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CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, JANUARY 7, 1893. No. 1.

NEW YORK ALUMINUM BEARING METAL CO.

NEW YORK OFFICE, N. E. Cor. Washington and Cortlandt Sts. CHICAGO OFFICE, 12 Pacific Avenue.
MONTREAL OFFICE, H. McLaren & Co., Agents.

MANUFACTURERS OF

ALU

TRADE MARK.

"Genuine Babbit," - -	Price 30c.	per	lb.	f.o.b.	New York
"Champion Metal," - -	25c.	"	"	"	"
"Aluminum Bearing Metal,"	18c.	"	"	"	"
"Big 4 Babbitt," - -	14c.	"	"	"	"
"Pyramid Metal," - - -	10c.	"	"	"	"
"Mystic Metal," - - -	8c.	"	"	"	"

CLOSE FIGURES MADE ON LARGE ORDERS OR CONTRACTS.

Our metals are superior to any like Babbitt Metals in the market. We Solicit Your Orders.

We want your Spring Order.

WALTER H. COTTINGHAM & CO
GREEN SEAL BRAND
WHITE LEAD PAINTS
VARNISHES
WINDOW GLASS
ARTISTS MATERIAL
PAINTERS' SUPPLIES
MONTREAL
TRADE MARK REGISTERED

Quality is our First Consideration.

We have goods that are Reliable.

Good Value Our Next.

RICE LEWIS & SON,

LIMITED.

Importers and Dealers.

HOUSE FURNISHINGS,

FINE

CUTLERY, PLATED WARE,

TILES, GRATES, MANTELS.

IRON BRASS # BEDSTEADS.

RICE, LEWIS & SON, Ltd., King St. E., TORONTO.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Caskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

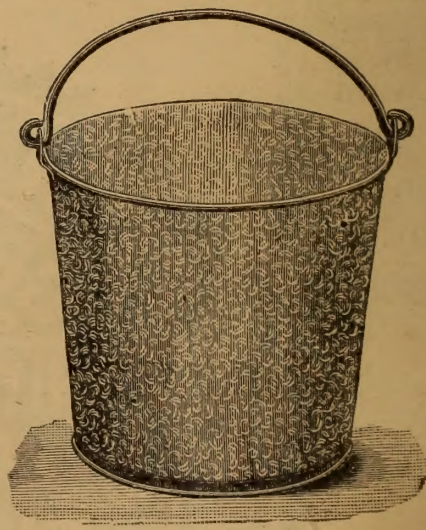
WESTERN BRANCH:

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

GALVANIZED STEEL BUCKETS.

IMPROVED PATTERN.



IMPROVED PATTERN.

Something entirely new, and superior to old style Buckets, made in three sizes.
They are superior to the ordinary Flaring English Bucket, being of greater capacity.
They are stronger in shape, consequently more durable.
They will not slop over or tip over, owing to the wide bottom.
They nest very close and firm, which protects them in shipping.
The rim is in one piece with the body, consequently cannot get knocked off.
They are galvanized and not lead coated.

For Sale by all Wholesale Hardware and Tinware Houses.

KEMP MANUFACTURING CO.
TORONTO, ONT.

HARDWARE

ORGAN OF THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

PUBLISHED WEEKLY—SUBSCRIPTION $2.00 A YEAR.

Vol. V. TORONTO, JANUARY 7, 1893 No. 1

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

HEAD OFFICE: - - 10 Front St. E.
MONTREAL OFFICE: - 146 St. James St.
E. Desbarats, Manager.
NEW YORK OFFICE: Room 41, Times Building.
Roy V. Somerville, Manager.
EUROPEAN BRANCH:
Canadian Government Offices,
17 Victoria St., London, S.W.
R. Hargreaves, Manager.

Advertisers and Subscribers may have their correspondence addressed to the care of any of our offices and hey are invited to use them at any time. At the Head office, Toronto, a place is set apart where they can see all the latest newspapers and the latest issues of trade papers from all parts of the world, where they can do their correspondence or obtain any information. Parcels may also be directed to the Head office.

HARDWARE opens its fifth Volume with its best wishes to all its subscribers for a Happy New Year. We are now on the threshold of 1893, when its fruits are more largely under our control than they will ever be again. We should shape its beginning to correspond with the way we desire to end it. The trader will find the present a good time to renounce some of the habits and methods that he has found inimical to his prosperity. We do not recommend him to fetter the free play of his discretion by the adoption of unalterable rules. The breaking of a rule intended to be of cast iron inflexibility is demoralizing, and the steady observance of one that is adopted on what turns out to be mistaken grounds or incomplete knowledge prevents development. Begin the year with an open mind, that you may extend your knowledge and correct misapprehensions, and commit yourself to nothing more than general principles. If you have given too much credit in the past, make up your mind to give less this year, but do not rashly resolve that you will credit no man. If you have sold at too low a profit, keep constantly in the determination to realize a fuller margin, but do not take a vow that you will never meet a cut. You are enlightened by the lessons of last year, but there is no reason why you should become the slave of last year's experience. One year is not all your lifetime; much less is it all time; none of the knowledge you have derived from it or from any other year is infinite; you have therefore no warrant for adopting any inflexible rule, as by so doing you shut up the avenues of further knowledge, and you need to keep all of them open. The man who succeeds these days is the man of resources, who can promptly perceive and choose the course of action that suits the spur of the moment. No resolutions, cut and dried at the beginning of the year, will provide him with the wisdom necessary for all the exigencies he has to face. The most the trader can do now is to securely attach himself to the moorings of sound general principle.

* * *

HARDWARE undertakes to do its best to further the prosperity it wishes to its readers in its New Year salutation to them. But it also takes occasion to remind some of its advertisers that it offers them a resource whose potential wealth they do not fully extract. An advertisement is not a charm. It is a business medium, and its effectiveness depends upon the business attention it receives. It must always show that it is connected with a living original, and like every other live thing, it must change. The same old familiar card appearing every week for a year has all the vitality crushed out of it by its oppressive sameness. The advertisement needs to be renewed from the well-spring of its source in short periods. Those who change oftenest reap the most benefit. The spontaneous effects of an advertisement are not its full or even its best effects. The advertiser's space needs incessant cultivation, otherwise it will grow wild and barren. This is particularly true of a trade paper, whose readers look upon the advertisements as news, and read them with interest or with langour, according as they are fresh or stale. The merchant's advertising is a department of too much moment to be neglected. He looks after his travellers, keeps them informed by weekly advices of changes, of bargains, of special drives, of new arrivals, etc., and finds it is necessary to do so in order to get full returns from his outlay on travellers' account. He looks after his collections, is cautious about his buying, has the best care taken of his books, is careful about the selection of his accounts, and gives himself a great deal of worry about many other interests. But his advertising he too commonly neglects. Why? The reason appears to be that many advertisers have not a due appreciation of the value of advertising. They have not taken note of its growth as a modern business force. Its importance entitles it to an equal division of the merchant's administrative care with any of the interests mentioned above—travellers, buying, book-keeping. Therefore, we advise our patrons to change their advertisements often, and study style, effect, and originality. The returns will warrant the extra thought and labor. The Sales Room Topics are a strong supplementary feature to our advertising columns, and advertisers should make it a point to have something new every week in those Topics. Readers always scan them with the expectation of finding something of special interest to them.

* * *

The London Free Press publishes extracts from the letter of a country merchant in which the writer accuses certain wholesale merchants of placing the labels of United States manufacturers upon harvest tools and carriage bolts of domestic make. The names of the wholesalers charged with this deception are not given in the Free Press, but it appears that they have been supplied to that

journal by the complainant, who is credited with the courage of his convictions to the extent that he is willing to make the charges specifically and over his own signature. If the thing he states is true the exposure of the culprits cannot be too swift or too complete. Wholesalers guilty of this form of misrepresentation do not merely mislead their customers and therefore make the latter unwilling parties to an injustice, but they also rob somebody. If the wares so falsely labelled are worthy goods, then the manufacturer is being robbed of the advertisement that inheres in their reputation, and is constantly building up some one else's prosperity. It is conceivable that this is made satisfactory to the genuine maker by the payment of some consideration in lieu of royalty by the manufacturer whose label is affixed to the goods. If the goods are inferior, and sell on the strength of the label instead of on their own merit, then the name on the label is degraded and the injury is on the other side. So somebody is robbed, unless there is a secret arrangement between the manufacturers to make this fraud mutually profitable. Whether all the manufacturers concerned are assenting parties makes no difference to the morality of the business. It is crooked trade, and we imagine there are few wholesalers who can be found guilty of it. Independently of manufacturers' interests, the retail trade and the public should be protected. Where a foreign manufacturer connives at the use of his label or trade mark by a Canadian, it is difficult for consumers to get the benefit of the legal protection that exists in this country to safeguard the interests of the owners of these marks and labels.

* * *

The building trade of this city for the year ust closed was a bigger thing than it seemed. The building permits taken out during 1892 represented a bigger outlay than had been expended in any former year save 1891, when the real estate boom reached its summit, and much of the building was being carried on by a lot of sanguine but insolvent investors. The sum of the outlay spent on building in that year was further swollen by the Parliament buildings and one or two other large edifices. The reaction from the briskness of 1891 did not however bring the building trade below what it was in years previous to that, so that 1892 must be called a good year in the Toronto building trade. The state of last year's building trade was currently reflected in the dissatisfaction of the local hardware trade, who measured it by the abnormal work done in the previous year, when building was at high tide. If a profit were made on all the builders' hardware sold for use in this city last year, the local traders ought to be very well satisfied. They had a better chance to make a profit, as the manufacturers of nails, locks, and some other goods used by builders had agreed on limited prices which were well maintained throughout the year. The coming spring's trade is looked forward to very hopefully. It is expected to be of good magnitude, and must be done on a sounder basis than that of 1891 was, that year's failures having heavily discounted the proceeds that hardware men expected from it. But the caution of the banks and loan companies is some security to all traders who venture anything upon builders' credit.

* * *

The manufacturers of heavy hardware in this country were evidently profoundly impressed with the greatness of the task they undertook when they essayed to stamp out the anarchy of prices that had become so widespread in 1891. They approached the difficulty in a spirit of caution. They were more serious than the auctioneer who warns all the crowd not to speak at once. They saw the danger of acting all at once. To completely repress the force of price-cutting by a single simultaneous act might be perilous, and they proceeded by successive steps. One class of manufacturers organized at a time, until the cut nail men, the wire nail men, the wire men, the horse shoe men, the lock men, the bolt men, etc., had all got prices under regulation by agreement. But a safety valve had to be left open here and there to prevent over-compression and explosion. Through one of these valves the price-cutting propensity has found very free escape for some time. That one is the trade in hinges. This line of goods has been selling for a long time at a price that afforded not the shadow of a margin, and more recently the price was brought below cost. The step which reduced it to this unremunerative basis is supposed to have been a tactical move to force the manufacturers to some action. If that was its object it has succeeded, for now the manufacturers of strap and T hinges have organized and have issued a uniform list for 1893.

* * *

Hamilton merchants are dissatisfied with the train service of the G.T.R. from Toronto. The cutting off of one forenoon train, which the railway company claims was not paying, brought the matter before the Board of Trade. Hamilton has been rather unfortunate in its relations with the G. T. R. people for some time. Toronto wholesalers have likewise complained of the limited train accommodation from this city to Hamilton. Our merchants found the long interval between trains a great inconvenience for the holiday trade, when early delivery was of paramount importance to retailers along that line. The Hamilton Board of Trade passed the following resolution: Resolved, after discussion, that in the interests of the business of Hamilton Mr. Seargeant be respectfully requested to have a passenger train put on to run between Toronto and Hamilton at some time between 8 a. m. and 10.30 a. m. each day, to be a local train between Oakville and Hamilton, stopping at intermediate stations.

* * *

For the last six months and more the merchants of this city have had to contend with great difficulties in the way of doing business by telephone. The trolley system many a time and oft played havoc with satisfactory communication by telephone. Until the change from horse cars to electric cars is completely effected and all contact between trolley and telephone wires is rendered virtually impossible there will continue to be disturbances in the conversations between trader and customer. The other day the meeting of a telephone and a trolley wire destroyed the telephone in a Gerrard street trader's shop. Occasionally merchants have been distracted by the incessant ringing of their instruments. One informed us that his telephone rang in short intermissions all day, and as each ring might herald an order, an attendant had to answer. It happened that business was light that day, and attention to the telephone was almost needless except to satisfy a feeling of uncertainty. Another had danced attendance on his telephone so long and had proved so many alarms to be false that he made up his mind not to go near the instrument when it rang, but calmly listen to the din until the wavering trolley line should be drawn taut and get off his wire. The next day he was pretty badly overhauled by an irate customer for not attending to the telephone.

* * *

If the merchants in the vicinity of the St. Lawrence Market in this city adhere to the idea they are reported to entertain, namely, to form a company and buy the market fees for the current year and then exempt the farmers from the payment of fees, they will show a rare example of courage and of commercial spirit that is deserving of admiration. The few cents that each farmer has to pay with each entry he makes to the market amounts to but little to the individual outsiders upon whom it falls, but they feel it more, and probably pay it more grudgingly than these few merchants among whom it would be divided, according to the rumoured purpose.

THE ANNUAL MEETINGS.

The annual meetings of the various associations of heavy hardware manufacturers are now being held in this city in the rooms of R. & T. Jenkins. Since each person or firm concerned in these deliberations manufactures usually more than one line, and as the manufacturers are grouped into separate associations for each product, and, further, as very often the course determined on in one section may affect that in another, it is impossible for the business of each organized industry to be pursued directly to its close in one session. There are therefore several sessions necessary to the completion of the annual meeting of each section. At the time of writing therefore the proceedings were not brought to a conclusion on many matters. The plain wire manufacturers and the wire nail manufacturers are the only ones whose business has been brought to a close. Intermittent sessions of other sections of manufacturers continue to be held, and next week will be pretty far on before the final adjournment of these annual meetings. The following are the members who are or have been in attendance: John Rodgers, one of the directors of the great Sheffield concern of that name; Col. W. H. Hutton of Montreal, who represents the Rodgers company in this country; Jas. H. Peck, of Peck, Benny & Co., Montreal; J. A. Robertson, foundryman, of St. John, N.B.; R. Hersey of Montreal; George A. MacAgy, Montreal; E. C. Moor and George W. Ketchum, St John, N.B.; F. Fairman, Montreal; Cyrus A. Birge, Collingwood; Charles A. Hart, Hamilton; Mr. Somerville, Toronto; Mr. Pender, St. John, N.B.; Mr. McMaster, Montreal; Mr. Greening, Hamilton; Mr. Parmenter, Gananoque.

The only change that has so far been confirmed is the reduction of the jobbers' cash discount on wire nails from 5 to 3 per cent. The old discount had caused a good deal of dissatisfaction to the jobbers, and it is known that one wholesale house had refused to allow 5 per cent. for cash last year. The objection made by this particular house was that it did not consider money worth 15 per cent per annum, and fifteen per cent. per annum was what the former cash discount of 5 per cent. amounted to, as the alternative time was four months. Further, it was considered something of an anomaly that the wholesaler's money was not considered to be worth as much as the retailer's, for, while the wholesaler was obliged to allow 5 per cent. for cash, he could get from the manufacturers only 3 per cent. when he paid cash. That is now changed, and the discount enjoined on the jobbers by the Wire Nail Association and allowed by the members of that association, is uniformly 3 per cent. off for cash. This is likely to establish harmony among the jobbers and prevent any defections from the agreement.

As to other probable fruits of the meetings nothing definite can be said. The cut nail men are expected to reduce the price of car lots by 5c. and the price of lots of 5,000 kegs by 10c. They may or they may not make reductions for quantities, and if they do the reductions may not be those expected. It is supposed that the stress of wire nail competition and the starting of a cut nail factory in this city are motives urging the manufacturers to offer concessions on lots. It is a fact that wholesalers of this city have not gone to the expense of carrying stocks this year, simply because they can buy on spot at a moment's notice. It is questionable if a reduction for round lots would be beneficial to the trade. It would probably throw the nail business into the hands of a few wholesale dealers who could take the round lots. Or it might lead to club buying, a few traders combining to make up an order of the magnitude necessary to secure the concession.

The plain wire men made no change, simply ratifying for the next quarter the list and discounts adopted at the special meeting held some time ago.

It was anticipated that the cut nail men would be hard pressed by the wire nail men to contract their preferred list, or that the wire nail men would make compensating additions to theirs, but nothing has transpired to show that either course has been followed.

The bar iron men have not done anything so far. There is, it is said, one contumacious manufacturer in the way of the formation of a solid column for the support of a uniform price.

PUBLICATIONS NOTICED.

Among the many Christmas numbers issued this year, that of the Canadian Miller is worthy of selection for special mention It is a very prosperous looking production, and the attractiveness of its appearance is fully equalled by its merit.

The Fruit Trade Journal, New York, brings its volume for 1892 to a close in a fine Christmas number, of which a copy has been received at this office. The outward appearance of the number is tasteful, and its contents are excellent. The Journal is a most useful auxiliary to the fruit trade.

Literature, art and advertising are elegantly blended in a charming little book we have received from J. E. Kennedy, the business advertiser of the Hudson's Bay Company. The title is The Red River Voyageur, the name of John G. Whittier's poem, which is the thread on which the illustrator and the advertiser work to engage the eye and the interest of the reader. It cannot be said that there is too much powder in proportion to the jam, and no one who gets a copy will fail to look through it, and thus help to work out the sagacious purpose of the company. The illustrations are very fine, and show some of the old historic forts and houses of the Hudson's Bay Company.

MY LITTLE STORY is the title of a handsomely covered, well printed, finely illustrated pamphlet, and the tale which fills it up is an interesting one for traders to read. It is the story of how Theodore Heinrichs, retail druggist, Baltimore, Md., systematized his business. The means by which this end was accomplished was a National Cash Register, and how great a part this guardian of a trader's cash capital can play in his prosperity may be learned from a perusal of this story. It is pretty sure to set the reader thinking, and to give him an insight into the principle of this mechanism of economy that will lead to its adoption, if it is not already in the trader's service.

The New York Daily Commercial Bulletin comes to hand at the beginning of the year with one column more to the page. The eight extra columns by which it is enlarged is equivalent to the addition of one of its present pages. The breadth of the paper is now nearly equal to its length. This is an improvement in the proportions of the paper, each page presenting a very compact appearance. We are glad to see that our eminent contemporary has to make more room to accommodate increasing business.

The Kemp Manufacturing Co. have assigned to a separate Catalogue—of which we have just received a copy—the description of that division of their products which includes plain and decorated tin cans, grocers' canisters, lard pails, boxes, etc. The very large Catalogue noticed recently in HARDWARE does not comprehend these goods, which come under the general class of show-keepers', particularly grocers', supplies. Canisters, tea cans, spice cans, syrup cans, self-sealing cans, coffee pails, spice pails, lard pails, baking powder pails, jam pails, blacking boxes, oil cans, butter packages, measures, scoops, funnels, make up the matter of the book, but as they are in great variety a mere enumeration gives little idea of the contents of the book. The handsome designs and labels on the coffee, spice and other cans is an attractive distinguishing feature.

The fine ample Calendar of the B. Greening Wire Co., Ltd., Hamilton, is sure to be a conspicuous feature in the offices and stores of hardware merchants during '93. It is one of the largest we have seen this year, as well as one of the most handsome. It may be read at any distance that the dial of a clock might be scanned, in fact it is very rare that such large numerals are ever seen on the face of a clock. The design is original. Each page is divided by red lines into 35 squares. As the days of no month are more than 31 in number there are always at least four of these squares not filled with date figures. A happy conception has brought these extra squares into seasonable advertising service. Each spare square is filled with the illustration of some line whose sale is large in that month. For example, the four squares not taken up with this month's date entries are used to illustrate wire rope, perforated metals, heavy wire cloth and coppered steel spring wire. Several valuable tables are given on the last page.

MODEL HARDWARE STORES.

FERRES & CO., HAMILTON.

We publish in this number a cut of the interior of the hardware store of Ferres & Co., 13 King street east, facing the garden of Gore Park, in the centre of the city of Hamilton.

The store is 18 feet wide, and has a depth of 140 feet, every part of which is utilized to the fullest extent for display and storage of goods.

The shelving on the right consists of tiers of four drawers, each 30 inches wide by 6 inches high and 24 inches deep, in which are kept carvers, butcher knives and steels, E. P. and N. S. flat ware, wrenches, augers, razor strops, brushes, etc., the top forming a ledge supporting shelves 12 inches deep, on which the stock of table cutlery and small shelf goods is held in boxes, which vary in size according to the class of goods contained in them. These boxes are painted green, and have the samples of contents fastened on the outside. They are made shallow (3 inches deep) so that the wires by which the samples are attached may be easily fastened and detached from the inside. By using No. 16 copper wire a simple square turn is found sufficient to attach light samples; this admits of samples being easily detached when sold, so that changes may be frequently made and samples kept fresh. The upper shelf is reserved for spare stock, in front of which there are doors or flaps hinged at the top, painted, and bearing samples to correspond with the boxes. Light goods, such as twine, boxing gloves, oilers, etc., are kept on top. The shelf boxes occupy the wall space 40 feet in length, in rear of which the shelving is 24 inches deep, and contains locks, and house trimmings extending 27 feet back to the office. The lower part is occupied by nail bins, the lower ones large enough to hold a keg, the bottoms projecting at an angle to admit of the scale scoop being placed below them, and being floored with Canada plate to protect from wear and to make the nails easy to pull into the scale with a claw. The samples of locks are shown on upright doors, fastened to the divisions of the shelves by old fashioned blind hinges, to swing both ways and lift off without any obstruction.

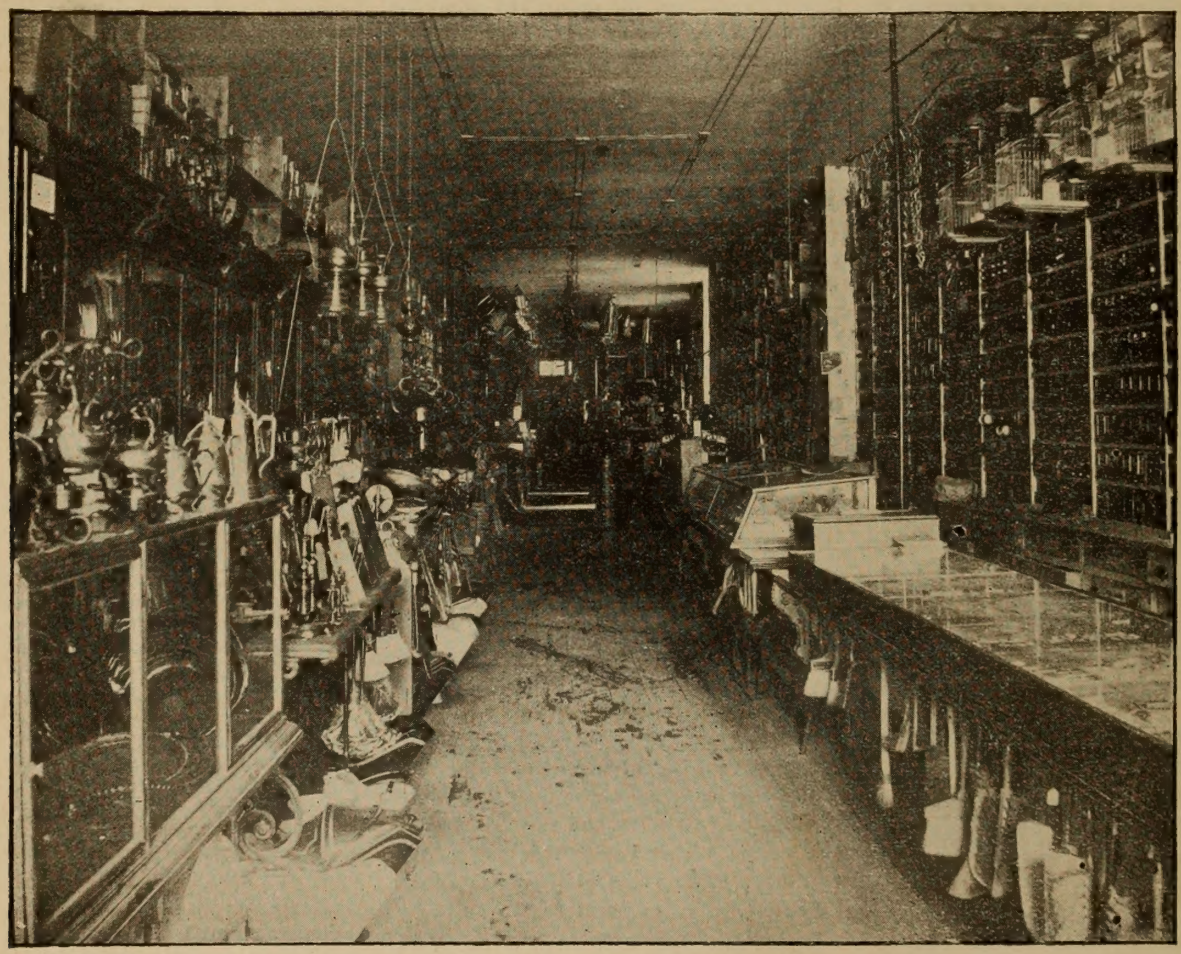
The office is fitted with shelving 16 inches deep, the lower part with upright divisions for record books, above them two rows of drawers, six rows of seven pigeon holes, each 12 inches wide by five inches high and 16 inches deep, made to contain a file foolscap size, in which letters, and invoices, etc., for two years are kept on Shannon files, in alphabetical order for ready reference, an arrangement equal in convenience and much cheaper than the standard office cabinet. Above these the space is occupied by the larger catalogues, while the smaller ones are filled alphabetically in a cabinet alongside The safe stands with the door outward into the passage way, so as to be visible from the front and back doors by the night watchman.

In rear of the office are the shovels and farming tools in racks and suspended against the wall by wrought iron pins 12 inches long. In rear of these are racks for cross cut saws and window glass, with shelving above for cans of paint.

The front counter, 18 feet long, is furnished with a black walnut show case full length, with plate glass cover, supported every 18 inches, each division being fitted with a tray sliding on waxed runners, and containing pocket cutlery and scissors. The small penknives are placed in boxes, inch and a quarter wide and two and a half deep, the covers of the boxes being reversed, so that the edges project upwards, and lined with plush, in which the sample knife is laid, the box below being capable of holding a half-dozen knives. In the first tray, 18 by 24 by 2 1-2 inches, a stock of 84 dozens or half-dozens of penknives is kept, with sample shown close to the plate glass—a very effective and convenient display. The larger knives are attached to velvet-covered boards and placed close to the glass with blades open, the stock being kept in drawers underneath. The second counter has a show case with N. P. frame, in which carvers and seasonable goods are shown, below which shelf brackets and butts are kept. Beyond the show case is an open space on the counter for parcelling.

Further on is another counter with vices, axes, shot and scales, with cabinet locks below and drawers in which samples of the finer locks and trimmings are kept secure from dust.

Against the wall on the west side (left hand) are five varnished ash show cases with hinged doors, each consisting of one light 30x50 inches, English sheet glass. These cases contain guns, plated ware, hammers and hatchets, saws and coopers' tools, and have below the glass doors shelves 24 inches deep for general stock. In front of these cases housefurnishing goods and fancy brass goods, table mirrors, bells, etc., are displayed in cases and



FERRES & CO'S HARDWARE STORE.

H. S. HOWLAND, SONS & CO.,

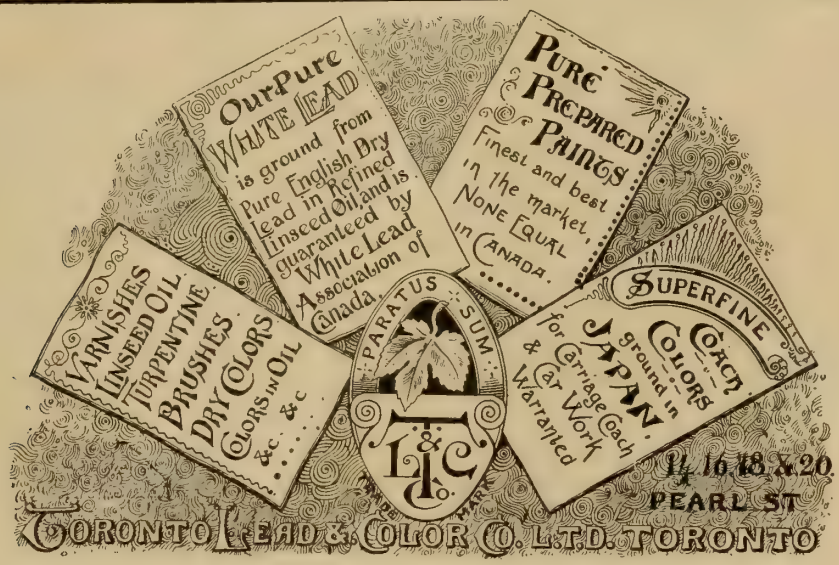
WHOLESALE HARDWARE,

37 FRONT ST. WEST, - - TORONTO.

SKATES

IN STOCK.

Genuine "Acme," Polished, No. 0, 90c. pair, No. 7, $2.90 pair.
" " Plated, No. 0, $1.50 " No. 7, 3.90 "
"Achieved," } Full Patent, Polished, $4.50 pair.
Forbes' New Patent, } " " Plated, - 5.50 "
In all sizes, 7½ to 12 in. Discounts on application.
Acme Skate Bolts, Nuts, Lugs, Links, and other repairs.
Skate Straps, ½x20, ½x36 in.; 5/8x20, 5/8x36 in.



SAW YOUR
ADVERTISEMENT
IN THE
HARDWARE.

When writing to our advertiser please inclose the above

H. Boker & Co.

are famous for their fine quality

Razors, Scissors

—AND—

Pocket Cutlery

TRADE MARK.

(TREE BRAND)

FOR SALE BY LEADING WHOLESALE HOUSES.

TO PURCHASERS OF SILVER PLATED WARE.

ALL Silver Plated Ware, whether it be light plate or the heaviest, has the same outward appearance, and there being no way to determine the thickness of plate except by analysis or actual wear, it is of the most importance, **if quality is desired,** that every article bear the full name of a manufacturer known to make these goods exactly as represented, who will guarantee them to give satisfaction if properly used. All goods bearing our stamp, **"Toronto Silver Plate Co."** are warranted to be made of eighteen per cent. Nickel Silver Metal plated with Pure Silver, as represented by marks thereon. Our process of plating is excelled by none, giving uniformity and durability.

MONEY PAID WILL BE REFUNDED FOR ALL GOODS NOT FOUND AS REPRESENTED.



PATTERN "F"
TWO-THIRD SIZE

FACTORIES AND SALESROOMS: 570 KING ST. WEST, TORONTO, CANADA.

E. G. GOODERHAM, Manager. JNO. C. COPP, Sec-Treas.

on tables, samples of Wanzer and Rochester lamps, also kettles and bird cages being suspended from the ceiling.

The stock of rope is kept in the cellar in coils and on reels, the ends of rope being brought through the floor and attached to hooks against the face of the counter, so that customers may be supplied without any going down stairs.

Brass drugget pins are driven at intervals of three feet in the floor, making a sixty foot measure in front part of the store, the 12 foot spaces being marked by an additional pin.

Beyond the show cases on the west or left-hand side, which end at a point 40 feet from the door, the wall shelving is 12 inches deep, being reduced on account of the cellar stairway being here. From the stairs to the rear of the store the shelving is 24 inches deep from floor to ceiling, and is filled with kitchen furnishings, tinware, granite, enamelled and japanned wares, fishing tackle, seine twines and nets being kept in the rear.

The elevator is near the goods entrance in the rear. Barrels of oil, turpentine, etc., are lowered far enough to clear the cellar ceiling, and then rolled on a rack extending over galvanized iron tanks, and are emptied directly into them.

The cellar contains a stock of cut nails, paints, dry colors, oils, etc., and upstairs are iron bedsteads and spare stock, while the stock of Belgian and English sheet window glass, plate and tinted glass, stepladders, wheelbarrows, and other bulky goods is kept in a two-storey warehouse, 22x70 feet across the alley in rear

The National cashier is in use, and recommended as suitable to the hardware business, the class of goods as well as the amount of each sale being preserved.

The store is well lighted by side windows in rear half, and the ceiling is utilized for suspending brooms, creamers, watering pots, pulleys, etc.

Mr. Ferres being known as a careful business man, assisted by an efficient staff of bright, popular and energetic young salesmen, and the firm being cash buyers and holding a reputation for reliable goods, their trade in builders' hardware, house furnishing goods and painters' supplies is yearly increasing. Mr. Ferres has recently been elected an alderman of the city. Although in the field only five days he made a successful run, without a personal canvas, in a field of five candidates.

THE TREATMENT OF CUSTOMERS.

The whole duty of the dealer to his customer is not summed up in honest dealing, polite attention and prompt delivery of goods. It is required of merchants that they should at least provide sufficient room between the store counter and the merchandise to allow patrons to move about without being crushed by contact with each other, or without having clothing soiled by coming in contact with goods during the busiest hours of the day. Some stores have so narrow a space between the counters that Saturday evenings are a trial to the patrons a few people uncomfortably crowding the space and preventing ano another moving about to examine the articles which they wish to purchase. The appearance of a jam in a retail establishment will cause many women to avoid the place, even if the prices are below the range of neighboring stores, and the most desirable class of patrons is most likely to be thus repelled and driven to rival establishments. This objectionable feature of too many retail grocery stores, viz., want of sufficient room for customers, seems to be due to the high rentals of eligible store property in many cities. In New York City there are few jobbing houses that are not greatly hampered during the busiest season by want of space in the shipping and packing departments, and the attempt to do business in too cramped quarters is, in this case, as with many New York and Brooklyn retailers, to be attributed entirely to the high rents of business buildings. The result is, as regards the retail trade at least, that floor space that should be devoted to the accommodation of patrons, and which would enable the clerks to move about more quickly while waiting upon customers during rush hours, is covered with piles of goods, only a narrow pathway being left open between the door and counter. Such establishments are rightly denominated "stores," the term "to shop," as used by the fair sex, not strictly applying to trading with this class of retail establishments—they are simply places for the storage of goods, the sale of which cannot but be conducted with more or less difficulty.

The contrast between a store crowded with goods in the manner alluded to above and the best arranged establishments, is very unfavorable to the former. The most modern style of grocery store, with its surplus stock stowed away under counters, on shelves and in the basement, and a clear view afforded right through the store from end to end, invites new custom, while the over-crowded store repels it. If to the advantages of a clear floor be added seats for waiting customers, such as are to be found in some of the leading grocers' stores, the attraction for the best class of customers is irresistible, if other things are equal. The dealer who compels his female customer to stand while waiting a clerk's leisure, or while her orders are being filled, has hardly mastered the secret or art of selling goods. An old dealer who retired from business a few years ago, said to the writer recently: "If a customer is standing a salesman will have great difficulty in selling her a new brand of goods which his employer is eager to push, but give her a comfortable seat and with a little tact the clerk can sell her articles which she is not actually in need of." A little reflection will convince the reader that our friend has not exaggerated the advantages of the grocer who provides a sufficient number of seats for his patrons.

This feature of the retail business—the arrangements for the comforts of patrons who visit their merchant's place of business—is as important as the demeanor of the proprietor and his assistants towards the said patrons, or the method employed in the delivery of goods. It is a source of much complaint that too many grocers' customers do not personally make their purchases, but send servants or children with their orders. In this contingency the dealer has no opportunity to make sales of new articles of merit the messengers not being empowered to make purchases on their own responsibility. If retailers wish their lady customers to visit their establishments they should make proper preparations for the accommodations of the desired visitors; not expect them to run the gauntlet of greasy butter tubs, dusty flour barrels, and toppling pyramids of canned goods, or to be hustled about by strangers while forced to stand for perhaps many minutes. Make a place worth a visit and purchases by proxy will become less common.—Merchants' Review.

THE HUSTLER.

The hustler, being unbeloved
By every Grace and Muse,
He eats at night in Boston and
Next morn in Syracuse.
From the Adirondack Mountains
To the fair Pacific slopes
He plays with lines of latitude
Like little skipping ropes.

His home is in the sleeping car—
No vine or fig tree's shade—
His music is its clanking wheels,
His poetry is trade.
This missionary of the mart
He spreads the true faith's germ's—
The endless merits of his house
Above all other firms.

He button-holes the kings of trade,
His sample case unrolls
And talks until the love of life
Grows feeble in their souls.
The bolted door swings wide for him,
He needs no bolts or bars,
And fears not any face of man
Beneath the sun or stars.

The heroes of baronial times
Were armed from hair to heel,
With iron pots upon their heads
And pantaloons of steel.
The hustler hero of to-day
Is armorless and weak,
But for the vigor of his tongue
And blushless breadth of cheek.

He meets all men with fearless mein,
Nor knows to pause or swerve,
With Lilliputian bashfulness
And Broddignagian nerve.
No dim abstractions vex his soul,
His creed and happiness
Is just to make a sale and catch
The two o'clock express.
—Sam Walker Foss in the Yankee Blade.

CULTIVATE A MEMORY FOR NAMES

"As good a piece of advice as I could give a young man starting business," said an old and successful merchant, "would be to get his customers' names right. Of course, everybody means to do this, but I don't think everybody attaches to it its full importance. The fact is that almost every man is proud of his name, whatever it may be, and he dislikes to see it misspelled or incorrectly written. There are plenty of names which sound alike, but which vary in the spelling, perhaps by only a single letter; and, too, in taking a man's name it is not so difficult as one might imagine to make a mistake in the initials, for there are letters which sound very much alike. When you get a new customer get his name right to start with. No man likes to receive a package or a bill or a communication of any sort with his name misspelled however modest and good natured he may be, he is pretty sure to be annoyed by it."—Sun.

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friends against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.

Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.

FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin.

CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,
Agents.
MONTREAL AND TORONTO.

Miller Bros. & Toms

(Successors to Miller Bros. & Mitchell. Established 1869.)

Machinists, Millwrights and Engineers.

MAKERS OF

ELEVATORS

For all purposes, of any capacity, and operated by Electricity, Water, Steam or Hand Power.

Builder's Derricks--Hand or Steam,
1, 1½, 2, 3, 5, and 8 Tons.

Foundry and Machine Shop Cranes,
Any Swing, Any Capacity.

GENERAL MACHINE WORK.

Works: 89 to 120 King, - - - - - MONTREAL.
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WIRE

Coppered Steel Spring. Tinned Mattress Wire. Broom and Brush Wire. Hay Baleing Wire. Flat Wires. Soft Coppered Wires

Write for Catalogue. We guarantee the quality of all our Wire.

Manufactured by

The B. GREENING WIRE CO., Ltd.,
HAMILTON, ONTARIO.

AFFABILITY OF STORE-KEEPERS.

The Commercial Inquirer in a rather lengthy article on the personality of the shopkeeper says :

The personality of the storekeeper has much to do with the results of his business ventures.

Men and women are creatures of impulse, of emotions, for the most part, and the wise man not only knows this but profits by his knowledge.

Every trader knows the main object he has in view in conducting his business is the making of money, and to this object everything else should be made subservient so long as the principles of integrity are not violated. Hence, the chief question is—What pays best? There's big money in smiles. A big stock of them kept where they can be drawn upon for any and all occasions is the most profitable stock a merchent can possess.

To some they came cheap. Some men are "built" so good natured and agreeable that a merry twinkle of the eye, a cheery smile and pleasant manner are their natural characteristics. Such men have a stock in trade worth more to them than a money inheritance. Others must acquire a pleasant address, and although a difficult operation it pays large dividends. It's astonishing what a multitude of errors a smile will cover ; how many rough places a pleasing manner can smooth over ; how many offended customers a cheerful reception can make good humored.

Cultivate a jolly disposition, and you'll not only make it pay handsomely but you'll get lots of fun out of it. Think of an irate customer coming with a rush into your store with a grievance—real or fancied—and determined to give you a "roasting" and then to withdraw his trade. You've seen him no doubt. Now, how will you meet him? If you get mad, he's got the best of you, because he's been mad so much longer that his anger has got his mouth into good working shape for abusiveness. But keep cool, listen to his complaint, show him you are ready to correct any error even if he's the one that made it, and get him off on to some amusing "string," and you'll have him good natured in spite of himself, and he'll leave the store laughing and determined that all the articles his family uses shall come from your store.

"I'll never go to that store again," has been the expression of many a woman who has met with a curt response to her inquiry. A lady entered a store and neglected to entirely close the door. On asking for the first article wanted—the trader replied : "The first thing is to shut the door." That was the last time she ever had occasion to either open or shut that store door, whereas courteous treatment would have made her a frequent purchaser.

NEW YEAR ADVICE.

The season goes by, the season comes back,
The strength of the earth to renew ;
The Summer is past, the New Year's come 'round,
With music and laughter, and shuffle and sound—
But there's business, boy all the year through.

There is business for us in the stern demands
Demands that forever renew
In industry's calls from the asking lands,
Whose acres are waiting for toil's clever hands,
For more than they're willing to do.

Life's valleys are gleaming with rivers of sin—
Temptation's flowers charming to view—
The siren walks there, where charming she's been
Since Eden went out and temptation came in;
Stand guard, boy, she's watching for you.

There's businees for all in this world, my boy
Though some folks find nothing to do ;
And misery will, misery forever enhance
With him who is satisfied fortune is chance,
And only may come to a few.

Who waiteth for fortune is waiting for grapes
In a desert where grapes never grew ;
A beggar that sitteth where nobody goes,
An idler for gold where no gold ever flows—
There's no business there, boy for you.

Who boreth for water must not expect oil,
Nor for gold if for silver he sue ;
If sleepeth the husbandman, sleepeth the soil,
And harvest refuseth the product of toil
Wake up, boy ! there's business for you.

Be true to your manhood, work up in the line
To wisdom's line—close as you can—
With axe, plow and harrow, for hillside and plain ;
And pen, ink and paper to plow for the brain,
Fulfill the grand purpose of man !

This brief of existence is business my boy,
For other more lasting in view ;
Life can't be a shadow that struts, frets and dies,
Where heaven, great heaven, looks down thro' such eyes ;
Look up, God is smiling on you !

Then work while 'tis day, ere cometh the night,
Be quick, boy, the moments are few ;
Eschew ye the evil, defend ye the right,
Work out of the darkness up into the light,
Where the world has business for you !

—Ex.

Goods conveniently located save time, money and temper in showing.

No young man can possibly have mistaken his calling who finds in it what the world wants done

EXCESSIVE COMPETITION.

To undersell competitors, both material and labor of inferior quality are employed, and there are now on the market, in many lines of goods, wares whose inferiority shows plainly that the sole object of their manufacture is to produce an article that can be sold at a low price and yet yield a profit no matter what its little remnant of intrinsic value may be. Thus the public is forced to put up with poor wares of all sorts ; or, if a really good, thoroughly made article is sought, to pay a special price for goods made by some special manufacturer who does a limited business outside of the general stream of competition, and thus is able to make his own price for his products. It has come to be commonly said by purchasers that really good, substantially made, and, therefore, in the long run, really cheap, articles are difficult to find. Goods of poor quality are, by the arts of manufacturers, made to resemble so much those of a higher class in their appearance and finish that only the test of use demonstrates the hollowness of their pretence except to experts familiar with the tricks of the trade. It is also argued that such unlimited competition has a tendency to make manufacturers and dealers tricky, and that in the mad race to undersell each other such profits as might otherwise be secured are sacrificed to such an extent that dealers protest it is impossible longer to do business at a fair profit. This state of things could not reasonably be expected to exist without some attempt to escape from its evils. The trusts have therefore come, either to stay or to make way for soe real or supposed remedy for these evils. There have been a few manufacturers, notable exceptions in the general scramble for trade, who have maintained the integrity of their products against all temptations to lower their standard. But these, as a rule, are such as by the aid of patents or by some secret of skill are able to avoid undue competition. To pursue this course, a manufacturer must produce an article of such worth as to command a sale because no one else, or at most, only a few others, can equal it. In such cases restriction of competition results from a natural law of trade. The final outcome of trsuts must be awaited ; it is yet too early to predict with confidence what it will be, but whatever effect upon commerce trusts as at present formed and managed may have, it is not unlikely that they are the advance guard of reforms in methods of business called for by the exigencies of modern industry. —Metal Worker.

THE ONTARIO TACK CO
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton, Ontario.
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SITUATIONS VACANT.

WANTED—HARDWARE TRAVELLERS with good connections in Lower Provinces and in Ontario. None but first-class men need apply. H. S., GAZETTE Office, Montreal.

BUSINESS CHANCES.

Advertisements inserted under this heading one cent per word each insertion.

Wanted--Foundry Men

To give Aluminum Alloy Composite a trial. 2% in ordinary Cupola will give you soft, sound and solid semi-wrought iron castings. Price, $5.00 per 100 pounds F. O. B.

Book of information with Government report and other indisputable testimonials for foundry men—FREE. The Hartsfeld Furnace and Refining Co., Newport, Ky.

Established 1864.

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CHARTERED ACCOUNTANTS

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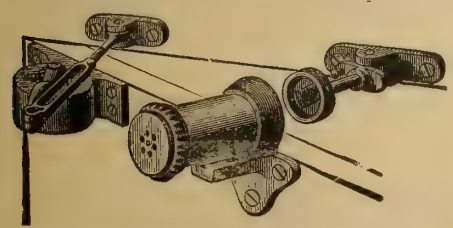
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STAINED GLASS FOR EVERY PURPOSE.

McCausland & Son,

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The Eclipse Spring

Shuts the door Everytime.

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Stops the Slamming.

Recommended by Architects.
Extensively used by Builders.

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Leather Belting,
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DANVILLE, QUE.

Ontario Office:
74 York St., Toronto,
H. D. SIMMONS, Agent.

A full stock of "Standard No. 1," and "Trade" Leather Belting, also Lace Leather and Cut Laces, kept in stock at our Ontario Office. Orders and Shipments attended to with prompt despatch.

NOW READY

The newest thing in Varnish. Put up in the neatest and handiest tin ever known. Easily opened. Easily sealed. No corks and no waste.

Unicorn
Furniture Varnish

In tins of assorted sizes. Packed in handy cases for the trade. Handsome show card in each case.

A. RAMSAY & SON,
MONTREAL.

Manufacturers of Leads, Colors, Varnishes, etc.

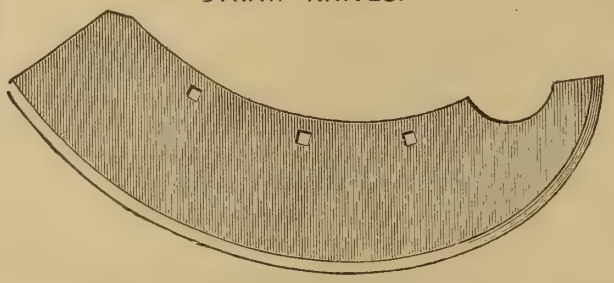
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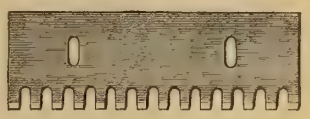
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ROOT CUTTERS.



We make a specialty of Straw Knives and Root Cutters. Quality guaranteed. Prices low. Send for quotations before placing your orders.

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The Whitman & Barnes Mfg. Co.



Canadian Branch:
ST. CATHARINES, ONT.

MANUFACTURERS OF

Extra Quality Machine Knives, etc.

OUR SPECIALTIES:

KNIVES FOR Mowers, Reapers, and Binders, Root Pulpers and Straw Cutters.
" " All kinds Wood Working Machinery.
" " Paper Mills.
" " Leather Splitting Machinery.



W. & B. Diamond Twist Drills.



Spring Keys, and Cotters.

Goods the best. Prices moderate
Quality Warranted.

TRADE CHAT

[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Wednesday.]

A. K. Melbourne, late of London, Ont., has decided to commence business in Hamilton in the carriage hardware line.

The commercial travellers of the North-West gave a most successful ball in the Manitoba hotel Winnipeg, on the 29th ult.

An electric wire crossed a telephone wire on Gerrard street in this city on Thursday, and the result is a ruined telephone in a neighboring store.

Mr. Crossley, a New York capitalist, has purchased a large area of mining lands in Marmora, Ont., also several quarries of lithographic stone.

Following the annual custom, the McClary Manufacturing Company, London, Ont., presented each of its married employes with a Christmas turkey.

A Belleville syndicate, who have made a strike of silver in Barrie township, Ont., and bought 5,000 acres of land, have purchased 465 acres additional with another vein on the property which assays at $87 per ton.

The hardware store in Elora, Ont., until a few weeks ago occupied by T. Black & Son, but since then occupied by Mr. Drainie, was destroyed by fire, with all the stock it contained, on Tuesday morning last.

The Rathbun Co., of Deseronto, and the McMullen Bros., of Picton, formerly owners of the Central Ontario railroad, are mooting a scheme to connect Picton and Deseronto by rail. The Bay of Quinte will be bridged at St. John's Island.

Abbott & Co. have nearly completed their new works on Delorimer avenue, Montreal, and expect to be busy at work very soon. The old factory was destroyed by fire on August 24 last. and the rebuilding was commenced as soon as possible.

Mr. Franklin, superintendent of the Montreal Street railway, has invented an ingenious new shoe for the street car horses, which, it is claimed, will not only preclude the possibility of their falling, but will be much easier on their feet than the present one.

David Blackley, Hamilton, is organizing a company to manufacture a barrel-making machine, invented by W. T. Vale, a Toronto man. Staves are fed into the machine, and it shapes them into barrels in as workmanlike a style as could be done by an expert cooper, except that the ends and hoops are left to be put on by hand. The capacity of the machine is one barrel a minute. The invention has been patented in 11 countries, and a factory for the manufacture of the machines has been started in Newark, N. J.

A syndicate has been formed by the merchants in the vicinity of the St. Lawrence market, Toronto, with the object of purchasing the existing rights of the present lessee of the market. If there are no legal difficulties, it is proposed after the purchase to charge no market fees.

The Canada Gazette announces the granting of letters patent, increasing the capital of the Canada Switch Manufacturing company, limited, from $50,000 to $100,000, incorporating the Weather and Water Proof Paint company, of Canada, with a capital of $5,000.

The Sheffield newspapers state that there is little doubt that the admiralty will use the Harveyized armor plate in new warships. The final decision will be considerably influenced by the latest experiments, but, as the Sheffield Telegraph frankly admits, it is clear that so far the American inventor has achieved the greatest success in armor resistance to projectiles ever known. There is to be another trial in England for the purpose of confirming first impressions as to the value of the process.

David J. Park, senior member of the firm of Park Bros., engine builders, Chatham Ont., died at his residence, last week at 5,30 from the effects of a severe burning he received by the explosion of a coal oil lamp a week before. The deceased had suffered greatly, and so severe were the injuries he received that a portion of the bone in the upper part of the left arm was exposed, while his face and body were badly scarred. Mr. Park was one of Chatham's prosperous men, being largely instrumental in building up a business that is widely known in western Canada

A deputation of working men waited on Sir A.P. Caron, Mr. Ouimet and Mr. Angus, at Quebec last-week, to ask that something should be done to provide employment. Mr. Langelier brought up the dismissal of forty employes from the cartridge factory, and Mr. Angers said that work in the factory had been pushed on so fast the appropriation was already spent, and in order not to close up the factory altogather, which would cause the deterioration of valuable machinery and a probable loss of skilled men, the Government had decided to keep it running on half time at a cost of $2,000 instead of $4,000 a month, but this was simply to avoid closing it up altogether.

Notice is given in the Canada Gazette that under "The Companies Act" letters patent have been issued incorporating Louis Davis, merchant, Henry Joshua Joseph, merchant, Henry Nutter, merchant, Charles Bolt, merchant, and Scott Joseph, clerk, all of Montreal, to carry on the manufacture of rolled plate stock of all descriptions, and for the manufacture of jewellery, and all other articles which are manufactured from such rolled plate, and to sell, handle and deal generally in jewellery and goods manufactured from rolled plate, the operations of the said company to be carried on throughout the Dominion of Canada,—by the name of "The Dominion Rolled Plate Company" (Limited), with a total capital stock of seventy-five thousand dollars divided into seven hundred and fifty shares of one hundred dollars.

The smelter at Pilot Bay, B. C., is nearing completion. All the buildings are up and only the machinery, which has been shipped, is now awaited to be put in place. The owners have built a wharf which will stand the wear of time and is classed as one of the finest in British Columbia. The principal source of ore that the Smelting Company will look to is the Blue Belle mine, located about 8 miles up the lake from the smelting point. The mouth of the tunnel is near the water's edge and the ore at a minimum cost can be placed on scows and towed from the smelter wharf. The ore from the Blue Belle is a very fair grade, and as it is found in ledges varying from 60 to 80 feet in width enough can be mined in one day to keep the smelting going 48 hours steady. The Smelting Company will begin early in the spring to build refinery works close to the smelting point. The silver will then have a market in Canada and China, without having to go into the United States and pay a duty on the lead in the bullion.

The Ontario government has appointed a preliminary commission to collect for the consideration of his honor in council and otherwise all such facts obtainable without an oral examination of witnesses, as bear on the several questions which have arisen with respect to direct taxation for municipal and other purposes, and its incidence, and all present and proposed exemptions from taxation, including in regard to all such particulars a comparison of the laws and practice of this province with the laws and practice of Great Britian, the other provinces of the empire, the United States and elsewhere. The commissioners are John R. Cartwright, chairman, Hon. T. W. Anglin and E. Saunders, secretary.

TRADE IN THE MARITIME PROVINCES.

But 200 new vessels, of 30,000 tons, were added to the registry in the Maritime Province during the past year, leaving a net decrease of 40,000 tons. Of this 33,600 was in Nova Scotia and 11,800 in New Brunswick and Prince Edward Island. Notwithstanding the almost total failure of the inshore fisheries, the exports of fish from Halifax to the West Indies increased from 247,500 quintals of cod and 32,200 barrels of pickled fish in 1891, to 262,000 quintals of cod and 45,800 barrels of pickled fish last year. The principal markets for these fish were Jamaica, Porto Rico, Cuba and Demerara. There was a decrease in the imports of molasses of 9,000 puncheons and a decrease of 1,500 hogsheads of sugar, but an increase of 50,000 bags of sugar. As a result of the abolition of the sugar duties the collection of customs revenue decreased $233,000.—Bradstreet's.

LATEST INVENTIONS.

THE POWERS
AUTOMATIC ✣ REGULATOR

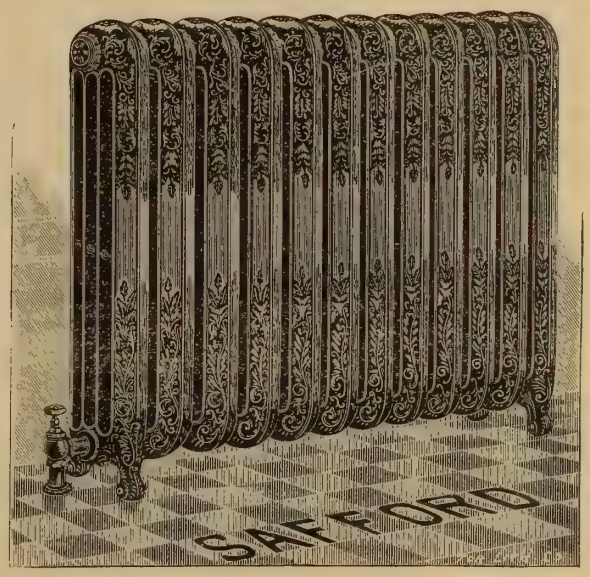


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Powers' Automatic Temperature Regulator
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This cut shows the Powers' Temperature Regulator connected and in use. We guarantee these machines to control "automatically," the Temperature of any dwelling. To any reliable party we send them on approbation for 30 days. Catalogues sent on application.

If you want 60, 65, or 70 degrees of heat in your rooms, this machine is guaranteed to do the work. You buy, it does the rest!



When You Build

A Factory, a Warehouse, or a Dwelling, see that your architect stipulates for the Celebrated

Safford Patent Radiator

FOR HOT WATER AND STEAM HEATING.

You will then enjoy the ACME OF COMFORT.

They are to be found in the largest and best buildings in Canada.

MANUFACTURED ONLY BY

THE TORONTO RADIATOR MFG. CO., LTD., TORONTO, ONT.

St. John, N. B., Montreal, Hamilton, Quebec, Winnipeg, Victoria, B. C.

MARKETS

MONTREAL MARKETS.

MONTREAL, Jan. 6, 1893.

HARDWARE.

The new year has opened, and although nothing important in the way of business is to note it is hoped that the year 1893 will, as is predicted, see a change from the sycle of low prices that has prevailed in iron as in other lines. It looks very much that way at present, for makers are all talking that way and we have already had to note advances in several lines, and this week the meetings of the various branches of the iron trade which are being held at Toronto are expected here to lead to further changes in regard to her iron, nails, etc. As to actual business there is little or none of it. All the jobbers have not completed their stock-taking yet, and in the matter of ordering supplies for forward delivery in the spring it is yet a little too early to talk.

PIG IRON.

There has been positively nothing doing in pig iron and a few car lots would make up the same total of business since the inception of the holidays. We quote nominally ex store. We quote Summerlee, $21; Longloan, $21; Carnbroe $19, and Eglinton $19.50; Nova Scotia Siemens $19 to $19.50.

BAR IRON.

There is no change in the nominal price of bar iron, but the gathering of makers which is being held this week at Toronto is expected to lead to some change.

SCRAP IRON.

Scrap iron is featureless with little business to note. We note the sale of some small lots of cost at $14 and quote wrought $15 to $16 with cost $13 to $14.

TIN PLATES.

There is nothing doing in tin plate, and nothing has been done in the way of forward delivery since the transactions noted some time ago. We quote cokes $3.35 to $3.50, and charcoal $4 to $4.25.

CANADA PLATES.

Canada plates are in small supply and firmly held, but buyers are not very urgent at present. We quote a nominal range of $2.50 to $2.60.

TERNE PLATES.

Ternes are quiet and unchanged on the basis of $7.25 to $7.75.

COPPER, ETC.,

Copper and other metals are without feature. We quote: Copper 13½ to 14c., tin 22½ to 23c., lead $3 to $3.25 for pig and $4 to $4.25 for sheet, antimony 12 to 13c., sheet zinc $5.25 to $6, and spelter $5.25 to $5.75.

NAILS.

The nail market remains the same, but something in the way of new developments is anticipated from the meetings which are being held this week at Toronto.

STEEL WIRE NAILS.

60 dy to 60 dy	per keg	$3.00
49 dy to 30 dy	"	3.25
8 dy	"	3.50
7 dy	"	3.75
6 dy	"	3.75
5 dy	"	4.00
4 dy	"	4.25
3 dy	"	5.00
3 dy fine,		6.25

CHEMICALS.

The week has witnessed no change in chemicals which remain as before.

Bleaching powder,	$3.25	to	$4.00
Bicarb soda,	2.20	to	2.25
Sal soda,	0.90	to	1.10
Caustic soda,	2.50	to	2.75
Soda ash,	1.75	to	2.25
Chlorate potash,	0.22	to	0.25
Alum,	1.35	to	1.55
Copperas,	0.80	to	1.00
Sulphur flour,	2.50	to	3.00
Sulphur roll,	2.25	to	2.70
Sulphate of copper,	4.50	to	5.50
White sugar of lead	0.08	to	0.12
Brown sugar of lead,	0.06	to	0.10
Bich. potash,	0.10	to	0.12
Bich. soda,	0.08	to	0.10
Logwood per 100 lbs.	2.00	to	2.25
Sumac, Sicilian,	65.00	to	70.00
Pruss, potash, yellow	0.27	to	0.30
Cutch,	0.08	to	0.09
Gambier,	0.06½	to	0.07
Madras Indigo	0.60	to	0.80

GLASS.

Glass continues featureless and the nominal basis is $1.35.

OILS AND PAINTS.

There is no change in leads and paints nor is any expected for a week or so. We quote as follows :—Choice brands of paints, Government standard, $5.25; do. No. 1, $4.75; do. No. 2, $4.25; do; No. 3, $3.75; dry white lead, 5c.; red lead, pure, 4¼c.; do. No. 1, 4c.

There has been further excitement in steam refined seal oil which is the only interesting line of the week and that holders are asking all sorts of prices, but we do not cite actual sales at the advance. We quote as follows :— Cod Newfoundland 42½c. steam refined 41 to 42c.; linseed raw 56c.; linseed, boiled 59c.; castor oil 8 to 10c.; cod liver oil, Newfoundland 80 to 90c.; cod liver oil Norway $1.05 to $1.20; turpentine, 50 to 51c. Less 3 per cent. 30 days.

CEMENT.

A few small orders are being received for cements, but the market is still quiet. We quote English brands $2.46 to $2.50 and other grades $2.15 to $2.20.

Firebricks continue in fair demand at $19.50 to $20 per thousand, as to quality.

NAVAL STORES.

The movement in naval stores is small. We quote :—Turpentine, 49 to 50c.; rosins, $2.50 to $5, as to brand; coal tar, $3.75 to $4; cotton waste, 5½c. for colored and 7c. to 10c. for white; oakum, 5½ to 7½c. and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep sea line. Pure Manilla, 12c. for 7-16 and upwards and 13c. for smaller sizes.

PETROLEUM.

There is only a small demand for petroleum at the moment and there is no new feature to report. We quote Canadian 12¼c. to 12½c. at shed in Montreal for round lots and 13½ to 14¼c. for small quantities. Benzine is quoted at 11c. Petrolea, and 13 to 14c. Montreal. American petroleum, 19⅝c. in car lots, 20c in 10-barrel lots, 20¼c. in 5 barrel lots, and 20¾c for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c.; Canadian benzine, 10¾c Petrola; 12¾c. Montreal.

TORONTO MARKETS.

TORONTO, Jan. 6, 1893.

HARDWARE.

Of the hardware trade the chief thing to be said is that travellers are again on the road to bring it out of its hiding places, for no actual business of any consequence is now in sight. If all the business done this week were effaced from the wholesalers' books it would not be a grievous loss. The annual stock-taking has not yet yielded up all its secrets, but by the end of next week all the houses whose commercial year coin-



Milk Can Trimmings.

Creamery Can Trimmings.

Railroad Delivery Can Trimmings.

Milk Cans, Creamery Cans and Delivery Cans made up.

All sizes body stock for Cans and Cheese Vats.

If you have not used our Trimmings a sample order will make you our customer.

THE McCLARY MF'G. CO.,

LONDON, TORONTO, MONTREAL, WINNIPEG

MARKETS.—Continued

cides with the calendar year will know pretty well what they made during 1892. Though the week has been little better than a blank so far as business is concerned, it has not been without it events. The hinge manufacturers have fixed a price on heavy T and strap hinges at 5c. The manufacturers of cut nails, wire nails, wire, rivets, bolts, tacks, screws, horse nails, horse shoes, etc., have been in session since Tuesday. The results of their conferences are not yet fully known, as the meeting are still being held and such of the proceedings as are ripe for publication are given on another page. While the results of stock-taking are not yet known it is recognized that the book debts carried into this year are not as great as those with which the trade entered upon 1892.

METALS.

The week's metal trade is of too small consequence to take notice of except in the way of reference to the position of prices, which remains practically as it was a week ago. The large consuming concerns are not buying. In the first place they are taking stock, and in the second place they see nothing in placing orders now, as prices promise to favor them for some time.

PIG IRON—The prices given in the subjoined circular are about all the information to be obtained on the market. Trade is expected to be active on spring account, for which orders are being sought for British iron.

Rogers, Brown & Co., Buffalo, N.Y, report the Toronto pig iron market as follows: —No opportunity for a marked change in the market conditions has been offered since our last report, as it has been essentially a continuation of the holidays further intensified by very general inventorying. The same careless independence of each other still continues to characterize both buyer and seller, with however a little feverishness on the part of the weaker furnaces. Prices are practically unchanged, with a slight inclination toward a weakness in spot delivery, but with a very satisfactory outlook ahead. We quote on the cash basis f. o. b. cars, Toronto, in bond : IX Foundry Strong Coke Iron, Lake Superior ore, $16.20; 2X Foundry Strong Coke Iron Lake Superior ore, $15.20; 2 Foundry Strong Coke Iron Lake Superior ore, $14.70 ; Jackson County Silvery 1, $18.30 ; Jackson County Silvery 2, $17.80 ; Lake Superior Charcoal, $18 20 ; Southern Soft 1, $14.60 ; Southern Soft 2, $14.10.

BAR IRON AND STEEL The bar iron men who are now meeting here are expected to come to some common basis of quotation. The price of bar iron remains at 2c. Steel is quiet and unchanged.

ANTIMONY—Cookson's is 13¼c., other brands are 12¾c.

CANADA PLATE—Is quiet at $2.65 to $2.90.

COPPER—The market is steady at 13¾ to 14¼c.

GALVANIZED IRON—The trade is of small proportions now. The price quotes from 5¼c.

INGOT TIN—No change of any moment has taken place outside. The price remains at 22¼ to 22½c.

LEAD—The market is inactive at 3¼c.

ZINC—Sheets are 6¼c. in casks and 6½c in broken lots. Spelter is 5c.

TIN PLATES—Are at a standstill. Cokes are $3.75. I C charcoal is $4.25, and for each cross $1 added.

OLD MATERIAL.

The old material market is dull and unchanged. We quote: No. 1 heavy cast scrap 65 to 70c. per 100 ; stove cast scrap 40 to 45c. ; No. 1 wrought scrap 60 to 65c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c. ; new light scrap copper, 8 1-2c. ; heavy scrap copper 9½c. ; old copper bottoms, 8c; light scrap brass 5½c.; heavy yellow scrap brass 7½c. ; heavy red scrap brass 8¼ to 8½c. ; scrap lead 2c. ; scrap zinc, 2½ to 2¾c.; scrap rubber, 2¼ to 2½c. country mixed rags, 80 to 85c. per 100 lbs ; clean dry bones, 50 to 60c. per 100 lbs.; plough shares, 60 to 65c ; burnt cast scrap, 15 to 20c.; railroad iron, 65 to 75c.; malleable scrap, 25c.

PAINTS, OILS AND COLORS.

The state of trade is like that in all lines at this period, very dull. There have been no changes. White lead is 4¼c. Linseed oil in 1 to 3 barrel lots 57½c. freight allowed to delivery station ; 4 to 9 barrel lots, 56½c. delivered ; 15 barrel lots and over, 51½c. at point of shipment. Three cents added to these prices gives the quotation for boiled in the respective lots. Turpentine is 50c. in 1 to 3 barrel lots and 60c. in broken packages.

PETROLEUM.

Canadian refined is unchanged at 14 to 14½c., and all other prices remain at quotations in Prices Currant.

The Petrolia Advertiser reports : Petrolia cruae $1.18 per barrel ; Oil Springs crude $1.19 per barrel. The past week having been devoted to the joys and pleasures extended to us by old Father Xmas, matters of business pertaining to oil have been given a rest. The price of crude is nominally $1.18, but there has been hardly any business doing and it is not much likely there will be until the commencement of the New Year, 1893.

AMERICAN MARKETS.

New York, Jan. 6.—In the ordinary course of events, the last day of the year is an uneventful one in the metal trade, as well as in other branches of business, but, contrary to the usual experience, not a few features deserving of more than passing notice, came to the surface. Not the least among these was a higher range of prices for pig tin, in the face of advices of remarkably heavy shipments from the primary sources of supply during the month of December, and a reduction in prices of corroders, prices of white lead and by-products, although the surface indications were that the temper of the market for the base material had turned somewhat for the better. In other lines nothing particularly new developed. The latest turns in the markets are outlined below.

Pope's circular comes out with statistics making it appear that the stock of pig tin in first hands on this side of the Atlantic is fully 4,500 tons. That was put out as a "bear" argument. Following this came advices to the Metal Exchange that the shipments from the Straits during December amounted to 3,-250 tons (including 2,650 tons to Great Britain and America), another "bear" point. Edward White figures out that the spot stock on this side of the Atlantic is less than 3,500 tons, and the veteran is supported by the calculations of other old timers in the business. This discrepancy is confusing, to say the least of it ; but the fact remains that 150 tons changed hands on Saturday at 19 3-4c. for last half of January delivery, and, while certain transactions were suggestive of a disposition to "hedge" on the part of one leading "bull" operator, the market held up remarkably well in the face of the heavy shipments from the Straits. Had that movement not exceeded all calculations, the year 1892 would probably have ended with a more decided "bullish" complexion to the market.



The fact was imparted at headquarters that the National Lead Company, otherwise known as the "Lead Trust," decided upon a reduction of 1-4c. per pound in list prices for white lead and by-products. This, however, is but a realization of the expected. The cost of crude material has receded to so low a level that a reduction in prices of the pigment has been for some time considered inevitable. Hence there was no shock. To the contrary, the market for pig lead showed remarkably good tone, with 3.85 apparently the lowest rate at which either prompt or near future deliveries could be obtained.

Western spelter continues to be sold by producers' agents at comparatively low prices. That is to say, at figures less than those bid by a few local jobbers for single carload lots, on Metal Exchange terms. There is a suggestion of anomaly in this, but there is really no anomaly, since dealers are carrying little stock, while producers are heavily burdened. On Saturday there were sales at 4.35c , delivered. It is asserted that smelters have been doing a losing business since the price dropped below 4 3-4c., and that production will be curtailed in the immediate future unless values turn for the better. The output the past year, it is estimated, will come closely upon 90,000 tons, an increase of over 100 per cent since 1886, and, on the basis of last official data, fully 4,000 tons surplus remain in smelters' hands, despite the fact that consumption has been above the average, particularly by galvanizers.

Pig tin prices have averaged somewhat lower, in sympathy with a slight downward movement in the London market, but comparatively little buying was done on the decline. The lower prices brought in enough enquiry on Friday to tone matters up a little, however, and 75 tons changed hands on the Metal Exchange, including spot delivery at 19 1-2 to 19.55c for prompt and 19.55 to 19.70c. for January. Last London cable advices quoted £191 5s. for prompt and £90 15s. for futures.

Outside of small sales for prompt delivery there is little doing in copper at present, and the demand is slow. Prices remain quite steady, with 12 1-4c. the lowest for Lake Superior ingot, 11 1-2c. generally asked for common casting, and 10 1-4 nominal quoted for Arizona pig. Prices have remained almost stationary in the London market as well, latest wires quoting merchant bars at £46 17s. 6d. for prompt and £47 5s. for future delivery.

Pig lead has been quiet the past few days, but the market remains firm at

MARKETS—Continued

3,85c. for common western, owing to reserved offering by producers.

Spelter is still urged for sale by some smelters, and round lots of prime western were parted with at 4.35c delivered, near future shipment. Additional quantities were offered at 4.40c., although bids of 4.40c., January and February delivery here, were made on the Metal Exchange.

In tin plate business has been slow, and the market is easy for spot, although quite steady on future deliveries.

SALESROOM TOPICS.

None of the wholesalers are yet in a position to say just exactly how much they added to their wealth by the trade of 1892, as the acres of inventory figures are not yet fully digested. They expect a good deal better showing than the winding up of the trade of 1891 showed. They are unlikely to experience any heavy shock of disappointment.

Last week it was erroneously stated in the Topics that the sale of Bugle window glass was controlled by one firm of wholesalers here. The house in whose favor this mistake was inadvertently made was the first to call our attention to it this week. Nobody controls the Bugle brand, and all sell it.

The McClary Mfg. Co. have a new copper tea kettle on the market. It is stocked in both bright copper and nickel plate. The selling points of this kettle are its weight, its cheapness, its shapeliness and general good appearance.

M. & L. Samuel, Benjamin & Co. are opening a good season's business in the Montana brand of harvest tools, which had a big run last year.

In the description of Ferres & Co's magnificent hardware store, given along with a cut of it in this issue, our readers will find some valuable suggestions regarding the keeping of stock. Such articles as these are in the best sense educative, and we desire to have as many of the same kind as it is possible to get. Our readers are invited to send photographs of their stores and descriptions, or descriptive features, to be used with the same object of benefiting the trade in general.

The annual meetings being held this week are surrounded by privacy. With that there can be no fault found, as any premature information as to the proceedings might cause them to be abortive of results. But the courteous secretary might be allowed enough latitude of discretion to be at liberty to say who are attending and what sections have got through their business. The popular prejudice against combinations of manufacturers is frequently unreasonable, but no cause contributes more to this prejudice than the precautions that are taken by such associations to preserve the utmost secrecy as to their doings.

The manufacturers of heavy T and strap hinges have at last called a halt to the cutting that has been rife for some years. They now require all jobbers to sell at 5c., and guard this price by withholding a rebate.

CO-OPERATION AND BUSINESS PROFITS.

Attempts at co-operation thus far have generally shown a strong if not fatal tendency to failure because of the difficulty of commanding the requisite skill and faithfulness in management. Co-operators are not willing to pay the price for service which their business needs in order to succeed They always stand on the theory that the men who conduct great enterprises get too much for doing the business and operatives too little. In course of time, and usually not very long time, their scheme goes down. This is because in the nature of things no hired person on a salary of fixed amount will all the time keep his wits alive and study into the small hours of the night devising ways and means to make money for other people. They propose in their constitution to take from capital and skill a portion of the profit that has usually been accorded to them and give it to labor; but after thousands of experiments during forty or more years of good business in this country there is hardly a single case of such undoubted success as to warrant the assertion that demonstration of feasibility has been attained. The combined skill of all the co-operators in half a century has produced no concern of magnitude. The almost uniform failures seem to prove that great management must have great compensation, and in endeavoring to get the skill without the pay the co-operators' dream has come to naught.

Now, this is equivalent to saying that the world finds its business can be done at less cost than by co-operation. The latter fails because it is undersold and unable to compete with such skill as gets the better pay. Had Commodore Vanderbilt been content with the salary of a steamboat captain he would never have developed into a great business man and railroad manager. The prospect of great emolument brought into exercise great powers, so that he cheapened transportation to an astonishing degree and yet made money to an astonishing amount. The people who saved four or five dollars in a round trip between Boston and New York, and the people who got their barrel of flour twenty-five cents less because he ran a railway to Chicago, enjoyed the sensation at that time, but, when they saw his fortune, could not refrain from tears to think of the merciless robbery they suffered at his hands. The thing happened and succeeded, not because Vanderbilt was a robber, but by virtue of his giving better terms to people who had to travel and had to eat bread. His inducements were such that he got the business. Suppose he and some others of the same kind of enterprise had not come upon the stage, what would have been the result? Evidently the old ways of business would have continued. We would still be going to Buffalo on canal boats and creeping along the streets of our cities in dilapidated omnibuses, still be doing our journeying in stage coaches over dusty roads and tedious hills at a great sacrifice of time, money, comfort and strength.

The enterprise of the money makers has profited everybody else by exciting production and accumulation. The money makers have taken pay, not out of labor, but out of the increased production and savings which their efforts have secured. Individuals have sometimes suffered. The omnibuses were killed when the horse-car came, and A. T. Stewart did the business of a hundred small shopmen; but the people at large saved time in getting where they were compelled to go in one case, and got what they wanted at less cost in the other. The street railroad makes ten times the money that the stage did, and the people save money and time. The people can do better by buying of Stewart, and therefore they buy. They enriched him to the tune of thirty millions, clean cash. This is a great fact, but it does not show great robbery. It may show the very opposite.

Stewart was in business for about forty years, and for many years sold twenty millions of goods per year. Had he sold but fifteen millions per year at a profit of five per cent., and invested the profit with his usual sagacity, he would have been worth more than thirty millions at the end of his forty years. That he left but thirty millions proves that his profit was not over five per cent. on the average. The margin for labor to gain from is, therefore, in the neighborhood of five per cent., because Stewart has proved that the ordinary man can not part with more than that and continue business. In other words, business stops when the margin goes down much below that rate.

There are some lines of business in which the profit is at times more than five per cent. but, in the long run, the average can not amount to more than that. Competition increases from year to year, and profits tend downward all the time; consequently, it takes more talent and energy to make fortunes now than it did a few years ago. It is not so easy for a laborer to become a boss as it formerly was; and as the chances for rising to bosshood grow less, the hatred of bosses increase. This is a symptom of discontent, and an evidence of the unreasonableness of the philosophy which is at the bottom of the schemes for relief. Capital must be paid, skill must be paid, and, if they are each paid but two per cent. of the accruing profits, one per cent. only remains for labor to get as its share; and this to the laborer whose wages are one dollar a day would amount to but three dollars per year. This is something, to be sure, but as a means of elevating the laboring classes is of no account.—Popular Science Monthly.

Aikenhead & Crombie, hardware merchants, Toronto, have sold out their stock to the Aikenhead Hardware Co.

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AGENTS WANTED.



Best Selling Kitchen Novelty in the Market.
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Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

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To Carriage Hardwaremen



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Hamilton and Toronto

SEWER PIPE

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Stock carried at Toronto Branch.

CAN TELL YOU ALL ABOUT THEM.

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MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
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GREAT AMERICAN CROSS-CUT SAWFILES
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Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

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BRAND "C. I. F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

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LAMPS A SPECIALTY.

All glass, Vase, and Library Lamps, in every hue and design.
Our travellers will call upon you shortly with samples.

LONDON AND BELLEVILLE.

INTERESTING FACTS CONCERNING NICKEL.

The value of commercial nickel depends greatly upon the percentage of pure nickel in the article offered, as well as the absence of certain impurities which, present in any considerable quantities, may render the metal valueless in certain processes. At the commencement of the present year a fair quotation for the best grades of the metal would have been from 57 1-2 to 60 cents per pound. The contract for the year by the agents of the nickel company were, however, made at 55 cents. Since that time the market has been a declining one, and we have recently heard of quotations as low as 45 cents per pound. The following extract from an article on the subject in the New York Tribune of December 24th may be of interest :

Sudbury, Ont., Dec. 18, 1892.

This is the place where the United States Navy department obtains its nickel for the manufacture of nickel-steel armor plates.

Copper was discovered here during the construction of the Canadian Pacific. A number of Cleveland and Akron capitalists became interested, aand on sending samples of the ore for analysis to the Oxford Co., of New York, it was found that nickel existed in large quantities. This "find" was confirmed by the analysis of the Vivian Refining Works, at Swansea, in Wales, and before long Secretary Tracy and Commodore Folger were put in possession of specimens of nickel steel. Up to this the world's supply of nickel, used principally in making nickel silver spoons, forks, coins and plated ware, had come from the Lancaster Gap mine, in Pennsylvania, owned by Joseph Wharton ; and from the mines in the French penal colony of New Caledonia. The New Caledonia nickel is found in beds of serpentine, but the veins are shallow, and, in miner's parlance, not persistent. The ore is mined by primitive methods, convict labor being employed, as well as native and Chinese labor, and carried many miles to the blast furnaces, which are fed with Australian coke and coal. The cost of transportation alone is a heavy item, and the fuel is dear. In 1882 the average price of nickel in the United States was about $1 a pound. The American production was under 300,000 pounds. The price in England was somewhat less, the English supply coming from New Caledonia, the mines of which were opened in 1876. The development of the Sudbury deposits has reduced the price to 50 cents, and when appliances for treating the matte have been established on a large scale, refined nickel can probably be bought for 25 cents or less.

The use of nickel as an alloy of steel gave it great economic importance. The compound is tougher and much more ductile and elastic than steel itself, and does not rust under water. English metallurgists employed it in the manufacture of gun barrels, but the real credit of "bringing out" nickel-steel belongs to the "Navy Department at Washington. The experiments with armor plates instituted by Mr. Tracy soon attracted attention in England. In a memorandum prepared by Lord George Hamilton for the guidance of Parliament in voting the appropriation for the navy it was stated that the armor plates of nickel steel "combined resistance to perforation with freedom from serious cracking," and that extensive orders had been given for nickel armor as the secondary defence of new battleships. Lord George added, "that the experiments with greater thicknesses do not at present place it in so good a relative position ;" but it is understood that his successor has found a 10 1-2 inch plate superior to a 12 inch plate of ordinary armor steel.

The McKinley tariff admits nickel ore and matte free, repealing the old duty of 15 cents per pound. Nearly the whole product of the Sudbury mines has thus far gone to the United States for armor plate purposes. Seven mines have been opened, and others worked to a limited extent. Nickel bearing ore has also been found near Ottawa. The experts say that the supply in the Sudbury country is practically inexhaustible ; they speak of six or seven hundred million tons being in sight, and predict that in a few years 20,000 tons of nickel will be produced annually. Much depends on the Dominion Government. When the more bellicose Tories learned that Secretary Tracy was purchasing Canadian nickel, they began to clamor for the imposition of an export duty, and it is quite possible that the Government may yield to them against its better sense.

The ore is both roasted and smelted. In building a roasting heap a layer of fine ore is placed on a bed of clay and gravel, and covered with eighteen inches of dry pine. Another layer of ore is put on, and then more pine. There are openings for draughts at the sides and ends, and sticks set upright throughout the heap serve as flues. Each heap is kept burning for a month, sometimes for two, those containing the largest proportion of sulphur and iron requiring the longest and fiercest combustion. The furnaces are of the Herreshoff patent. They are made of rolled steel, with a water space of two inches between the outer and inner plates, and cast iron bottoms protected by fire brick. They are elliptical in form, with a diameter ranging from three feet or so to six feet and a half, and are nine feet in heighth to the charging door. A square opening on one side is fitted with fire-clay to a corresponding opening in the furnace, through which the molten mass flows into a water jacketed settling pot that rests on wheels. A charge consists of 2,000 pounds of ore and coke—eight parts of ore to one of coke. The matte bubbles out, causing a series of sharp reports, and is cooled in the pots and shipped to the refining works. From five to eight tons of ore go to the making of a ton of matte. The matte contains from 10 to 20 per cent. of nickel, the other components being copper, iron, sulphur, cobalt and slag. Experiments are being made with new furnaces in the hope of increasing the richness of the matte, so as to save expense in transportation. The contract between the United States Government and the Carnegie and Bethlehem works, where the armor plates are made calls for 31-2 per cent. of nickel in the steel. The plates are forged under steam hammers, bent to shape with hydraulic presses, and cut with saws and planes to fit the place designed for them on the warship. There are no refining works in Canada. In all likelihood Cleveland will be the seat of the industry. The matte will be carried by rail to lake Huron, which is not very far away, and shipped on vessels to Cleveland.

All the untaken mineral lands in this region belong to the Crown. In 1891 an act was passed attaching working conditions to all conveyances from the crown from that date, and exacting a royalty of 3 per cent. on nickel. The royalty does not take effect until seven years after the issue of the patent. Leases can be had at a low figure, and a good deal of land is being taken up by lease. Prospectors have found gold, silver and platinum, but nickel and copper are and will continue to be the chief sources of mineral wealth. The average essay value of the ore is about 3 per cent. of nickel, but a certain amount is lost in smelting. Labor is cheap, and there is an abundance of water and wood for roasting. Connellsville coke is used in the furnaces. It is brought in by the Canadian Pacific, and the cost is heavy. There is no coal in any part of Ontario.

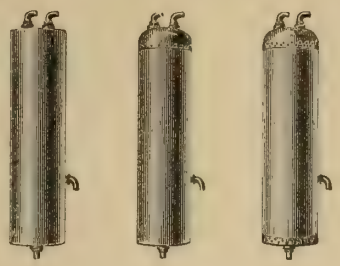


ON GUARD.

Jones stays at home to watch the meter.

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Best Workmanship. Test Guaranteed.



26. 27. 27½.

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Consequent upon the ordinary Range Boiler failing to fill the demands of the Trade, we are making a special Copper Range Boiler, Extra Heavy, of the best Lake Superior Copper, flat bottom, top and bottom Double Riveted, with a guaranteed Hydraulic Test of 200 pounds.

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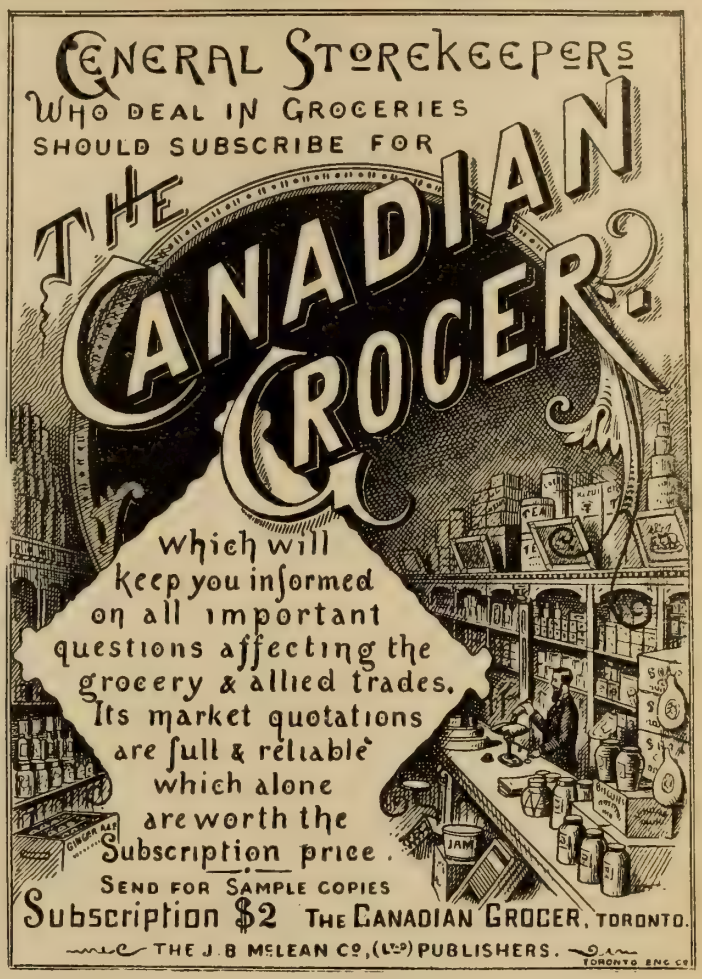
and meets the requirements as called for in the specifications of our leading Architects.

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We have fine line of Axes and Axe Handles, best makes, Also Cross cut Saws, Canadian, American and English manufacture, English Cow Ties, Hand and Machine made Rope Halters, Genuine Acme Skates, Snow Shovels, wood and steel.

Enquiries for quotations or general information will receive prompt attention.

M. & L. SAMUEL, BENJAMIN & CO.,

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THE MONTREAL TRAVELLERS' DINE.

The annual jollification of the Dominion Commercial Travellers' Association took place at the Windsor Hotel in Montreal on Thursday last, and as usual the knights of the gripsack had a regular old-fashioned good time. Two hundred sat down, there being seven tables besides the long guest table for the big guns which ran the full length of the south side of the big hall. The decorations were tasteful as usual, and an efficient orchestra discoursed a choice selection of melodies to aid the digestion of the good things.

The committee who had charge of the dinner may well be congratulated on its success, and all of them—Mr. G. W. L. Cains, the chairman, and Messrs. Fred Birks, W. H. Callahan J. W. Clark, E. H. Copeland, F. S. Cote, M. E. Davis, J. T. Dwyer, Geo. Forbes, Wm. Galbraith, F. Gormley, E. E. Guilbault, Fred Hughes, E. D. Marceau, J. H. Morin, E. G. Painchaud, Wm. Percival, John Rogers, John Taylor, L. A. Wilson and H. W. Wadsworth, the secretary—deserved the congratulations they had received.

President elect Cains saw that matters did not drag, and hi dazzling shirt front was the focus from which all things radiated for the nonce. Assisted by the soft glow of the electric lights and the other shirt fronts it cast a pleasing reflection over every visage, and as there were presumably no dyspeptics present the general effect was gratifying beyond description. The chairman was supported on his left by his worship the Mayor, and Solicitor-General Curran was on the right. The other guests were Lieut.-Col. Stevenson, United States Consul-General Knapp, Edgar Judge, Judge A. H. Chattain, corporation counsel of Chicago; N. J. Power, general passenger agent, Grand Trunk railway; Thomas W. Blair, Intercolonial railway; J. H. Copeland, Chas. Gurd, David Watson, James J Carmody, T. Simmons, Wm. Buell, W. Percival, F. H Dent, H. W. Wadsworth and J. E. Wright, many of the guests being at the vice-chairmen's tables, which were presided over by Messrs. John Rogers, L. A. Wilson, J. N. Morin, W. H. Callahan, E. D. Marceau, George Forbes, and De Grandpre.

Among the others who sent their regrets were His Excellency Lord Stanley, Governor-General; Sir John Thompson, Sir Donald A. Smith, Hon. J. A. Chapleau, Hon. Wilfrid Laurier, Mr. A. T. Lepine, M.P.; Hon. L. O. Taillon, Hon. J. S. Hall, Hon. A. W. Morris, M.L.A.; Mr. O. M. Auge, M.L.A.; the presidents of the Board of Trade and Chambre of Commerce; the Mayor of Portland, president Maine association, secretary Maine association, and Hon. W. H. Looney, Messrs. J. H. Dow and M. J. Pickering, of Portland, and presidents of sister associations in Canada.

After the usual loyal toast of the Queen had been drunk with full honors, telegrams of kindly greeting were read from the London association, the Toronto association, and from Mr. Fred Birks, their last secretary, and from twenty absent brothers, regretting they could not attend.

The toast of His Excellency followed, and then the President of the United States was not forgotten, although the present occupant is not the one Canadians just exactly like. But defeat is a galling thing, and the drummers were willing to receive him, and when Consul-General Knapp rose to respond amid the concluding strains of "The Star-Spangled Banner," his reception was too enthusiastic to leave any doubts in the minds of any American visitor as to the feelings of the boys towards their cousins across the border, no matter what disgruntled office-holders might do. The Consul-General, after returning thanks for the invitation, said that the commercial travellers of Montreal were an honor to their calling and to the Dominion. He was glad to be able to say also that since he was their guest two years ago they had increased in numbers from 2,100 to 2,400 and now had a surplus of $12,500. He was very grateful for the grand manner in which they had received the name of his honored chief, the President of the United States; it showed that there was the best of good will between the two countries, and it would always be hoped ,continue so. For evidence is advancing that commerce, more than ever before, is the means of bringing closer together the two countries, and the commercial traveller is one of the classes who is doing much towards this. Canada and the United States are kindred countries. The people of both are joined together to make two great nations and we can join in singing together "Hail Columbia" and "God Save the Queen."

Judge Chattain responded to the toast to "Our American Cousins," in a very able speech, which was greeted with cheers from time to time. In opening he said that this was an industrial age, and a complex one, but the voice of the serious people of the United States was not in favor of annexation, as we think there is plenty of room on this continent north of Mexico for two great nations. Fine economic questions may often come before us that may cause excitement for a while, but if these questions are kept away from political demagogy and left to the commercial interests to settle there will be no trouble. The commercial spirit of England has made it the great nation that it is. It was that spirit that brought up the supremacy of its army and navy. It was that same spirit that has made Montreal the great city it is to-day. It was the same spirit that permitted Chicago to secure the World's Fair.

In proposing the toast of the commercial interests of Canada, Vice-President Morin remarked that although the past two years had not been all that they should be, he felt sure the year they were just entering would bring better things. He called on Mr. Judge to respond.

Mr. Judge did so in his usual eloquent manner. He said it was always customary at this dinner that an officer of the Board of Trade should reply, and he regretted that they had not called upon a more able speaker. As the vice-president had said, trade was not as bright just now as it should be, and bankers were not having big balances. In speaking of the commercial interests of Canada, Mr. Judge said he could look back to the time when the dinner did not exist, and in conclusion said he could heartily praise the travellers for being among the foremost to open up the country and thereby develop it.

Mr. L. A. Wilson in proposing the toast of the forwarding interests, dwelt upon the consideration with which the commercial travellers had been treated by them. Mr. Poirier resonded in appropriate terms, expressing the sincere hope that a feeling of amity would always exist between commercial travellers and the forwarding companies.

The sister associations, by Mr. George Forbes, followed, calling for a few remarks in response by Mr. D. Morton, of New York, and Mr. John Rogers proposed "Our Guests." In referring to the railroad men he called upon them for that "little two cents," which hit the boys right where they lived, for it was greeted with prolonged cheers.

The first guest to rise in response was the Hon. J. J. Curran, who was greeted with hearty applause, and started in by saying that this was not the first time he had been their guest, but on this occasion he had a greater pleasure in being with them, especially on account of the way in which they had greeted his name and the honored chieftain who had seen fit to promote him. Mr. Curran made a very patriotic speech on Canada as a nation. As his chief had been referred to, he might say that even if Sir John Thompson had retired to the Supreme Bench he would have been able to show the commercial interests that his name was not unknown in acts to their benebenefit. The Banks and Banking Act, the Bills of Exchange and Promissory Notes Act, and last but not least, the Criminal Code of 1892, which protected not only the commercial interests, but the homes and families of Canadians, and was a perfect work of statesmanship from beginning to end, must be credited to him. Then the speaker referred to the United States, not in a derogatory way, but as a nation of whom we were proud to be friends, but at the same time were not afraid of. This was greeted with cheers.

The "Army and Navy and Volunteers," "The Ladies" and "The Press" followed, calling for speeches from Lieut.-Col. Stevenson, W. H. Callahan, and E. D. Marceau, and the gathering broke up in the wee sma' hours with "God Save the Queen."

BUSINESS FAILURES IN CANADA.

In the Dominion of Canada, including Newfoundland, the total number of failures reported for 1892 is 1,682, a decrease of 9 per cent. compared with the preceding year. The decline in volume of liabilities, however, is much heavier, from $14,884,000 to $11,603,000, or 22 per cent. Increases in number of failures are reported from Nova Scotia, Manitoba and British Columbia, where gross liabilities of those failing are likewise large as compared with 1891. Ontario and Quebec each show a gratifying reduction in the number of business failures, together with gross liabilities.

The report of failures in the Dominion to Bradstreet's this year and last in detail is as follows:

	No. of Failures.		Liabilities.	
	1892.	1891.	1892.	1891.
Ontario	716	843	$3,652,959	$5,371,000
Quebec	565	680	5,273,547	7,538,000
New Brunswick	85	93	549,002	599,000
Nova Scotia	153	122	956,830	591,000
Prince Edward I'd	8	10	113,000	106,000
Newfoundland	3	7	37,000	96,000
Manitoba	62	51	517,400	340,000
N. W. Territories	16	17	51,521	159,000
British Columbia	71	23	452,461	81,000
Total	1,682	1,846	$11,603,210	$14,884,000

The total number of failures for 1892 includes three from St. Pierre and Miquion.—Bradstreet's.

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KEEPING EVERLAST-INGLY AT IT BRINGS SUCCESS.



THE secret of successful advertising is to make the advertisement as interesting as the editorial page, or the Market Reports. Change it regularly, put life in it and you will soon discover why advertising pays. Is it not worth a trial? Tell your customers and probable buyers through your advertisement what your travellers would tell them, and see the difference in the results. Our subscribers tell us that they read the advertisements that are changed regularly with as much interest as any part of the paper, because they contain much valuable information of new goods, where they may be had and of changes in prices.



WHAT OTHERS HAVE DONE OTHERS CAN DO.

SUCCESSFUL MEN ARE ALWAYS SAFE GUIDES.

Have You Ever Bought Our Razor Strops?

They Are Better And Cheaper Than Imported Goods.

Send Us A Trial Order.

The Hemming Bros. Co., Ltd.,
76 York Street,
TORONTO.

Business Changes

SALES MADE OR PENDING.

T. M. Andrews, hardware merchant, Quebec, advertises his business for sale.

George Devlin, general merchant, Perth, Ont., has sold out to G. A. Bateman.

John M. Dunbar, general merchant, Hopewell, N.S., advertises his business for sale.

The general store stock of Alfred Limoges, St. Eustache, Que., is advertised for sale by tender.

P. McGillivray, general merchant, Altamont, N. W. T., has sold out to John & Henry Sampson.

The general store stock of the late R. Parker, Hillsdale, Ont., is advertised to be sold by auction on the 10th inst.

PARTNERSHIPS FORMED AND DISSOLVED.

Gallant and Deagle, general merchants, Margaree, N. S., have dissolved.

Alexandre Legure and Gustave Beauchamp are registered proprietors in the firm Legure & Beauchamp, traders, Ontario.

DEATHS.

D. J. Park, of Park Bros., Chatham Engine Works, is dead.

FIRES.

The Alpha Rubber Co., Montreal, is burnt out. Insured.

N. B. Norton & Co., hardware merchants, Charlottetown, P. E. I., are burnt out. Partially insured.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

Enos Awalt, general merchant, Hemford, N. S,. has assigned.

Stone & Co., general merchants, Rapid City, Man., have assigned.

Edouard Lesage, general merchant, St. Leon, Quebec., has assigned.

J. D. Buchanan, general merchant, Lake Megantic, Que., has assigned.

W. J. Christie, general merchant, Little Bras D'or, N.S. has assigned.

Newberry & Wells, general merchants, Melita, N. W. T., have assigned.

A. E. Joncas, trader, Berthier, Que., is offering to compromise at 25c. in the dollar.

Geo. Williams, general merchant, Manotick, Ont., has assigned to P. Larmouth, Ottawa.

Howard C Markell, general merchant, Northfield, Ont., has assigned to Oscar Fulton.

L. N. St. Laurent, general merchant, Rimouski, Que., has called for a meeting of his creditors.

Douglas & McNiece, dealers in crockery and glassware, Montreal, have transferred their stock to D. Yuile in trust.

THE WOOD NICKEL-STEEL PROCESS

Since the adoption of nickel-steel armorplate by the United States government, methods of incorporating nickel with steel have been diligently studied. Among those who have taken out patents in this line is E. P. Wood, of the Homestead Steel Works, who has assigned his patent rights to the Carnegie Steel Company. The process differs from the open hearth, or Bessemer, process in the manner of introducing the nickel, and consists in the reduction of the nickel oxide in the presence of the fused iron or steel either before or after the decarburization of the pig metal. The nickel oxide used may be any of the natural ores, or what is described as "artificial" nickel ore, the latter being preferable on account of the small percentage of nickel in the natural ores. The artificial ore contains, iron 23.87 per cent., nickel 48.23, phosphorous 0.007, silica .19, sulphur 0.26, and oxygen and earthy matter 25.72. The nickel to be added is prepared by grinding the ore and then milling it with powdered charcoal or coke, three parts of nickel oxide requiring one part of carbon. The object of the carbon being to reduce the nickel oxide, it is necessary to know the amount of the latter in the ore used. The nickel and carbon being accurately mixed, are made plastic with tar or silicate of soda and then formed into bricks and pressed solid. The object of pressing is to make the materials so coherent that they can be kept immersed in the molten metal and further to aid this the bricks should be thoroughly dry. Knowing the percentage of nickel in the ore, that in the bricks can be readily calculated, so that as many bricks may be added as is necessary to produce a product of any required composition. Allowance should be made for the nickel which passes into the slag, which is generally about 10 per cent. of that used.

The application of the process to the open-hearth furnace is thus described: The furnace being properly heated, a proper number of nickel bricks are placed on the hearth, mixed with the charge of pig metal, which is so placed as to prevent the bricks from rising to the surface of the metal as it melts, after which the open-hearth process is carried on in the usual way, the decarburization of the pig metal and its subsequent re-carburization, together with the addition of spiegeleisen or ferro-manganese, being conducted in the usual manner. The effect of introducing the nickel is that the oxide of nickel is reduced in the presence of the melting or melted pig metal, and the metallic nickel thus produced becomes intimately mixed with the iron, while the earthy and foreign matter of the nickel ore is melted and unites with the slag. The process applies also to the use of the nickel bricks in the basic process of decarburizing pig metal without any other charge than the addition of the nickel bricks. It is preferable in the basic process to add the bricks after the addition of the limestone and before charging the pig iron so as to bring the nickel bricks into more intimate contact with the melting iron or steel. When used in connection with the Bessemer process, the nickel bricks are introduced into the iron ladel as the molten pig is being charged into the converter, if the iron be hot enough, but as this is usually not the case, it is better to introduce the nickel bricks into the Bessemer converter before the molten iron is charged, no other change in the conduct of the Bessemer process being required; or the nickel bricks may be added to the Bessemer metal in the steel ladle at the end of the process, the steel being blown hot enough to cause the complete fusion of the bricks, in which case the nickel ore will at once be converted into metallic nickel and absorbed by the liquid steel.—Iron Industry Gazette.

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MANUFACTURERS OF





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OAKVILLE, ONTARIO.

OFFICES: 100-102 Reade St., New York, U.S.A.

KEARNEY & FOOT CO

WORKS: Paterson, New Jersey, U.S.A.

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Superior quality fully guaranteed.

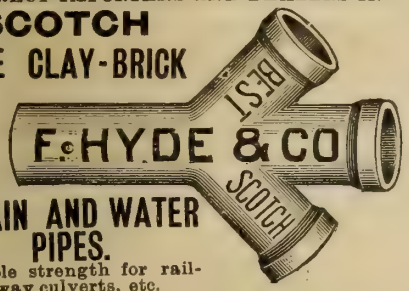
CAPACITY OF WORKS: 1,200 doz. per day.



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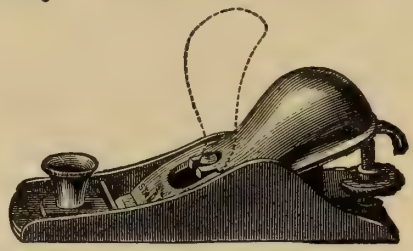
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SCOTCH FIRE CLAY-BRICK



DRAIN AND WATER PIPES.
Double strength for railway culverts, etc.
Sewer Bottoms or Invert Blocks, Cement.
NOTE.—Only pure SCOTCH unglazed Fire Clay Linings and pipes are kept in stock; any other quality is worthless for resisting heat and frost. Correspondence invited. Quotations promptly furnished.
OFFICE: 31 Wellington St., Montreal.

IMPROVED
Labor-Saving
CARPENTERS'
TOOLS.
STANLEY
RULE & LEVEL CO.
New Britain, Conn.
SOLD BY ALL
Hardware Dealers.

Stanley's Knuckle-Joint Block Plane.



The knuckle-joint in the cap makes it a lever, too; and the act of placing the cap in position, will also clamp the cutter securely in its seat.
No. 18. Knuckle-Joint Plane, 6 in. Length, 1¾in. Cutter, Lateral Adjustment, Nickel Plated Trimmings.. **$1.75**

The Old Wooden Bucket Must Go

Indurated Fibre Ware.



NO HOOPS, NO JOINTS, CANNOT LEAK, SWELL, OR WATER SOAK.

The E. B. EDDY CO.
MAMMOTH WORKS
HULL, CANADA.

Jessop's Steel.

This brand which has earned the title of the "Standard Tool Steel of the world," can always be relied upon by consumers. A full assortment of best and medium qualities kept in stock, at lowest prices.

A. C. LESLIE & CO., Agents,

445 St. Paul St. Montreal. 18 Front St. West, Toronto.

"Burham"

PORTLAND CEMENT.

BEST ENGLISH BRAND MADE.

Canadian Consignees :

McRAE & Co.,

Ottawa and Toronto.

MUNN'S LIQUID GLUE.

The Strongest, Cheapest and Best.

Put up in all sizes. Circular and price list on application. KENNEDY BROS., Agents, 101 Bay St., Toronto.

For sale by the following wholesale houses in Toronto :—

H. S. HOWLAND, SONS & CO.
THE HEMMING BROS. CO.
THE ART METROPOLE.
WILLIAM BROWN, Carriage Hardware.

SAY !

If your Jobber can't supply

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Write

W. S. McGREGOR, Agents,

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Excellent Quality ! Reasonable Price !



ADAMS-MARS BEST.

GALVANIZED SHEET IRON. SP

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Letters translated from or written in any foreign language.

I H. CAMERON, 10 Front St. E

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—
56 and 28 lb ingots, per lb .. 24, 25½
Strip .... " 25, 26½

Tin Plates—*Charcoal Plates, Bright.*

Bradley M.L.S.	Per box	
I.C., usual sizes	$6 00	$6 25
I.X., "	7 25	7 50
I.X.X., "	8 50	8 75
Raven & P.D. Grades—		
I.C., usual sizes	4 50	4 75
I.X., "	5 50	5 75
I.X.X., "	6 50	6 75
I.XXX., "	8 50	8 75
D.C., 12½ x 17	4 00	4 25
D.X.,	5 00	5 25
D.X.X. "	6 00	6 25

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be purchased of 10c. per box less.

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets ..	8 00	8 25
I.X. Terne Tin	10 00	10 25
Old process I.C.	....	13 00
" " I.X.	....	16 00

Charcoal Tin Boiler Plates.

Cookley Grade—	Per lb.
I.X.X., 14x56, 50 sheet bxs " 14x60, " " 14x65,	6½c, 7c.

Tinned Plates

72x30 up to 24 gauge	6½	6¾
26 "	7	7¼
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Iron, per 100 lb ..	$2 05	2 15
Refined " " ..	2 35	2 65
Horse Shoe " " ..	2 60	2 75
Band " " ..	2 50	2 60
Hoop " " ..	....	2 60
Swedish " " ..	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets...	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inc	$2 45
16 "	2 35
¾ " and thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2⅞, 2¾
26 "	3, 3¼
28 "	, 3½

Canada Plates.

Blaina	½ bright	2 65	2 70
Abercarne		2 65	2 70
Lion		2 65	2 85

Iron Pipe.

Wrought 62½ per cent.
Galvanized, 35 to 37½ per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head		
16 to 24 gauge, per lb	5,	5½
26 gauge, "	5½,	5¾
28 " "	5¾,	5¾
Gordon Crown—		
16 to 24 gauge, per lb	5,	5½
26 gauge, "	5½,	5¾
28 " "	5¾,	5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	5¾	6
" ¼ " "	5½	5¾
" 5-16 " "	4¾	5
" ⅜ " "	4⅜	4⅝
" 7-16 " "	4¼	4½
" ½ " "	4	4¼
" ⅝ " "		3¾
" ¾ " "		3 1-5
Trace, per doz. pairs	$3 60	5 90
German coil, per 100 ft	1 65	2 70
Jack chain, iron, single, per doz yards	0 13	0 50
Jack chain, double, per doz yards	0 15	....
Jack chain, brass, single, per doz yards	0 20	1 10

Copper—*Ingot.*

English B.S "	0 14	0 14¼
Lake Superior	0 13	0 13¼

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22	$0 25
" round & square 1 to 2 in	0 20	0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16	0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17	0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26	0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb..	0 20	0 22
" 35 to 45 " " ..	0 19	0 20
" 50 lb and above per lb	0 18	0 19

Boiler & T. K. Pitts.

Plain Tinned per lb.	....	0 21
Spun " "	....	0 25

Wire.

Pure, in coils—		
From 1 to 20 gauge	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20	0 21
" " 27 to 30 " ..	0 23	0 25
" " 30 and up	0 26	0 28
Sheets, hard-rolled 2x4 ft...	0 21	0 23

Zinc Spelter.

Foreign, per lb	0 06½	0 06¾
Domestic "	0 06¾	0 06¾

Zinc Sheet.

5 cwt casks	0 06	0 06½
Part casks	0 06½	0 06¾

Lead.

Imported Pig, per lb	0 03½	0 03¾
Domestic "	....	0 03¾
Bar, 1 pound	.. .	0 05
Sheets, 2½ lbs, per square ft, by roll	0 04¾	0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¾	0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

Half-and-half (guar.) per lb	0 17	0 19
Standard	0 16	0 18

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½	0 14
Other makes "	0 13	0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per lb	4½	5
No. 1 Do "	0	5
No. 2 Do "	0	4½
No. 3 Do "	0	4

Prepared Paints.

(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	....	$1 10
2nd qualities "	....	0 90

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 14

Colors, Dry

Yellow Ochre (J.C.) bbls, p. cwt	1 35	1 40
" " (J.F.L.S.) " "		2 75
Venetian Red (R.C.2) " "		1 50
Ven Red, Cookson's "	1 80	1 90
English Oxides per cwt		3 25
American " " "		2 25
Canadian " " "		1 75
Paris Green, per lb	0 13	0 15
Burnt Sienna, per lb		0 08½
Burnt Umber "		0 05
do pure		0 06
Drop Black "		0 09
Chrome Yellows "		0 12
" " Lemon pure,		
8 lb. tins, per lb		0 19
Chrome Greens "		0 12
Golden Ochre		0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 65
Extra "	1 00
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 90
No. 1 Carriage "	1 50
Gold Size Japan "	1 40
Pure Orange Shellac "	2 00
Hard Oil Finish "	1 50

Linseed Oil (in bbls)

Raw, per gal	0 56½	0 57½
Boiled "	0 59½	0 60½

Turpentine (in bbls)

Selected Packages, per gal	0 50

Castor Oil.

Best, per lb	0 07½	0 08½

Cod Oil.

Cod Oil, per gal.	....	0 48

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet makers	0 17	0 18
White	0 16	0 17

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer-
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per 1 b
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge 0 25
Thin card wads in boxes of 1000 each, 8 gauge 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge 1 15
9 and 10 gauges 1 40
7 and 8 gauges 1 65
5 and 6 gauges 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each 4 50

Augers.

Gilmour's, discount 50, 50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 30 and 5 off Revised list to 35 per cent
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 37½, 40 per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 to 65 and 5 per cent

Wrought Steel.

Fast Joint, dis. 65 to 65 & 5 pc.,
Loose Pins, " 65 to 65 & 5 pc.,
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—Socket, Framing and Firmer

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 40 to 45 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.40	2.70	2.00	
26 to 40	1.50	2.90	2.25	
41 to 56		3.30		5.00
57 to 60		3.60		5.50
61 to 70		3.90		6.00
71 to 80		4.50		6.75
81 to 85		5.20		7.50
86 to 90		5.90		8.50
91 to 95				9.50
96 to 100				10.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 30
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 90
Enamelled " 0 55 1 20

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c.

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross..... 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p.c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 4½ 0 05
Screw and Strap, per lb .. 0 03½ 0 04½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

BOWMAN, KENNEDY & CO.,

LONDON, ONT.

Large consignment of WINDOW GLASS via "Pickhuben," just unloading at our Warehouses.

Full assortment of sizes now on hand. Prompt shipment Guaranteed.

SEND US YOUR ORDERS AND THEY WILL HAVE GOOD ATTENTION.

Wrought Hooks and Staples, Amer- dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 40 0 45
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Pad- ock, Am. per gross..... 1 60 4 75

Knobs.

Door, japanned, and N.P , Can. list dis, 50 p.c.
Bronze, Berlin, per doz .. 2 75 3 25
ronze, Gem, " 6 00 9 00
ass " 8 75 10 00
hutter, porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)
1. Either Canada or American Pattern.
Basis—50 to 60 dy..... 2 30
40dy..... 2 35
30 dy..... 2 40
20, 16 & 12 dy..... 2 45
10 dy..... 2 50
8 & 9 dy..... 2 55
6 & 7 dy..... 2 70
2. American Pattern Only
from 4 to 5 dy 2 90
3 dy. (lath)..... 3 30
3. Canada Pattern Only
from 4 to 5 dy 2 80
3 dy. (lath)..... 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 5 per cent. cash in 30 days.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross
Square, round and octa- gon 3 38 4 00
Diamond..... 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz..... ... 2 25 3 25

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Star R & L Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... .... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3½

Rakes.

Cast Steel and Malleable Canadian list dis. 40 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	22	25
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 0 70 0 75
" N P. " 1 00 1 10

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 30 and 5 p.c. to 35 p.c
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent.
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 30 to 35 per cent.
Hack, complete, each.... 1 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H. " 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P , dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P,, 70 per cent.

Sheaves

Sliding Door, per set 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, p. gro. 1 65 5 50
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia ½ gross boxes..... 3 25
" ¼ and ⅛ gross boxes per gross net cash 12 00

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4½ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2, " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 50 per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 50 per cent.
" Tacks, 45 per cent.
Trunk and Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz ..... 1 [illegible] 2 50

Tinner's Shears and Snips

P. S. & W., 10 p.c. advance on American list.
Canadian net list.

Tinware.

Stamped, dis. Assn list, 70, and 12½ per cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Iron and Steel, bright, annealed, oiled, coppered, galvanized, spring, nail, bolt, rivet, etc.
15 per cent. f.o.b Montreal, off revised list, Dec. 1, '92.
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " " } 4½ 4¾
" Plain twist, 2&3 wires
" Steel thorn and rib- bon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Ly- man," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p.100 sq ft 1 90 2 00

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 30 to 32½ p. c.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3
" S., per doz..... 5 80 7 0
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR HOLLOW WARE.

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR KNIVES, FORKS, SPOONS.

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

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ART COUNTESS BASE BURNER

WITH AND WITHOUT OVEN ATTACHMENT.



Over 15,000 now in actual use, and our sales this year larger than ever.

This is undoubtedly the most beautiful and perfect working Heater ever manufactured.

EVERY STOVE A DOUBLE HEATER.

By a patented device, the cold air usually found along the floors or under the base is drawn up through circulating air flues and over the fire, and is then thrown out at the top of Stove into the room, or may be conveyed to any other room by attaching a pipe to the cellar.

FOR SALE BY ALL LEADING DEALERS IN THE DOMINION.

E. & C. GURNEY CO.

TORONTO, ONT.

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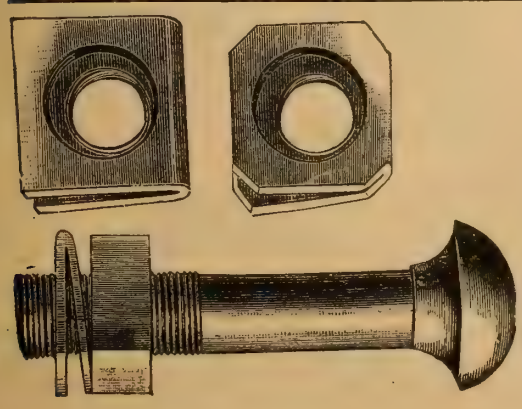
THAT THERE IS A STEADY INCREASING DEMAND

FOR GLOBE FILES?

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GLOBE FILE MFG. CO.,

WALTER GROSE, Montreal, P. Q. **PORT HOPE, ONT.**



THE THOMAS NUT LOCK

Patented 1890.)

Absolutely the only effective NUT LOCK applicable to all Railway purposes, Machinery, Agricultural Implements, Carriages, and all Bolts where Nuts work loose, of any size or in any position, without changing bolts as now in use. Manufactured from best spring steel.

The Thomas Nut Lock Co.

Moncton, N. B.

"IDEAS FOR HARDWARE MERCHANTS,"

JUST PUBLISHED

PRICE $1.00 POSTPAID.

This novel book is the only book ever written especially for Hardware men, and every Hardware Merchant will find it of decided help and of intrinsic value. It tells HOW TO ADVERTISE a Hardware Store. HOW TO DRESS a Hardware Store Window. HOW TO SELECT Seasonable Goods and HOW TO DISPLAY them to best Advantage. HOW TO MAKE a success with Hardware. HOW TO COMPETE with "Department Stores." HOW TO TURN a Credit Business into a Cash Business. HOW TO AVOID Bad Debts and Increase Trade. HOW TO SECURE Low Quotations from Jobbers and Manufacturers. HOW TO ARRANGE the Fixtures in a Hardware Store. HOW TO TREAT and Manage Clerks. HOW TO KEEP your Accounts with the Least Labor. HOW TO SYSTEMATIZE your Business and Arrange its Details. HOW TO ARRANGE Price Lists. HOW TO MEET close Competitors and HOW TO BE ENTERPRISING. HOW TO PROPERLY proportion Store Expenses, and thousands of practical hints for Hardware Merchants

"Ideas for Hardware Merchants" sent postpaid upon receipt of price.

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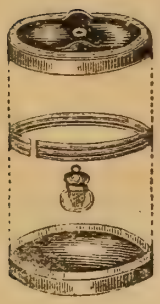
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Send Ten Cents to the HARDWARE PUBLISHING CO. for a copy of B. F. Cumming's Prize Essay on "How to Sell Goods.

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MILK CAN TRIMMINGS



Send for new lists, now ready.

We will furnish this year, the best quality of Can Trimmings ever offered in Canada. Orders solicited for early shipment.

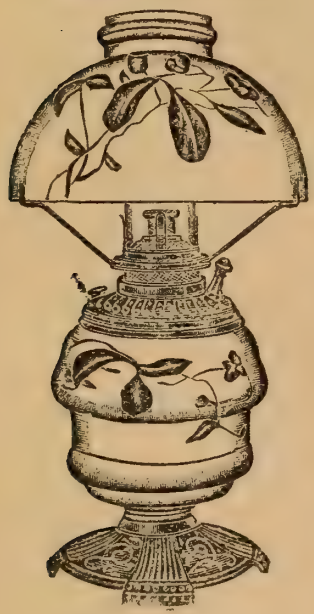


Thos. Davidson & Co., Montreal.

IF YOU KNOW NOTHING ABOUT

THE "PITTSBURGH" LAMP,

BANQUET, HANGING.



VASE & PIANO.

It is you we wish to know that:—

We Have Direct Communication

with all who do, and they find that

THE LIGHT IT AFFORDS SURPASSES ALL OTHERS

(Electricity or Gas.)

In the way of LIGHTING CHURCHES, STORES, or PRIVATE HOUSES.

Write for Calalogue.

Gowans, Kent & Co.,

Sole Wholesale Agents for Canada,

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ONLY RUBBER FACTORY IN ONTARIO.

H. D. WARREN, Pres and Treas. CHAS. N. CANDEE, Sec'y

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OF TORONTO, LTD.



Only makers of Wire Wound Hose on which the wire does not require to be fastened to couplings, or by other clumsy device to prevent coming loose from the hose. Ours may be cut at any point. Wire applied to any Hose up to 3 inch diameter.

Our Garden Hose is all HAND-MADE, and is The Best Manufactured Record Unparalled Sold under guarantee and NOT ONE DEFECTIVE SECTION reported during this season.

Belting, Fire Hose, and Mechanical Rubber Goods of all kinds. Mackintosh and Rubber Clothing. Factories, (Parkdale), Toronto.

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BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11:

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern; so that we have the somewhat singular sight of a combine reducing prices."

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, JANUARY 14, 1893. No. 2.

NEW YORK ALUMINUM BEARING METAL CO.

NEW YORK OFFICE, N. E. Cor. Washington and Cortlandt Sts. CHICAGO OFFICE, 12 Pacific Avenue.
MONTREAL OFFICE, H. McLaren & Co., Agents.

MANUFACTURERS OF

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TRADE MARK.

"Genuine Babbit," - -	Price	30c.	per lb.	f.o.b.	New York
"Champion Metal," - -		25c.	"	"	" "
"Aluminum Bearing Metal,"		18c.	"	"	" "
"Big 4 Babbitt," - -		14c.	"	"	" "
"Pyramid Metal," - -		10c.	"	"	" "
"Mystic Metal," - - -		8c.	"	"	" "

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30 AND 32 St. Helen Street
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WE WOULD . .
NOT SPEND . .
GOOD MONEY .
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FINE MECHANICS' TOOLS - -

Lathes, Bench Vises, Screw Plates, Chucks, Drills, Reamers, Etc.

HOUSE FURNISHINGS - -

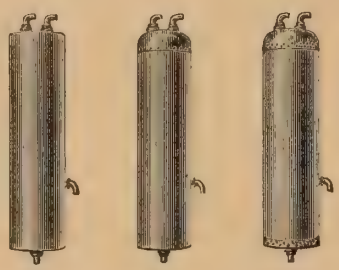
Success Water Filters, Agate Ware, Puritan Cookers, Iron and Brass - Bedsteads, Etc.

RICE LEWIS & SON, LIMITED,

——TORONTO.

BOOTH'S COPPER RANGE BOILERS

Best Workmanship.



26. 27. 27½.

Test Guaranteed.

IMPORTANT NOTICE.

Consequent upon the ordinary Range Boiler failing to fill the demands of the Trade, we are making a special Copper Range Boiler, Extra Heavy, of the best Lake Superior Copper, flat bottom, top and bottom Double Riveted, with a guaranteed Hydraulic Test of 200 pounds.

This Boiler is known as

"Booth's 27½ Copper Range Boiler,"

and meets the requirements as called for in the specifications of our leading Architects.

Correspondence solicited and Price Lists on application.

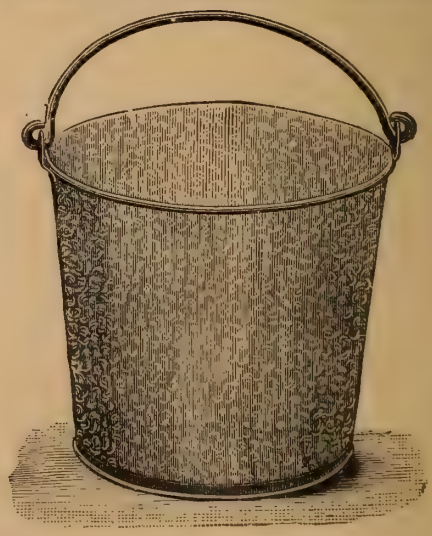
THE BOOTH COPPER CO.,

Coppersmiths, 165 York St., TORONTO, ONT.

GEO. BOOTH, Proprietor, formerly Booth & Son.

GALVANIZED STEEL BUCKETS.

IMPROVED PATTERN.



IMPROVED PATTERN.

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They are superior to the ordinary Flaring English Bucket, being of greater capacity.

They are stronger in shape, consequently more durable.

They will not slop over or tip over, owing to the wide bottom.

They nest very close and firm, which protects them in shipping.

The rim is in one piece with the body, consequently cannot get knocked off.

They are galvanized and not lead coated.

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HARDWARE

ORGAN OF THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

PUBLISHED WEEKLY—SUBSCRIPTION $2.00 A YEAR.

Vol. V. TORONTO, JANUARY 14, 1893 No. 2

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

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FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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Advertisers and Subscribers may have their correspondence addressed to the care of any of our offices and hey are invited to use them at any time. At the Head office, Toronto, a place is set apart where they can see all the latest newspapers and the latest issues of trade papers from all parts of the world, where they can do their correspondence or obtain any information. Parcels may also be directed to the Head office.

The five per cent. discount for cash promises soon to be a lingering survival in the hardware trade, and its tenure even as a survival is not likely to be a long one. Within the past year there has been a steady movement towards a basis of 3 per cent. for cash, and on several lines of four months goods the manufacturers made this reduction. The associations which have been in session here for the past ten days made a considerable enlargement of the list on which 3 per cent. was already the cash discount, and now there are none of the goods comprehended in the interests of these associations on which 5 per cent. is allowed Up to the beginning of last year the cash discount was quite uniformly 5 per cent. on four months goods, and declined to 3 per cent. for the most part only on six months goods. The allowance of 5 per cent. for the use of money three months—as payment in 30 days was equivalent to cash—has certainly not been warranted by the state of the money market for some time or by the margin of profit on merchandise. The only reason that could be advanced for the concession of a discount that was out of due relation to the commercial and financial conditions of the time was the necessity for some check to the credit system. A liberal credit system seemed to call for a liberal discount. But while the liberal discount has undoubtedly been a factor in the cultivation of a cash trade, it has not been productive of very much benefit in this way. The people who are thrifty enough to avail themselves of a cash discount are usually trustworthy for an account, and little is risked by selling to them on credit. The people who are always hard up for money when an account is due would not be any more forward with it at the time of buying even if the discount were larger. The 5 per cent. discount of course made trade safer according to the degree in which it made payment present and certain instead of future and contingent, but it did not make many cash customers of really bad pay traders. The live merchant these days finds it pays him to look to his financial management as well as to his commercial enterprise for profits. Even if he can get but 3 per cent. discount where he formerly got 5, he will strain a point to avoid taking credit. But of course he is going to use his ready money where it will do the most good. If he can get only 3 per cent. cash discount from the hardware jobber, and six or seven per cent. from the stove manufacturer, the stove man will get the ready money and the hardware jobber will carry the retailer's account. The money will go where the least of it will serve, and credit will be contracted where it will cost the least. It is possible on two equal bills to make more than the full cash discount obtainable on one, by paying the other and letting the former stand. There is that effect resulting from the lowering of the cash discount, and it will be felt by wholesale hardware merchants according to the extent of the dealings of their customers with manufacturers who give a larger discount. The only business that it is necessary to get on a cash basis is that which is unsafe on a credit basis, and only a small proportion of this latter can be shifted off credit ground by the means of cash discounts. Short time and careful selection will be a better insurance against loss through bad debts than liberal cash discounts. They benefit only those who would in any case make use of every means to increase the net returns of their business. They were good only as they afforded one more source of revenue to such people, but they did not make more retailers pay a greater proportion of cash for their stock. Their effect was not felt appreciably in reducing the proportion of loss incidental to the credit system, for as was said before, people who are unsound credit customers cannot be made good fiscal economists by discount inducements. Agreement among the trade to shorten the time, and to require some basis of credit—such as a certain proportion of fire insurance on stock—is the only means by which necessary reform in the credit system can be effected.

* * *

The practice of placing false brands on harvest tools and other manufactures is evidently quite an established trade custom, but inquiry into the circumstances shows that it is not so unjust and mischievous a practice as it seemed. The false labels infringe no rights, as in every case where a false label is used it is that of a fictitious firm of manufacturers. The Canadian maker may have a dozen labels for one class of product, and you, as wholesale buyer, are allowed to pay your money and take your choice. The manufacturer is willing, and since he is a consenting party to the anonymity the false brand thrusts upon him, it is to be assumed that he gets his consolation out of the proceeds of the trade you do with him. The trouble with most of the names coined is that they credit the United States as the source of many of our manufactured products. Of course an imaginary

company can have no local habitation or name assigned to it in this country, for if it professed to belong to any town in Canada its unreality would be manifest from its non-existence in that town. Hence the necessity for making the United States the home of so many of these thriving industries. Manufacturers say it would be impossible for them to do business with two competing wholesale houses unless they humored each of the competitors by plastering some strange label on the goods. It gratifies a whim of the wholesalers to appear to be the sole continental distributors of the output of a big concern in the United States, and it makes them feel independent of each other in the eyes of their customers. It is a permissible and harmless, though rather childish practice for grave business men to give their countenance to. If the Customs people should get it into their heads that there must be a good deal of smuggling done to flood the country with so much United States stock, they might be stupid enough to make a raid upon the warehouses, and confiscate some of our staunch Canadian workmanship under the error that the brands were genuine. That the fictitious brand may become a mame to conjure with is evidenced in the touching solicitude of retailers that they may not be able to find the same brand to fill repeat orders. Identically the same make, quality, and style of goods as were called for in the order have been shipped back by retailers because the goods did not bear the talismanic brand. In the meantime the shipper had received a fresh supply of labels of the coveted kind and was able to send back the same goods labelled in accordance with the bias of the buyer. The retailer of course has to keep in the path that he has once broken among the local consumers. If he sold a certain labe well last summer, he will be wise to stock it again this summer Truly brands are sometimes like the watch-words of a people, they may be founded upon nothing solider than prejudice. After all, the one thing necessary is value, and that the goods must give, or they would not persist in consumers' favor. In the same way as a rose would smell as sweet by any other name, so will a good article sell readily under half a dozen different names.

* * *

Most people are aware by this time that the Southern Confederacy was unable to assert its separate corporate existence, and consequently that its credit is hardly a good basis to build up a fortune upon. The notes issued by its short-lived government as a medium of exchange have of course long been worthless as currency, though some value may attach to them as historical relics. The green goods men and their dupes are now endeavoring to revive the buying power of these notes, and their success will depend upon the carelessness or ignorance of the honest people to whom they are proffered. There were some green goods men base enough to outrage the confidence that is founded on the time-honored principle of "Honor among thieves." They have been mean enough to send bricks and packages of sawdust to the confiding criminals who sent them good money to pay for ten times its face value of counterfeit money. The conscience of these green goods men appears howwever to have been burdened by their sense of guilt, and now they are using their pals a little better, for they are sending them some of the bills of "The Confederate States of America." It is not supposed that even these are genuine, but their buying power is as good as that of the genuine bills, of which the source of issue was long ago defunct. It is reported that one enterprising business man in the province of Quebec invested $500 of good money in this counterfeit Secessionist money. Others may have got some of it too, so it is as well for traders to be on the look out for five, ten, and twenty dollar bills of "The Confederate States of America." There is also a new counterfeit of the $2 Dominion note that needs to be guarded against. Only a few days ago a specimen was brought for the first time under the notice of the Commissioner of the Dominion police. The counterfeit is printed from a wood cut, is very poorly executed and should easily be detected. The signatures are especially bad. But traders should get out of the habit of assuming that all money tendered them is good. It is necessary nowadays to examine it carefully, otherwise a new and constantly widening avenue of loss will be opened.

* * *

Though an influential deputation of Montreal merchants last week waited on the Provincial Government again to ask the remission of the heavy tax that has been laid upon the commerce of that city, it is pretty certain they will be granted no relief. The deputation included the President of the Board of Trade, the president of the Chambre de Commerce, the president of the Corn Exchange, as well as other members of these bodies and of the committee appointed by a general meeting of the merchants to deal with this subject of taxation. The Provincial Treasurer, Hon. Mr. Hall, pointed out the necessity of meeting the province's temporary loan on the 16th July. A tax upon real estate was impracticable. The tax on personal property was likewise out of the question. The Government had at last to take to a tax levied on the rental value of business places. He showed that Montreal was paying less than half of the real estate tax, three-fifths of the license tax, and five-sixths of the commercial corporations tax. The deputation claimed that the rental tax should be collected from professional as well as business men. The taxes they considered unfairly distributed, and they would rather pay two years' taxes in one to tide the Government through its financial difficulty than to pay more than their fair proportion. The premier promised that the measure would be amended, but that the present year's taxes would have to be paid.

THE RECENT MANUFACTURERS' MEETING.

The associations of heavy hardware manufacturers concluded their meetings here on Wednesday. The results of their deliberations have not yet been officially announced, but so much of them as it concerns the manufacturers to make known to the trade will be published in circulars that are supposed to be about ready for distribution. Several changes, more or less important, have been made, but none of them of a disturbing character. Merchants who had bought previous to the taking effect of the changes are probably on the whole in a better position than if they held their orders till now, the changes being adverse to buyers on everything but cut nails. In addition to the changes mentioned in HARDWARE last week the following have been made :

The cash discount has been reduced to 3 per cent. on all the goods included in the manufactures represented. The 5 per cent. discount is abolished on everything in these manufacturers' lines. Bar iron, cut nails, wire nails, wire, horse shoes, horse nails, bolts, rivets, washers, tacks, etc., call for a cash discount of 3 per cent.

In wire nails there appears to be some difference of opinion as to the effect of changes made in the prices charged to jobbers, some wholesalers claiming that their profit is now reduced to 5 per cent. There is to be some straightening out of this matter.

A uniform price has been agreed upon for bar iron. The base is $2.05 in Toronto,

Hamilton and Montreal. In London the price is $2.10. Off these prices there is a rebate of 5c. in car lots and 10c. for 100 ton lots, if that quantity is taken inside of a year. This rebate represents the whole of the profit allowed the jobbers. The arrangement among the manufacturers is equivalent to a division of the territory into districts, of which each rolling mill is the centre. Toronto and Hamilton manufacturers are protected by the arrangement and by freights, in the enjoyment of all the western market. Montreal can sell without any competition in eastern Ontario and Quebec, and the Maritime Provinces are left to the St. John's people. Up till this change the price was $1.90 in Montreal. With 18c. added to this for frieght the price would be $2.08 here, and that of course could not be got, with $2.05 the price of local makers, and moreover that price would not satisfy the eastern men, who were prominent in the movement for the advance. There is a list also being made out for extras. Half inch bar is the base. Extras are all sizes under this.

On cut nails the changes have been made as HARDWARE anticipated. On cars there is an allowance of 5c. rebate on cars and 10c. on lots of 1000 kegs, if such quantities are taken inside of the year. The list remains the same. The new cut nail manufactory in this city is now represented in the Association, the proprietor, Thomas D. Graham, having joined. He had always sold strictly upon the lines of Association agreement before he joined, and there was no object to be gained by remaining out. Another point with reference to cut nails is that the danger of a quarterly disturbance of the price is removed, the manufacturers having agreed to authorize present prices up till May, instead of till March, as formerly.

There is a revival of the movement to fix up a joint arrangement on horse nails, but it has not yet succeeded. There is to be a meeting in Montreal.

On copper rivets the discount has been made 50 per cent. The discount in iron washers has been lowered from 50 to 40 per cent.

A GLASS DIFFICULTY.

Dealers in glass in Montreal are taken up at present with a discussion as to what is the proper duty on glass imported from Great Britain and Belgium. Although the customs have taken up the matter now, the original cause of the difficulty is the jealousy that exists between dealers who handle Belgium glass and those who handle the English product, of whom, of course, Pilkington Bros, are the chief. The matter came to a head a short time ago, when Appraiser Douglas, of the customs examining staff there, notified Jno. Thorpe, the agent of the Pilkingtons, that he had received a circular from the trade that his firm was entering goods at an undervaluation, which Mr. Thorpe promptly denied, and said he was prepared to controvert the same by proofs. The window glass required for Canadian purposes is of different sizes from those sold in England, and Messrs. Pilkingtons have been cutting glass specially for the Canadian market in consequence, thus coming directly into opposition with Belgian interests. This is where the hitch occurs, for the firm of Pilkingtons is probably the largest glass manufacturing firm in the world, and, having determined to export to Canada a quality and make of glass adapted to Canadian purposes, they have become most formidable competitors to those who have previously had a monopoly of this market.

The Belgian glass for the Canadian market is packed in boxes containing 50 and 100 feet respectively, and Mr. Thorpe says that his firm cut and pack their glass in boxes of 100 and 200 feet, and that the British glass so imported is of exactly the same size and quality as the Belgian, and is sold on the Canadian market at the same price. There being no home market price in Great Britain for a class and size of window glass not required there but specially prepared for the Canadian market, Messrs. Pilkingtons, on commencing to trade here, invoiced their goods at the same price as the Belgians invoiced theirs, and continued to trade, so entering their goods until quite recently. In consequence of the agitation against the English firm, however, the customs took the matter up, as above stated, and it is now before Controller Wallace, the amount of glass involved being something like $13,000 worth.

If the facts as alleged by Mr. Thorpe are correct, and he says he is prepared to substantiate them, showing HARDWARE a letter from his firm the other day to that effect, there can be no doubt that if the English firm are compelled to enter the same class, size and style of glass as the Belgians import, at a higher duty than is paid by the Belgians, the loss will be considerable, and the effect will be to subject the English house to an unfair competition in favor of foreign competitors. The difference would amount to about $100 in duty on every 1,000 boxes of 100 feet of glass sold, or in other words, the English house would have to pay 50 per cent. more duty than a Belgian house on the same size, quantity and quality of glass sold. By law, goods have to be entered at the customs according to their fair market value in the country from which they are exported, but if there is no market value, as Mr. Thorpe alleges, then it is a matter in which the Controller can exercise his discretion, and determine what should be—having a fair regard for all the circumstances—a fair market value for the articles imported.

As is well known, the Messrs. Pilkingtons have established a large branch house in Montreal, where they carry the largest stock of glass in Canada, and their appearance on the market, although it may have interfered with the business of some wholesalers, has been a decided benefit to the retail trade; at least they so attest. Take plate glass, for instance. Some time ago it could not be had for less than 80 to 85 cents per square foot; now orders are filled right along at 50 per cent. less. The Messrs. Pilkingtons claim that they are not to blame for this, as they had in self-defence to meet the cuts that some of their competitors, who were dissatisfied that they should open up business here, were making. They claim they are able to play a game of that kind as long as and longer than the next man, and it looks very much as though they were right.

Incidental to the matter, a lively correspondence has sprung up in the daily press there, and it is evident from the tone of some of the letters that the Messrs. Pilkington are not loved altogether too much. Some of the importers allege that they have been exporting glass to Canada for years, and they ask, Would Pilkington Bros. invoice the same quality of glass to other large importers of glass in Canada at the same price as they invoice to themselves? This is a pertinent question that Mr. Thorpe claims he will answer to the Controller or to any interested party who likes to apply to him, and in the affirmative, and that if importers have any orders to place they are prepared to fill them at exactly the same price as the values given to the customs authorities.

WHAT MONTREALERS THINK ABOUT THE CHANGES.

The meetings of the various iron manufacturers which have been taking place in Toronto naturally attracted great attention in Montreal, and the feeling in regard to the changes that have been made, so far as known, is one of satisfaction, for the trade approve of anything that will stop the terrible cutting in prices which has of late flung the whole trade in iron into demoralization. The alteration in the cash discount on wire nails is especially gratifying to some Montreal wholesalers, for the reasons that HARDWARE fully and clearly explained last week. In fact, the only grumbles that have been heard have been from one or two wholesalers about bar iron advices from Toronto, received by several of the trade on Tuesday, stating that the price had been advanced to $2.05. These claim that the price is not warranted, and that they will bring in English iron after the winter season is over and compete with the domestic product. The majority of the trade there disagree with this, however, and say that the price is below what English bar can be laid down at, even at summer rates, for the makers certainly know what they are about, and would not put the figure up to a limit which would endanger them to competition. In brief, $2.10 is where this limit is placed. As to the advance itself, they will not say, but of course they would have been better satisfied had there been more margin to work on, but on the whole, they seem to think that the makers are not disposed to be unfair. It will be remembered that HARDWARE some weeks ago predicted the likelihood of an agreement on bar iron, the only hitch being the big makers in Ontario. These having agreed, of course the advance was consummated.

The hardware business now organized under the title of The Aikenhead Hardware Co. has under various names been carried on in Toronto between sixty and seventy years. First, as Ridout Bros., they built the store on the north-east corner of Yonge and King streets, in 1830. For many years past the business has been carried on under the firm name of Aikenhead & Crombie. Thos. E. Aikenhead, the manager of the new firm, has been connected with the business nearly twenty years, and has made himself well-known and popular with purchasers. Their new premises, 6 Adelaide street east, are commodious, and specially fitted up for this class of business.

OUR LONDON LETTER.

London, Dec. 31, 1892.

I think when our hardware men come to total up the year's trade they will find that it has not been a particularly good one for them. Times have been bad for some years past in England; work is slack, and consequently men have either to accept lower wages or go altogether. In the provinces—particularly in the northern counties, where strikes have been prevalent during 1892—the lack of remunerative employment has been felt to an excessive extent. This being so, it is hardly to be expected that artisans and working people generally will spend much money on goods other than food, rent and clothes. At such times they reduce their expenditure to the lowest figure and adopt the very common-sense principle of "cutting your coat according to your cloth." Retail hardware men have therefore suffered wherever hard times have appeared, and few towns in England have escaped such a visitation. I think when the official returns for the whole year's trade appear—as they will do early in January—we shall find that the wholesale hardware houses have by no means made a fortune. Our shipments abroad of hardware were, up to November 30 last, below those for the corresponding period for 1891 and 1890, and it is hardly likely that arrears will have been pulled up in one month. Exports of Christmas goods will have long since been made and sold by this time, if foreign retailers are at all lucky.

As regards the Christmas trade of hardware in London, I can say that we have seldom had a quieter market. I can only ascribe this to the prevalent want of cash, and the consequent inability of working class folks to give presents. Of course, there are plenty of people earning their £200 to £500 ($1,000 to $2,500) a year, but they are numbered by the thousand, while those receiving from $260 to $500 a year are counted by the million, and it is the mass of the people that shrewd storekeepers look for their trade. Unfortunately, any little trinket in the hardware line, suitable for presentation, is comparatively dear to what the fancy stationer, draper, or even grocer, can supply. Cutlery, plated goods and similar lines run into money, whereas 25 cents judiciously laid out in the fancy stationers will purchase something tasty and useful.

THE WHOLESALE MARKETS.

Birmingham machine tool makers are busy on goods of small descriptions, and iron founders are fairly active on railway and telegraph work, bridges, girders, railway stations, etc. The makers of steel grinding and crushing mills have been rather busy of late in coffee and other mills for South America, and drug and grocery mills for the home trade. Mincers and sausage machines are now in request, both for home and export. The strikes in the malleable iron foundry branch, after an apparent arrangement, have broken out afresh, owing to a misunderstanding. I refrain from quoting prices in my letters as they invariably alter before the figures appear in print, and being, therefore, of no use whatever. I may say that unless business revives it is probable that the marked bar makers will have to lower the standard at quarter-day, though this will hardly be done without some concession. New orders are getting to be very scarce in the Birmingham hardware trade and the outlook for the new year is gloomy. The iron and steel trades in Newport have lately been at their lowest ebb, and any change can hardly fail to be for the better. The volume of work done will not bear comparison with that accomplished in 1890 and 1891. In Sheffield I find that makers of table cutlery have been specially busy lately, but only in the Christmas requirements; so have the manufacturers of silver and electro-plated goods, but most travellers report that the demand has been nothing like so large as is usually the case just before Christmas. There is considerable inactivity in the heavy trades at Sheffield, and at several of the larger works the holidays will run to full a fortnight or three weeks, or well into January. Wolverhampton makers have the same story to tell. The condition of affairs is not such, in this town, to cause manufacturers of hardware goods to resume operations in a hurry, and the cessation from production is rather welcomed by many makers. The general condition of the market is not such as to warrant any expectations of higher prices yet awhile. So far from this being the case ,it is not improbable that at the forthcoming January meetings marked bars may be reduced. The present standard is £8, and may be reduced to £7 10s. Quotations for this description of iron have sold at £8 for two years past.

FAILURES OF THE YEAR.

By the courtesy of the recognized mercantile agency here, I am enabled to send you a summary of the gazetted failures in the United Kingdom, and how they are distributed:

	1892.	1891.
Bankers	3	1
Building and timber trades	650	623
Chemists and druggists	59	76
Coal and mining trades	126	84
Corn, cattle, and seed trades	288	215
Drapery, silk, and woollen trades	498	521
Earthenware and glass trades	41	39
Farmers	320	260
Furniture and upholstery trades	114	99
Grocery and provision trades	1,037	933
Hardware and metal trades	103	116
Iron and steel trades	172	145
Jewelry and fancy trades	193	179
Leather and coach trades	289	272
Merchants, brokers, and agents	383	340
Printing and stationery trades	95	111
Wine, beer, spirit and tobacco trades	500	457
Miscellaneous	764	729
Totals for United Kingdom	5,6 0	5 200

The number of company liquidations has increased very rapidly under the influence of recent legislation. In 1891 the number of compulsory and voluntary winding-up orders issued was 912; in 1892 the total rose to 1,027, or an increase of 11 per cent. There is every likelihood of this increase continuing as there are many shaky concerns in extremis.

THE NEW CANADIAN MAIL SERVICE.

A good deal has been written respecting the recent interview between Sir Charles Tupper and a deputation representing the Swansea shipping and commercial interests, which urged upon Sir Charles the advantages of making Swansea the terminal point in Great Britain for the proposed line of fast steamers between this country and Canada. It was urged that this route would save 180 miles of sea voyage over 200 as compared with Southampton. Sir Charles Tupper said that by direct communication between Canada and England a saving of 24 to 36 hours could be effected, and that the Canadian Parliament had voted a subsidy of £100,000 a year for the purpose of promoting this enterprise. He added that it was likely to be increased to £150,000 or $750,000. As regards this project, I may say that the shipping interests in this country does not seem to take up the question very warmly. The leading Liverpool shipping paper, the Journal of Commerce, has published an extraordinary letter from a writer in Montreal, signed by "A British Merchant," in which he says that it is not intended to carry cargo by these vessels, for indeed, he says, it is monstrous for the Dominion Government to impose such high duties on iron, etc., and under such circumstances there is a poor chance of a cargo. "This is just another instance of the gross ignorance of Canadians in political economy, while the absurd craze of the national policy of high protection continues here, depend upon it such a necessarily expensive steamship line has no raison de etre, nor could it possibly be a paying venture." This writer considers it his bounden duty to warn all capitalists to put their means in other investments rather than in such a wild speculation as the one referred to—wild, I say, as long as this Dominion Government, by a preposterous fiscal policy, destroys ocean commerce, and, not only that, but shuts out healthy immigration to our vast territories in the Northwest. This is an extraordinary letter for a merchant to write, especially one calling himself British. The publication of such letters is rather conducive to the feeling expressed at the meeting held in Montreal on the 28th of November last, when Mr. Le Mieux proposed the declaration of Canadian independence. Without considering the result of that meeting in a too serious light, the voting on that occasion was certainly remarkable: For declaring independence there voted 1,614; annexation 992, maintenance of status quo 364, and 27 for imperial federation. It is a very great pity that the people of Great Britain know so little about our colonial empire. There is a good joke going the rounds of the press here respecting The Illustrated London News. An unhappy youth in that office misdirected a wrapper in the following way: "Mr. ——, Toronto, P.Q., U.S.A." A more unhappy muddle could hardly have been made, and Canadians pointed out that it was a pity English boys were not taught something more about Canadian geography and her provinces, and especially that the province of Quebec was not in the United States.

The West Peterboro' Farmers' institute held a meeting in Peterboro' on Saturday. D. E. Smith, B.A., of Brampton, spoke on "Road-making." proposing changes in the present system. The meeting was unanimous in the opinion that there should be a change in road making. None desired a commissioner and about one third favored the employment of a trained engineer to superintend roads. A committee was appointed to interview the county council with a view to having the act respecting wide tires on heavy waggons imperative in that county.

A customer secured is a promise of greater salary in time.

"There are geniuses in trade, as well as in war or the state, or letters; and the reason why this or that man is fortunate is not to be told. It lies in the man."—EMERSON.

H. S. HOWLAND, SONS & CO.,

WHOLESALE HARDWARE,

37 FRONT ST. WEST, - - TORONTO.

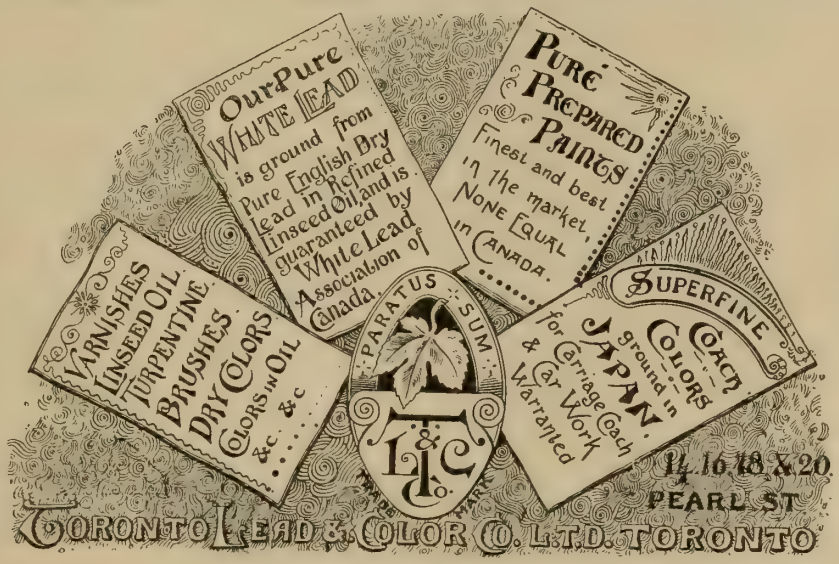
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In all sizes, 7½ to 12 in. Discounts on application.
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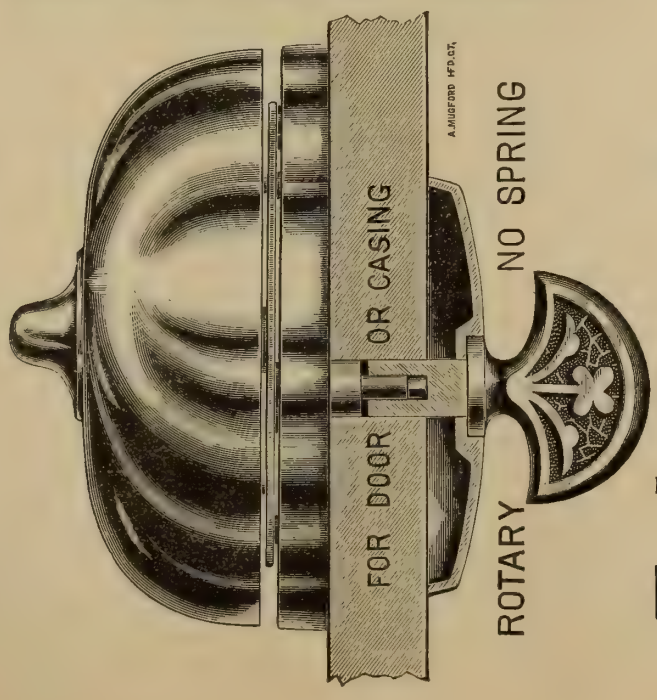
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THE NEW
Departure Bell Co.,
BRISTOL, CONN.

THE CARELESS CLERK.

There are some employes in stores who, though not really dishonest, are equally dangerous to merchants.

Though they will not actually steal, still they are as criminal as the thief. The losses incurred through the carelessness of employees often escape notice, for it is a species of viciousness, the result of which is not always apparent. Yet the merchant suffers, all the same. Perhaps we are wrong in deeming this trait vicious. At worst it is but a deplorable weakness of character, often not latent, but acquired by an unwise training. For the possession of this drawback in character, people invariably have to lay the blame with those on whom their early training depended. The boy who learns his early lessons from the man who conducts his business in a slip-shod or haphazard manner cannot help possessing a disregard for order in his latter years. Habits are easily acquired, but it is woefully hard to rid oneself of them especially if they are bad habits.

The clerk who is careless in even the most trivial things never will be successful. Business, like life, is a series of incidents ; on the attendance to each item depends the success of the whole. The man who shirks, disregards or ignores trifles will be unsuccessful in the main, for great things are but an aggregation of little things.—Ex.

THE PATRONIZING MERCHANT.

There is nothing so ridiculous and so easily descernible in a merchant as an air of patronage towards customers. It is a species of vanity which is as ludicrous as it is disagreeable. This weakness is called bumptiousness, and is repelling to the general run of customers, who are quick to distinguish it from a pleasant presence. A pleasant presence in the store is one of the essentials towards the success of a merchant. This essential of a pleasant presence is made up of simplicity. Just that and nothing else. Simplicity is the most charming of all qualities and is and always has been possessed by the men and women that the world deems great. The simple man is natural and is possessed of a suavity which is real. Assumed suavity is generally made up of bumptiousness and is as different from the inherent quality as the sweet violet is different from the violet of the millinery counter.

The bumptuous merchant in his vanity reckons himself somewhat of a philanthropist. His behaviour towards his customers is offensive to those amongst them who are of a keen or sensitive nature. In his overweening vanity he reckons himself the patron and the customer the beneficiary. Every action of his conveys that expression. When he is sympathetic he is condescendingly so; heartiness is luring and often vulgar ; his insincerity is apparent, for humanity is a distinctive judge of disposition and character. The patronising merchant is a humbug.—Ex.

AN AGE OF HUSTLERS.

This is pre-eminently an age of hustlers, and the sooner it is realized by the old conservative school of traders who believe that all they have to do is to know their respective occupations, open up with sufficient capital, and business come to them as it did to their predecessors, the better. A gentleman belonging to the latter class, who represented a large wholesale house in this city, was complaining a few days ago of the terrible strain of competition that his firm was subjected to by other houses covering his ground and offering greater inducements than he cared to do, as he was determined not to sell goods at less than a certain percentage of profit. He also stated that for several years past he had lost ground, and had been compelled to trespass on his capital account. He therefore thought of following the example set by a large wholesale firm on McGill street and retiring from business.

"Why," broke in the writer, "these are all hustlers who are covering your ground and taking your trade from you. Why not be satisfied with less profits and cover their ground the same as they do yours ? Your smaller profits would be offset by a much larger volume of trade." But no, he could not see it in that light, and if he could not clear the same profits that he had been accustomed to, the hustlers were welcome to take the greater risks, along with the smaller gains. This trader of the old school hit the nail admirably on the head when he described the business of the present era as one of greater risks and less percentage of profits ; and, depend upon it, those who refuse to do business on any other principles (we care not what branch they belong to) will get left. The tide of competition keeps flowing on, and its flood will be felt with greater force as the years roll on. Nor do we see how this can be avoided, as long as the human family continues to increase at the tremendous ratio which marks its present course. In proportion to population, there are two traders in the present day to one of twenty years ago, and if the increase continues, the proportion will soon be three to one, which means a gradually decreasing percentage of profits. To offset this, means should be devised whereby the cost of living is proportionately less.—Trade Bulletin.

BANK LOSSES AND MERCANTILE AGENCIES.

The following was included in a paper presented to the recent meeting of western bankers : "It is apparent that losses would be largely averted if the banker could be thoroughly and accurately informed as to the character and responsibility of his borrowers. Any plan, therefore, that will bring him into possession of this information should be promptly adopted and persistently pursued. The information now furnished by the various commercial agencies is of great assistance in ascertaining the responsibility of borrowers. Although their reports are not to be implicitly relied upon, being often incomplete and occasionally misleading, yet no prudent banker can afford to dispense with their services, especially where his field of operations is so extensive as to preclude the possibility of his having personal acquaintance with every customer, and accurate knowledge of their affairs. It goes without saying that access to these sources of information should be at the command of every bank officer whose sphere of operations is not purely local and confined to the narrowest field. In addition to this he should employ every proper means to ascertain and systematically record, in such manner as to be readily accessible, all facts which affect favorably or unfavorably the standing of those who are asking, or likely to ask, favors at his hands. In the end, however, the customer himself must be depended upon to make a full and complete exhibit of everything affecting his present responsibility and future success. It is unwise to accept the account of any man whose truthfulness is not fully established, and prudence dictates that no person should be accepted as a borrower who is not willing to make in confidence to his banker a complete exhibit of his resources and liabilities. The age of mystery as related to business affairs is happily passing away. The time was when business men considered it akin to an insult to be called upon, when asking credit, for a statement of their affairs, and when the publication of a full report of the condition of a bank would have been considered unwise, if not absolutely dangerous. Fortunately wiser and sounder views now prevail, and no right minded man or well-managed institution now hesitates, when asking favors, to place the prospective creditor in full possession of the facts upon which credits can be intelligently extended. Modern methods make it necessary that all the barriers which a false pride has served to erect between a banker and his customer shall be completely removed, and that perfect frankness shall characterize their intercourse. This course is clearly for the interest of the borrower as well as the lender, for nothing places a customer on a better footing with his banker than a willingness to tell him the whole truth at all times and under all circumstances.

TRADE SALES.

The general stock of Thos. Fisher & Co., of Bolton, Ont., invoiced at $6900, was sold at Suckling's to J. Taylor, at 47c. on the dollar.

On Tuesday next, the seventeenth inst., at 2 p. m., Suckling & Co. will sell at their warerooms in Toronto the general store stock, shop furniture and delivery service of John McConachie, Honeywood, Ont., at a rate in the dollar. The stock includes staple and fancy dry goods, hats, caps, furs, boots and shoes, groceries, hardware, crockery, etc., amounting to $3,078.51. One-third of the purchase money is to be cash, the remainder to be paid in two, four and six months, with interest, secured.

The insolvent estate of R. Weatherell, general merchant, Oil City, Ont., is to be offered for sale by J. W. Jones, at his auction rooms in London, Ont., on the 13th inst. The store stock is a general one, including dry goods, millinery, hats and caps, boots and shoes, groceries, hardware, etc., valued at $6,757 87

The trader who pays his way must sell at a profit, and cannot afford to cut below others in the same line.

TORONTO PLATE GLASS IMPORTING CO.,

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WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
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"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friends against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.

Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.

FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin.

CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

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Best Crucible Cast Steel.

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For all purposes, of any capacity, and operated by Electricity, Water, Steam or Hand Power.

Builder's Derricks--Hand or Steam,
1, 1½, 2, 3, 5, and 8 Tons.

Foundry and Machine Shop Cranes,
Any Swing, Any Capacity.

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Coppered Steel Spring. Tinned Mattress Wire. Broom and Brush Wire. Hay Baleing Wire. Flat Wires. Soft Coppered Wires

Write for Catalogue. We guarantee the quality of all our Wire.

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The B. GREENING WIRE CO., Ltd.,
HAMILTON, ONTARIO.

EXPLOSIONS OF WATER BACKS.

From a recent issue of The Builder, we reproduce portions of an article relating to the causes and dangers of explosions of range water backs. Before reprinting the article, however, we should explain that in England the water back, or place in which the water is heated, is known as the range boiler, the boiler in turn being called a reservoir. So in the following article reference to range boiler will be understood as meaning the same thing as water back or water front.

The approach of winter brings to mind fatalities and disasters that annually occur from the cause which forms the subject of this article. It is not that every cause of these serious accidents has any relation to cold weather; in fact, there is only one cause which has, but this one is the most prolific of trouble, for at least four-fifths of the explosions are directly traceable to frost.

The causes which lead to explosions are four: 1. Frost. 2, Failure or shortness of water (sometimes due to frost). 3. Stopcocks, and 4, incrusted deposit. These four causes are placed in their order of virulence. There is a doubt whether the second and third should not be put upon terms of equality in regard to the degree of danger that existence creates; but, as regards the fourth, there is scarcely any danger at all traceable to it, notwithstanding the alarming advertisements to the contrary.

Taking these causes in the order of citation, one of the ways by which frost can cause an explosion is by solidifying—i.e., freezing—the water in the two circulating pipes that lead from the boiler, so any steam generating cannot escape. The general safety of every apparatus is supposed to be provided for by an open pipe at the highest point. This pipe should allow free escape for steam, and is also intended to allow for the expansion of water as it is heated; it is, in fact, usually called the expansion pipe. This open pipe at the top is efficient in preventing danger as long as it is open or there is a clear way through the pipes from this point down to the boiler as there always should be. If, however, any part of this pipe or the circulating pipes between it and the boiler be in exposed places where frost can act vigorously upon them, there is every probability that during the six or seven hours at night when the fire is out the water may be cooled down sufficiently to freeze. If the frost can act in this manner and the water is frozen hard in three or four or more feet of pipe the open pipe at the top is now of no avail, as the passage between it and the boiler is cut off and no other escape for steam, etc., exists.

When the apparatus is upon what is known as the "tank system," with the hot-water reservoir or tank at the top of the house, a danger exists if the frost attacks the cold supply pipe along. If this pipe is frozen up the hot water apparatus is no longer furnished with cold water as fast as the hot is withdrawn. The first intimation of this is that water cannot be obtained from the hot-water taps, and this means that the apparatus has been emptied down to the tap in question. This is a serious matter, and the fire should be extinguished at once until water runs freely at the taps, or, in other words, until the cold supply pipe is clear again. If the fire is not extinguished there is a considerable likelihood of an explosion, for what little water is in the boiler and pipes will be quickly evaporated, and the boiler will get red hot. The red heat of the boiler is not dangerous in itself, but if from any cause the frost-bitten pipe should suddenly run free again and water enter the boiler while the latter was red hot the result would be disastrous to everything near it. This particular way in which an accident can occur is the one which without doubt has caused three-foruths of the fatalities on record. When a boiler bursts owing to the steam outlet being closed the explosion is not of nearly so serious a nature as that from water flowing into a red-hot boiler. With the latter it is the effect of steam in its enormous expansive and rending force that does such serious hurt. With the former it is a burst and not an explosion in the true sense of the word.

The remedy for this is, of course, to prevent frost attacking the pipes. * * *

If the pipes cannot be placed in fairly warm situations they should be covered with some material to keep them warm, that is,to prevent their losing heat. * * *

So far, we have spoken of the effect of frost in attacking the hot-water pipes, and in causing shortness of water by freezing the cold-water service. The particulars given in this latter case apply in just the same way when the failure of water proceeds from any other cause. In towns and places supplied by a water company the water supply is as regular as could be wished, but in outlying districts it is not so, and hundreds of country residences rely upon a gardener's attention to a pump, which only makes the supply very irregular indeed.

The next cause of explosions—stop cocks in main circulations—is only less prolific of trouble than the last, due to stop cocks not being in common use for this purpose. If it was the regular thing to put stopcocks in the main circulating pipes the number of accidents would be very large. It is a dangerous practice, and condemned by every practical man. What leads to people having stopcocks so placed is the idea of saving labor and nuisance when the boiler has to be opened for cleaning purposes or repair. By means of stopcocks so placed, all communication can be cut off between boiler and tank when desired, and it would be possible to remove the old boiler, and replace it with a new one, without emptying the tank. It, however, must be repeated, that the introduction of stopcocks in these pipes is very dangerous, and should be avoided.

The next and last cause of boiler explosions, pipes choked with incrusted lime deposit, is a possible cause, certainly, although it is doubtful if such a result has ever really taken place. In the first place, it is unusual for both circulating pipes to become furred seriously. The furring of the flow pipe is very frequent, and occasionally (rarely) a section of this pipe is found quite solid with deposit. The return pipe does not fur up so quickly, and the element of safety is the fact that when the flow pipe becomes partially choked the apparatus gives out alarming noises and vibrations. The result is that weeks, and sometimes months, before there is any real danger the noises have necessitated something being done, as they simply frighten people. It has to be admitted that if the furring did not bring about these significant noises it would be the commonest cause of danger possible, and we should almost daily hear of accidents from this cause. The warnings, however, do occur and before the pipes are choked to an actually dangerous extent they become quite unbearable. In this fact lies safety, for the collection of deposit is very gradual, and it never occurs suddenly.

The remedy for all these dangers is a safety valve, but there should be some care exercised in this. A safety valve cannot usually be put direct into the range boiler, and has consequently to be connected thereto by a pipe. It is better to have a distinct pipe for this rather than use one of the circulating pipes, as a pipe which has the water almost stationary within it is less liable to fur than one of the circulating pipes. This should also be of good size, so as to insure its keeping clear and not being choked with deposit, and the shorter it is the better. —Ex.

STOVES AND CLEANLINESS.

"One reason for my preference for the large tenement is that it permits the elimination of the cooking stove from each household," writes Lucia True Ames in an article on "The Home in the Tenement House" in the January New England Magazine. "'A home without a stove! impossible!' I hear many exclaim. Not in the least impossible—and something for the very poor greatly to be desired. First, so far as heat is concerned, in a tenement house holding fifty or sixty families, heat may be supplied from a central source which would be far too expensive in a small tenement house of eight or ten families. The poor usually buy fuel in small quantities at exceptionally high rates, and this amount, if added to their rent, would, in a large tenement, supply them with heat by steam or hot water, which would be far preferable for the following reasons: The storing of fuel and the carrying it up long flights of stairs by the hodful would be done away with, and the sending children out to gather kindling from the wharves, streets, and vacant lots, with the dirt, slovenliness and weariness which always attend such work, would be abolished. No one who has not worked long among the poor can realize the serious drawback to good temper, comfort and cleanliness that the mere care of fuel, the cleaning of the stove, and the disposal of the ashes involve with people who must eat, sleep, bathe, and live around a coal stove three or four flights from the cellar or ash-barrel, as is the case in the majority of our tenements. The waste of fuel is often appalling, due largely to ignorance about draughts and to letting the fire go out during a morning's absence from home and then rebuilding it to cook the dinner. I once saw a child of ten, in a room strewn with shavings and ashes, try to make a fire by placing the coal on the bottom of the grate, and lighting from the top the kindling and paper that were laid over it. In families that were receiving coal given in charity I have repeatedly seen red hot stoves packed full of coal, the draughts all open and the heat going up chimney. The doing away with the heat of a stove in a living room during the summer months is no small contribution to the health and good temper of the inmates."

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TACKS, SHOE NAILS, ETC.
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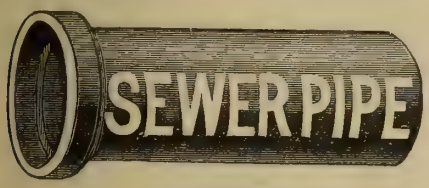
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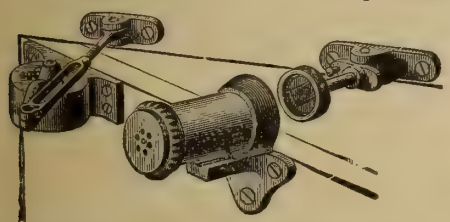
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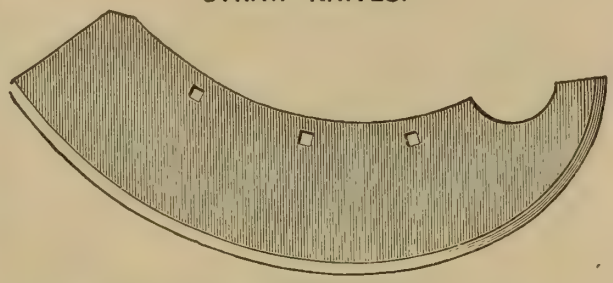
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W. & B. Diamond Twist Drills.



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Goods the best. Prices moderate
Quality Warranted.

TRADE CHAT.

John Robertson's stove and tinware store in Strathroy, Ont., was damaged by fire to the extent of $1,200 on Saturday last.

P. Nolan, Toronto, dealer in stoves, tinware, etc., has called a meeting of his creditors. He is unable to meet his payments. It is expected that a satisfactory settlement will be made.

The following is the statement of building permits issued during the past seven years

1886.....	$1,196,200	1890.....	$2,364 750
1887.....	1.276,600	1891.....	4,388.900
1888.....	2,063.796	1892.....	2,682,755
1889.....	2,356,174		

Application is being made for incorporation by letters patent of Fred Massey, of Montreal, E Gurney, W. H. Carrick, E. F. Skinner and L. B Alcock, of Toronto, as the Gurney-Massey Company (Limited.) The chief place of business is to be at Montreal: capital stock $50 000.

SALESROOM TOPICS.

The travellers of Walter H. Cottingham & Co., Montreal, have been out since the beginning of the year, and are meeting with good success, their orders so far being very heavy for the firm's Green Seal brand of window glass.

Alonzo Spooner has been admitted as a partner of Samuel Rogers & Co., of the Queen City Oil Co., Toronto, and will be an active member of that firm. His Copperine business runs along just the same in Port Hope. He is succeeded in the management of the latter by Samuel Bennett.

Travellers have been given their prices on spades and shovels, and are now booking orders.

There is a strong probability, according to advices from Antwerp, that the price of window glass may be high for late orders. Already the market has gone up a point, which is equal to 10c. a case here. Jumet advises importers here that specifications will have to be in before the 31st inst. The expectation of a revival of cholera on the continent makes shippers anxious to have all the glass business done before the winter is over and the season for alarm and for quarantine regulations is on. Glass has recently been at the lowest point it has touched for 15 years. Traders should not hold their orders too long, if they want to be sure of getting glass at present prices.

H. S. Howland, Sons & Co. are introducing a new line of solid steel spades and shovels, branded "Samson," which they are quoting at inviting prices.

There are still uses for the snow-shovel in this climate of ours. The stock on hand when the old year closed was enough to make the wholesalers doubtful of this and to discourage manufacturers from making any more, but they look at the matter differently now. The weather and the snow by-law have both shown themselves staunch friends of the trade, and the past fortnight has witnessed a very general and not sad parting between the wholesalers and their stock of snow-shovels.

M. & L. Samuel, Benjamin & Co. have done a very large trade in steel snow-shovels, having cleared out all their stock and renewed since the opening of the year.

The manufacturers have put green wire cloth on a basis of $1.80 per hundred feet, delivery in Toronto, Hamilton and London. This step meets with the approval of the jobbing trade.

H. S. Howland, Sons & Co. are putting on the market a new axle grease, branded "Imperial," and manufactured in Buffalo. It is put up in tin boxes, neatly labelled, and will look well on the shelving. The firm have secured this line to overcome the objection to wooden boxes, which soon become saturated with their contents, consequently disagreeable to keep in stock and handle, and allow the strength of the grease to escape.

The trade in small stoves for heating compartments has been given quite an impulse by the extremely cold spell we have had.

There is ice now almost everywhere, and the means of locomotion upon it are in unflagging demand. The skate trade is as merry as the skaters.

The McClary Mfg. Co.'s Toronto business for 1892 was 42 per cent. larger than that of 1891. This is the gratifying showing of the company's stock sheets.

IRREGULARITIES IN BUSINESS.

Under this heading a correspondent writes as follows in the Ironmonger:

Sir,—There are several irregularities in everyday business routine, which, although causing a considerable amount of trouble and worry, have, by reason of their frequent occurrence, get to be almost regarded as necessary evils. Their origin, nevertheless, is thoroughly well known, and, with only ordinary care and attention on the part of those primarily concerned, they might easily be very greatly remedied. To presume to teach business men, in however slight a degree, how to conduct their affairs, would be presumptuon indeed, but if I might be allowed, without being misunderstood, to draw attention through your influential paper to the hindrances and difficulties arising from one or two matters of this kind, I trust the subject will not be without interest to some of your numerous readers, and that it may lead to an expression of opinion with a view to improvement.

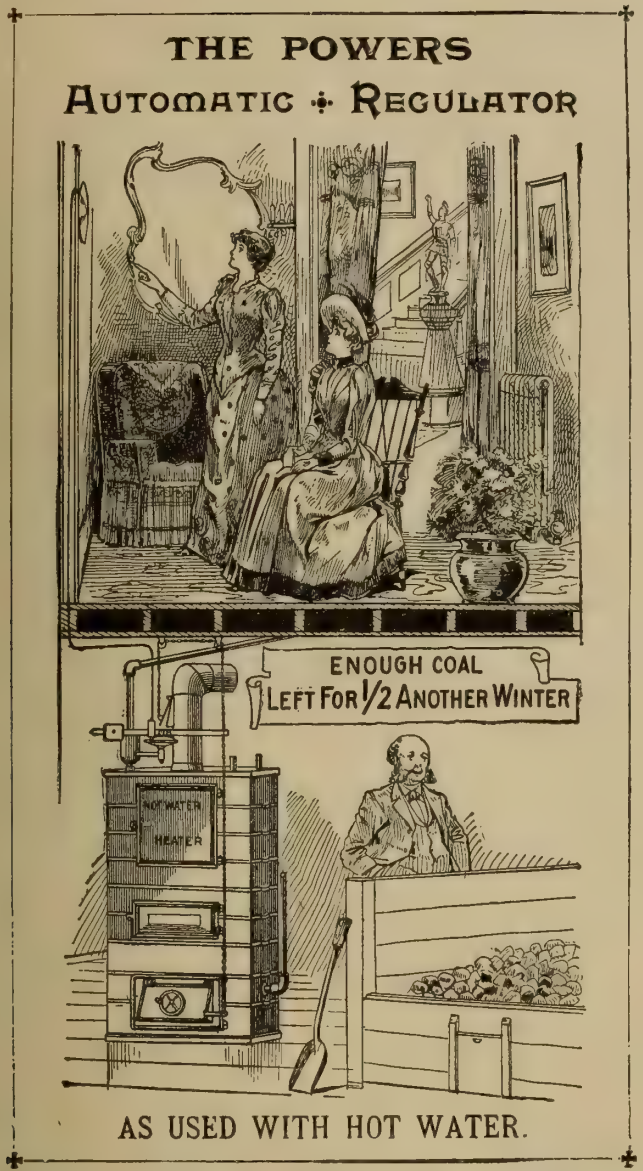
Of the endless ramifications of business intercourse some of the most important are undoubtedly the interchange of accounts, the quotation of prices—special and otherwise—and the dealing with correspondence. These items are also the most common sources of complaint and annoyance, as reference to any well-conducted commercial house will amply prove. Among manufacturers and traders, in a small way especially, neglect of these particulars is sometimes very remarkable, and, as to their accounts generally, it is very evident that book-keeping is by no means all that might be desired. Speaking rather broadly, in fact, one is almost tempted to say that in not a few instances accounts appear to be better kept for a man by the people he deals with than they are by himself. This sort of thing would be all very well if time were of no particular value and people were as invariably willing to point out mistakes as much against themselves as in their favor. But business morality has scarcely reached that stage yet, and if a person will not look after his own interests he can hardly expect others to do it for him. Commercial men do not, as a rule, object to pay what is due from them, but they find it very convenient sometimes to be blind to errors by which they gain a benefit, and, although willing enough to acknowledge the liability in the end, are not at all above leaving such mistakes to be discovered by the individual who made them. Nor can they be altogether blamed. They have something better to do than waste their time correcting their neighbor's shortcomings—especially at expense to themselves.

Leaving out of the question the losses a man brings upon himself by laxity in his figures, the great subject of complaint is that he should show so little regard for other people, who have their own living to get as well as he, by carelessly giving unnecessary trouble. If a practical man finds his services of more value in his factory than in his office he should pay a capable person to look after his books for him. Otherwise he will probably find that his customers will prefer, rather than run the risk of being bothered with endless inaccuracies, to place their more important orders where they will get all-round attention even if they pay a little more for it. People generally have a firm belief that laxity in one particular is generally attended by more or less indifference in other departments too. Quotation of prices is another continual source of trouble. The reason would appear to be that so few people, comparatively speaking, seem to keep properly arranged factory books, by which they can see at a glance the cost of the different articles they make. The inevitable result is that they have little or no data upon which an ordinary calculation can be founded, much less one out of the usual course; and the natural consequence is that in many cases the prices are as often as not arrived at more or less by rule of thumb, and therefore decidedly open to mistakes. It is no uncommon thing to find a man grumbling over a loss made on a contract, and endeavoring to induce the firm with whom he has contracted to allow him to raise the price to enable him to cover expenses.

Correspondence is another sore point. It is very often difficult to get a reply to a letter within a reasonable period, and, when the answer does come, to find the point at issue improperly dealt with. No one finds fault with people for using necessary deliberation over—or, indeed, finesse in fencing—a knotty question, especially where they have to take every precaution to protect themselves. It is when correspondents are known to be anxiously waiting for information upon important matters, which has to be transmitted by them in turn to their clients, that thoughtless disregard of time and convenience plays so much havoc—to everyone concerned, too. In conclusion, it cannot be much to any man's advantage to buy well, turn out good work, and even sell it well if he does not get the full amount due to him for his goods, experience, time, and labor, etc.; nor will it benefit him much to do business at certain prices unless he knows absolutely that they are bearing him a profit.

Laxity in the proper observance of ordinary business courtesies will certainly pay no one. It is not the object of these remarks to show people how they stand in their own light by permitting irregularities to exist—they ought to be the best judges of that themselves—but to maintain that those who suffer by negligence of this description have very fair cause for complaint, especially when it is self-evident that a little proper attention given at the proper moment in a proper manner would generally do all that is required.

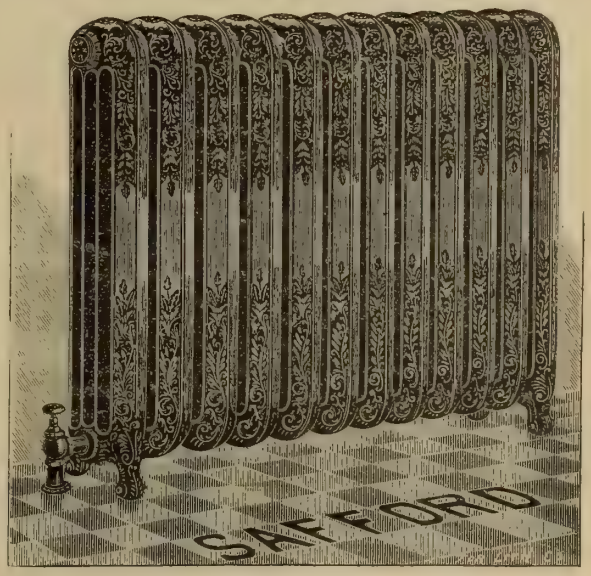
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MARKETS

MONTREAL MARKETS.

MONTREAL Jan 13th 1893.

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below, and in our Prices Current, necessarily take a wide range.]

HARDWARE.

The week has not furnished any change in the actual business of the hardware trade, for the houses here are just winding up their stock-taking, and their travellers are not yet out on the road, and until the one is completed and the latter are out nothing very interesting can be expected. Some of the houses report some small letter orders which has led to odd trading, but the volume of this is small. Values generally are firm, and the various meetings held at Toronto last week, when they did decide on any change, made it in an upward direction, which the trade here are not dissatisfied with, for they consider that anything which will do away with cutting and the disturbances that it creates a benefit. The change in the wire nail discount is satisfactory, and, while some find fault with the advance in bar iron, the majority infer that the makers were justified in obtaining a little more. However this, particular matter is referred to elsewhere. In crude material the market is as quiet as ever, there being nothing doing in pig iron, tin plate, or any lines of metals. In paints and oils business is quiet also, the only change of importance being advances of linseed oil and turpentine, both of which, as will be seen by the appended details, being marked up. Glass is steady and unchanged, and other lines do not furnish anything interesting.

PIG IRON.

The dullness reported in pig iron last week has not been lifted, and there is little or nothing doing, while prices are nominally the same as follows: Summerlee, $21; Longloan, $21; Carnbroe, $19.50; Eglinton, $19.50 to $20; Nova Scotia Siemens, $19.50 to $20.

BAR IRON.

In so far as actual business is concerned, there is nothing to note in bar iron for neither buyer or seller cared to do anything pending the probable changes that makers might decide upon at the meeting in Toronto. As anticipated by HARDWARE over a month ago, all the mills in the country have come to an agreement to sell at a uniform price, and the basis has been advanced 10c. on jobbing lots, to $2.05, with 5c. less for car lots.

SCRAP IRON.

Stocks of scrap are not large, but the demand is nil, and business extremely quiet. Prices are nominal at $15 to $16 for No. 1 wrought scrap. There is no cast scrap offering, and we omit the quotation.

TIN PLATES.

Jobbers report no business, nor is there anything in an importing way. Buyers claim that there is no necessity for hury in this respect. We quote coke, $3.25 to $3.50, and charcoal, $4 to $4.25.

CANADA PLATES.

There is no surplus of Canada plate, as has already been pointed out, but the market rules dull. Prices are steady at $2.50 to $2.60, according to quantity.

TERNE PLATES.

There is no change in terne plate, and prices are nominal at $7.25 to $7.35.

OTHER METALS.

Copper is somewhat easier and business is dull at 13c. to 13 1-2c.

Lead is dull and unchanged at 3c.

Tin is quiet and rules easy at 22c. to 22 1-2c.

Antimony is steady but featureless at 12c. to 13c.

Spelter rules easier at $5 to $5.50.

NAILS.

The cut nail market is quiet, pending the result of the meeting being held in Toronto, of which the trade here have no definite information as yet. The change in the wire nail discount is generally received with satisfaction.

CHEMICALS.

There has been no change in chemicals. The houses are just through with their stock-taking and at work on their samples, travellers starting out next week.

Bleaching powder,	$3.25	to	$4.00
Bicarb soda,	2.20	to	2.25
Sal soda,	0.90	to	1.10
Caustic soda,	2.50	to	2.75
Soda ash,	1.75	to	2.25
Chlorate potash,	0.22	to	0.25
Alum,	1.35	to	1.55
Copperas,	0.80	to	1.00
Sulphur flour,	2.50	to	3.00
Sulphur roll,	2.25	to	2.70
Sulphate of copper,	4.50	to	5.50
White sugar of lead	0.08	to	0.12
Brown sugar of lead,	0.06	to	0.10
Bich. potash,	0.10	to	0.12
Bich. soda,	0.08	to	0.10
Logwood per 100 lbs.	2.00	to	2.25
Sumac, Sicilian,	65.00	to	70.00
Pruss, potash, yellow	0.27	to	0.30
Cutch,	0.08	to	0.09
Gambier,	0.06½	to	0.07
Madras Indigo	0.60	to	0.80

OILS AND PAINTS.

There is no change in leads, which rule quiet. We quote:— Choice brands of paints, Government standard, $5 25; do. No. 1, $4.75; do. No. 2, $4 25; do; No. 3, $3 75; dry white lead, 5c.; red lead, pure, 4¼c.; do. No. 1, 4c.

Oils are quiet, but linseed is firm and higher at 57 to 58c. for raw and 59 to 60c. for boiled. Advices on turpentine are also firm, an advance of 3c. being wired from the south, and now orders would not be filled here on the old basis. We quote as follows:— Cod Newfoundland 42½c. steam refined 41 to 42c.; linseed raw 57 to 58c.; linseed, boiled 59 to 60c.; castor oil 8 to 10c.; cod liver oil, Newfoundland 80 to 90c.; cod liver oil Norway $1 05 to $1.20; turpentine, 50 to 51c. Less 3 per cent. 30 days.

GLASS.

The glass market is quiet there being only a local jobbing trade to note on the only basis of $1.35 for first breaks and so on.

CEMENT.

The movement in cement is small but prices are well maintained. We quote English brands at $2 40 to $2.50, and other grades $2.15 to $2 20 Fire bricks continue in fair demand at $19 50 to $20 per 1,000 according to quality.

NAVAL STORES.

Naval stores are quiet and generally neglected. We quote as follows:—Rosins, $2.50 to $5, as to brand; coal tar, $3.75 to $4; cotton waste, 5½c. for colored and 7c. to 10c. for white; oakum, 5½ to 7½c. and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep sea line. Pure Manilla, 12c. for 7-16 and upwards and 13c. for smaller sizes.

PETROLEUM

Petroleum furnishes a very moderate movement and there is no change in prices. We quote as follows: Canadian 12¼c. to 12½c. at shed in Montreal for round lots and 13½ to 14¼c. for small quantities. Benzine is quoted at 11c. Petrolea, and 13 to 14c. Montreal. American petroleum, 19⅝c. in car lots, 20c in 10-barrel lots, 20¼c. in 5 barrel lots, and 20¾c for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c.; Canadian benzine, 10¾c Petrola; 12¾c. Montreal.



Milk Can Trimmings.

Creamery Can Trimmings.

Railroad Delivery Can Trimmings.

Milk Cans, Creamery Cans and Delivery Cans made up.

All sizes body stock for Cans and Cheese Vats.

If you have not used our Trimmings a sample order will make you our customer.

THE McCLARY MF'G. CO.,

LONDON, TORONTO, MONTREAL, WINNIPEG

TORONTO MARKETS.

TORONTO, Jan. 13, 1893.

HARDWARE.

The business of the year is so far confined to sales of sorting up lines, to which the unusually hard weather has given a special impetus. For instance, the trade in snow shovels has been especially active. Skates have been also in continued good demand, and sleigh bells have had fair sale. The same is true of other seasonable lines. The travellers are out with samples of goods for spring trade, notably spades and shovels. The changes made by the manufacturers' associations have not yet been officially announced by these bodies, but the most important of them are given on another page. The trade is generally satisfied with the changes, the majority preferring a little fault in the details of combined arrangements rather than the price cutting that was so general in the absence of such arrangements. The results of stock taking are still unknown, but they are quite certain to be more satisfactory than they were a year ago.

METALS.

Business in metals is at a low ebb. The consuming concerns are not yet very much in need of material, many being closed down for repairs and for stock taking. Prices have not varied, everything being rather flat.

PIG IRON — The sales are very few. Orders for spring delivery are being booked for British iron. The market is easy on both sides of the water.

Rogers, Brown & Co., Buffalo, N.Y., report Toronto pig iron market as follows :— The general tendency of the market during the past week has been on the side of weakness in prices. There has been a liberal inquiry and a large increase in sales, but both of these features are largely neutralized by heavy offerings. We quote on the cash basis f. o. b. cars, Toronto, in bond : IX Foundry Strong Coke Iron, Lake Superior ore, $15.95; 2X Foundry Strong Coke Iron Lake Superior ore, $14 95 ; 2 Foundry Strong Coke Iron Lake Superior ore, $14.70 ; Jackson County Silvery 1, $18.00 to $18.30 ; Jackson County Silvery 2, $17.30 to $17.80 ; Lake Superior Charcoal, $18 20 ; Southern Soft 1, $14.35 to $14.60 ; Southern Soft 2,$14.10.

BAR IRON AND STEEL—The price of bar iron is now $2.05 in this city, Hamilton and Montreal, and $2.10 in London. The list for extras is not yet published. The trade in steel is like that in all other metals, very quiet.

ANTIMONY—Cookson's is 13¼c., other brands 12¼c.

CANADA PLATES—There is little movement. Prices $2.65 to $2.90.

COPPER—The ups and downs of the New York market have not ended in any advance, in fact the market appears to be weaker. Prices here are 13¾ to 14¼c.

GALVANIZED IRON—The price is 5¼c. upwards.

INGOT TIN—Jobbers get 22¼ to 22½c. The market is easier in New York and London.

LEAD—There is no change either in the price or the state of trade, the former being 3¼c., and the latter dull.

OLD MATERIAL.

TIN PLATES.—Cokes are $3.75, I. C. charcoals $4.25, with $1 extra.

ZINC.—Casks of sheets are 6¼c., broken lots 6½c. Spelter is 5c.

Prices remain at former quotations, with business very dull. We quote: No. 1 heavy cast scrap 65 to 70c. per 100 ; stove cast scrap 40 to 45c. ; No. 1 wrought scrap 60 to 65c. ; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c. ; new light scrap copper, 8 1-2c. ; heavy scrap copper 9½c. ; old copper bottoms,8c; light scrap brass 5½c.; heavy yellow scrap brass 7½c. ; heavy red scrap brass 8¼ to 8½c. ; scrap lead 2c. ; scrap zinc, 2½ to 2¾c.; scrap rubber, 2¼ to 2½c.' country mixed rags, 80 to 85c. per 100 lbs ; clean dry bones, 50 to 60c. per 100 lbs.; plough shares, 60 to 65c ; burnt cast scrap, 15 to 20c.; railroad iron, 65 to 75c.; malleable scrap, 25c.

PAINTS, OILS AND COLORS.

The trade in these lines is not of large volume just now. There are no changes in the prices to report. White lead is 4¼c. Linseed oil in 1 to 3 barrel lots 57½c. freight allowed to delivery station ; 4 to 9 barrel lots, 56½c. delivered ; 15 barrel lots and over, 51½c. at point of shipment. Three cents added to these prices gives the quotation for boiled in the respective lots. Turpentine is 50c. in 1 to 3 barrel lots and 60c. in broken packages.

PETROLEUM.

The market is featureless, with the basis continuing at 14 to 14½c., the price of Canadian refined.

AMERICAN MARKETS.

New York, Jan. 13.—During the past two or three weeks competition for orders for structural steel has been very keen, and particularly where chances to secure anything in the line of a large contract for beams existed several manufacturers have named unusually low prices. Thus 2c. per pound at mill is known to have been shaded in more instances than one, and it is now rumored that a large contract has been taken at as low as 1.08 per pound, or $41.60 per ton. This rumor is not confirmed by local selling agents. In fact, those conversed with on the subject expressed serious doubts as to the accuracy of the report. It is no secret, however, that the market has become very much demoralied since the collapse of the steel beam "pool." When the manufacturers were in combination the price was held at about $60 per ton, or $15 above the rate at which orders will be taken by some concerns at the present time. There is a lingering suspicion that certain of the larger and best equipped manufacturers are engaged in a warfare upon their weaker competitors, with a view of exterminating the latter or forcing them into a combination later on. The competition is nearly as keen in other lines of structural steel as in beams, and prices are unusually low all along the line. In the manufacture of spikes, fish plates, and other track materials, very similar conditions exist, and matters are not a great deal more satisfactory in the departments devoted to ordinary merchant iron and steel. Drawing the line at steel rails and galvanized sheets, in which combinations of manufacturers are still partially effective, at least, the finished iron and steel trade is more or less depressed.

Crude materials used in these lines are correspondingly weak, since supplies are more than ample to meet present wants. Even the class of pig iron employed for foundry work, in which line general trade conditions contrast favorably with those prevailing in the mill branches, is a trifle irregular. By way of illustration, foundrymen are slow about placing orders for their favorite brands, because of free offering from various sources, and, occasionally, concessions of from 25 to 50c. from the prices generally quoted as representing market value are made.

Importers are securing moderate orders for Scotch pig iron, ferro-manganese, steel bars, billets and rods, but the business is considerably below what has been put through during the early part of last year. The increase in consumption of domestic soft steel, along with exceedingly low prices for the same, seems to have cut down the outlet for European products in this market to very small proportions. About the only exception is in the instance of black sheets employed in the manufacture of American tin plate.

The pig tin market was decidedly flat. London sent along a rather disturbing factor in the shape of a decline in prices there to £90 17s. 6d. for prompt, and £90 12s. 6d. for future delivery, while local operators were exceedingly cautious, as though fearful that the arch-manipulators on the other side of the ocean would twist them whether they went "long" or "short" of the market to any great extent. Local trade demand was slow, and the out-of-town movement no freer than it has been previously this week.

The copper position is unchanged. Shipments to Europe on consignment and in execution of old orders are of fair volume, as are also the deliveries to home consumers, but new demand is of extremely conservative type. Prices keep quite steady, however, at 12 1-4 to 12 1-2 for Lake Superior ingot, and 11 1-4 to 11 1-2 for casting brands. In the London market prices for merchant bars improved to £46 2s. 6d. for prompt and £46 10s. for future delivery, but the sales reported were small in comparison with those of the preceding day.

There were no new developments in the market for pig lead or slab spelter. Both metals are slow of sale at the moment and in moderate demand, but fairly steady as to prices. Current quotations 3.85 to 3.90c. for lead and 4.35 to 4.40c. for western spelter.

Tin plate has been slow thus far this week, and prices still lean somewhat in buyers' favor, although showing no radical change.

CORRUGATED IRON
ILLUSTRATED CATALOGUE FREE
METALLIC ROOFING CO.
MANUFACTURERS TORONTO

CATERING FOR THE PUBLIC.

Human nature in some respects is the same in each and every individual. While men may in a general way be entirely opposite to each other in habits, mode of life, likes and dislikes, nevertheless there are some characteristics that are found in 999 men out of 1,000. Curiosity is one trait that extends very generally throughout the human race. From the ancients to the present time curiosity has been a plane upon which all men

have met as brothers, and this statement may be verified by anyone taking the trouble to look over a crowd surrounding a toy pedlar and a man known in common parlance as a "fakir." A new puzzle or toy will attract and hold a crowd—banker, bootblack, white man and negro, grey hairs and youth, all pushing and striving for a favorable position, and what is the motive? Curiosity. Stop in a crowded thoroughfare and look up at any elevated point,and in ten minutes a crowd of peoplewill collect and stare, wonder, and question their neighbors as to the matter of interest. Curiosity governs the crowd. Everyone will admit that the foregoing is true, not only in this country, but throughout the civilized world, and, in fact, the uncivilized as well.

Applied to business.—To a certain extent this fact may be utilized in business, and a safe statement is: Every firm that caters to the public, and by so doing has achieved success, has attained the same to a certain extent by playing on the curiosity of the public. Another fact not to be overlooked is this: The average man has certain ideas concerning certain things.Opinions are formed from impressions given by a certain thing. The majority of ideas formed from the same impression will be very similar; there ore, wh.n mak ng stat.m n.s, do so in such a way as to cause a man to say, "That's so." In making a display work upon the chord that may be struck in the average man. If a person stops to view your display, the exhibit should be at once pleasing, and at the same time of such a character as to demand a future recollection. Business to-day is done by nothying the public that you are in business, and by placing before it such goods as will please and make a lasting impression.

Human Nature.—A successful business man must be either a student of human nature or a man with the ability to appreciate the fact that he is not, and have the foresight to engage a man who is. Advertising and window dressing in the present day are done by men who make the work a study, and who are particularly suited to it.

Advertising Opportunities. — In the hardware business the opportunities for attractive display and interesting advertising is unusually extended. In many other lines of business the goods relate more or less to the season, while in the hardware business some goods are sold which are seasonable in any season. Then, again, in the line of goods which comprise the hardware business there are many things particularly interesting at certain seasons. As an instance of this the line of sporting goods is always one which will interest at any time of the year. The average man has a weak point which tends towards sport of some variety. This point should be borne in mind.

Show Windows.—When dressing a window it is always well to have a certain space devoted to sporting goods. A pair of bamboo rods, one or two guns, and revolvers, are always drawing cards. Then a few pocket-knives, partly opened and neatly arranged. There are any number of brightly-finished tools which will appeal to some particular class, which may be tastefully arranged. The little things or novelties are the ones that attract attention. It is foolish in the extreme to use good display room for staple goods. Every person knows that the hardware store is supplied with hammers, planes, axe-handles, etc., but people do not know of all the new things constantly being put on the market unless they see them displayed. A good expenditure of time may be made in keeping the window-glass clean and well polished. Some say a highly-polished plate glass window becomes a looking-glass, and that the glance does not go further. If you can attract anyone by having a looking-glass, well and good; a very desirable state of affairs, in fact. The idea of a person seeing no further than the glass is a myth. Black velvet is the best covering for the bottom of the window. "But it would soon be covered with dust," someone may say. Yes, so it will, and your window and tools will become covered with fly specks, cobwebs and dust if they are not attended to, and the balance sheet will show a sum on the wrong side. Displays should be changed frequently. If tools become a little worn or specked, sell the samples and put out new samples from stock.

In Touch with the Times.—A certain amount of attention should be paid to the events of the times. For instance, if a large bicycle race is to take place, put a wheel in the window. If the race is won on a make of wheel carried in stock, state the fact on a neatly-written card. If not, find out from the manufacturers of your wheel whether or not any event of moment has taken place in which your wheel has been used. If fishing be the topic of discussion, decorate your window with fishermen's goods; if the notice of the public be brought to agricultural matters, display some vegetables grown from seeds sold by you. In other words, be up with the times, and in touch with the public.

In the Store.—Inside your store the same rule, generally speaking, holds good. The front of the store should be devoted to attractive,showy goods,while the staples and heavy matter should be kept upstairs, downstairs, or in the back part of the store. Showcases should contain the small wares which are highly-polished and susceptible to dampness. The cases should be trimmed in black. For inside trimming white is advocated by some, but experience has proved that black is the best background. A rule that applies to showcase and window is this: Don't try to get all your line in at once, and keep changing the display, and in this way exhibit your entire line. The mistake of crowding is so common that it is hard to appreciate the fact that a few pieces are much more effective. A card of description is often very desirable. If you wish to use a notice don't print it unless you are an artist, but get it done artistically. A "homemade notice looks cheap, and hurts you. So much for store display. Now for the general display made by your advertisement.

Paper Display.—Advertisement-writing is an art, and that it is but imperfectly understood by the average man is evidenced by the pages of the daily and trade papers. The following rules may be generally followed in advertising.

A Few Hints on Advertising.—Do not go into details; make all sentences short and to the point. Write your "ad," and then cut every word you can and still retain the sense. Use one type for the head or catch line, one type for the name of the "ad," and, if desired, another for the firm name. If your "ad" goes on a full page of cuts don't use a cut, your "ad" should be distinct; use plain type, such as you saw in your primer at interest the public. Talk about your goods, not about your firm. When you were established, and how long you have been in business are facts which do not interest the public. Talk about your goods. Don't try to talk about the entire line at once. Take a certain article suited to the season, the class of trade, and thoughts of the public. Advertise that article. The object of an "ad" is to attract people to your place of business. When you get them you can then go into details. If you have a cut for a trademark don't try and tell all the story on this cut; if you do the chances are it will blot; if it does not blot, people will not read it anyway. Have everything which acts as a medium between you and the people distinctive. Don't be just like someone else. Cater to human nature and success will follow.—American Paper.

WHY THE OTHER FELLOW CAUGHT THE TRADE.

Here is a feature of the retail tin, stove and plumbing trade that is open to study and criticism:

Bill Whitney and me went to school together, but when I was 12 years old I had to hustle for my living, took care of the horse, swept the shop and was as useful as the boss of the tin shop where I worked. Bill always was a good feller, never got stuck, and not only finisned our school but went through college, then came home and went in with his old man; but though we always spoke, we did not hobnob much as we did when kids.

I stuck to biz, because I had to. Didn't have time for reading, which put me to sleep after a day's hard work out of doors. So what Bill called rhetoric was scarce in me; but I saved my money, and now the boss' business is my business, and I know how to do good work and won't do any other kind, or won't sell any other kind of goods, for it don't pay.

Well, I was dirty and not polished, and as the town boomed another feller started and he talked sweet, wore a biled shirt but didn't know the trade. He never learned it and did some horrible bum work, but the way he talked of products of combustion, transverse sections, conflicting energy and things was equal to a college professor, and the people just dumped the dollars in his till, for they thought because I could not talk sanitary and sich that I wasn't even sane. Well, Bill Jones got married and built a house and gave me a show, but when he asked me about scientifics I wasn't in it, but the other fellow talked it as glib as ice and Bill, wanting a good cage for his bird, thought the other fellow knew it all and he done the work.

Well, I done it over and Bill blames me for knowing my business and not knowing how to talk to the boys I grew up with intelligently so as to get their confidence, and says I ought to be poorer than what I am for not giving my brains a show, and he is brushing them up and I dress more to suit my wife and hang me, if the talk and clothes ain't bringing me trade.—Metal Worker.

Now that the great banquet is over the members of the Toronto Board of Trade are beginning to talk of the approaching elections. These will take place on the 26th inst, nominations being made a week earlier. Many names are canvassed in connection with the several offices, but at present no very definite prophecies are ventured upon as to the outcome of the balloting.

SITUATION WANTED.

WANTED—POSITION IN HARDWARE OR tinware, by experienced traveller. Good references from leading houses; pusher and good salesman. Apply G., HARDWARE Office. 2

SITUATIONS VACANT.

WANTED—HARDWARE TRAVELLERS with good connections in Lower Provinces and in Ontario. None but first-class men need apply. H. S., GAZETTE Office, Montreal.

BUSINESS CHANCES.

Advertisements inserted under this heading one cent per word each insertion.

FOR SALE—STOCK OF GENERAL HARDware, paints, oils, stoves, &c. Business established 25 years. Value about $3,500. Address, Estate J Cameron. Beaverton tf.

Wanted--Foundry Men

To give Aluminum Alloy Composite a trial. 2% in ordinary Cupola will give you soft sound and solid semi-wrought iron castings. Price, $5.00 per 100 pounds F. O. B.

Book of information with Government report and other indisputable testimonials for foundry men—FREE. The Hartsfeld Furnace and Refining Co., Newport, Ky.



"BUILD TO-DAY THEN, STRONG AND SURE, WITH A FIRM AND AMPLE BASE." —Longfellow.

DO YOU?

WISH THUS TO BUILD, an advertisement in the CONTRACT-RECORD, TORONTO will bring you tenders from the best contractors.

Rotary Biscuit and Cake Cutter.

AGENTS WANTED.



Best Selling Kitchen Novelty in the Market.
Works Easy, Cuts Clean and Continuously.
Indispensible to Housekeepers, Hotels, Restaurants and Bakers.
It Saves TIME and LABOR and helps to make Kitchen Work a pleasure.
Trade supplied by
M. M. Vardon, 67 Yonge St., Toronto
Sole Agent for Canada.

SHOVELS--Fenerty's.

Users are rapidly learning that it pays to buy Shovels, etc., that can be so readily rehandled.

LOTS OF TESTIMONIALS.

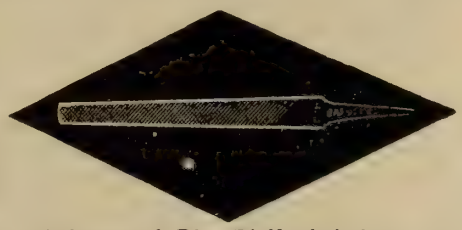
DEALERS--THIS POINT IS A STRONG SELLING CARD.

JNO. PETERS & CO., Halifax.
JAS. E. CHIPMAN, Vancouver.
CRAIG, MacARTHUR & CO., Toronto.
Stock carried at Toronto Branch.

CAN TELL YOU ALL ABOUT THEM.

HALIFAX SHOVEL CO., Ltd., Halifax, N. S.

BLACK DIAMOND



FILE WORKS,

21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

—MANUFACTURERS OF—

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
CLIMAX SAWFILES. LIGHTNING SAWFILES.

—AND—

EVERY OTHER DESCRIPTION OF SAW FILES.



ELECTRICAL
HOUSE -:- FURNISHINGS.

Bells,
Batteries,
Push Buttons.

The largest and best assorted stock in Canada.
Send business cards for discounts.

T. W. NESS,
749 Craig St., MONTREAL.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

THE BEST English Sporting Gunpowder

USE THE

"ALLIANCE"

PRIZE POWDER.

—Made only by—

Pigou, Wilks & Laurence, L'd.,
11 Queen Victoria St., London, E. C.

Always obtainable from
Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg.
John Barnsley & Co., Victoria, B. C.

W. J. REID & CO.

IMPORTERS AND DECORATORS OF

Crockery China and Glass.

LAMPS A SPECIALTY.

All glass, Vase, and Library Lamps, in every hue and design.
Our travellers will call upon you shortly with samples.

LONDON AND BELLEVILLE.

THE DEAD STOCK EVIL.

Writing on the ever-present and ever-important theme of "dead stock,' in the Michigan Tradesman, Mr. S. P. Whitmarsh says .

Among the worries of mercantile life a considerable portion may be charged up to dead stock. How to keep it from accumulating, and how to dispose of it to the best advantage, are questions ever recurring to one who desires to make the most of his capital. No matter if it has been bought to the best advantage both as to price and quality; there can be no profit from it until sold and paid for.

In cities and large towns the auction room is the natural outlet when all other plans fail to diminish the undesirable surplus. In spite of the wisest forethought in buying, every dealer finds a larger proportion than he has anticipated that does not move out with the other stock. The proportion varies with different branches of business, being largest in lines where fashion controls sales, but, at the worst, does not prove total loss. The stocks which fashion has outgrown in the city may meet a profitable demand in localities where buyers are not controlled by artificial tastes, or, at least, are not so eager to indulge in the expensive luxury of the very newest styles.

The civilization of to-day, thanks to inventive genius, is rapidly adding not only to its wants but to its luxuries as well ; but, thanks to the same genius, these wants are more economically supplied. As a natural result, this enlarges the variety kept in every line of trade, and this indirectly tends to the increase of dead stock. The dealer of the present age, therefore, must be peculiarly well qualified if he expects to meet promptly the fluctuating wants of a public who discard today what pleased them yesterday, and select novelties that, in turn, have an equally short-lived demand.

Country stores, where goods of a miscellaneous kind are dealt in, become the depositories of dead stock more from careless good nature while trying to indulge a capricious demand than from any lack of business prudence in the proprietors. By setting aside in a class by itself and marking down, such a stock can be disposed of at very little loss if the dealer is fortunate enough to have a list of profitable customers. Thus, in almost every species of traffic there is a way by which the dead stock can be cleared up at some price to repair partially the waste unavoidable in all business ventures.

Although dead or slow-moving stock is an inevitable disadvantage in all kinds of business, it may still be counted among the minor evils, to be avoided or endured as each dealer manages his line of traffic. No man can entirely master the difficult problem of how to avoid losses of this kind ; but, if blest with fair powers of judgment and memory, he may learn by his mistakes how to better arrange his purchases to catch the popular demand. If he be a genius, he may create such a demand ; for, if generous and prudent, he may give away dead stock and find it returned to him, like bread "cast upon the waters," in an increase of trade. The worst use to which it can be put is to raffle it away, for that is demoralizing and is not business.

WHAT A GOOD SALESMAN IS.

In an after-dinner speech, Mr. J. G. Powers, for many years one of Wanamaker's lieutenants, thus described the qualifications of a good salesman : "To be a good salesman is the same, so far as it goes, as to be a good merchant, and the great majority of both merchants and salesmen mistake what it is to be either. For instance, isn't this the prevailing notion of a good salesman : To be bright and clean looking, to have a good face, a pleasant manner, to be modest, but confident, ready and self-possessed, cheerful, cheery, polite, to take pleasure in giving pleasure, to adapt himself to his customers, to carry the whole of ones stock in his head to catch the customers want or notion or whim in a minute, and go to a dozen sorts of goods, and surround that want or notion or whim with so many satisfactions as to narrow it into a choice between them ; not to be afraid of work, to welcome service, to make a business of being ready with many expedients for every emergeny ; to seem to have no end of strength, and time, and patience ; to spend them all without stint in the effort to please ; to come from the last transaction with buoyancy and with anticipation of equal success in the next one ; to devote oneself to a dozen, twenty, forty customers, one after another, never weary, with forty different manners of forty different customers, all marked by adaptation to the one in hand ; taking success and failure with the same complaisance ; helping other salesmen ; taking help from them ; being devoted to business ; the business of selling, and helping others to sell, and being helped to sell, as if selling were what the world turns on. I believe that both merchant and salesman, to be in their respective capacities, must add to these blandishments the hard, cold, stern virtue of sincerity. Of two equal salesmen, side by side, the one who sincerely makes his customer's money go as far in satisfaction and gratification as the store affords him opportunity to do, will distance the other just as surely as of two equal stores side by side, the one that counts not the cost of faithful, adequate service, will distance the other. Store and salesman must work together. A faithful salesman is out of place in a faithless store ; and a faithful store depends on the faithfulness of its sellers."

Mr. Frank Caverhill and the firm of John Magor & Son, Montreal, have secured a corner in seal oil, having purchased every barrel in Canada and Newfoundland, owning over 1,000 barrels between them. It is used by paint and oil men for mixing purposes, and is a good substitute for cotton seed and lard oil.



BOWERY MUSIC.

MR. WRAGGS (to lodging-house Clerk).—See here, Mister, I can't sleep, because dat feller in der nex' room snores so awful !

CLERK.—Huh ! Yer didn't expect to get a lullaby by der Metropolitan Opera House Orchestra for fifteen cents, did yer ?

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Caskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

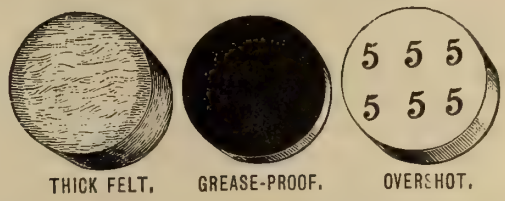
WESTERN BRANCH:

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

The Best in the Market.

BALDWIN'S



THICK FELT. GREASE-PROOF. OVERSHOT.

GUN WADDING,

For SPORTING and other CARTRIDGES. Best Hair, and Brown Felt of uniform thickness; also Best Cloth, Field, Grey Felt, Black Grease-proof and Card Wads. Overshot Wads, printed name and number. Indented Wadding, suitable for muzzle loading guns.

To be had of all Jobbers and Dealers in Sporting Goods.

JAMES BALDWIN & SONS,

ORIGINAL MANUFACTURERS,

Morville Street, Birmingham, Eng.

Agent:—W. H. JAGGER,

24 Front Street West, TORONTO.

Price Lists and Samples to the Trade Only.

We have fine line of Axes and Axe Handles, best makes, Also Cross cut Saws, Canadian, American and English manufacture, English Cow Ties, Hand and Machine made Rope Halters, Genuine Acme Skates, Snow Shovels, wood and steel.

Enquiries for quotations or general information will receive prompt attention.

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, Toronto.

ENGLISH HOUSE: SAMUEL, SONS & BENJAMIN,
164 Fenchurch St., London, E.C.

A PROPOSAL FOR A BLAST FURNACE HERE.

Mayor Fleming received a letter yesterday from Joseph L. Thompson regarding the establishment of blast furnaces in Toronto. He asks the Mayor to enlist his active sympathy and points out that pig iron can be manufactured here for $13.66 per ton, the Dominion cash bonus of $2 a ton reducing the cost to $11.66. This includes $1 per ton for interest and renewals of plant. The current price of pig iron per ton is $18 to $20. Mr. Thompson says he has a tender from a Pittsburgh firm to erect a complete smelting plant with one furnace of a capacity of 75 tons a day for $150,000. This includes switches, sidings, mineral sheds, etc. There is, he says, a market in Canada for 1000 tons per day. "The form the city's assistance might most reasonably take (in addition of course to a free site, free water, taxes and so on), would be a large subscription to the capital stock of the company. One hundred thousand dollars would be sufficient to give the enterprise a good start."

IRON SMELTING IN ONTARIO.

The Toronto Globe says :—"The E. W. Rathbun Company of Deseronto is prepared to establish an iron smelting works at that place if it receives sufficient monetary encouragement from the Ontario Government to enable it to do so profitably. An application for a bonus for the proposed industry is now under consideration by the Cabinet, and in connection with the matter two of the ministers have recently visited Deseronto to look the ground over. The iron producing industries in Canada enjoy a bounty of $2 a ton on their output, and a tariff protection of $4 a ton, which gives them an advantage of $6 a ton. The Rathbun company has for several years been manufacturing the refuse materials from its extensive mills into charcoal, which has been shipped to Detroit to be used in iron smelting operations there. By the establishment of direct railway communication with the ore beds of North Hastings the company is in a position to transport the ore to the furnaces at a minimum of cost, and it has also in its favor the ability to produce cheaply all the charcoal that would be required. With a little assistance from the government it is ready to start the first smelting works in Ontario. There are two iron smelting industries in Quebec—that of the Canadian Iron Company at the Radnor Forges, north of Three Rivers, and that of John McDougall & Co. at Drummondville. The former has a daily output of 25 tons, which, by doubling the driving power, will be increased to 50 tons a day. The Drummondville concern, which is now carried on by Robert Cowan of Montreal, produces thirteen tons a day. The province of Quebec pays no bounty. Nova Scotian capital has been invested in the iron smelting industry. The folowing statement shows the amount of the claims for bounty on pig iron manufactured in the Dominion since the inception of the bounty principle, and the amounts paid in each fiscal year :—

Year.	No. of tons claimed upon.	Amount of bounty paid.
1883 84.....	29,388 16	$44,089 91
1884 85.....	25 769 13	38,654 91
1885 86.....	26,179 19	39,269 56
1886 87.....	39,717 00	59,576 00
1887-88.....	22.209 61	33.314 41
1888 89.....	24 822 42	37,233 62
1889 90.....	24.373 10	25,697 27
1890 91.....	20.153 01	20.153 05
1891-92.....	30.289 17	30,294 37
Total....	242,900 97	$328,283 10

POOR BOYS.

Great men are a nation's choicest treasure. There are many stately and exclusive doors open only to those who bear titles and degrees, but to the hearts and homes of all true Americans, those who have risen by their own exertions from poverty and obscurity to wealth and eminence, find a welcome. It has been said, "Biography is the most universally pleasant and profitable of all reading." If we would understand what heroism is, we must study the lives of heroic men and women. A living patriot will teach us more of patriotism than a thousand books.

Let us recall the lives of some of the men in active life who were once poor boys; whose fathers' names are unknown in public; who by years of persistent endeavor attained wished for and deserved success. Washington, Franklin, Grant, Garfield, are men belonging to this class. They have made the world richer and better, and have passed away leaving others to make for themselves similar positions. We have poets, inventors, statesmen, divines who have become popular benefactors, not for an age only, but for all time.

Among inventors such as Morse, Whitney and Robert Fulton, Thomas A. Edison rises pre-eminent in his superior practical inventive power. Born at Milan, Ohio, young Edison began life poor. Though of humble parentage, yet he has surpassed the profoundest thinkers of our times. To him we are indebted for the electric light, the only artificial light whose brilliancy approaches that of the sun. Many of our inventors have died in poverty, receiving no pecuniary benefit for their genius, but Edison received $100,000 for the discovery of the carbon telephone.

Our Presidents have been men whose early struggles against adverse circumstances strengthened and prepared them for their important positions. Benjamin Harrison, when a young man with his family at Indianapolis, living in three plain rooms, not ashamed of his poverty or the self-evident fact that clients would be received cordially at all hours, had no visions of living in the executive mansion; Mrs. Harrison, performing the monotonous duties of a housewife, could not see in the future the position she would hold in the American mind and heart. They began life in poverty, which is but the beginning of wealth and power, having the boundless possibilities of the future always before it.

In all these lives there have come patience by being poor, courage by coming in contact with opposition, knowledge of character they would not have gained had they been carefully shielded by the surroundings which money gives to the sons of the rich.—Merchant Sentinel.

PRESENT BUSINESS METHODS.

"Friendship doesn't sell many goods now-a-days," remarked a salesman recently. This is true enough in one sense, but in another friendship plays just as great a part in commercial affairs as it ever did. That friendship that tied a merchant up to a particular house, or to a certain salesman in that house, and made him blind and deaf to any other concern, has largely passed away, but there still exist many instances of warm personal consideration between merchants and salesmen, founded on mutual esteem, and on benefits given and received in the course of business, that will secure trade for certain houses, other things being equal. A merchant will usually prefer to buy of a salesman whom he knows, in whom he has confidence, and with whom he is in sympathy, but he expects just as good treatment from him as from his rivals; in fact, this friendship is usually founded on the idea that the merchant can do a little better in one way or another with his particular house or salesman than with any other.

This change in the business methods of the country is due in part to its transformation from a new and thinly settled country to one in which the most advanced commercial ideas alone can rule, and partly to changes in the industrial interests of the entire country. In the early days anybody could make money retailing goods. Style was but little thought of. A merchant's stock was good until it was sold. The city and the surrounding country was being settled rapidly, money was plenty, and price was not of such great importance when everyone had money and felt certain that they would shortly be wealthy.

Now what is the state of affairs? There are more goods for sale than people must or can buy. Buyers have been taught to be cautious and critical, and economy is practiced of necessity by nine-tenths of the people. Competition hence becomes severe, and a merchant to be successful must be both wise and diligent in his purchasings, and cannot afford to overlook the advantages which may be found by searching through an entire market. He must post himself on what is offered him by all the houses, and if one can make better prices on any line of goods he must avail himself of the opportunity. Not only is his competitor likely to do so, but his customers are much better posted on prices than formerly through the catalogues now so freely distributed by the large city stores. His best friend in business is that one which will make him the lowest prices, or in some way enable him to make the most money. So that selling goods is not a matter of friendship nowadays, but is strictly business, as it ought to be.—Ex.

MISREPRESENTING GOODS

There is little question but that, theoretically, the average merchant subscribes to the highest ethics of shop-keeping He finds, indeed, a certain moral satisfaction when giving his concurrence to the opinions of speakers and writers on trade topics, who assume to teach from an elevated point of view, and though it is a question when, after all, in the practical application of such theories, there is not a great deal of divergence from the theory itself, possibly the temptation to have a lower code of business ethics than what is conceived to be absolutely just, has its strongest force in the matter of representing goods to customers.

An esteemed English contemporary suggests that "there is a song of a not very elevated character which carries the refrain, 'It's all right, if you love the girl,' and we fear," it adds, "there may be here and there a tradesman who sings as a lullaby to his own conscience, 'It's all right, if you sell the goods.' But is it? Is it even all safe and prudent and good policy?"

While this may be regarded as shifting the question to a very much lower plane, it has the advantage of attracting more attention. Our English contemporary argues that the chief reason for a lowering in ethical consideration of the pratical side of this question is that "we all know how to live uprightly and won't, whereas we do not know how to make fortunes, and wish we did." It, undoubtedly, is true that business morally has a much better chance, if the odds are in favor of its paying a dividend in hard cash.

The solution of this question in a way that deals fairly with the consumer and satisfies him, and justifies the merchant's own conscience, even when tried rigidly by the standard of the highest business ethics, is to handle only good goods.

We have no question that a man is a better man, better satisfied with himself, better contented with his business, more successful in his business, more popular with his customers, and more likely to obtain larger custom, if he sells goods that he does not feel he is compelled to misrepresent in order to "make them move." Good goods at fair prices, when put into practical effect, therefore satisfies not only the moral, but the material side of the merchant's life. There can be no possible reason why a merchant should not adopt that motto as his own, and put it into practical operation. Poor goods at any price do not pay in the long run. Good goods at a fair price always pay.—Michigan Tradesman.

CHARACTERISTICS OF COMMERCIAL TRAVELLERS.

If all ironmongers and travellers were business men in the truest sense of the words there would be little need to draw up a set of rules. There is a small minority of buyers who are always unthoughtful, and sometimes even insulting. They daily complain of being bored by travellers, or keep repeating the dreadfully hackneyed expression, "They have always more travellers than customers," etc. A close observer will soon find that these grumblers are most unbusiness-like men, who only order when they are in a good humor, and not when they want goods. They invariably "repeat" what they have already in stock, and leave unordered what they really do require. In other cases their rudeness is often assumed to drive a traveller off without his account when the business is on the down grade. Although this class are always too busy to see a traveller, they can gossip for an hour to a neighbor; yet if the traveller suggests calling again he is asked not to do so, the request being clinched with the addition, "You travellers think we have nothing else to do but wait upon you."

On the other hand, we have a lot of very unbusiness-like commercial travellers, some types of which I have already described. I can conceive of nothing so objectionable as a "bouncing" or "boring" traveller rushing into a shop and standing in front of a lady customer, and expecting all attention to be turned to him. It is this small minority who make things uncomfortable all round, and anoy ironmongers, as well as put them out of temper, and the next traveller who calls has to suffer for the "cheek" of his predecessor. I have seen some travellers have the cool impertinence to stand smoking in a customer's shop, and after this I am unable to see how they can be surprised if they are very unceremoniously received. Such prosy ironmongers or travellers all the rules in the world would not move, but we cannot draw up a set of rules to suit a small minority, consequently I leave this class out of consideration entirely. The great majority of ironmongers, who are the financial masters of their business, and conduct it on sound business principles, have no difficulty whatever in dealing with travellers, nor do I ever hear them complain. The rules I propose to enunciate are only what they daily carry out in their business, and hence the absence of friction. If the ironmonger would only make a point of seeing a traveller when he calls, and telling him whether he did or did not want anything, in place of keeping him hanging about the shop, the difficulty would vanish at a blow. Where a business is properly conducted nothing is ordered until the stock is taken and the buyer knows what he has got. He then sees at a glance whether he can buy or not, and is able to give a definite answer. The moment business is mentioned anything new or novel can be gone into in a very few minutes, and decided then and there. If travellers be, as many people maintain, "an evil," a little closer examination will soon show them that they are a "necessary evil," and many ironmongers are waking to that fact, and sending out a traveller to look up their own customers. I wonder if they ask them to clear out the moment the customer says "No," without any further attempt at booking an order?

1. When a traveller is advised, if he be from a firm you do business with, or from a firm you intend to open an account with, make a point of having your stock taken of the goods he sells the day you receive advice, and there and then decide whether you will buy or not, always, of course, keeping an open mind relative to novelties and specialties which may be shown.

2. When the traveller arrives, make a point of speaking to him at once. If you are engaged, make an appointment as soon as you possibly can, and keep it.

3. Ask for statement and square off the account before you proceed to any other business.

4. When the account is settled make your decision unmistakable if you have resolved not to buy. If the traveller attempts to bore you lead him to understand once for all that his continuing to do so will lose him your account altogether. You will have no difficulty next time.

5. If you find your stock is low give the order to the traveller in preference to forwarding it to the works. The majority of travellers can do as well, and, in many cases, better for you than the firm will do. They have all the latest patterns and lowest prices, otherwise they could not keep up their returns.

6. When you get a good article which sells well repeat it in preference to substituting another, unless in cases where fashions change. By doing this you have very much less danger of accumulating old stock through the new article selling first and leaving the remains of the old parcel on the shelves.

7. Never allow yourself to be carried away or your judgment upset by the oratory or eloquence of an able traveller in buying goods you cannot sell, or ordering larger quantities than usual to get better terms. If you do you will have to pay the penalty, either by an increased stock or having a clearing sale to get the goods off.

8. When once you know a traveller well enough to be able to trust him, it is well to do so in reference to patterns you should buy. Sometimes an apparently good thing, through some unapparent deficiency, is a comparative failure, and it is as much a traveller's interest as yours in advising you to buy his best value.

9. Make a point of doing your business with as few firms as possible, and restrict your accounts as much as you can. In this way you will save a lot of time, you will get better attention, and your account will be more valued by the maker you support.

10. Before you decide on a manufacturer, be sure that he is progressive, enterprising and up to date. In this way you will catch the infection, and follow up what the manufacturer initiates.

11. Be always willing to look at the patterns of any firm you have not done with, and consider their credentials. In this way you will be able to detect rising merit, and in time you may find it to your advantage to change an account.

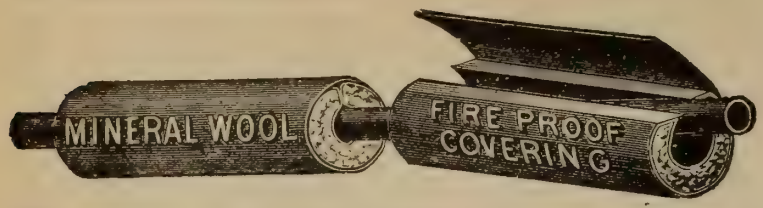
12. Never change an account without the most mature consideration, or until you have weighed up all the pros and cons of the two makers, nor in one article only, but all round; or unless the firm you are dealing with neglect your orders and give you just cause of offence.

13. Unless it be in goods you cannot value, such as cutlery or electroplate, never allow yourself to be prejudiced in favor of an old name in cases where an equal quality of goods can be had cheaper from a younger firm; but be quite sure the quality is equal before you finally decide. Some old-fashioned ironmongers pay very dearly for blindly buying from old makers, while the draper supports a young rising firm, and is thereby able to cut the ground from the ironmonger's feet.

14. Consider the time of the traveller as well as your own, and in this way you will gain yourself a good name in the trade. You will make business pleasant and remove friction, which would otherwise lead to trouble, worry and anxiety.

15. If you be on friendly terms with the traveller I should be sorry to make rules so rigid as to exclude all sentiment from business, but let it be an unalterable rule never to permit any friendly intercourse to interfere with business until business is finished. Should any interruption then occur, the friendly chat can be cut short or postponed until another occasion.

I know many ironmongers who carry out the majority of these rules daily, and it is always a pleasure to do business with them.—The Ironmonger.



A GREAT LOSS?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss. The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.



SALES MADE OR PENDING.

R. Dunsmuir & Sons, general merchants, Union Mines, B.C., have been succeeded by Simon Leiser.

The general store stock of Thos. Fisher & Co., Bolton, has been sold to A. Taylor at 47c. in the dollar.

The general store stock of John McConachie, Honeywood, Ont., is advertised for sale by auction on the 17th inst.

PARTNERSHIPS FORMED AND DISSOLVED.

J. P. Coutlee and J. D. Coutlee are registered proprietors in the Canada Supply Co., Montreal.

Alexander T. Paterson and R. McD. Paterson are registered proprietors in the firm A. T. Paterson & Co., general merchants, Montreal.

Andrew Bros., general merchants, Middleton, N. S, have dissolved, Geo. M. Andrew continuing.

Oswald Ste. Marie and Edmond M. Wright are registerd proprietors in the firm Ste. Marie & Wright, oil merchants, etc., Montreal.

FIRES.

N. Campeau, tinsmith, Buckingham, Que., is burnt out. Partially insured.

R. B. Norton & Co., hardware merchants, Charlottetown, P. E. I., are burnt out.

John Robertson, stoves and tinware merchant, Strathroy, Ont., is burnt out. Insured.

John Windsor, general merchant and fish dealer, Petit Rocher, N.B., is burnt out. Insured.

DEATHS.

James F. Cochran, of J. F. Cochran & Son, general merchants, Brooklyn, N.S., is dead.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

G. L. Pelletier, general merchant, Matane, Que., has assigned.

Demand of assignment has been made on A. Bissette, general merchant, Iberville, Que.

Paquette & Therien, general merchants, St. Remi, Que, are preparing a statement of their position.

J. L. Dunn & Co., manufacturers of varnish, Windsor, Ont., have compromised at 50c. in the dollar.

The book debts in the estate of C. L. Ingraham, general merchant, Sydney, N. S., have been assigned.

Griffin & Co. (M. E.—Mrs. C. B.—Griffin only), general merchant, Ridgetown, Ont., has assigned to John Lennox, Hamilton.

THE LESSONS OF THE LEDGER.

There is perhaps no time in the year when the business man becomes as close a student of his ledger as at the close of the year. It is at this time when items mature into totals, while losses and gains are brought before the court for examination and impartial verdict. It is a time for reflection with all, and of repentance with many. With some the investigation is a delightful process as indicating progress and prosperity, maturing in a discovery of being richer than at the close of the previous year, and with substantal evidence on hand of doing as well, if not better in the year to come. Others are neither so happy nor rich as they were. Twelve months have registered as many falls in the mercury of the business thermometer, and a corresponding descent on the stairway of progress. In either case ,the causes, both of going up and coming down, are likely to be put in the scales and weighed, and where continuance is a virtue and repentance a necessity, the totals of the ledger are the missionaries of the hour.

Here common sense or folly are made manifest; indiscretion or carelessness are epitomized in cold arithmetic; mistakes, like the maternal hen, mark the difference between the chalk and the legal egg in the production of poultry and the prospects of a sale in the market. Disappointments, as unavoidable as a change in the weather or a record of a ballot box, are more or less the thorns that are left in every annual crop. Customers are not always what they promised to be; the keg was new but the cider sour. Their promises were gilt edged but their pay invisible. Debts remain on the books where their claim on immortality is beyond dispute, while markets, like men, are not always what they seem. Dishonesty, misplaced confidence, and salaries without equivalent, have all made their raids on the expense account, with a solitary cypher at the foot bottom of the column. These things, like the population of Noah's ark, represent a variety, both of freight and passengers, all which are unloaded by the business man at the close of the year.

Some men profit by these experiences; others, if the wiser, are never the better. Enough, however, is annually discovered to make a wise man reflective and his



vice versa regretful. Success in but few instances is the result of accident or indifference. It has its laws and conditions, both economic and moral, and their violation has its punishments, no matter the furniture of an office or the cash of the sinner. In the morals of business there is no revised edition, or wrinkles of age or decay. They are as immutable as the multiplication table, and no man can reverse either their potency or their consequences. The idea that business integrity, conscience and square dealing are no longer factors in prosperity, may find now and then a room to rent in a commercial hat, but we question whether the average business man, however much he may ignore his duty, has any honest doubt of the right way being the best.

In business methods and conditions there are, however, continual changes, and it is here that the uninformed and negligent find themselves at the wrong end of the kite. For this obtusity and short sightedness there is practically no valid excuse. Every trade has, in these days, its own journal. Here the man most interested can secure all the information he needs, and for what is after all but a nominal sum per year can secure the eudcation not obtainable elsewhere at any price. The opportunities of advertising are equally as available. When judiciously appropriated, the results are unanimous in favor of the man who appreciates the value of printers' ink. In this direction, as in all others, in which methods improve with time, the scope and importance of advertising is continually increasing. Readers are not now, as of old, in a minority, nor is the circulation of a trade journal limited to a solitary mail bag or the boundaries of a county. In this means of increasing business one may find its results on the smiling side of his ledger. In fact, all causes that lead to business expansion and success are more or less legible to the man who makes up his mind to profit by the lessons of his ledger.—Age of Steel.

OFFICES: 100-102 Reade St., New York, U.S.A.

CAPACITY OF WORKS: 1,200 doz. per day.

KEARNEY & FOOT CO

Manufacturers of FILES AND RASPS.

Superior quality fully guaranteed.



Illustrated Catalogue Price Lists mailed on application.

WORKS: Paterson, New Jersey, U.S.A.

PLEASE MENTION THIS PAPER WHEN WRITING US. Agents, M. & L. Samuel, Benjamin & Co, Toronto.



... NOTICE ...

THE metal used for our Spoons, Forks, etc., we guarantee full **18 PER CENT. NICKEL SILVER.** All goods bearing the name "TORONTO SILVER PLATE CO." are plated with pure silver as represented, extra or standard plate is full 25 per cent heavier than ordinary market standard. All are **BURNISHED BY HAND**, which imparts a harder, more durable and even finish than is possible by any other process,

We deposit on our extra plate ware 50 dwt. pure silver on tea spoons, 75 dwt. on dessert spoons and forks. and 100 dwt. on table spoons and medium forks.

Factories and Salesrooms, 570 KING ST. WEST, Toronto, Ont.

E. G. GOODERHAM, Manager JOHN C. COPP, Sec. Treas.

The Old Wooden Bucket Must Go

Indurated Fibre Ware.



NO HOOPS, NO JOINTS, CANNOT LEAK, SWELL, OR WATER SOAK.

The E. B. EDDY CO.

MAMMOTH WORKS

HULL, CANADA.

Jessop's Steel.

This brand which has earned the title of the "Standard Tool Steel of the world," can always be relied upon by consumers. A full assortment of best and medium qualities kept in stock, at lowest prices.

A. C. LESLIE & CO., Agents,
445 St. Paul St. Montreal. 18 Front St. West, Toronto.

"Burham"
PORTLAND CEMENT.
BEST ENGLISH BRAND MADE.

Canadian Consignees :
McRAE & Co.,
Ottawa and Toronto.

MUNN'S LIQUID GLUE.

The Strongest, Cheapest and Best.

Put up in all sizes. Circular and price list on application. KENNEDY BROS., Agents, 101 Bay St., Toronto.

For sale by the following wholesale houses in Toronto :—

H. S. HOWLAND, SONS & CO.
THE HEMMING BROS. CO.
THE ART METROPOLE.
WILLIAM BROWN, Carriage Hardware.

SAY !

If your Jobber can't supply
Kearney and Foot's Files
Write
W. S. McGREGOR, Agents,
11 and 13 Front St., Toronto.

Excellent Quality ! Reasonable Price !



ADAMS-MARS BEST.
GALVANIZED SHEET IRON. SP

FOREIGN CORRESPONDENCE.

Letters translated from or written in any foreign language.

I H. CAMERON, 10 Front St. E

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	24, 25½
Strip "	25, 26½

Tin Plates—*Charcoal Plates, Bright.*

Bradley M.L.S.	Per box
I.C., usual sizes	$6 00 $6 25
I.X., "	7 25 7 50
I.X.X., "	8 50 8 75
Raven & P.D. Grades—	
I.C., usual sizes	4 50 4 75
I.X., "	5 50 5 75
I.X.X., "	6 50 6 75
I.XXX., "	8 50 8 75
D.C., 12½ x 17	4 00 4 25
D.X.,	5 00 5 25
D.X.X. "	6 00 6 25

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be purchased of 10c. per box less.

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	8 00 8 25
I.X. Terne Tin	10 00 10 25
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65,	

Tinned Plates

72x30 up to 24 gauge	6½ 6¾
26 "	7 7¼
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Iron, per 100 lb	$2 05	2 15
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inc	$2 45
16 "	2 35
¼ " and thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2⅝, 2¾
26 "	3, 3¼
28 "	, 3½

Canada Plates.

Blaina	½ bright	2 65 2 70
Abercarne		2 65 2 70
Lion		2 65 2 85

Iron Pipe.

Wrought 62½ per cent.
Galvanized, 35 to 37½ per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	5¾ 6
" ¼ " "	5¼ 5½
" 5-16 " "	4¾ 5
" ⅜ " "	4⅝ 4⅞
" 7-16 " "	4¼ 4½
" ½ " "	4 4¼
" ⅝ " "	3½
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 14 0 14½
Lake Superior	0 13 0 13¾

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20 0 22
" 35 to 45 " "	0 19 0 20
" 50 lb and above per lb	0 18 0 19

Boiler & T. K. Plts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 06½ 0 06¾
Domestic "	0 06½ 0 06¾

Zinc Sheet.

5 cwt casks	0 06 0 06½
Part casks	0 06½ 0 06¾

Lead.

Imported Pig. per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, per square ft, by roll	0 04½ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04½ 0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

Half-and-half (guar.) per lb	0 17 0 19
Standard	0 16 0 18

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½ 0 14
Other makes "	0 13 0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per lb	4½ 5
No. 1 Do "	0 5
No. 2 Do "	0 4½
No. 3 Do "	0 4

Prepared Paints.

(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1 10
2nd qualities "	0 90

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 14

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
Venetian Red (R.C.2) " "	1 50
Ven Red, Cookson's "	1 80 1 90
English Oxides per cwt	3 25
American " " "	2 25
Canadian " " "	1 75
Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure,	
8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 65
Extra " "	1 00
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 90
No. 1 Carriage "	1 50
Gold Size Japan "	1 40
Pure Orange Shellac "	2 00
Hard Oil Finish "	1 50

Linseed Oil (in bbls)

Raw, per gal	0 56½ 0 57½
Boiled "	0 59½ 0 60½

Turpentine (in bbls)

Selected Packages, per gal	0 50

Castor Oil.

Best, per lb	0 07½ 0 08½

Cod Oil.

Cod Oil, per gal.	0 48

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet makers	0 17 0 18
White	0 16 0 17

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50, 50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 30 and 5 off Revised list to 35 per cent
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35, 40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 37½, 40 per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 to 65 and 5 per cent

Wrought Steel.

Fast Joint, dis. 65 to 65 & 5 pc.,
Loose Pins, " 65 to 65 & 5 pc.,
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " .... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50 pc } to 50 and 5
Plate dis. 50 pc } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... .. .. 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 40 to 45 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10 p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.40	2.70	2.00	
26 to 40	1.50	2.90	2.25	
41 to 56		3.30		5.00
57 to 60		3.60		5.50
61 to 70		3.90		6.00
71 to 80		4.50		6.75
81 to 85		5.20		7.50
86 to 90		5.90		8.50
91 to 95				9.50
96 to 100				10.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 6 50

Picture Glass.

Pilkington's ordinary.
1st break 4 30
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 90
Enamelled " 0 55 1 20

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c.

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 4½ 0 05
Screw and Strap, per lb .. 0 03½ 0 04½
Per doz. sets
Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.
Per doz. pairs
Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mortar, etc., discount 40 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

BOWMAN, KENNEDY & CO.,

LONDON, ONT.

Large consignment of WINDOW GLASS via "Pickhuben," just unloading at our Warehouses.

Full assortment of sizes now on hand. Prompt shipment Guaranteed.

SEND US YOUR ORDERS AND THEY WILL HAVE GOOD ATTENTION.

Wrought Hooks and Staples, Amer- dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 40 0 45
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Pad- ock, Am. per gross..... 1 60 4 75

Knobs.

Door, japanned, and N.P , Can. list dis, 50 p.c.
Bronze, Berlin, per doz .. 2 75 3 25
ronze, Gem, " 6 00 9 00
ass " 8 75 10 00
hutter, porcelain, F &
L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)
1. Either Canada or American Pattern.
Basis—50 to 60 dy..... 2 30
40dy..... 2 35
30 dy..... 2 40
20, 16 & 12 dy..... 2 45
10 dy..... 2 50
8 & 9 dy 2 55
6 & 7 dy..... 2 70
2. American Pattern Only
from 4 to 5 dy 2 90
3 dy. (lath)..... 3 30
3. Canada Pattern Only
from 4 to 5 dy 2 80
3 dy. (lath) 3 20

Cut Nails steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 5 per cent. cash in 3 days.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross
Square, round and octa- gon 3 38 4 00
Diamond..... 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz..... ... 2 25 3 25

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. B. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... .... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 1½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	22	25
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 0 70 0 75
" N P. " 1 00 1 10

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 30 and 5 p.c. to 35 p.c
Emery, per quire 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempsbell's dis. 40, 62½ per cent
Canadian dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S & D., dis. 35 per cent.
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 30 to 35 per cent.
Hack, complete, each.... 1 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H. " 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P , dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 60 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, p. gro. 1 65 5 50
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia ½ gross boxes..... 3 25
" ¼ and ⅛ gross boxes per gross net cash 12 00

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross	7 50	12 00
Dessert " ..... "	21 00	.....
Table " ..... "	30 00	30 00
Dessert Forks.... "	24 00	.....
Medium " .... "	27 00	.....
Table " ... "	36 00	.....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4½ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2, " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 50 per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 50 per cent.
" Tacks. 45 per cent.
Trunk and Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75 p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S. & W., 10 p.c. advance on American list.
Canadian net list.

Tinware.

Stamped, dis. Assn list, 70, and 12½ per cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Iron and Steel, bright, annealed, oiled, coppered, galvanized, spring, nail, bolt, rivet, etc.
15 per cent. f.o.b Montreal, off revised list, Dec. 1, '92.
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 15 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " " } 4½ 4¾
" Plain twist, 2&3 wires
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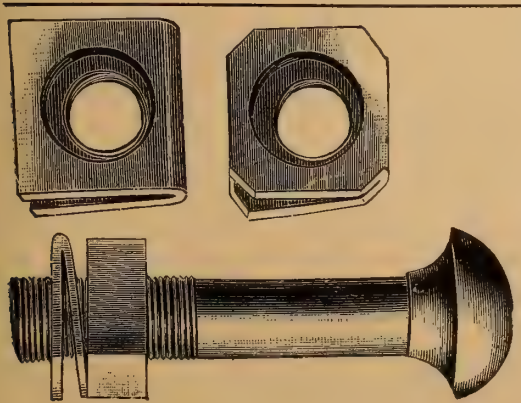
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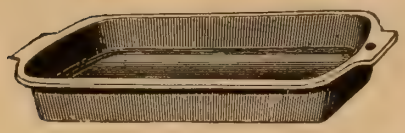
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CANADIAN
HARDWARE
AND METAL MERCHANT

VOL. V. TORONTO, JANUARY 21, 1893. No. 3.

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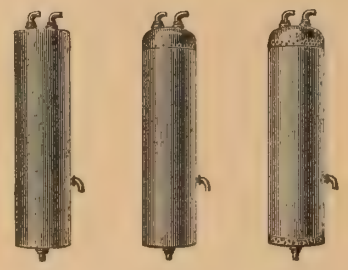
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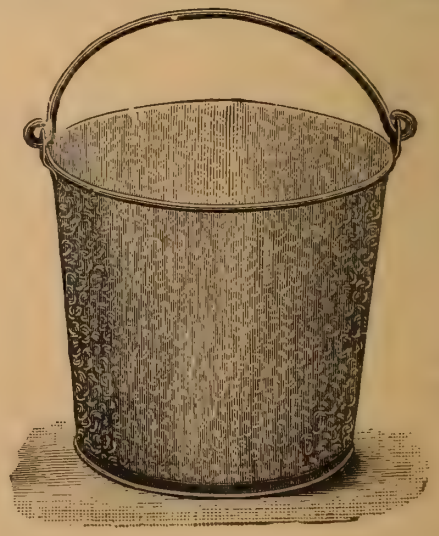
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They are stronger in shape, consequently more durable.
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ORGAN OF THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

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Vol. V. TORONTO, JANUARY 21, 1893 No. 3

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

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Advertisers and Subscribers may have their correspondence addressed to the care of any of our offices and hey are invited to use them at any time. At the Head office, Toronto, a place is set apart where they can see all the latest newspapers and the latest issues of trade papers from all parts of the world, where they can do their correspondence or obtain any information. Parcels may also be directed to the Head office.

The late severe weather was probably as agreeable to the hardware merchant as to any class of trader. His goods are not, with a very few exceptions, liable to damage from low temperatures. The grocer, the fruit and vegetable dealer, and many other classes of traders, have to fight the cold weather by fire, if they would preserve many lines of their stock from destruction. There are some liquid goods that have to be kept in a warm atmosphere to guard against loss through freezing, but they are the exceptions. This is well, for the hardware merchant has much to dread from excessive heat. There are certain combustibles, as gun-powder, spirits of turpentine, benzine, and the like, that are much safer in cool storage than in warm. The cold weather has sharpened the demand for winter lines and thus benefited the hardware man. The sale of horse shoes, of skates, of snow shovels, of sleigh bells, of hand-sleighs, and many other lines has been very greatly increased since the bare ground was covered, the waters frozen, and the difficulty of keeping warm became a general one. The cold weather has probably not benefited the hardware trade as much as it did the dry goods trade, but its effect has been entirely beneficial. Those who handle stoves have had some demand for compartment heaters, which many people whose furnaces are inadequate for the requirements of the late cold snap found it necessary to put in.

* * *

The manufacturers of polished steel butt hinges in the United States have adopted a new list, the changes in which, together with the change in discount, are equal to an advance of about 20 per cent. on former prices. This has some interest for the Canadian trade, who handle large quantities of United States steel butts every year. Indeed, until last year there was no choice, and United States manufacturers had this market to themselves. Now there are virtually two Canadian manufactories—one started last year at Brockville, and another preparing to start at Gananoque. It is expected that they will take advantage of the rise in the United States, either to increase their profits or the volume of their trade, or probably both. If they adopt the United States list, they will most likely take a different discount and keep to net prices which, along with the duty of 35 per cent., will preserve this market for native producers. It is understood that one firm of manufacturers have already withdrawn their quotations, and this leads to the expectation of higher prices.

* * *

The renewed effort to establish a combine on horse nails has proved a failure, as former efforts in the same direction have proved. Manufacturers differ in their ideas as to the value of their product, some holding such lofty views that they consider themselves entitled to a bigger margin than their fellows. This stood in the way of an agreement between makers and defeated a purpose that was generally held to be desirable. In horse nails, however, there is probably less cutting than in many other lines that are open to competition. Still, wholesalers whould feel more satisfaction if a common basis existed. Manufacturers are of one mind, apparently, as to the desirability of a uniform price, but for the reason referred to, they find it hard to get to that basis.

* * *

It is notable and significant that any sales of wire nails at extremely low prices in the United States have been made by concerns engaged in the production of wire, of which they also produce the immediate raw material, that is, the iron. The object of this is apparently to drive out of the business manufacturers who have to buy the material, and who are therefore reduced to dependence upon the profit yielded by the nails. In other words, United States wire nail manufacturers who make their own wire are willing to sacrifice the profit on the nails in order to kill out competitors who make no other product. This means that the profits on the wire nail trade are pretty much reduced to the profits made on the material. In this country the same holds true to a considerable extent. Manufacturers who draw their own wire can afford to put wire nails on the market at current prices, but those who do not, will find present prices rather unremunerative.

* * *

The Hon. N. Clarke Wallace takes the right way to fit himself for the duties of the office of Comptroller of Customs to which he has been appointed. He began by announcing his desire to become acquainted with the views of the mercantile class in relation to customs duties, appraisements, etc. When in Toronto last week, many of the leading importers, at his own request, waited on him and brought before him matters that they deemed anomalous or deserving of consideration with a view to reform. The questions discussed affected only the dry goods trade, and representatives of that trade alone were present at the meeting. The following day he went to Hamilton

to meet the business men of that city and to talk over customs matters with them. No subject of direct moment to grocers or general merchants was brought up, but some matters important to other trades were broached, and closer relations between the business men of Hamilton and the customs department were established. It is to be hoped that this departure of the head of the customs department will be regularly followed up. If he makes a practice of seeking the sense of the business community upon all matters vital to the importing trade, he will be pretty sure to prove a satisfactory Comptroller of Customs. Mr. Wallace's example is worth imitating by the chief of the Department of Trade and Commerce,of which the Customs is a subdepartment. Commerce is probably better equipped with organs of opinion than any other interest that is under the administration of a department of state. Its special press, its Boards of Trade, and its business men's associations are all media through which its views can be ascertained and its wishes consulted. There is no need therefore for the Minister of Trade and Commerce, or either of his under-secretaries at the heads of the Customs and Excise Departments, to look to his office staff for guidance. Civil servants are notoriously attached to old routine, and the Minister who shapes his course according to their counsels is more likely to place the interests of his department under an elaborate office system than to effect any reforms for the benefit of the citizens concerned. That is red tapeism, and we are glad to hear Mr. Wallace say at the outset that he will not add a yard of the red tape that already fetters business despatch in the Customs Department. In the matter of diverse appraisements, the encouragement of informing by the allowance of a moiety of the goods confiscated, the duties on samples, etc., there is room for the introduction of salutary reform. X and Y may buy of the same line of goods from the same foreign manufacturer, but because X lives at Toronto and Y lives at Belleville, Y's goods may cost him more, owing to the fact that the appraiser at his port classifies them differently from the appraiser at Toronto, and exacts a higher duty. This difference between local appraisers is sometimes enough to settle which of two merchants shall command the trade of an intermediate district. Also, the fact that informers were rewarded with a portion of confiscated goods often led greedy but mistaken spies to cause a lot of trouble by false reports. These things need attention. Sir John Thompson announced at the meeting he addressed in Toronto last week, that his Government proposed to make some changes in the tariff during the coming session of Parliament. If the changes are made in the light of information obtained by Mr. Wallace's method, they are not likely to be followed by any great incursions of commercial deputations to Ottawa praying for modifications.

SALESROOM TOPICS.

William Buck, of Brantford, Canada, has lately installed in his works a new electroplating dynamo. This machine is one of the latest improved American Giant dynamos, manufactured by the Zucker & Levett Chemical Co., of New York city.

The trade in butcher knives this season has not been up to expectations. This is owing to the scarcity of hogs and to the fact that so many were bought on foot and slaughtered at packing factories.

L. S. Starrett of Athol, Mass, the celebrated manufacturers of fine mechanics' tools, whose representative has had the pleasure of calling on some of the Canadian trade, has made an arrangement with the following well known Canadian firms to represent him on this side of the line : Rice, Lewis & Son, of Toronto, D. Drysdale of Montreal, and the Mechanics' Supply Co. Quebec.

The results of the nail tests at the United States Arsenal, Watertown, New York, have not yet been officially announced. Such reports as have been published are due to notes taken by observers.

The general meeting of the Linseed Oil Association will be held in Toronto next Tuesday afternoon. It is expected that some changes will be made.

Mr. Mills, formerly manager of Abbott & Co.'s works, Montreal, has severed his connection with that firm. He is very well-known to the trade, having been with Abbott & Co. a long time.

Craig, McArthur & Co. have done a large business in the Halifax Shovel Co.'s shovels this winter. They had some exceptionally large orders from the west, particularly from Sudbury.

The cut nail manufacturers of Montreal are now seeking storage in this city, and it is understood that all or most of them will put in stocks here.

A. F. Macpherson, secretary of the Montreal Rolling Mills Co., and formerly the western representative of that company, was married last week in Rockford, Ill., to a lady of that place.

Francis, Frost & Co., hardware brokers, have bought out the business of Dixon & Dixon in this city. Mr. Dixon has gone to the United States, but is still in the spirits of turpentine trade, and from Savannah or New York he will maintain a regular connection with his successors, and keep them advised as to the movements of the Southern market.

A Sheffield firm is putting a patent-handled butcher knife on the market, that is expected to take with consumers on account of its cheapness. The haft, instead of being scaled, is solid, the drawn tang being driven in and secured with one pin, thus saving the labor and cost of putting in several rivets to hold the scales to the knife.

The Arbenz razor commands a large sale in the trade of M. & L. Samuel, Benjamin & Co. This razor consists of a perfectly flat blade of steel inserted in a back. The blade is fixed or moveable. The advantage claimed is that the razor never needs to be honed and that the blade can be renewed from time to time as it wears out. Extra blades are sold at $3. per doz.

The break in American prices of Paris green enabled some of our Canadian jobbers to secure round lots at close figures, and the Toronto Lead and Color Co. advertise special prices on a favorite make. A few years ago American green, owing to its excellent quality, held control of the American market, but for some time the price has prevented importation. Its very superior color and fineness are the strongest indications of its strength and purity, and dealers have no difficulty in convincing farmers of these advantages.

M. & L. Samuel, Benjamin & Co. find the Jones shovels just suited for their trade, and this winter they have distributed very large quantities of them all over the country.

PUBLICATIONS NOTICED.

The Metal Worker begins the year in a new form. Its length and breadth are contracted, all to the advantage of its third dimension. It now bears a strong resemblance to the Iron Age, and is nearly as bulky a volume. The matter is of the usual superior character which that journal has accustomed its readers to.

The Illustrated Catalogue of The Dennis Wire and Iron Works, of London, Ont., is now ready for distribution, a copy having been received at this office. It lays before the trade in a very concise form a fund of information so large and detailed that, without it, it would be next to impossible for the trader to grope his way towards definiteness in his dealings with the Dennis Wire and Iron Works. The illustrations are liberal and excellent, nearly every one of the 76 pages of the book exhibiting one or two. The matter is well arranged and reference to it is rendered easy and accurate by an alphabetical index. The hardware merchant needs this Catalogue for the purposes of a trade in wire or wrought and cast iron work.

There is nothing on which clearly defined ideas are more necessary than in the file trade. The diversity of kinds and sizes is embarrassing to the buyer unless he has some means of finding out what he wants and of indicating his wants in his orders. He is at sea without a chart. The Kearney & Foot Company, of New York, and Paterson, N. J., had evidently the needs of the trade clearly before their eyes when they got out their fine A.B.C. File Chart. The great variety of shapes, cuts and sizes of their famous files makes the Chart a valuable auxiliary to the trade in them. The Chart, which is intended for hanging on the wall, is of heavy white paper, presenting beautiful impressions of each cut and shape in their various scales and sizes. It is of ample size, being 3 feet 6 inches long by 2 feet 3 inches wide. This chart will extricate the trader from many a difficulty, as it will enable customers to select exactly what they want and will enable the trader to specify with accuracy the files his order calls for. The Chart will be mailed to any part of the United States on receipt of 10 cents, and we presume Canadian traders can get it for the same price. All hardware men should have one.

The People's Almanac, prepared as a supplement to The Montreal Gazette, is issued for 1893 by the publishers of that paper. It is a convenient and well-filled repository of facts and figures, well chosen with an eye to the greatest benefit of the greatest number. Portraits of the Ministers, Provincial Governors, and other men prominent in politics, intersperse the reading matter. A very useful feature of the almanac is the list of events of 1892, presented in chronological order.

THE SCRAP IRON DUTY AGAIN.

The advance which the makers of bar iron decided upon week before last at Toronto has revived the old question of the duty on wrought iron scrap, the merits and demerits of which have been so often argued and threshed out in the press and elsewhere. Now that the price is advanced on finished bar iron, the parties interested in the manufacture of Canadian puddled iron are beginning to ask why the duty on wrought scrap should not be readjusted, as they consider the present basis decidedly unfair to them. Everyone who knows anything about the trade is aware that to make finished bar iron the manufacturer must have either puddled bars or "scrap bars," made from wrought iron scrap. Puddled bars are made from pig iron, and the process has for its aim the elimination of the impurities in pig iron, and the bringing it into a spongy mass, which is then placed under a powerful hammer, and, after reheating, is shaped into bars of suitable size for re-rolling into the finished bar iron of commerce. Scrap bars are a substitute for puddled bars, and are made as stated above from wrought iron scrap, which is heated sufficiently to make the "pile" of iron capable of being worked into scrap bars, which are again heated and rolled into bar iron of any size and shape required.

It is the duty levied on these two raw materials that the makers of puddled iron in Canada claim is an injustice. The duties on the three main articles embraced in the iron schedule are $4 per ton on pig iron, $9 per ton on puddled bars, and $13 per ton on bar iron. The intention, the puddled people say, was that the ratio between the duties levied of four, nine and thirteen dollars, respectively, represented the cost of labor to transform one article into the other. This would mean, therefore, that, given a ton of ore, it required $4 worth of labor to convert it into pig iron, $4 worth more to make the puddled bar, and still $4 worth more to make the finished bar iron.

The people who argue in favor of Canadian puddled bar hold that this schedule has entirely failed to perform the object which it was intended it should, viz., to increase the consumption of iron produced in Canada.

The reason for this they attribute to the admission of wrought iron scrap at a customs duty of $2 per ton, which, as is shown above, is a competitor with puddled bars. As matters now stand, therefore, the producers of puddled bars in Canada are at a disadvantage represented by the difference between the duty of $2 per ton on scrap iron and the duty of $9 on puddled bars. Either one is too high or the other too low. In fact Canadian puddled bars enter very little into the production of bar iron, the rolling mills using wrought iron scrap almost entirely, and, as a natural result, the domestic puddled bar, which it was intended to protect, does not receive any protection at all. The makers of puddled bars in Canada appear to recognize the fact, for they have not, it is understood, puddled any iron at all of late, and for the reasons above given.

Another incongruity in this connection is the difference between the duty on wrought iron scrap and cast iron scrap, the latter paying $4 instead of $2 a ton. It is used for foundry purposes solely,and the puddled bar people are talking of interesting the founders in the matter, because there is no apparent reason for this difference.

In fact, the duty on wrought iron scrap was fixed as it is simply to suit the rolling mills people, and it is here where the shoe pinches. It is plainly evident that if the consumption of puddled bars made from native Canadian ores is to be encouraged and developed, the duty on wrought scrap must be advanced to a figure more closely approximating to that of puddled bars. This is the knotty part, for there is an opinion that the time is decidedly inopportune to talk about any advances in duty of any kind or on any article to the public. On the whole the subject is decidedly interesting, and if it is brought before Parliament there are people in the trade who predict that it may have a very different result from the one aimed at, viz., that the duty will be removed on puddled bars altogether, which it is claimed the interests of the consumer demand. It is certain that such a result would not displease the rolling mills people, and that they would work for it. But on the other hand, the recent advance in bar iron may raise other complications if the matter ever does come up for public discussion, and lead to an agitation for a reduction of the duty on bar. At any rate some of the dissatisfied ones are hoping that the difference of opinion between the interests represented in puddling and those represented in the rolling mills may lead to some move in this direction.

GOOD LAMPS PAY.

Going into a large wholesale crockery and lamp goods house in Chicago a couple of months ago to make some purchases I found that the company had been laying in an elaborate assortment of lamps. I was told upon enquiry that the calls were so numerous for this line of goods that it had been thought best to get the best that could be found so that the retail dealer might get the most for his money. I found that it had not been customary until recently for wholesale houses to keep them in stock to any great extent. It was only the ever increasing demand that made it imperative upon the wholesaler to get into this line heavier than ever before. I have been carrying lamps along with my hardware stock for four years, and I have felt well repaid for the move.

The way I happened to go into the business was this: "I wanted a lamp for the house, and I wanted it to be a nice one. I supposed there would be no trouble in getting what I wanted in town, so I went to our best general merchant and told him what I wanted. He said he had a small line; that it did not pay to carry a large one. When I came to look over his stock I thought he was about right, if that was the kind of lamps he was going to keep. He did not have anything like I wanted and I would not buy. The other two places where lamps were kept were the same way.

My own want set me thinking. It was altogether probable that there were others in the same fix as myself wanting to buy nice lamps and with no stock to select from. Why would it not be a good idea for me, I thought, to get a small and select line of lamps and give the people a chance to buy what they wanted?

As a consequence of my interview with myself I wrote a letter to a wholesale crockery and lamp goods house, asking them if they could get me a nice line of lamps to carry in stock. The reply came that I could have my wishes gratified, and a price list was sent me to select from. I picked out a very nice line of lamps, not too expensive, and sent in my order. This was about the last of September, and the lamps came all right before my Christmas opening. And this is just where I hit the nail right on the head.

As everyone knows, a pretty line of lamps hanging up or set on counters add very much to the appearance of things in a store. This is just the way my line acted. It filled in with my other Christmas goods and set off the whole display. Then to add still more to the effect I lit up two or three of the pretty ones, and made everything so bright that customers were not slow to appreciate it. My store was visited by everyone in search of presents, and my lamp list melted away so rapidly that I had to get in a rush order to supply the Christmas demand. I had the entire lamp trade of the town that year. Those dealers who said it did not pay to carry a large line of lamps discovered that it did pay to carry a nice line.

Since my first trial I have kept right on, and manage to sell a good many nice lamps along from January to Christmas every year. As I have said in former letters, "every little helps," and even if one does not sell a good many lamps, each one brings in a little more profit. It is not necessary to get a variety; a few of the best medium lines will do to start with.

Now that the larger wholesale crockery houses have taken up lamps to a great extent, there is always a good assortment to choose from. Then, again, since the wholesale dealers purchase in large lots and anticipate trade sales. They buy close and are enabled to sell close. So, of course, the retail dealer now has a better chance than a few years ago in this matter.—J.B.B. in The Pottery and Glassware Reporter.

A PERFECT PISTON PACKING.

The Gutta Percha and Rubber Mfg. Co., of Toronto, Ltd., whose extensive new warehouses and offices at 61 and 63 Front street west, nearly opposite the Queen's hotel, indicate the growth and importance of this progressive Canadian manufacturing industry, has begun the new year with several new lines of manufacture added to its extensive list. Important among these is the "Guttaperch" brand of self-lubricating, anti-friction, spiral piston packing. Owing to its evident superiority over other packings, its convenience, moderate cost, and almost entire absence of waste, the "Guttaperch" has become the most profitable piston packing for both dealers and consumers to handle. This style of self-lubricating packing has become so generally known as not to require special description in these columns, and the trade generally will be glad to know that the Gutta Percha Co. are this year pushing its sale at such favorable prices and put in such convenient form that dealers may stock it with more profit than ever before. We invite your attention to the cut and list of stock sizes as shown in the Gutta Percha Co.'s advertisement on the back cover of this issue.

SOME CHANGES IN THE STOVE TRADE.

Previous to 1879 there were probably not more than a dozen furniture houses selling stoves in all New York city and surrounding towns, whereas to-day there are thousands. In fact, it is exceptional to find one that does not sell stoves and fittings.

The disturbance to the regular trade was not generally felt at first, only those complaining whose near neighbor in the furniture line went in the stove business, but it spread to all sections and cities in the course of a few years, crowding out the old line dealers one after another either completely or else causing such a reduction in their stove business that they were no longer factors in the trade. During the three or four years of good demand in stoves after the boom of 1879 the loss to the old time dealer was not seriously felt, but as soon as the trade settled back the changes that had been going on were noticeable to an alarming extent. Many of the dealers more distant from the trade centres, who had always done a good local business were astonished at the falling off in their custom and were unable for a long time to account for it. Complaints more or less bitter were lodged against the wholesalers for selling to furniture houses on the ground that they were not legitimate dealers, but the manufacturers could hardly see it in that light when such concerns formed a large proportion of their customers, and considering, too, that supply must follow where demand leads.

Old-time city dealers who ten years ago gave stock orders in the fall for from 100 to 200 stoves, which they piled away in their cellars and warehouses, found their trade reduced from year to year and their order to the salesman smaller and smaller, until finally they met the agent making his annual call with the remark: "No more stock orders for me; I will order as I want." Many have become so disgusted that they have given up stoves entirely and confine themselves to jobbing, tin work and roofing.

The furniture houses are not alone responsible for curtailing the trade of stove dealers, however, as many of the large departmental stores have established stove departments, and, while they always sold house-furnishing goods, it is easy to see how much more custom they are taking away from the smaller stores on such utensils by selling the stove itself. They have injured not only the city dealers but the country dealers as well, as many such stores make deliveries with their own waggons anywhere within 25 or 50 miles of New York.

The evils that have sprung up on account of this freak of trade are many, and, while they have fallen most heavily on the retail stove dealers, the manufacturers have also suffered. The people have not burned up any more stoves because others sold them, but, on the other hand, the scramble after the trade by wholesalers when furniture men started to sell stoves encouraged a host of concessions and inducements that have proven to be very costly indeed. The traditional customs of the trade were unknown to these people, and they refused to be educated up to them. They proposed going into the stove business at the smallest possible bother to themselves, and would not put up with such annoyances as deigning to black stoves, pay the expressman every time he delivered them, pay for any breakage in transit, or for any screws or bolts that may have become lost on the way, while the number of salesmen, the frequency of their visits and their persistency in trying to sell goods led them to believe that they could avoid all such detail, having those things conceded, if not by one firm then by another.

Hence the old lines of competition have all been broken up. Arguments that used to prevail with the stove dealer are found to be beyond the comprehension of the furniture dealer. The arrangement of the flues was of no more account to him than the arrangement of the salesman's hair, and the size of ovens and fire boxes had nothing to do with the case. What they wanted to know from the salesman was how cheap he could sell a 7-inch range, the length of time allowed for payment, and what other inducements he could offer? Competition being thus defined, abuses crept in that have cut deep into the wholesalers' profits, and which will take another revolution to reform. Things scarcely to be thought of ten years ago in the nature of concession are matters of ordinary trade now. Free delivery, free blacking, free castings to repair breakage, free bolts and nuts, and the privilege of returning unsold heating stoves at the end of the season, are among the many concessions made by the wholesalers from time to time that are now recognized as settled conditions in the sale of stoves. Besides all this, it has not infrequently happened that wholesalers have been obliged to send workmen to distant places to repair stoves which through the ignorance or neglect of the furniture dealer's employees to loosen the bolts, have cracked with the first fire, not from any imperfection in the casting itself. To decline compliance with such a request would endanger the customer's trade, and an explanation from the wholesaler of the custom in the trade regarding such cases would be entirely useless. Calls have also been made on the wholesaler to send a man to look at a stove which some person complained did not work right, and on account of which installment payments were withheld; an expert has been sent simply to find that the stove was either improperly set by an incompetent man or had been purposely abused by the owner himself. A charge for such little services would call forth an indignant protest from the dealer.

In addition to all this, prices have been cut and slashed in order to get custom among such dealers. Cutting of prices is not a new element in the stove business by any means, but in the midst of all the other innovations that have cropped out during the new era of the stove business, cutting of prices has not taken a back seat, but has come in for its full share of recognition along with all the rest.

It should be stated perhaps that there were and are many exceptions to the class of furniture dealers referred to, who have fully equipped stove departments with competent superintendents and practical workmen to whom some of the remarks made do not apply. Their trade being larger, the delay caused by ordering stoves blacked would be unprofitable and their demand such that small deliveries were unnecessary. But, excepting all such, the trade with the main body has fostered abuses innumerable that will take a long time to cure, and that only a general advance in prices, warranted by unusual prosperity in the stove industry, will furnish manufacturers an opportunity to cover. It has made more clerical work necessary to do the same amount of business; takes more salesmen to cover the same territory with its added number of dealers, more porters to handle the same number of stoves distributed in smaller quantities, increased the entering and posting of sales, stationery, postage; and hence, to sum up, vastly increased the general expense account and lopped off thousands of dollars of profit, and this is but one of the three great convulsions the trade has suffered from 1882 to 1892.—The Metal Worker.

AS A SALESMAN SEES IT.

In my trips over the country I have had a good chance to observe the methods employed by various merchants in the country stores. They are not all alike by any means.

In some stores I have visited I have found that the advertising cards and other matter sent out by manufacturers and jobbers was dumped under the office desk, and there it remained until it was found to be in the way, when it was consigned to the flames or to the paper mill.

Although one may not like to see many such merchants, it is true that there are some who do not look out for their own interests or the manufacturers' either. They make waste of what should be made useful. As an instance of how such advertising can be best used, I will cite an instance in a little town which I make every sixty days.

One day soon after I took up the territory I thought I would observe this customer, as I had found him very intelligent and enterprising. He was waiting on a customer from the country, and had just sold him quite a large bill of goods. Among other things was a milk pail. After getting the various articles done up, the merchant picked up a number of advertising cards, novelties, etc., which had been sent him for distribution and put them into the pail.

In speaking of this afterward the merchant said that he had made many a sale in just that way. The farmers would take the matter home, look it over and become interested. There was no telling when they might strike just what they wanted. In this way many

H. S. HOWLAND, SONS & CO.,

WHOLESALE HARDWARE,

37 FRONT ST. WEST, - - TORONTO.

SKATES

IN STOCK.

Genuine "Acme," Polished, No. 0, 90c. pair, No. 7, $2.90 pair.
" " Plated, No. 0, $1.50 " No. 7, 3.90 "
"Achieved," } Full Patent, Polished, $4.50 pair.
Forbes' New Patent, } " " Plated, - 5.50 "
In all sizes, 7½ to 12 in. Discounts on application.
Acme Skate Bolts, Nuts, Lugs, Links, and other repairs.
Skate Straps, ½x20, ½x36 in.; 5/8x20, 5/8x36 in.

AMERICAN PARIS GREEN . .

Finest and . . .
Purest made . .
Prices lower . .
than any other .
in the Market . .

The Toronto Lead & Color Co.

14, 16, 18 and 20 Pearl Street, Toronto

sales were brought to the merchant who used the talents which had been given him.

I am a firm believer in newspaper advertising. I believe that the manufacturers and jobbers who want to reach the retail trade to the best advantage should advertise in trade journals, and the retail dealers should advertise in their home papers. But I believe just as firmly that much can be accomplished by a judicious distribution of novelties If they are sent to the dealer he should certainly make use of them, no matter hw much of an advertisement he has in the paper.—Stoves and Hardware Reporter.

A CAUSE OF FAILURE.

Among many causes of failure in business none is more common than the impatience of individuals. The average man, coming to years of discretion, after working for a salary, feels able to manage for himself, and embarks in a venture of one kind or another with more or less capital. He is sanguine of success, or he certainly would not risk his time and money, but it is seldom that he realizes the length of the journey before he can feel certain that he has an established connection. Some men acknowledge to themselves that there are such things as bad debts, dull seasons, and losses of all sorts to be faced, but even these men do not realize the time that must elapse before a business advertises itself, as one may say, or brings in money solely by reason of its being well conducted.

Through not considering how long it takes to make a business, many get discouraged and sell out at a loss, or fail wholly, when, if they had been satisfied with the day of small things, they might have lived to see them grow larger. The hare and the tortoise of Æsop's fable exist to-day in trade, and the business hare is just as confident of his ability to make a trade in a day as his congener was of outstripping the hard-shell conservative who went slower, but got there first in the sequel; for it is not so much brilliancy that is wanted as sturdy sticking to trade through thick and thin. It matters not what calling, or what line men take up in any one of them, certain qualities must be manifested, and ordinary business faculty will succeed with perseverance, where the erratic, can't-wait man misses every time.—Commercial Enquirer.

Established 1864.

CLARKSON & CROSS,

CHARTERED ACCOUNTANTS

NO. 26 WELLINGTON ST. EAST

E.R.C.Clarkson, F.C.A.
W. H. Cross, F. C. A.
Edward Still.
John F. Helliwell.

TORONTO, ONT.

H. Boker & Co.

are famous for their fine quality

Razors, Scissors

—AND—

Pocket Cutlery

TRADE MARK.

(TREE BRAND)

FOR SALE BY LEADING WHOLESALE HOUSES.

EXPERIENCES IN THE HARDWARE BUSINESS.

Editor Hardware,—In the following lines I will endeavor, to the best of my ability, to give information by following which any person may become successful in the hardware business with no greater capital than average intelligence and a pair of dirty hands. As experience is always the best teacher, or, as our old Roman friends used to say in terse Latinism, experientia docet, it has occurred to me that the best way for the reader to avoid mistakes is to follow me through mine, and then go and do otherwise. The breaks I have made would sorely have tried the patience of Job, and would have discouraged any other than an actor or a book agent. I displayed an ignorance, in the early days of my business experience, which to the ordinary reader may seem natural, but which to me appeared deplorably profound. But that has all passed now, and what I don't know about the business would fill huge volumes. Follow me, then, gentle reader, through the recital of some of the breaks with which I amused the "boys" in the store, and embarrassed myself, and became wise.

Having graduated at the grand old university 'neath the elms of New Haven, the problem presented itself to me, without any great urging on my part, what pursuit was I to follow during the rest of my mundane existence? For I had resolved that I would have none of the rolling stone bitters in my cocktail, and that I would stick to one thing to a mossy old age unless it should prove so unremunerative as to cause the proverbial wolf to become to inquisitive. With this laudable determination, I cast about me and finally decided to accept a promising opportunity in a large hardware establishment. I determined to start in at the bottom and learn the business from the ground up. One of my friends advised me to commence at the top and learn the business from that exalted height. Aside from the impossibility there was an inadvisability in this course of action, so I said to him: "Did you read Caesar and Virgil first and learn the vocabulary and grammar afterwards?" With this sage remark I dismissed him, with a haughty air, which was calculated to impress him with his ignorance.

So I took off my coat and pitched in. This latter I did literally, for the first day of my work, while excavating four cents' worth of putty from its quiet repose,I lost my balance and pitched headlong into the barrel, smelling like a glazier the rest of the day. One of my sympathetic friends asked me why I didn't keep my balance in the bank as he did, then I wouldn't lose it. I didn't answer him. Since that little episode I have not been able to approve of Mr. Diogenes' choice of a habitation, for even without the putty I don't believe he was very comfortably fixed; he certainly wasn't if he dwelt in the same posture in which I tried it. It's funny what queer taste some people exhibit in their habits of sleeping. I once knew a man (he's dead now) in the west, who had a comfortable home handsomely furnished. Yet this idiot had a partition made in his woodshed, furnished one of the rooms thus made with a bed, two chairs and a table, and would sleep there every other night. One night a tarantula and a rattlesnake indulged in pleasantries with him, and he never slept there again. They said he had the largest funeral ever seen in Munroe county. That was hard luck, but it isn't Hardware, and I am digressing.

Deciphering cuneiform inscriptions or translating Homer's great story never gave me half as much trouble as did the interpretation did the hieroglyphics which stood for Christian numbers on the price lists. Before my mind finally mastered them I suppose I cheated one side or the other, the customers or the firm that employed me, hundreds of times. I could work the thing all right in practice, but my mistakes when making a scale were due, I suppose, to the dreadful responsibility that accompanied the knowledge that I held a human being's money in my hand, as it were. This made my translation halting and faulty. I at first made use of a small key or "crib" with the hieroglyphics to jog my memory a trifle. This was my Rosetta stone. In the use of this my four years' experience at college made me an adept. Of course, when I glanced at this when making a sale, I was all right, but it was when I began to get gay with myself and depend on my memory, that prices ran riot, and somebody was apt to be defrauded of his hard earned money. At last I mastered the system, and could attend to the wants of a customer with some degree of confidence, telling him or her, as the case might be,in the most I-know-it-all manner, everything I knew about the goods, and a great many things I didn't know.

One thing that troubled me a great deal until I became used to it was the gross and unpardonable ignorance of some of our customers, mostly those known as the Pennsylvania Dutch. Here was displayed an ignorance that was sublime in its profundity; it fairly took your breath away. One of these stolid specimens would come in and slide reproachfully up to one of the salesmen. Silence for eighteen seconds while he collected the scattered remnants of what stood him in place of a brain; then, "I vant some nails." Silence, expecting you to read his mind when he has none. "Yes, what size?" "Oh, ten penny." Another silence. "Yes; how many?" "Oh, 'bout t'ree poun's." Then you get him three pounds of ten penny nails. Any person with the minutest fraction of an intellect would have said at once, "I want three pounds of ten penny nails," but not so with your Dutchman. He believes in letting you find out things for yourself. Perhaps he thinks you'll remember them better. What a happy life he must lead—no supersensitive nature to become wounded, no carping care to mar the serenity of his peaceful days. He enjoys the same kind of happiness as a cow when she is well fed, and has just about as much sense. In some of them cupidity is harmoniously blended with their stupidity. If they can beat you down two cents on an article they are happy for the rest of the day. It is sometimes well worth a nickel to see the look of supreme delight take the place of the usual vacuity on his face when you come down for him.

I was, perhaps, properly repaid for my criticisms on the intellectuality of some of our customers by the embarrassment caused me by their request for something I never knew existed, whose name to me was as strange as soap to an Indian. This was a source of great annoyance to me, and unfeeling customers who wanted some obscure or eccentric article would, it seemed to me, come straight to me for it, and of course I didn't know any more about it than I did of the future state. One afternoon soon after I began, a young lady, not so beautiful as Cleopatra, modestly asked me for powder. It first occurred to me to send her to a drug store, but it flashed across me that it was gunpowder, and not face powder, she meant. Yes, I knew where the gunpowder was kept, and I thought I knew the price.

"I want it for a dog," said she, "and I'd like to know how much I need."

"Well," said I, assuming my most Chesterfieldian manner, "about three and a quarter drams of powder and an ounce and a quarter of number six shot, with two felt wads on the powder and a cardboard wad on the shot ought to fix him."

"But I don't want any shot," protested the female.

"You can't kill him without shot," said I.

The poor creature shrieked and nearly fainted at the idea of the assassination of her pet poodle, and informed me so indignantly that she wished to administer the dose internally to cure some ailment of the poor beast, that I got rattled, and charged her five cents too much for the explosive. How was I to know that she had an indisposed canine? But some people are so unreasoning.

Shortly after this experience a business-like looking man approached me and said: "I want half a dozen one and a quarter inch bibs."

"One and a quarter inch!" thought I. "What a minute infant he must have. Why doesn't he exhibit it in a museum?" I was about to send him out to a dry goods store when the salesman at my side came to the rescue and said, "Yes, sir; this way, sir." Knowing that we did not deal in infants' apparel, I followed them curiously, and, lo! and behold, he showed the customer some spigots, such as you turn every day (if you have cleanly habits) when you run the water into your bath tub. Only the quickness of my fellow salesman saved me from a fresh display of ignorance, and relieved my mind of its false impressions concerning the man.

But the worst break I ever did make occurred in this wise: One evening shortly before closing time, when my mind was occupied with visions of the pleasure I was soon to bestow on the inner man, another and very different vision appeared to me. And what a vision! "A beauty from 'wayback," thought I. I shall not attempt to describe her. Read the description of the heroine in any modern novel and you will know how beautiful she was. In addition to her beauty, an air of refinement and modesty surrounded her; she seemed altogether too good for this world. Coming up to the counter in a shrinking way, for she was evidently embarrassed at seeing men only in the store, she said in gentle and refined accents, "I want some pads." Pads! I was dumbfounded. Oh, what shamelessness! Asking me in the most matter-of-fact way for pads! Nevermore will I put my trust in appearance. Pads! Feeling that the silence was becoming unbearable, and having a somewhat hazy idea that I must say something, I stammered, "But you don't—don't need them." I saw I had made a break the moment the words left my lips, and I fully expected to see the fair young thing smite me with a glance and flaunt out of the store at the insult. But not so. The shameless hussy calmly said, "No I don't want them; they're for my father." For her father? Now, in the first place, what does her father want with pads? and in the second place, what a pernicious example to set his daughter. Suddenly a voice whispered in my ear,

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friends against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.

Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.

FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin.

CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,
Agents.
MONTREAL AND TORONTO.

Miller Bros. & Toms

(Successors to Miller Bros. & Mitchell. Established 1869.)

Machinists, Millwrights and Engineers.

MAKERS OF

ELEVATORS

For all purposes, of any capacity, and operated by Electricity, Water, Steam or Hand Power.

Builder's Derricks--Hand or Steam,
1, 1½, 2, 3, 5, and 8 Tons.

Foundry and Machine Shop Cranes,
Any Swing, Any Capacity.

GENERAL MACHINE WORK.

Works: 89 to 120 King, - - - -
Office: 122 King St, - - - - MONTREAL.

WIRE

Coppered Steel Spring. Tinned Mattress Wire. Broom and Brush Wire. Hay Baleing Wire. Flat Wires. Soft Coppered Wires

Write for Catalogue. We guarantee the quality of all our Wire.

Manufactured by

The B. GREENING WIRE CO., Ltd.,
HAMILTON, ONTARIO.

"Shut up, you idiot!" Then aloud, "Just step this way, please." I soon discovered that what she wanted, and what she technically called "pads," composed part of a harness. Her father was a harness-maker. As I wiped the copious dew of agitation from my bewildered brow, I vowed I would spend a week in the stable in order to avoid such mistakes in the future.

The maligned beauty, all unconscious of the uncomplimentary opinion I had formed of her, gracefully sailed out of the store, a restored idol. Do you wonder that my nerves are shattered by such experiences?

A recital of such heartrending breaks can only weary the reader, as it agitates me, and I shall therefore call a truce, ending this educational dissertation with a few homely but wholesome points to be observed in the conduct of this business.

When a man asks you for forks, be careful to ascertain whether they are intended for use at the table or in the hay field.

If a sailor enters the store do not take it for granted that he will ask for tar rope, nor that the roue will call for rakes, nor that the begrimed individual wants washers, nor that the old maid sighs for felloes.

When a customer asks for a drink of water, do not tell him to go back to the iron department and drink a waggon spring. Such pleasantries are apt to cause hard feeling.

Now, if any reader of the foregoing lines fails to become rich in a short time, if he has faithfully allowed these words to sink deep into his mind, he must be a dolt indeed. Nicht wahr?—N. Y. Hardware.

PERTINENT POINTS FOR RROGRESSIVE RETAILERS.

Naturally it takes a long time to build up a successful and permanent business. Numerous examples of the prosperous mercantile establishments scattered everywhere over the country attest this fact. But whether the time be long or short, it is only one of the elements of success. Did you ever stop to think how artificial a thriving business is, and how susceptible to influences either good or bad? It is not one of the simple elements of nature, not protoplasm, but one of the most specialized forms of life. Nor is the action of business, the force which propels it, one of the simple and elemental motions. It is compound, often at variance with the simpler forces of nature. An ordinary bicycle rider cannot maintain his position if the wheels stand still. The wheel must first be set in motion and acquire a momentum before it can be ridden with ease and comfort. The top cannot be balanced upon its point if at rest, but set it spinning round and round, and the perpendicular position will be maintained as long as a certain degree of notion lasts. Almost every business is like the spinning top, or the bicycle that defies the laws of bodies when at rest. The motion must be maintained or a crash will follow. The business man must furnish the power. And yet he employs means that are beyond his control. He takes things on trust. He relies upon the law of averages. Because the sun rose yesterday, he says, it will rise to-morrow. Because several houses were built in his locality last year, several will be built next year. And while thus riding along to success on a perch that might be dangerous under guidance that is not intelligent, he swerves to right or left to catch the fickle currents of popular favor, and to direct these currents his own way as much as he can. The novice thinks it easy to run a store, just as he may think it easy to ride a bicycle or cross a pond on skates. An attempt at either speedily disabuses his mind, and gives him a wholesome respect for the art. The business must be thoroughly learned. And the greater the business the greater must be the care and attention devoted to the mastering and pursuit of it; for with greater success the machine grows more complex, more liable to encounter difficulties, yet, on the other hand, more certain to attain a high degree of prosperity, if guided by watchful and intelligent methods. It is exhiliarating to mount a wheel and ride swiftly and with little difficulty over space. It is equally exhilerating to establish and command a prosperous mercantile busi- It is worth while to learn the business thoroughly, to know just what to do and just what not to do, when to do and when not to do, how much and how little to do. Moreover, the numerous skeletons and wrecks that skirt the pathway of commercial life, mutely attest the urgency of this proper understanding. Make the study of your business your life work.

Speculation is usually so enticingly apareled that the average business man must exercise strong restraint to resist its promises of wealth. Opportunities for investing in dazzling projects crowd upon every man of capital. The greater his means the more numerous the pack of promoters who swarm about him. To make ten dollars with one, or a hundred dollars with ten is a rate of accumulation so vastly superior to the moderate gains of legitimate business, that men take very slight chances to attain that result, trusting to luck for a favorable outcome. Should the venture prove successful, it is usually heralded from housetops, but if disastrous, it is buried in oblivion. Consequently the results that reach the public ear show a much larger proportion of successes than actually occur. Unfortunate speculations are rarely heard of unless they involve a man's business in hopeless ruin. In that event concealment is impossible. Business men can cover up a crippled financial condition for a long time if so disposed, and the useful lesson of their rashness is thereby lost, in good part. The only safe rule for speculation is not to engage in it at all, for the habit grows wonderfully upon one, and sooner or later will involve him in difficulties if not disaster. It kills many men's estates, others may escape with loss of limb; none can touch the pitch and remain untarnished. Among those who dabble in bubbles, the highest code of conduct is not to invest unless you can afford to lose the money outright. If you lose, your business does not suffer, and if you gain your reward is great. The difficulty is for men to observe this rule if they once embark upon the hazardous scheme of gaining wealth rapidly. It is usually a safe rule to let alone any mining or other highly-capitalized scheme that goes crying up and down the land for investors. Most of those schemes, however plausible, are highly unsafe. There is an abundance of capital to quickly back those enterprises that have in them the possibilities of success, and for such there is no need of bringing into requisition the services of an auctioneer. Those business men who devote their energies and brains to the advancement of their own business fare best in the long run. Drafts upon the capital there employed should never be made for outside projects. An emergency may come when it is needed, and if not at hand, there are breakers ahead for the unfortunate dealer.

An experienced salesman says about handling a customer: "Receive him in a quiet, easy manner, that he may feel that he has come at the right time and to the right place. Do not assume to know his business better than he does. Seek in every way to build up his pride as well as maintain your own. Do not be backward in introducing business, but in careful, delicately chosen words, find as soon as possible the wants of your customer. Use diligence and perseverance in showing goods and their merits in a scientific manner, also at the same time humoring your customer until you have gained so much of his confidence that he will tell you just what he wishes. Then the crowning point is to fill the bill with a true artist's eye and sober, candid judgment. Fill the bill to the very letter, as to the very best of your ability, as to quality and price, for further sales are at stake. Thus with frankness honesty and uprightness in every particular, with native, ready wit to adapt himself to the wants of each individual customer, the ambitious salesman will have gained lasting customers, well satisfied, as well as the reward of having sold far more than at the time anticipated.—Chicago Ironmonger.

At the annual meeting of the Ottawa Board of Trade held last week the president, J. M. Garland, who is wintering in California, sent an able review of the year's work, in which he suggested that the board co-operate with similar bodies in Canada for the reorganization of the Dominion Board of Trade, with headquarters at Ottawa, where it would be in touch with the Government.

The Commercial Travellers' Mutual Benefit Society held their annual meeting at the rooms of the association on Yonge street, Toronto, on Saturday afternoon. The attention of the meeting was directed chiefly to the election of officers and the revision of the by-laws. The officers elected were as follows: President, James Greenfield; vice-president, Thomas Dunnet; treasurer, Warren Kennedy. Trustees, T. M. Bayne, W. B. Dack and Jos. eph Taylor, for three years; H. Goodman, H. Lamong and John A. Ross for two years; R. L. Patterson, Robert Crean and S. R. Wickett for one year; E. A. Dailey and W. M. Bremner, Hamilton; T. C. Fleming, Brantford; C. Huber, Berlin; N. D. McArthur, Belleville; M. R. O'Laughlin, Winnipeg; J. W. Dillon, London; and M. S. Sutherland, Kingston. The association has paid out $16,700 in death claims, and the reserve fund now amounts to $15,573. The membership of the society is 1,954.

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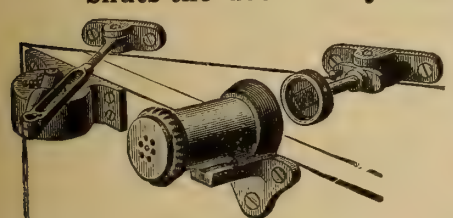
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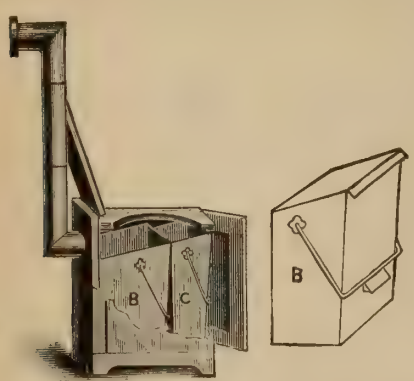
Goods the best. Prices moderate
Quality Warranted.

THE PATENT VENTILATED CLOSET.

This ventilated closet, which is illustrated in the accompanying cuts, is manufactured by the Manitoba Ventilated Closet Company, of which M. M. Vardon, 67 Yonge street, Toronto, is the agent in this city. The special advantages of this closet are that it dispenses with the need of water or sewer connections and expensive plumbing. The patent ventilated closet overcomes all the



objectionable features of the old style earth closet or commode, and, instead of boxing up the smell the common sense principle is adopted of allowing a free current of air to pass through the closet at all times, carrying it off by way of the chimney, as will be seen by the accompanying cut, which shows an opening beneath the door to admit air, and a three-inch metal pipe at top of closet in rear, which is to be attached to stove pipe or chimney hold. The arrangement of the buckets is an ingenious one. Being oblong in shape, there is no room wasted; they fit snugly into the closet, allowing space for draft to pass all round them and out at the pipe hole over the



top; the urine bucket "C" being made purposely high in front in order that there may be no escape in that direction, sloping gradually back and slipping under a turn-over or lip attached to rear of excrement bucket "B," both buckets being narrower at the bottom than at the top, thus allowing handle and lug of excrement bucket to fall in between, where they are out of the way and always clean. This arrangement of the buckets, separating the urine from the excrement, allows the closet to be used by ladies and children as a urinal at all times, as the front bucket can be removed and emptied every day without disturbing the rear or excrement bucket. The closet is sold through the hardware and furniture trades. The price is $12.

THE SITUATION OF COPPER.

The London Financial Times of December 30 doubts the accuracy of the copper statistics, which limited the increase in visible supply abroad for the first half of December to 500. This, it says, was brought about by cutting down the stocks in France 700 tons. The Times says:

"The so-called French stocks have always been subjected to statistical manipulation, but latterly the process has become a little too transparent. Very little enquiry in competent quarters would prove that France has never, since the Secretan collapse got its stock of copper reduced below 8,000 or 10,000 tons. At the present moment the whereabouts of such a quantity would not be difficult to name. It must be well known in the market to everyone who has adequate means of information. When, therefore, the official statisticians write down French stocks month by month till, on the 15th of December, they get them under 3,000 tons, they are simply indulging in romance, which could be exploded in half an hour if certain holders of copper chose to say the word. There is, of course, no call on them to do so.

"They are not responsible for the copper statistics, and it does not concern them if certain speculators choose to indulge in a game of mystification. The game has been carried so far that it can no longer deceive anyone who does not wish to be deceived. The idea of copper stocks in France being under 3,000 tons is palpably and indisputably absurd. French figures may, in short, for the future be dismissed from serious consideration. They are fictions of the metal exchange, to which no copper consumer need pay the slightest attention. If we confine ourselves with the English figures, which, if not positively reliable, are at least not manifestly untrue, the result of the first fortnight of December is a net increase in stocks of fully 1,200 tons. If there be anything reliable in copper statistics, it is the movement of furnace material. Chili bars and other forms of fine copper may be spirited about to suit speculative purposes, but furnace material is a solid article, the incomings and outgoings of which can be followed with moderate certainty. That is very possible why the Americans recently gave it their special attention, and attempted to create an artificial dearth of it."

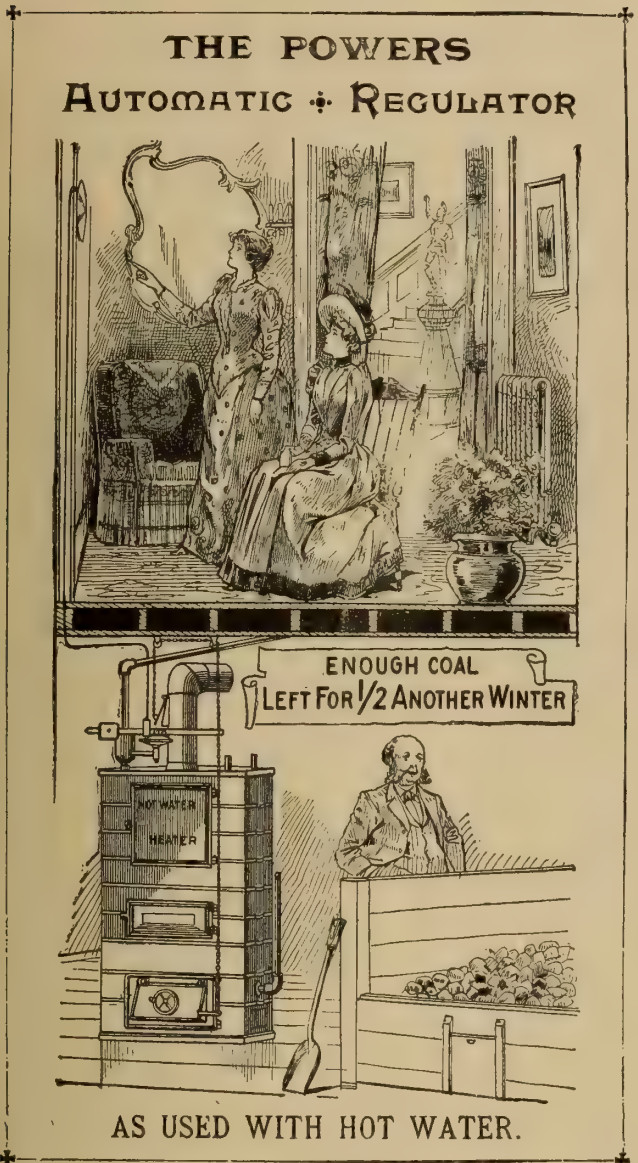
ANCIENT SPURS.

Upwards of fifty years ago a couple of ancient spurs (a lady's and gentleman's) were plowed up in a field belonging to Perry Mill Farm, Sambourne, Warwickshire, at that time owned and occupied by Mr. John Hobbins. After the death of Mr. Hobbins his effects were sold by auction at Studley, a neighboring village, and amongst the rest the old spurs were sold. These were purchased by a gentleman residing at Studley, who invited me to call on him and inspect the spurs. I accordingly called and examined these relics of a bygone period. The gentleman's spur is of iron, and was much corroded by time and exposure; of rather large size, with a pole at the heel quite four inches long, at the end of which is a circle of teeth of considerable length and size; altogether it must have been originally a formidable looking weapon for a horse—such a one as might have been worn in the Civil War by one of Cromwell's Ironsides. The lady's spur is much smaller, and of different material; it is made either of copper or bronze, and was at first entirely plated with gold, some of which still remains. The fancy wheel of teeth at the heel, about the size of half a crown, is still perfect, and in good working order. Where the gold plating has worn off it has a bronze or coppery appearance. While the teeth of the gentleman's spur are long, flat and pointed, and set at some distance one from another, the teeth at the heel of the lady's, like a circular fan, are set close together, only divided near the points, which are blunted, as if made more for ornament than to punish a horse. It was, evidently, a very handsome and costly spur, and has not suffered so much, by long exposure to the atmosphere, as the gentleman's iron one. As regards the fact that they were plowed up, they were probably lying upon the surface of the land, and were first plowed n unobserved, and afterwards plowed up, when they would be seen and secured.—Saddlery and Harness.

HISTORY OF CAST IRON.

Cast iron did not come into commercial use before 1700, when Abraham Darby, an intelligent mechanic, who had taken some Dutch workmen to establish a brass foundry in Bristol, England, received the idea that iron might be substituted for brass. This his workmen did not succeed in doing, being probably too much prejudiced in favor of the metal with which they were best acquainted. A Welsh shepherd boy, named John Thomas, had some time previous to that been received by Abraham Darby into his workshop on the recommendation of a distant relative. While looking on during the experiments of the Dutch workmen, he said to Darby that he thought he "saw where they had missed it." He begged to be allowed to try, and he and Darby remained alone in the workshop all night, struggling with the refractory metal and imperfect molds. The hours passed on and daylight appeared, but neither would leave his task. Just as the morning dawned they succeeded in casting an iron pot complete. The boy entered into an agreement with Darby to serve him and keep the secret. Although enticed by offers of higher wages to leave his master, he continued faithful, and from 1709 to 1828 the family of Thomas were the confidential and valued agents of the descendants of Abraham Darby. For more than 100 years after that night in which Thomas and his master succeeded in making an iron casting in a mold of fine sand, contained in frames and with air holes, the same process was practiced and kept secret at Coalbrook Dale with plugged keyholes and barred doors.—Ex.

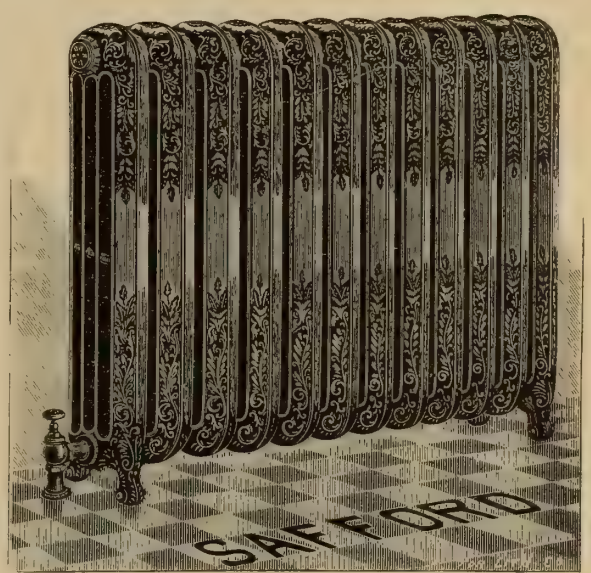
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MARKETS

MONTREAL MARKETS.

MONTREAL, Jan. 20, 1893.

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below, and in our Prices Current, necessarily take a wide range.]

HARDWARE.

The wholesale houses in heavy goods are now through their stock taking and know pretty near how they stand. The residue on all staple lines is small, and the question of fresh supplies is therefore a pertinent one. With the new basis of wire nails, bar iron, cut nails, etc., established beyond doubt, and new supplies wanted, the trade are expecting business to pick up shortly. New goods will be coming in, and as travellers are starting out the revenue should increase. A good sign is the fact that letter orders recently have led to a considerable trade in a small way, and the fact is interpreted to mean that supplies in retailers hands are not large, and that they will soon be figuring on spring supplies. The changes in bar iron, etc., have already been commented on, and nothing new has arisen to call for mention except the makers have been booking some fair orders. Some new supplies of shelf goods are coming in already, and samples have already been made up for the road.

PIG IRON.

There is no change in pig iron which rules quiet and unchanged. In fact the only sale we hear of was that of a 50 ton lot of Summerlee at $20 which is low and no criterion as it was governed by special circumstances. Stocks here are small and holders would not do business under the following range. We quote Summerlee, $21; Longloan, $21; Carnbroe $19 50 and Eglinton $19 50; to $20 ; Nova Scotia Siemens $19 50 to $20.

BAR IRON.

The jobbers having got through with their stock taking and the uncertainty about prices being over there is more thought about supplies. No great business has resulted yet however

SCRAP IRON.

There is very little scrap here and no business is doing. We quote prices nominally unchanged at $15 to $16 for wrought scrap.

TIN PLATES.

The week has been almost an absolute blank, and we quote values precisely the same, coke $3.25 to $3.50 and charcoal $4 to $4.25.

CANADA PLATES.

Canada plate is in small supply and firmly held at $2.50 to $2.60, but little or no business is doing

TERNE PLATES.

There is no change in terne plate and we quote prices nominal at $7.25 to $7.35.

OTHER METALS.

Copper is quiet and unchanged at 13 to 13½c.

Lead remains the same at 3c.

Antimony is as quoted last week at 12 to 13c.

Tin featureless and dull at 22 to 22½c.

Spelter easy at the decline $5 to $5.50.

NAILS.

The uncertainly about the basis of value being settled, matters in cut nails are beginning to pick up, and the changes to be governed by quantity which were anticipated by HARDWARE early in the fall were fulfilled. Aside from this the list remains the same and jobbers are beginning to think about supplies for stocks generally are small. There is some improvement in the demand for wire nails.

CHEMICALS.

Chemicals are dull and unchanged, travellers having only started on the road this week.

OILS AND PAINTS.

The oil market is fairly steady, the advance in linseed that we noted being fully maintained. We quote :—Cod, Newfoundland 42½c. steam refined 41 to 42c.; linseed raw 00 to 58c. ; linseed, boiled 00 to 61c.; castor oil 8 to 10c.; cod liver oil, Newfoundland 80 to 90c. ; cod liver oil Norway $1 05 to $1.20 ; turpentine, 50 to 51c. Less 3 per cent. 30 days.

Leads are quiet, but when the travellers who are going out this week get to work business is expected to pick up.

GLASS.

There is no change in glass and business is quiet on the basis of $1 35.

CEMENT.

There has been only a small business doing in cement in 5 to 10 barrel lots on local account. We quote as follows:—English brands at $2 40 to $2.50, and other grades $2.15 to $2 20 Fire bricks continue in fair demand at $19 50 to $20 per 1,000 according to quality.

NAVAL STORES.

Naval stores here are quiet and unchanged. We quote as follows :—Rosins, $2.50 to $5, as to brand ; coal tar, $3.75 to $4; cotton waste, 5½c. for colored and 7c. to 10c. for white; oakum, 5½ to 7½c. and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep sea line. Pure Manilla, 12c. for 7-16 and upwards and 13c. for smaller sizes.

PETROLEUM

There is no change in petroleum which rules dull. We quote : Canadian 12¼c. to 12½c. at shed in Montreal for round lots and 13½ to 14¼c. for small quantities. Benzine is quoted at 11c. Petrolea, and 13 to 14c. Montreal. American petroleum, 19⅝c. in car lots, 20c in 10-barrel lots, 20¼c. in 5 barrel lots, and 20¾c for single barrels, 2 per cent. off for cash ; American benzine, 23 to 25c. ; Canadian benzine, 10¾c Petrola ; 12¾c. Montreal.

TORONTO MARKETS.

TORONTO, Jan. 19, 1893.

HARDWARE.

The trade in hardware is not of large proportions just now. The sorting up orders in a few lines, such as snow shovels, furnish some business, but though it is liberal in volume in the lines it is confined to these are too few to support a large trade. Travellers are booking orders on spring account, but the general report indicates that they find them hard to pick up. Nails, both cut and wire, are very quiet, horse shoes and horse shoe nails are fairly active ; there is little else deserving of mention in a review of current trade. The houses on the street are nearly as quiet as they were during the first week of the year. The paucity of items is little less noticeable now than it was then. The fact that the manufacturers' associations have concluded their annual business and settled all suspense as to expected changes has probably something to do with the lethargy of the buying side, although of course such lethargy is rather a seasonable characteristic.

METALS

The metal market continues to be a dull one locally, neither spot nor future business of any magnitude being reported. The tin



Milk Can Trimmings.
Creamery Can Trimmings.
Railroad Delivery Can Trimmings.
Milk Cans, Creamery Cans and Delivery Cans made up.
All sizes body stock for Cans and Cheese Vats.

If you have not used our Trimmings a sample order will make you our customer.

THE McCLARY MF'G. CO.,

LONDON, TORONTO, MONTREAL, WINNIPEG

MARKETS—Continued

market has been rather a variable one in London and New York, and prices have made some advances. Speculative influences underlie these movements.

PIG IRON—A very light trade is being transacted, but freer deliveries on yearly contracts are being called for. The foundries are just getting started again and this creates new wants, which are expected to develop business. Southern soft iron costs about $18 laid down here. In British brands there is very little interest evinced.

BAR IRON AND STEEL—Bar iron is somewhat active. The price of course remains as fixed by the Association, that is $2.05. Cast steel is quoted from 10c. upwards; and is in some request at the tool factories and other works.

ANTIMONY—A dull market is afforded by present requirements of manufacturers, and the quotations remain at 13¼c. for Cookson's and 12¾c. for other brands.

CANADA PLATES—These are unchanged and almost out of demand at $2.65 to $2.90.

COPPER—A steady market has succeeded the late excitement in New York. Jobbers are selling at 13¾ to 14c.

GALVANIZED IRON—Quotes at 5¼c. and upwards.

INGOT TIN—The price has experienced a reaction, having gone up £1 in London since last report. Retailers' orders are generally filled at 22¼ to 22½c.

LEAD—Is in very light demand, and is easy at 3¼c. Round lots are to be had at a lower figure.

TIN PLATES—The week has not much of a record for business in this metal. Cokes are $3 75, I. C. charcoal is $4.25, with $1 added for each cross.

ZINC AND SPELTER—Sheet zinc is quiet at 6¼c. in casks and 6½c. in broken lots. Spelter is unchanged at 5c.

OLD MATERIAL.

The following prices hold good for the various kinds of old material: No. 1 heavy cast scrap 65 to 70c. per 100; stove cast scrap 40 to 45c.; No. 1 wrought scrap 60 to 65c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c.; new light scrap copper, 8 1-2c.; heavy scrap copper 9½c.; old copper bottoms, 8c; light scrap brass 5½c.; heavy yellow scrap brass 7½c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 2c.; scrap zinc, 2½ to 2¾c.; scrap rubber, 2¼ to 2½c.; country mixed rags, 80 to 85c. per 100 lbs; clean dry bones, 50 to 60c. per 100 lbs.; plough shares, 60 to 65c; burnt cast scrap, 15 to 20c.; railroad iron, 65 to 75c.; malleable scrap, 25c.

PAINTS, OILS AND COLORS.

The price of spirits of turpentine has advanced 3c., and this change is the one departure from last week's position of affairs in the oil, paint and color market. There is one thing that is very evident, in this trade, and that is that it is in a very demoralized state. The profits of the paint trade are cut down to a losing basis. White lead is 4¼c. Linseed oil in 1 to 3 barrel lots 57½c. freight allowed to delivery station; 4 to 9 barrel lots, 56½c. delivered; 15 barrel lots and over, 51½c at point of shipment. Three cents added to these prices gives the quotation for boiled in the respective lots. Turpentine is 53c. in 1 to 3 barrel lots and 63c. in broken packages.

PETROLEUM.

A steady market, with a slight decrease in business, incidental to the growing daylight, is about all there is to take note of in a market report. The quotation for Canadian refined continues to be 14 to 14½c.

AMERICAN MARKETS.

New York, Jan. 20.

Pig Tin.—"Cing Lung" is an expression that has been common among traders on the Metal Exchange of late. The term is supposed to signify that some operators have looked upon certain trades as being in the nature of "wash" sales. Whether suspicions in that connection were well-founded or not, it is a well-established fact that the recognized leaders have very good control of the market. When it suited their purpose prices were carried upward in skyrocket fashion, and, while the surface indications have infrequently led to the impression that the interest alluded to has been conspicuous as buyers at top prices, and quite as free sellers at bottom figures, the gyrations of the market show that they are still leaders. By way of illustration, one or more prominent metal firms bought a considerable quantity of tin recently for direct shipment from the primary sources of supply at about *93 to *93 10s. per ton, delivered here, presumably on the strength of the opinion that the duty of four cents per pound specified in the McKinley tariff law will go into effect. Other operators, with like convictions, purchased tin somewhat freely in this market for prompt and near future delivery at corresponding prices. For reasons not clear to the local trade, but suggestive of the usual manipulations by the leaders there, London prices were hammered from £92 71s. 6d to £92 5s., and the local market responded to a certain extent. The presumption is that the leading London operator has either taken advantage of the opportunity to unload upon eleventh-hour "bulls" or engaged in a contest with those venturesome New York dealers who, possessed of sufficient nerve, purchased in the primary market. Just as the "bull" movement seemed to gain force, the Strouss interest figured as sellers in London, however, and the consequent reaction in prices there turned the tide on this side of the Atlantic. Thus, against business in spot stock early in the day at 20 1-4c. net cash, January delivery was sold at 20.20c. March at 20.45c., and April at 20.55c., about 150 tons changing hands.

Bonstead's cable advice regarding shipments from the Straits during the first half of January were very similar to those received on Saturday by the Metal Exchange. Bonstead makes the total 1,800 tons, including 1,300 tons to Great Britain, 200 tons to the United States, and 300 tons to the continent.

Secretary Carl Mayer, of the New York Metal Exchange, presents data showing that the importation of pig tin at this port during the first half of January amounted to 848 tons, and estimates that 800 tons passed in the channels of consumption during that period. According to these figures the statistical position is practically the same as it was at the beginning of the month. The price of the metal is higher by about 1-2c. per pound in this market, and has advanced £1 2s. 6d. to £1 5s. in London.

Copper.—Demand for ingot fails to increase to any perceptible extent. Outside lots that may come upon the market at 12 to 12 1-8c. seem to be quietly absorbed, and moderate quantities are placed at 12 1-4c. or thereabouts by some of the mining companies. When it comes to business at a higher price than the latter, buyers are conspicuous by their absence, although manufacturers of the general line of copper and brass goods are well employed, and the prospects not only favorable in that department, but for a large consumption of wire by electric railroads in many parts of the country. It is calculated that 3,000 lbs. of wire to the single mile of track are used on the trolley system, and it is a matter of record that the building of electric railroads in various parts of the country will be pushed forward on a large scale during the present year. Hence a general belief that outlet will be equal to present consumption, and sufficient to absorb accumulations of supply that may take place on this side of the Atlantic prior to the opening of navigation. Casting stock is in hardly as good position as the Lake product, still 11 1-4c. seems to be the lowest at which odd lots may be picked up, while 11 1-2c. upward is generally quoted. London advices note a slow market there, with latest cable advices quoting merchant bars at £46 for prompt and £46 10s. for future delivery.

SHEET STEEL BRICK
ABSOLUTELY FIRE PROOF.
METALLIC ROOFING Co.
CATALOGUE FREE. M'F'RS TORONTO

Lead and Spelter.—Demand for these metals continues in the same rut in which it has been running since the beginning of the year. Consumers rarely order more than a carload or two at a time, and their aggregate purchases are comparatively moderate. Sellers will quote at 3.85 to 3.90c. for common domestic pig lead and 4.35 to 4.40c. for ordinary western spelter, delivered here, early shipments from the west.

Tin Plate.—Neither large consumers or jobbers are placing orders of any magnitude at the moment. The general tendency is to go slow, since foreign markets are flat and without cause for apprehension of any radical advance in prices there.

Iron and Steel.—The past few days have been distinctly bare of new feature in the local market for pig iron. Agents report the receipt of routine orders only, the aggregate of which is only fair for the season, and the business passing is at practically the former line of prices. Northern brands are quoted at $15 for No. 1 X foundry; $13.75 to $14 for No. 2 X foundry, and $13.25 to $13.50 for grey forge. Southern brands are quoted at $14.50 to $15 for No. 1, $13.50 to $14 for No. 2 foundry and No. 1 soft, $13 to $13.50 for No. 2 soft, $12.50 to $13 for grey forge.

For old iron and steel the demand continues slow, and the market is barely steady. Iron tee rails are quoted at $17 to $17.50 f.o.b. Jersey City, and steel at $14. Wrought scrap at $16 for No. 1, and car wheels at $13 to $13.50, all f.o.b. Jersey City.

Sales agents report that there is still a considerable amount of steel rail business in sight, but that only a small portion of the same comes within reach, and that, since the business consummated early in the month, only small orders have been taken. The price for standard sections is, however, kept at $29 f.o.b. eastern mills.

Business in soft steel billets and rods, sheets, etc., is very fair, and there are some new orders coming in for various structural material, but competition continues keen, and prices are rather weak all along the line.

METAL INDUSTRIES.

The Toronto Industrial Association's committee on metallurgical industries, other than iron, has issued an interesting report.

After referring to the advantages possessed by Toronto for the refining of nickel, and reciting the fact that Toronto could easily be made the chief nickel market of the world, the report continues: "We import into the Dominion a million dollars' worth of copper and brass a year in sheet and wire. Yet we see the copper from lake Superior carried past our doors to Europe and re-imported, with a duty of 30 per cent., in many forms we might make at home from the copper of our own country. We have not had time to find out how much zinc dross is exported to return in brass; the quantity is considerable. We do manufacture large plumbers' supplies, a fair amount of fittings for gas and electric light, but do nothing in the way of making sheet copper for architectural work or copper smithing, or for electrical and other purposes, or stamping on a large scale for domestic and decorative uses.

If the experimental works now being erected across the lake prove successful an endeavor should be made to have the permanent works, according to that system, established here. It partakes of the nature of smelting as well as refining, and it is conceivable that by some such process nickel smelting works may be established here, though the methods now in use appear to require an abundant supply of cheap wood fuel, which for the present can best be obtained at the mines.

Should the processes of melting and refining be carried on upon a large scale, it seems desirable that the municipal council should set aside special districts for them. One excellent place would seem to be the now unused eastern shore of the bay, to be reached by a bridge across the Don, near its mouth.

The city might build the bridge and make the road, while the Harbor Commissioners would no doubt unite in dredging approaches for vessels carrying fuel and raw material.

The committee hear that a quantity of silver ore (galena carrying silver) was lately sent from Barrie township to Montreal.

They are not informed whether it was in transit to a smelting point abroad or was to be treated in Montreal, but the report gives them the opportunity to say that there ought to be in Toronto by this time an establishment for treating ores and concentrates containing precious metals. Many thousands of dollars' worth are annually sent to the United States, and, although there seems to be advantages there in a greater and more varied supply than we at present possess, the subject is worth considering. It may be that an experimental plant should be in the first place erected in connection with the School of Technology, like that at Houghton in connection with the Michigan Mining School, or that the Government should encourage by bonus or fees a private industrial establishment, in which the students there could work and learn.

The committee would like to have a good museum of Canadian ores established in this city. There are some specimens in educational museums, and a typical collection in the Canadian Institute, and something on a larger scale seems desirable to stimulate the interest of our own people and of visitors.

The policy of the Government in respect to the development of mining industries should be at once declared. Is a bonus to be given for metals smelted in Ontario, lead, copper, zinc, iron, etc., or not? So also the policy of the municipality should be announced, the inducements to be held out should be decided upon and made widely known.

Your committee do not clearly understand whether they should allude to such subjects as the following:

1. Mica—We control the best position in Canada for a factory to prepare mica for the market. We have mica mines accessible in three directions; we are, so to speak, in the mica centre. The industry is no slight one; we have a fine supply in Canada; the trade is increasing.

2. Phosphates—The finest apatite in the world is in Canada; we need artificial manures, of which this is a chief ingredient, yet we have no factory of any importance in Toronto. This we consider of great consequence, and it is perhaps directly conected with the nickel smelting and refining industry, as affording a use for the sulphur product now wanted.

3. Cements—We no longer depend on imported Portland cements. The materials for manufacturing the article are said to exist near Toronto.

The committee have ventured to make the above suggestions, but they would prefer to receive information on such matters and do what may be in their power to help in realizing the reasonable hopes of enterprising citizens or of strangers desirous to make their homes with us.

SOMETHING ACOUT WHETSTONES.

From Prof. L. S. Griswold's contribution to the geological survey report for Arkansas,the following notes of interest to the users and sellers of whetstones are taken: A few tests to decide what sort of a stone is being offered by the dealer are often useful. The hardness may be tested by a pocket-knife. If the stone is soft, like the water-of-Ayr stone, the knife edge will cut it easily on its flat sides without injury to the knife; a stone of medium hardness, like the Hindostan will cut on the edges with some difficulty; a hard stone, the Ouachita, for example, can be scratched by the knife point; while a very hard stone, like the Arkansas, receives no scratch from the knife point. The fineness of the grit can best be judged by drawing the edge of the finger-nail backwards over the stone; the sensation produced indicates well the coarseness of the grit, and a little practice with various stones soon gives one expertness in judging their fineness. The finger nail will tell whether the stone is coarse or contains coarse particles by showing scratches; a fine gritted stone will make no visible scratches. The sharpness of the grit also will be indicated by the amount of the nail worn away. The general appearance in shape and color also afford valuable means of judging a stone. The sides should be perfect planes, and the angles right angles, though for special purposes the edges may be bevcied. Good stones seldom have a poor finish; uneven sides and irregular angles; on the other hand, some poor stones are well finished, so entire dependence cannot be placed on these criteria. The reason why the finish should be a good one is that a poorly finished stone is sure to wear unevenly, and as soon as a stone has worn to an uneven surface it ceases to do good work. Soft stones are more liable to an uneven wear than hard ones, but care must be exercised in using hard stones, for when worn unevenly, they give much worse results than the soft ones.

"The color is also a good indication of the character of a stone. In a good stone the color should be very uneven, whatever shade it is; an even color denotes a homogeneous stone. Slight yellowish, reddish, or brownish iron stains in light-colored stones are not objectionable, but strongly marked spots of areas indicate a change, generally toward hardness, in the quality of the stone. Stones may also have hard spots which are white.

"A new whetstone, fresh from the rub-wheel, has the sharpest "bite" it will ever have. Purchasers should remember this, and not be disappointed because their stones do not cut so well after the slight roughness given it by the sand in grinding has worn away. A dull tool with a notched edge should no more be placed on a good whetstone, than a carpenter's chisel should be used to drill a rock; yet such a use of whetstones is a common thing. The purpose for which a whetstone is bought should be kept in mind, and it must be remembered that if used for purposes widely different from those for which it is best adapted the stone will be spoiled for its ordinary work. For this reason it is economy to have stones of different grades wherever tools are in constant use, as in carpenter and machine shops. It must be expected that a whetstone will lose a little of its abraiding quality with use; if it loses much, however, the conclusions may be drawn that it is not being properly used, that proper care is not being taken of it, or that it is a poor stone. only do not be too ready to condemn the stone. Many good stones are condemned and given a bad reputation when the fault lies either in the original choice of the stone, or in the use made of it, or the care taken of it."

At a recent meeting of the Victoria, B. C., Board of Trade, the question of Dominion legislation regarding insolvency was brought up, and a letter read from the Vancouver board. J. H. Todd said that the Attorney-General would have a bill brought before the Legislature framed upon the Ontario and Manitoba Acts. Robert Ward wished the matter placed in the hands of the Dominion members. He did not think this would interfere with local legislation. J. H. Todd having moved that the Dominion Parliament members insist upon the passage of a Dominion Act. Colonel Prior, M.P., reminded the board that the matter has often been brought up in the Dominion House but there was no unanimity about the contents of the bill. There was great need of such an act. He would urge, not insist; the Government could not be driven.

Credit is often too cheap and overbuying far too common. Don't be guilty of the one, and don't abuse the other.

One thing in particular should be impressed upon clerks—the necessity of careful attention to small customers

If you want books, it is rarely wise to pay double price for them to a travelling book-selle

A customer secured is a promise of greater salary in time.

"There are geniuses in trade, as well as in war or the state, or letters; and the reason why this or that man is fortunate is not to be told. It lies in the man."—EMERSON.

The trader who pays his way must sell at a profit, and cannot afford to cut below others in the same line.



A Thing of Beauty and a Joy Forever . . .



ILL be the Spring Number of THE HARDWARE MERCHANT for 1893. Every dealer in Hardware, Stoves, Tinware, and Kindred Trades in Canada will receive a copy, and no doubt read it, as it will contain matter of great interest and value to the retail dealer found no where else outside of Webster.

Do you want to sell spring goods, or any other kind of goods? Then advertise them in HARDWARE! Retail buyers are often busy when your travellers call, and have no time to view samples With HARDWARE it is different. Our subscribers read it at a time when its contents can be properly digested, and at a time when they usually decide on what lines to buy, and from whom. You never hesitate to invest money in business and take big chances. You take no chances by advertising in THE HARDWARE MERCHANT. As a proof of this, look at our ever increasing advertising pages. **Don't take our word for it,** see for yourself.

This Spring Number will be issued about the first of March. Do not miss it! Put the date down in the tablets of your memory, and have copy in plenty of time to secure good position.

MONTREAL NOTES.

There are complaints about the high freights interfering with orders for cement, but the trade here have been booking some orders for all that.

W. H. Cottingham & Co.'s travellers have started out with their new samples.

The glass duty is still agitating the trade here, and a spirited correspondence is going on between Agent Thorpe, of the Pilkingtons, and the gentlemen who differ with him. The latter contend that the decision of the customs people is bound to be against the former's contention.

The Consumers' Cordage Company is offering to the public $1,000,000 of its stock, and it is getting a good reception. The profits of the concern make it a gilt edge investment.

Wm. McNally & Co. still have a good stock of cement in hand at the service of their customers.

A. Ramsay & Son report very gratifying returns for the year on their special brand of Unicorn varnish.

The Safford radiators are being used in the handsome new ticket offices of the Canadian Pacific Railway in the St. Lawrence Hall building.

On 'Change on Saturday last W. W. Ogilvie was waited on by a number of members of the Board of Trade and requested to allow his name to be put in nomination for the presidency. After a brief interchange of views Mr. Ogilvie consented, and, it is expected, he will be sure of election at the coming annual meeting.

HIS FIRST MONEY.

One of the wealthiest men in the state of Oregon is W. S. Ladd, the banker of Portland. His accumulation of the last thirty years is estimated at $30,000,000. The following story is told of Wm. Ladd by Uncle Billy Irwin, now an old man living near Corvallis: "I went into Ladd's Bank the other day," he said, "and he showed me a ten-cent piece, which he said was the first money he ever earned in Oregon. Away back in the fifties John Couch had a store in what is now North Portland, but he would only sell goods in unbroken packages. Two young men, whose names I have forgotten, thought money could be made by selling goods at retail, so out in the woods and among the stumps they erected a log building, and were the first retail merchants of Portland. One day a sturdy, well-built young man, came to the store, and, after hanging around for an hour or so, asked the merchants why they did not have a certain stump in front of the store taken out.' 'What will you take it out for?' asked the merchant of the young man, whose name was Wm. Ladd. 'I will do it for ten dollars,' he said. 'All right, go ahead.' Young Ladd hesitated, and then said: 'Would you mind advancing two bits, so that I can get something to eat?' The money was paid, and with fifteen cents of it he purchased some crackers, and, taking an oyster can, went down on the levee of the Williamette river and ate the crackers, washed down with Williamette water. He had ten cents left out of the quarter, and W. S. Ladd has the same ten cents to-day. Mrs. Mackay of California, is said to be ashamed to own that she once worked for a living; but W. S. Ladd is proud to tell the fact that the first money he ever owned came from earnest hard work."—Ex.

THE MANUFACTURE OF WIRE.

To produce wire several processes are necessary, which we will briefly explain, that those of our friends who have not had the opportunity of seeing them may be able to do so at least in imagination.

The iron ore, after being taken from the mine is converted into cast iron by means of a blast furnace, which, by intense heat, separates the iron from the bulk of impurities with which it is combined, the purified metal being run into rough bars, technically called "pigs," and the impurities drawn off in the form of slag.

These pigs are afterwards treated according to the nature of the metal required. For what is known as puddled iron, a quantity of pig and scrap iron is placed in a reverbatory furnace, and again subjected to intense heat, to further remove carbonaceous and other impurities.

The man in charge of this furnace is called a puddler, and by means of a long iron rod, with a rake or rabble at the end, he works the metal about, which has become half molten or in a pasty condition, until he has gathered a good sized lump, which is called a ball or bloom, weighing about 60 pounds. In its half molten state it is subjected to the crushing blows of a steam hammer, which further beats out any retained slag.

The next process is the heating of these blooms, and passing them between a pair of powerful grooved rolls, which forms the welded iron into a bar.

This bar is cut into short lengths. A number of them are placed together and are known as a "faggot." After being brought to a welding heat in a furnace they are subjected to the heavy blows of a steam hammer, which drives out any further slag or impurity remaining, and forming the welding mass into a billet. In this form they are taken to the rod mills, to be again heated, and, passing through a train of rolls, are reduced in diameter to about 3-16 of an inch, or 6 wire gauge, which is the size of rod mostly used.

This rod, now ready for the cold drawing process, is first thoroughly cleansed from scale or rust, by soaking in a vat containing sulphuric acid and water. After being immersed long enough to remove the scale, it is thoroughly washed to cleanse it from the acid and loose scale, and plunged into a vat of lime water to prevent it rusting, until the wire drawer is ready to take it in hand.

Before going to the drawing block the end of the wire is put into a pointing machine, which produces a tapered end, in order to pass far enough through the wire drawers' plate or die to enable him to seize it with his tongs. By two or three pulls with his tongs, he draws enough wire through to fasten the end in a pair of vice jaws attached to the revolving block, and which forms a part of the mechanism. He then starts it revolving, each coil of the wire forcing the last further up the block until the coil is finished.

After being drawn or gradually reduced in size a few gauges, the wire becomes so hard that an annealing process is necessary. The coils of hard wire are therefore placed in a large iron cylinder which is hermetically sealed, and the whole mass subjected to fire until it becomes a bright red. After being kept at this heat a suitable length of time, to insure thorough softening, it is allowed to cool slowly, when it again receives another cleaning and coating, and is further reduced by repeated drawings until brought to the size required.

Iron and steel wire is drawn through chilled iron or steel dies, but some of the precious metals are now drawn through diamonds or rubies, drilled at an immens eexpenditure of labor. To make one of these dies requires many days of continuous drilling. The delicacy of the work may be appreciated when the size required is represented by the diameter of a hair.—"Wire," by the B. Greening Wire Co.

WELDING NICKEL AND STEEL.

At the October meeting of the Engineers' Society of Western Pennsylvania, Mr. Joseph H. Eastwick read a paper on "The World's Supply of Nickel." Nickel was first isolated by Cronstedt in 1751 and was noticed as a peculiar metal in the copper ores of Germany. Its applications in the arts have been developed within the last fifty years. While deposits of nickel ore are widely distributed over the surface of the earth and have been worked to some extent in many countries, the world's supply is derived from two extensive deposits, one in New Caledonia and the other at Sudbury in Canada. The Sudbury deposit is nickeliferous pyrrhotites, and the New Caledonia is principally silicates of magnesia and nickel. The Sudbury deposit is probably the most important and extensive to be found anywhere, but the New Caledonia mines, which were discovered about 25 years ago, still supply the largest part of the world's nickel. The deposits in Sudbury will, however, compete very seriously with the New Caledonia ores, as the company has now a large plant costing about $2,500,000, and has several mines which are doing very well. The average percentage of nickel in the Sudbury deposit is between 2 and 3 per cent.; that of the New Caledonia mines is from 8 to 10 per cent. There are deposits at various places in the United States which may be valuable, principally in Oregon, Nevada and North Carolina. A trial of the North Carolina ore by Mr. Mixer, of the Edgar Thompson Steel Works, was rather discouraging. It averaged about 2 per cent. of nickel, although samples have been obtained running up to 10 per cent. The Nevada ores are abundant in quantity and comparatively rich, but they are arsenides of nickel and difficult to refine. They are also far from railroad facilities. The Oregon ores are of the silicate class and have not been developed in commercial quantities.

During the discussion the question of welding nickel and iron was brought up. Mr. Mixer said that he had examined rolled sheets made at Cleveland, O., of nickel and steel. Looking at the edges of the sheet it could not be determined where the nickel ends and the steel begins, but of course the outside is mostly nickel and the inside steel. The nickel is welded to both sides of a sheet of steel. It makes a non-oxidizable article having the stiffness of ordinary steel, and convenient for various uses.

Mr. Mixer pointed out that the small percentage of nickel in steel is not likely to increase the demand for nickel so much as is generally thought. The Edgar Thomson people had received from Commodore Folger a bar of nickel steel containing 25 per cent. of nickel. It was about two inches in diameter and very tough, and a steel chisel was ruined trying to cut through it. It took a beautiful polish. It is obvious that for many purposes, as, for instance, pistol barrels, a steel with a high percentage of nickel may prove very valuable.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

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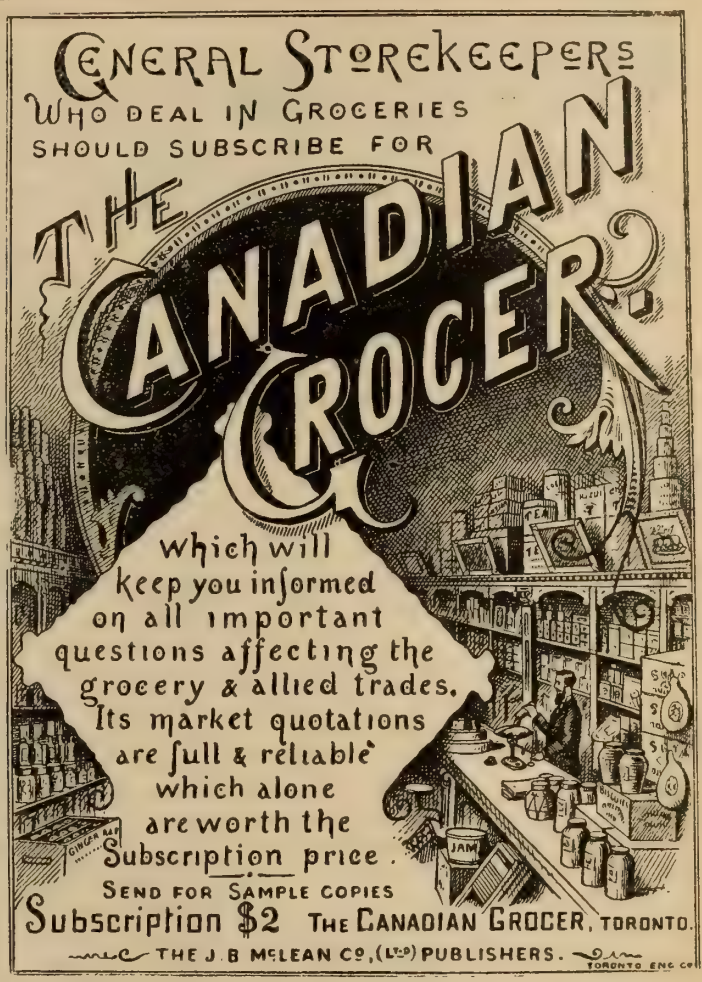
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Spades and Shovels
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TRADE CHAT

[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Wednesday.]

James F. Davis & Co., of Hamilton, manufacturers of granite hollow-ware, have assigned to R. T. Wilson, of Dundas.

Coulter & Campbell, brass founders, have issued a writ asking for the winding up of the Polson Iron Works Company. Their claim is for $1.700.

Tullock & Co., London, E. C., have admitted as partner John Beaumond Picton, who has for several years been associated with their business.

We have received advice from Tulloch & Co., London, England, confirming their last report of the London cement market as published in HARDWARE.

A permit has been issued by the City Commissioner to the Kemp Manufacturing Company, Toronto, for erection of one story addition to factory, River and Gerrard streets, at cost of $1,300.

A correspondent who omits his name sent HARDWARE a letter for publication in our last week's issue. As the name is a material appendage to all requests for publishing matter of this sort, we are compelled to leave the letter out until we hear from "Teddy the Tinker" again. The name is not required of course for publication.

The Department of Public Works has awarded the following contracts for supplying heating apparatus to the various public buildings: Petrolea, to Maguire & Bird, of Toronto; Port Arthur, to Purdy, Mansell & Mashinter, of Toronto; Laprairie P.O., to A. Chanteloupe, of Montreal; St. Hyacinthe, to A. Blondin, of St. Hyacinthe.

A fire, supposed to have been caused by a spark from the furnace, broke out in the mansard roof of W. W. Chown's brick dwelling, in Belleville, the other morning. The flames destroyed the roof and gutted the upper part of the house. A portion of the contents were saved. Mr. Chown owns the property. Insured for $2,500 on building in the Phœnix, of Brooklyn, and $2,000 on contents in the Agricultural, which will cover the loss.

A deputation appointed by the Mining Association to wait on the Quebec Provincial Government to protest against the gunpowder tax, went to Quebec the other day and laid their case before the Hon. J.S. Hall, Provincial Treasurer. The deputation comprised: James King, M. P. P., the Hon. George Irvine, Q.C., S. A. Klem, M.E., Col. Lucke, S. P. Frouchet, J. B. Smith and B. T. A. Bell, of Ottawa. The association confidently expect a change in the Government's policy on this question, and ultimately the abolition of the tax, but nothing definite resulted directly from the interview.

In his address before the Hamilton Board of Trade, the Hon. N. Clark Wallace, the Comptroller of Customs, said that with reference to his own department, there had been complaints regarding its methods, and it was his desire to apply a remedy wherever possible. Some of these complaints may not have been entirely well founded, but he had no doubt the department had its faults, and his experience as a business man would be of assistance to him in applying the remedy. The Customs Department was a partner with importers in all lines, and it should not harass the other member of the firm. Its first business was to protect the revenue, but it was bound equally to encourage trade, and he would endeavor to see that harassing conditions were not imposed, and red tape avoided as much as possible.

Among the questions by the Mining Convention which meets in Montreal, on Saturday, will be the desirability of the compilation of the mining and metallurgical information scattered through the reports of the Geological survey of Canada. The question of an export duty on natural gas piped out of Canada to the United States will come up, among others the necessity of a provincial bonus to develop the iron industry of Ontario and to create the manufacture of nickel steel in that province; the great need of a mineralogical museum in the interests of scientific and mining development; the desirability of the removal of the customs tariff on all coke used for smelting and metallurgical purposes in the province of Ontario; the necessity of enlarged and safer housing of the collection at the Geological survey at Ottava; and the extension by the Government of the law admitting mining machinery not made in Canada.

The latest extension of the pneumatic tire principle is a wheel that is all wind—all except its envelope, a circular rubber bag.

The Newbury Tribune is informed that Mr. Dobbyn, late operator at the G.T.R. station there, with his brother, has purchased the hardware business lately carried on by Adams & Co.

W. H. Evans, one of the shareholders of the Canada Paint Co., of Montreal, has decided to locate permanently in Hamilton to look after the western portion of the company's business.

A deputation of the Winnipeg Board of Trade waited on Superintendent Whyte the other day and urged that the rule prohibiting commercial travellers from riding on freight trains be rescinded. No answer was given.

At a meeting of the Patrons of Industry in Forest, Ont., Mr. Mallory, the president of the order, repudiated the notion that there is any antagonism between Patrons and storekeepers. The buying of goods at a reduced price was, he said, no part of the Patron constitution. Any number of neighbors can join and make a bargain with storekeepers for goods at a percentage on invoice prices. It requires no charter to do that. But the P. of I. have become an incorporated body for far higher purposes than buying sugar and tea. If Patrons have been benefited by getting their goods cheaper, that is simply an outcome of the organization.

A bicycle weighing only eleven pounds has been made and successfully tried in England. The material was aluminum. The machine was exceptionally strong, and the rider in the test a large and heavy man.

The Magnolia Anti-Friction Metal Co. have sent out a triple felt pen-wiper, that with the familiar magnolia blossom and the equally well-known advertising formula that goes with it, tells of the widespread use of this company's anti-friction metal. A line to 74 Cortlandt st., New York, will bring a duplicate of the one that lies before us.

The opera house at Brantford was filled Friday by farmers of Brant county and vicinity, when the first meeting was held of the shareholders of the Farmers' Binder Twine and Agricultural Implement Manufacturing Company. The election of officers was the chief item of business. The works in Brantford are to be started up very shortly.

In England and in many parts of Europe proper they have for a long time been using the Yates horseshoe, a regular curiosity made of compressed leather. At the factory where they are made three thicknesses of common cow skin are pressed into a steel mould, and while held in that position by powerful clamps, are subject to a bath of some chemical preparation which makes them surprisingly hard and durable. It is claimed for these shoes that they are much lighter and last longer than those made of iron, also that split hoofs are unknown in horses constantly provided with them. The shoe is perfectly smooth on the bottom, no calks being required, the impact causing the surface to adhere even on the smoothest ice. Although, as above noted, the shoe is hard and durable, it is also very elastic, thus preventing sprains and bruises and making the horses' step lighter and more sure. Straw treated with a solution unknown to European and American chemists has been used for horseshoes for centuries in Japan. Perhaps some American genius will outdo Yates and Japs by giving us a durable paper horseshoe. Who knows?—Chicago Journal of Commerce.

"Burham"
PORTLAND CEMENT.
BEST ENGLISH BRAND MADE.

Canadian Consignees:
McRAE & Co.,
Ottawa and Toronto.

SITUATION WANTED.

WANTED—POSITION IN HARDWARE OR tinware, by experienced traveller. Good references from leading houses; pusher and good salesman. Apply G., HARDWARE Office. 2

SITUATIONS VACANT.

WANTED—HARDWARE TRAVELLERS with good connections in Lower Provinces and in Ontario. None but first-class men need apply. H. S., GAZETTE Office, Montreal.

BUSINESS CHANCES.

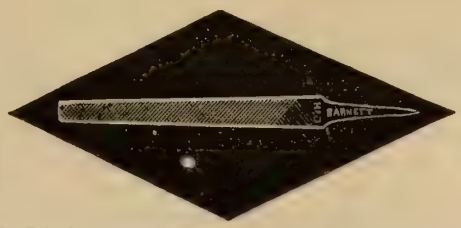
Advertisements inserted under this heading one cent per word each insertion.

FOR SALE—STOCK OF GENERAL HARDware, paints, oils, stoves, &c. Business established 25 years. Value about $3,500. Address, Estate J Cameron, Beaverton tf.

Wanted--Foundry Men

To give Aluminum Alloy Composite a trial. 2% in ordinary Cupola will give you soft sound and solid semi-wrought iron castings. Price, $5.00 per 100 pounds F. O. B.

Book of information with Government report and other indisputable testimonials for foundry men—FREE. The Hartsfeld Furnace and Refining Co., Newport, Ky.

BLACK DIAMOND  **FILE WORKS,**

21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

—MANUFACTURERS OF—

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
CLIMAX SAWFILES. LIGHTNING SAWFILES.

—AND—

EVERY OTHER DESCRIPTION OF SAW FILES.

Have You Ever Bought Our Razor Strops?

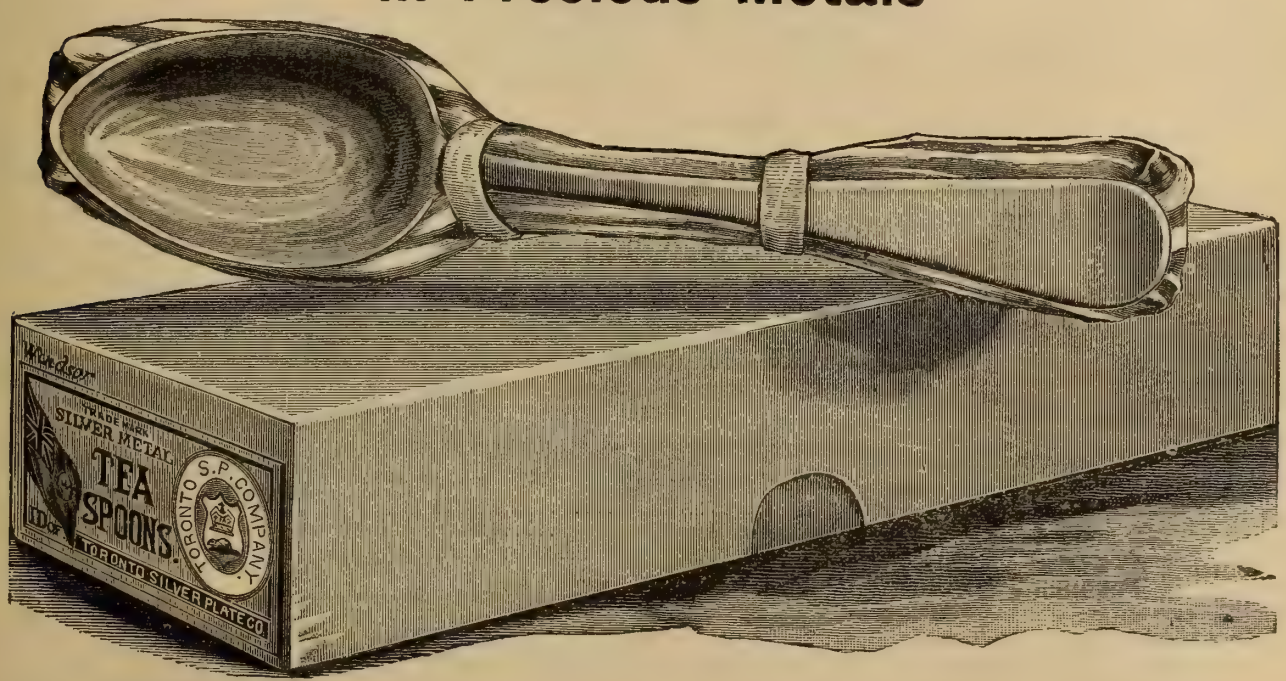
They Are Better And Cheaper Than Imported Goods.

Send Us A Trial Order.

The Hemming Bros. Co., Ltd.,
76 York Street,
TORONTO.

E. G. GOODERHAM, Manager JNO C. COPP, Sec.-Treas

A New Discovery . in Precious Metals



TRADE MARK

Toronto Silver Plate Co. || **SILVER METAL** || These Spoons and Forks are Guaranteed Solid . . Metal, and as durable as Sterling Silver. . . . . .

BUSINESS CHANGES.

SALES MADE OR PENDING.

John Robinson, tinsmith, Grand Valley, Ont., has sold out to S. T. Suggett.

Wm. McCormick, dealer in tinware, Port Dalhousie, Ont., advertises his business for sale.

Dixon & Dixon, wholesale turpentine merchants, Toronto, have sold out to Francis, Frost & Co.

PARTNERSHIPS FORMED AND DISSOLVED.

John Hourston & Co., hardware merchants, Edmonton, N. W. T., have dissolved.

Mathilda Drolet, wife of Joseph Rousseau, is registered proprietress in the firm J. Rousseau & Co., tinsmiths, Quebec.

Hermas Larose and Francis X. Prive are registered partners in the firm Larose & Prive, founders, Vercheres, Que.

James W. Pike, of Montreal, is a general partner, and Thomas Prosser, jr., of New York, is special partner in the firm James W. Pike & Co., Krupp's agents, Montreal.

FIRES.

Louis J. Herard, hardware merchant, Montreal, is partially burnt out. Insured.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

The Imperial Portland Cement Co., Montreal, a winding up order has been granted.

P. Nolan, dealer in stoves and house furnishings, Toronto, is offering to compromise.

Demand of assignment has been made upon Lacoste & Co., hardware merchants, Montreal.

ADVANTAGES OF BARBED WIRE.

The Ohio agricultural experiment station, at Wooster, furnishes some interesting notes about fences and insects. The old worm-rail fence, the stone wall and the hedge are harborers of a vast number of the pests of agriculture. Even the board fences offer them ample protection, as may be ascertained by any one who will take the trouble to examine them in the late autumn or winter. The chinch bug passes the cold season safely under the leaves and matted grass, and the army worm often originates there in abundance. The larvæ of the stalk-borer pass their early stage in the stems of grass, and grasshoppers breed there. The fall web-worm delights to pass its adolescent stage in the crevices about rail and board fences and stone walls. Many other pests are named as perpetuated from one warm season to another by the protection thus afforded. The barbed wire fences offer a minimum of such protection. Soon after its introduction it was discovered that domestic animals were more or less liable to injury from the barbs. This led to a modification to the extent of placing a board horizontally above the wires, and these boards have been adopted as highways by caterpillars, which travel over them in vast numbers. The common yellow bear thus migrates in the fall in search of a suitable place for cocooning. It is especially liable to attack from a fungous disease, the empusa. When first attacked it becomes paralized and limp, but later it is rigid and attached to the board so tenaciously that it only disappears when disintegrated and washed off by the rain. When a caterpillar is thus fixed on the narrow way it is brushed against by others, which catch some of the spores of the empusa die in consequence and communicate the disease to other travellers In a short time the upper edge of the board may become literally strewn with corpses, and the empusa is thus a powerful agent in checking the abundance of these caterpillars. As they cannot crawl along the barb wire it is left open to inference that the board should not be used.—Ex.

A NEW NUT LOCK.

Angus Fougere has invented a new nut lock which consists of an ordinary bolt and nut, the lock being a secondary nut, about the size of a thick washer, in which a thread is cut in such a way that when lightly screwed in the plane of the washer is inclined from 3 to 10 degrees to the plane of the nut. The washer, which is made of mild steel, is screwed up tight against the nut, which forces its threads from their natural position and thus causes the washer to bind on the bolt. The thread of the bolt is not injured, and it is said the nut cannot be started by vibration, nor can it be loosened by a wrench until the lock is first unscrewed. The American Engineer and Railroad Journal states that the Inter-colonial railway, of Canada, has used about 2500 of these locks for over a year. Information may be obtained from Mr. R. H. Cushing, Moncton, N. B. This refers to the Thomas Nut Lock Co., of Moncton, N. B.

ANALYSIS OF CANADIAN COAL.

A sample of the coal taken from the second seam of the Drummond colliery, says the New Glasgow Enterprise was sent to Prof. Donald, of Montreal, for analysis. Manager Fergie has just received the results of that analysis, and it is exceedingly favorable and gratifying. Says the learned analyst: "It is the finest specimen of Canadian coal I have ever seen, giving 68 per cent of fixed carbon." The full analysis is as follows:

Moisture	1.08
Volatile combustible matter	22.32
Fixed carbon	68.14
Ash	8.46

This seam is the one which the men had just tunneled to when the slight fire from roburite took place two weeks ago. The fire is now altogether out, and men are in at the face again. This splendid seam will thus give the enterprising Drummond colliery a higher place than ever among the great industries of Canada, and under the energetic and efficient management of Manager Fergie will continue at the top of the ladder. They have just received a crusher from England which will be put in place at once. A crusher to make the coal smaller is somethine new in the history of Canadian coal mining.

Charles Stark. the founder of the Charles Stark Company, limited, is now sole proprietor in the Charles Stark Co. The business will in future be conducted on a strictly cash basis, and special attention will be given to mail orders, as in the early years of its existence. The same lines of general merchandise will be handled as heretofore, the firm name still being the Charles Stark Company.

DIRECT IMPORTERS AND DEALERS IN
SCOTCH
FIRE CLAY-BRICK



DRAIN AND WATER PIPES.
Double strength for railway culverts, etc.
Sewer Bottoms or Invert Blocks, Cement.
NOTE.—Only pure SCOTCH unglazed Fire Clay Linings and pipes are kept in stock; any other quality is worthless for resisting heat and frost. Correspondence invited. Quotations promptly furnished.
OFFICE: 31 Wellington St., Montreal.

W. J. REID & CO.
IMPORTERS AND DECORATORS OF
Crockery China and Glass.

LAMPS A SPECIALTY.
All glass, Vase, and Library Lamps, in every hue and design.
Our travellers will call upon you shortly with samples.
LONDON AND BELLEVILLE.

Rotary Biscuit and Cake Cutter.
AGENTS WANTED.
Best Selling
KITCHEN NOVELTY
In the Market.


Patented May 1892.

Works Easy, Cuts Clean and Continuously.
Indispensible to Housekeepers, Hotels, Restaurants and Bakers.
It Saves TIME and LABOR and helps to make Kitchen Work a pleasure.
Trade supplied by
M. M. Vardon, 67 Yonge St., Toronto
Sole Agent for Canada.

OFFICES: 100-102 Reade St., New York, U.S.A.

KEARNEY & FOOT CO

WORKS: Paterson, New Jersey, U.S.A.

Manufacturers of FILES AND RASPS.
Superior quality fully guaranteed.

CAPACITY OF WORKS: 1,200 doz. per day.



Illustrated Catalogue Price Lists mailed on application.

PLEASE MENTION THIS PAPER WHEN WRITING US. Agents, M. & L. Samuel, Benjamin & Co, Toronto.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer



ELECTRICAL
HOUSE -:- FURNISHINGS.

Bells,
Batteries,
Push Buttons.

The largest and best assorted stock in Canada.
Send business cards for discounts.

T. W. NESS,
749 Craig St., MONTREAL.

THE BEST
English Sporting Gunpowder
USE THE
"ALLIANCE"
PRIZE POWDER.
—Made only by—
Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.

Always obtainable from
Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.

The Old Wooden Bucket Must Go

Indurated Fibre Ware.



NO HOOPS, NO JOINTS, CANNOT LEAK, SWELL, OR WATER SOAK.

The E. B. EDDY CO.
MAMMOTH WORKS
HULL, CANADA.

..WIRE..

CALVANIZED, ANNEALED, OILED AND FENCING

Best quality, even weights, prompt delivery of import orders, lowest prices, write for quotations.

A. C. LESLIE & CO.

MONTREAL and TORONTO

MUNN'S LIQUID GLUE.

The Strongest, Cheapest and Best.

Put up in all sizes. Circular and price list on application. KENNEDY BROS., Agents, 101 Bay St., Toronto.

For sale by the following wholesale houses in Toronto:—

H. S. HOWLAND, SONS & CO.
THE HEMMING BROS. CO.
THE ART METROPOLE.
WILLIAM BROWN, Carriage Hardware.

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.

GALVANIZED SHEET IRON. SP

WHY IS IT

THAT THERE IS A STEADY INCREASING DEMAND

FOR GLOBE FILES?

Because every file is warranted, equal to the best imported, and prices much lower. Because the Consumer has no Duty to pay on these files.

GLOBE FILE MFG. CO.,

WALTER GROSE, Montreal, P. Q. **PORT HOPE, ONT.**

FOREIGN CORRESPONDENCE.

Letters translated from or written in any foreign language.

J. H. CAMERON, 10 Front St. E

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—		
56 and 28 lb ingots, per lb	24,	25½
Strip "	25,	26½

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
Bradley M.L.S.		
I.C., usual sizes	$6 00	$6 25
I.X., "	7 25	7 50
I.X.X., "	8 50	8 75
Raven & P.D. Grades—		
I.C., usual sizes	4 50	4 75
I.X., "	5 50	5 75
I.X.X., "	6 50	6 75
I.XXX., "	8 50	8 75
D.C., 12½ x 17	4 00	4 25
D.X.,	5 00	5 25
D.X.X. "	6 00	6 25

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be purchased of 10c. per box less.

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	8 00	8 25
I.X. Terne Tin	10 00	10 25
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65,	

Tinned Plates

72x30 up to 24 gauge	6½	6¾
26 "	7	7¼
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Iron, per 100 lb	$2 05	2 15
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼inch	$2 45
16 "	2 35
¾ " and thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2⅝, 2¾
26 "	3, 3¼
28 "	, 3½

Canada Plates.

Blaina	½ bright 2 65	2 70
Abercarne	2 65	2 70
Lion	2 65	2 85

Iron Pipe.

Wrought 62½ per cent.
Galvanized, 35 to 37½ per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	5¾ 6
" ¼ " "	5¼ 5½
" 5-16 " "	4¾ 5
" ⅜ " "	4⅝ 4¾
" 7-16 " "	4¼ 4½
" ½ " "	4 4¼
" ⅝ " "	3¾
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 14 0 14½
Lake Superior	0 13 0 13¼

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20 0 22
" 35 to 45 " "	0 19 0 20
" 50 lb and above per lb	0 18 0 19

Boiler & T. K. Plts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 06½ 0 06¾
Domestic "	0 06¾ 0 06¾

Zinc Sheet.

5 cwt casks	0 06 0 06½
Part casks	0 06½ 0 06¾

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, per square ft, by roll	0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¾ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

Half-and-half (guar.) per lb	0 17 0 19
Standard	0 16 0 18

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½ 0 14
Other makes "	0 13 0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per lb	4½ 5
No. 1 Do "	0 5
No. 2 Do "	0 4½
No. 3 Do "	0 4

Prepared Paints.

(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1 10
2nd qualities "	0 90

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 14

Colors, Dry

Yellow Ochre (J.C.) bbls, p. cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
Venetian Red (R.C.2) " "	1 50
Ven Red, Cookson's "	1 80 1 90
English Oxides per cwt	3 25
American " " "	2 25
Canadian " " "	1 75
Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure,	
8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 65
Extra "	1 00
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 90
No. 1 Carriage "	1 50
Gold Size Japan "	1 40
Pure Orange Shellac "	2 00
Hard Oil Finish "	1 50

Linseed Oil (in bbls)

Raw, per gal	0 56½ 0 57½
Boiled "	0 59½ 0 60½

Turpentine (in bbls)

Selected Packages, per gal	0 50

Castor Oil.

Best, per lb	0 07½ 0 08½

Cod Oil.

Cod Oil, per gal.	0 48

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet makers	0 17 0 18
White	0 16 0 17

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis 12 p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50, 50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 50
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 30 and 5 off Revised list to 35 per cent
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, eaca 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 37½, 40 per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 to 65 and 5 per cent

Wrought Steel.

Fast Joint, dis. 65 to 65 & 5 pc.,
Loose Pins, " 65 to 65 & 5 pc.,
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... .. 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 40 to 45 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.40	2.70	2.00	
26 to 40	1.50	2.90	2.25	
41 to 50		3.30		5.00
57 to 60		3.60		5.50
61 to 70		3.90		6.00
71 to 80		4.50		6.75
81 to 85		5.20		7.50
86 to 90		5.90		8.50
91 to 95				9.50
96 to 100				10.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.

st break	$3 65
2nd "	3 90
3rd "	4 60
4th "	4 95
5th "	5 40
6th "	5 90
7th "	0 50

Picture Glass.

Pilkington's ordinary.

1st break	4 30
2nd "	4 70
3rd "	5 40
4th "	5 90
5th "	6 50
6th "	6 90
7th "	7 70

Glue Pots.

Tinned, each 0 30 0 90
Enamelled " 0 55 1 20

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c.

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 4½ 0 05
Screw and Strap, per lb .. 0 03½ 0 04½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

BOWMAN, KENNEDY & CO.,

LONDON, ONT.

Large consignment of WINDOW GLASS via "Pickhuben," just unloading at our Warehouses.

Full assortment of sizes now on hand. Prompt shipment Guaranteed.

SEND US YOUR ORDERS AND THEY WILL HAVE GOOD ATTENTION.

Wrought Hooks and Staples, Amer- dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 40 0 45
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padock, Am. per gross 1 60 4 75

Knobs.

Door, japanned, and N.P , Can. list dis, 50 p.c.
Bronze, Berlin, per doz .. 2 75 3 25
ronze, Gem, " 6 00 9 00
ar " 8 75 10 00
hutter, porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)
1. Either Canada or American Pattern.
Basis—50 to 60 dy..... 2 30
40dy..... 2 35
30 dy..... 2 40
20, 16 & 12 dy..... 2 45
10 dy..... 2 50
8 & 9 dy..... 2 55
6 & 7 dy..... 2 70
2. American Pattern Only
from 4 to 5 dy 2 90
3 dy. (lath)..... 3 30
3. Canada Pattern Only
from 4 to 5 dy 2 80
3 dy. (lath)..... 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 5 per cent. cash in 3 days.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz..... ... 2 25 3 25

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Star R & L Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	22	25
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 0 70 0 75
" N P. " 1 00 1 10

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 30 and 5 p.c. to 35 p.c
Emery, per quire 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent.
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 30 to 35 per cent.
Hack, complete, each.... 1 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H. " 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 50 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, p. gro. 1 65 5 50
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia ½ gross boxes..... 3 25
" ¼ and ⅛ gross boxes per gross net cash 12 00

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Snaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2, " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 50 per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 50 per cent.
" Tacks, 45 per cent.
Trunk and Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P. S. & W., 10 p.c. advance on American list.
Canadian net list.

Tinware.

Stamped, dis. Assn list, 70, and 12½ per cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Well Wheels.

Amer., per doz. 8,10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Iron and Steel, bright, annealed, oiled, coppered, galvanized, spring, nail, bolt, rivet, etc.
15 per cent. f.o.b Montreal, off revised list, Dec. 1, '92.
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6½c. per lb.
Clothes Line Wire, 15 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " 4½ 4¾
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90 2 00

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10p.c.
Coe's Gen'ne, dis. 30 to 32½ p. c.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3
" S., per doz..... 5 80 7 0
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS.

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

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Apted Bros.

...FOR EVERY
...DESCRIPTION OF

Printing



54 YONGE ST.
TORONTO

PRICES RIGHT...
TELEPHONE 1785

ORDERS BY MAIL RECEIVE PROMPT ATTENTION



"IDEAS FOR HARDWARE MERCHANTS,"

JUST PUBLISHED

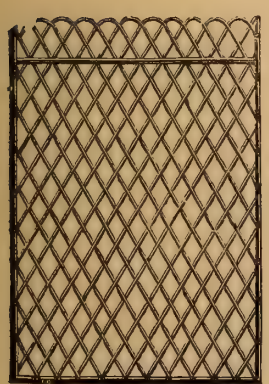
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This novel book is the only book ever written especially for Hardware men, and every Hardware Merchant will find it of decided help and of intrinsic value. It tells HOW TO ADVERTISE a Hardware Store. HOW TO DRESS a Hardware Store Window. HOW TO SELECT Seasonable Goods and HOW TO DISPLAY them to best Advantage. HOW TO MAKE a success with Hardware. HOW TO COMPETE with "Department Stores." HOW TO TURN a Credit Business into a Cash Business. HOW TO AVOID Bad Debts and Increase Trade. HOW TO SECURE Low Quotations from Jobbers and Manufacturers. HOW TO ARRANGE the Fixtures in a Hardware Store. HOW TO TREAT and Manage Clerks. HOW TO KEEP your Accounts with the Least Labor. HOW TO SYSTEMATIZE your Business and Arrange its Details. HOW TO ARRANGE Price Lists. HOW TO MEET close Competitors and HOW TO BE ENTERPRISING. HOW TO PROPERLY proportion Store Expenses, and thousands of practical hints for Hardware Merchants

"Ideas for Hardware Merchants" sent postpaid upon receipt of price.

J. B. McLEAN PUB. CO.,

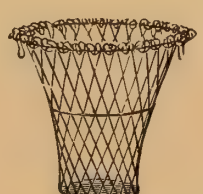
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WIRE GOODS —AND WIRE WORK

We manufacture a complete and superior line.
—All branches.



WIRE BASKETS, ALL SIZES.

THE DENNIS WIRE AND IRON WORKS

LONDON, ONT.

Send for Illustrated Catalogue.



WIRE ANTI-RATTLERS.

To Carriage Hardwaremen



The season for Horse Shoe Vises is at hand. It will pay you to get samples now

A. B. JARDINE & CO.,

HESPELER, ONT

MILK CAN TRIMMINGS



Send for new lists, now ready.

We will furnish this year, the best quality of Can Trimmings ever offered in Canada. Orders solicited for early shipment.



Thos. Davidson & Co., Montreal.

THERE WAS AND IS . . . **Light = = =**

But not such Light as is given by

Hanging, Banquet



Piano, Vase

THE

PITTSBURGH

LAMP

IT IS EQUALED BY NONE

All Good Dealers Keep Them . . . . . .

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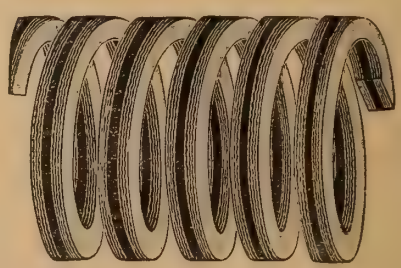
TORONTO and WINNIPEG

Only Rubber Factory in Toronto

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEC, Secy.

GUTTAPERCH

. . . BRAND . . .



SPIRAL PACKING

ANTI-FRICTION . . .

SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3 8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO. OF TORONTO Limited.

61 and 63 Front Street W. Toronto

BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY. The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, JANUARY 28, 1893. No. 4.

NEW YORK ALUMINUM BEARING METAL CO.

NEW YORK OFFICE, N. E. Cor. Washington and Cortlandt Sts. CHICAGO OFFICE, 12 Pacific Avenue.
MONTREAL OFFICE, H. McLaren & Co., Agents.

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TRADE MARK.

"Genuine Babbit," - -	Price	30c.	per lb.	f.o.b.	New York
"Champion Metal," - -		25c.	"	"	" "
"Aluminum Bearing Metal,"		18c.	"	"	" "
"Big 4 Babbitt," - -		14c.	"	"	" "
"Pyramid Metal," - -		10c.	"	"	" "
"Mystic Metal," - - -		8c.	"	"	" "

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LONDON

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Every Gallon is the Same

Mander Bros. is one of the oldest English Varnish Firms in existence. Their varnish has been a leading and popular brand for almost a century. For some years past Mander Bros. have been giving special attention to the Canadian Trade. Their Varnishes wherever used in this country are now acknowledged most satisfactory and suitable for this climate. Their prices are reasonable.

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RICE LEWIS & SON, LTD.

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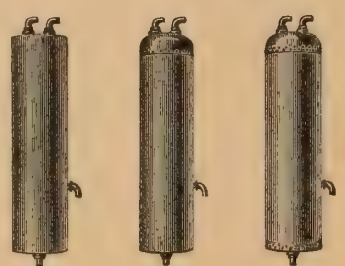
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BOOTH'S COPPER RANGE BOILERS

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"Booth's 27½ Copper Range Boiler,"

and meets the requirements as called for in the specifications of our leading Architects.

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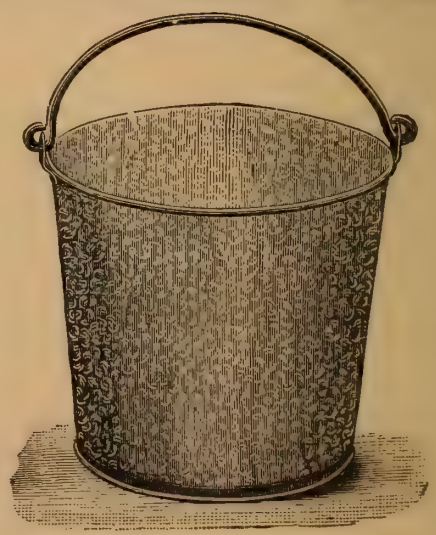
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They are stronger in shape, consequently more durable.
They will not slop over or tip over, owing to the wide bottom.
They nest very close and firm, which protects them in shipping.
The rim is in one piece with the body, consequently cannot get knocked off.
They are galvanized and not lead coated.

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KEMP MANUFACTURING CO.
TORONTO, ONT.

HARDWARE

ORGAN OF THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

PUBLISHED WEEKLY—SUBSCRIPTION $2.00 A YEAR.

Vol. V. TORONTO, JANUARY 28, 1893 No. 4

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

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FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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Travellers are now abroad among the trade, working like missionaries to instil into the minds of merchants the importance of ordering early and buying freely. There is very little danger of them over-doing the business, for the retail hardware men are more phlegmatic than their brethren in some other trades, and are not easily persuaded to over-stock themselves or venture after any speculative illusion. They have followed a conservative policy for several years and find it to be the best thing for them. It is also the best thing for the wholesalers, who like to receive their money when it is due. Of course they cannot expect to get it if a great part of the stock it is owing for still lies on traders shelves when the debt matures. There is just so much buying capacity to fill up. An overflow is waste. It is better to let wants ripen than to make a big estimate of them and buy accordingly. Of course it is safe to buy in such quantities as are certain to be needed, but the tendency to measure the prospective demand by the attractiveness of a present special offer is usually a cause of mistakes. If a trader is offered an unusually good bargain, he is apt to take in too much, both in his purchase and in his estimate of the demand that is tributary to his business. The hard-headedness of retail merchants during the buying period is usually their salvation in the paying season. Prices are so unstable and tend so much to gravitate towards cheapness, that stock carried over from one year into another is apt to have lower-priced new goods to contend with.

* * *

It is well to take time by the forelock to lay the foundations of a spring and summer trade in bicycles. If traders wait until the snow is off the ground they may find that the local young men are going "of their own motion" to other places and to other classes of dealers for their bicycles. They may or they may not be now in the mind to buy, but a little seed, now dropped into promising minds, may yield a handsome return when the robins begin to nest again. There is no need to dilate on the possibilities of a bicycle business by hardware men. Those who care to observe can see that the use of the bicycle as a means of ordinary locomotion is extending. It was deemed a luxury a while ago, and its use was limited pretty much to the sphere of amateur sports. There is now both more practical and larger ground now under the demand for it, and the extension of its use is no inconsiderable factor in the decline of the price of horses. Livery stable-keepers note the difference between the pre-bicycle times and the present. Young men that formerly wasted their substance and their leisure behind hired horses that they drove off their legs, are now giving their own legs a little of the hardship and are the better men—morally, physically and probably financially—of it. The demand has an accretion from another important quarter: ladies are taking to the wheel with enthusiasm. The hardware merchant should perceive in time that he is in the presence of a change, and should make a laudable effort to turn it to his advantage.

* * *

It is to be hoped that one of the results of the parliamentary session which has just opened will be the addition of an insolvency Act to our Dominion statutes. The mercantile and financial interests are earnest in their call for one, and they will be on the alert to see that the Bill they placed before the Government does not get crowded forward into another session. Any temporizing course should not be countenanced. There are some sections of the country whose representatives in parliament will probably be but lukewarm friends of the measure. The wholesale men of the Maritime Provinces will be likely to use their influence for the continuance of provincial legislation upon the subject of insolvency, for their own insolvency laws have a protective effect against competition from other provinces. Ontario or Quebec merchants think twice before taking a new account with a retailer in a province within which the insolvency laws allow preferential claims to resident wholesalers. The preferences of the Maritime Provinces make collection uncertain for Ontario and Quebec wholesalers, and therefore limit the business done by the merchants in that part of Canada. In our own province the effect of chattel mortgages very often similarly thwarts the ends of justice. The compromising of failures by private arrangement among the creditors concerned does more damage than either of the other evils, but it usually affects the competitors more than the creditors of the favored insolvent. The distribution of assets is another important point for which provision should be made. We want uniformity and fairness in our insolvency legislation. The passage of a measure in which both these objects should be attained would be beneficial to the credit of the country abroad. English houses cannot but take into consideration among the risks attendant upon a business with Canadian importers, the diversity and unfairness of our provincial insolvency legislation, which put so many difficulties in the way of

our distributors recovering all that is owing them.

* * *

The window glass trade has been an unremunerative one to jobbers for a long time. The desire to place stock appears to have steadily kept all considerations of profit in the background. Window glass was never so cheap as it is now, and import orders for spring delivery have been taken at very low prices, despite the prospect of an advance in Belgium as soon as the spring shipments begin to come forward. The quarantine arrangements which are expected to draw a cordon around this continent next spring may or may not be so strict as advance reports represent, but if cholera re-appears at German and Belgian ports we may expect obstacles in the way of our deliveries of glass. If importers obtain early shipment they will escape the market consequences of a cholera scare, but if they do not they may find it hard to supply glass at prices booked. A factor in the depression of prices in this country may possibly be the rivalry between importers of Belgian and importers of English glass, a rivalry which has made itself noticeable in Montreal, where importers of the former accuse importers of the latter of entering English glass below the English price. The answer appears to be convincing, namely, that the importers af the English glass will sell it at the same price to any one who wants it. Whatever the cause is, the price at which glass is jobbed is remarkably low.

* * *

Hardware merchants are beginning to take a less passive interest in the demoralized condition of the white lead market. Of course they are not troubled by the fact that prices have been below the cost of production, but they are very nearly concerned when grinders let down the bars between traders and consumers and admit the latter upon an equal footing with the former. If the 4¼c. quotation had been confined to the trade, the trade would not care who paid the piper, so long as their rights were not thrown into the whirlpool along with the grinders' profits. The hardware trade want to sell all the white lead the people of this country can consume and are prepared to take the risks of carrying stocks through a demoralized market, if grinders can confine themselves to their own line of custom and do not venture into that of the retailer. All grinders have not trespassed on the retailers' ground, but some have, and there are consumers who can show stock they bought at as good a price as was conceded to the hardware merchants. It is to be hoped the cutting among grinders will have its surcease now. A promising beginning has been made. On Tuesday and Wednesday the manufacturers met in Montreal and agreed to a truce until the end of this week, adopting 5¼c. as the price in the meantime. There were some slight differences in the way of a more permanent arrangement, differences that it is hoped will disappear and make way for a sane trade. There was a strong desire to place the onus of the mischief that has been done on the right shoulders. The spirit exhibited at the meeting plainly indicated that unless a basis could be reached, the excitement would be stirred up from still deeper depths in the scale of prices. The jobbing and retail hardware trade have the interest referred to above in seeing that any arrangement that may be arrived at will recognize their rights.

* * *

A partially disabled pumping service, the upheaval of the steel conduit that carries Toronto's water supply across the bay, and the fractures at several of the joints of that conduit threatened at one time to leave the city with an empty reservoir. The week before last indeed the pressure was so feeble that people living on the higher levels were without water for domestic uses, hydraulic elevators could not be run and the city was left almost without fire protection. This last condition was the most serious. The apprehension of such danger caused some disquietude, as the most trivial fire, which could be quenched by a few pails of water, might be the beginning of a terrible conflagration through the want of a pressure sufficient to throw a stream on the flames. The fire insurance companies looked upon this state of things with some alarm, and the Board of Underwriters showed an inclination to raise the rates. This would have been most heavily felt by the business men of the city, just at a time too when they would be most likely to avail themselves of insurance protection. The city underwriters had the reservoir and pumping station inspected the other day, and as they found a great improvement in the supply, it is supposed the inspectors will not report for an increase in the rates. They will, however, recommend that the city at once secure two large steam fire engines. Until the waterworks system is in better shape, merchants in this city will need to be very careful to take no chances from danger by fire. Carelessness as to matches, stoves, furnaces, etc., may be the beginning of a disastrous ending.

SALES ROOM TOPICS.

Painchaud, Squire & Co., Montreal agents for Dumoulin Freres, of Liege, have already received a large number of orders for importations in fire-arms.

Import orders are now being taken for poultry netting by A. C. Leslie & Co. This firm report the trade in Jessopp's cast steel for the current month to be greater than that of all last quarter.

The cash discount on horse nails is now the same as that on nearly all other lines of heavy hardware, namely 3 per cent.

Glass orders are coming in quite freely for import.

M. & L. Samuel, Benjamin & Co. are selling large quantities of Daisy churns.

Francis, Frost & Co. have been appointed sole Canadian agents for the Hatch Cutlery Co. of South Milwaukee, formerly the Chicago Drop Co.

H. S. Howland, Sons & Co. are offering a monkey wrench, called the Robinson wrench, that has an important distinguishing feature not seen in other monkey wrenches. This is a nut at that end of the handle into which the lever is inserted. The purpose of the nut is to prevent the strain of the tool from exerted on the handle alone and thus endangering or breaking the latter.

The price of tinned carpet tacks has been lowered 10 per cent. by domestic manufacturers. The reduction was necessary to successfully compete with United States tacks that were being brought in. The introduction of electricity into the manufacture of the latter cheapened the cost of production. Further, the coat of tin deposited by electroplating is not a success, the effect being little more than to temporarily brighten the tacks but not prevent the iron of which they were made from rusting.

H. S. Howland, Sons & Co. are printing a wire and cut nail list in attractive and convenient form, with the object of enabling the retailer at a glance to get at the cost of any gauge or size. This list will be found a very useful auxiliary to the retail hardware trade.

A wholesaler remarked the other day: "We have too many combines now. A machine could take orders as well as a smart traveller. People are hard to sell to when you quote a combine price to them. You have to persuade a man that he is buying lower than anybody else if you expect to sell to him. Nine-tenths of the sales made are put through on the illusion that the buyer is getting a figure away inside of the usual quotation. Now that he feels he can

do no better than his neighbor, buying has lost its chief charms for him, and he is very loath to give an order.

There is a strong feeling among jobbers and manufacturers on account of the action of the rolling mills people in advancing the price of bar iron and increasing their own share of the list price. One wholesaler declared that it would not pay him to bother with bar iron now, even if he had not to carry a bar in stock but could have all orders shipped directly from the mill. The manufacturers who use bar iron as raw material are chafing against the advantage that is taken of the protection the tariff gives the rolling mills.

It is said that a movement has been set on foot by a group of local capitalists to start rolling mills in this city.

Craig, McArthur & Co. have some large specifications in hand for importation. They have forwarded several big orders for tin plate.

THE COPPER MARKET.

The current issue of the Engineering and Mining Journal, in summarizing the copper market, says that although during the last few days there has not been so much done the interest shown is greater and the inquiry better, from which it would seem that the supplies of manufacturers are becoming much depleted. By the larger companies Lake is still held at prices above the ideas of buyers, but the smaller companies and second-hand holders would no doubt sell at 12.10 or even a trifle less. Prices of casting are very well maintained at 11¼ to 11¾c., while Arizona pig has yet to be quoted at 10½c. Large transactions in furnace material have been closed, but the terms have been kept secret. Cables received from abroad show that the statistics for the first half of the month increased only 500 tons, or rather less than was expected.

ADVANCING TIN PRICES.

The peculiar course of the pig tin market has been the subject of more than ordinarilly close study in the metal trade during the past month or six weeks, and the deeper the matter of statistical position was looked into the more mysterious appeared to have been the operations of the leading manipulators. Speculation and higher values prompted by the provisions of the McKinley tariff act gave place to liquidation, under which prices receded greatly, and following that came sales and offers to sell on terms indicating a need of cash on the part of some of the most pronounced bulls. Meanwhile a great deal of tin changed hands. The supply became more evenly divided among the large dealers, and no inconsiderable quantity passed into the channels of consumption. Until Friday last, however, the local market presented a ragged and rather weak appearance, while London advices tended to impair confidence rather than develop favorable opinion. On the day mentioned there were fair signs of some new move, however, and following that came what looked at first like crazy bids, but subsequently afforded evidence that somebody is behind the market for no other purpose than to push prices higher. Naturally, rumor was busy with allusions to a "corner" or something akin to it, but the basis for the rumor seemed to have had no broader foundation than that a great deal of tin has changed hands during the past few weeks.—New York Commercial Bulletin.

THE BORROWER.

The borrower is like the Colonial Treasurer—he believes in local loans ; but in another particular he differs essentially from the present occupant of the unpretentious building in Macquarie street, he prefers to make his loans interminable. He issues no "funded stock ;" he gives no security save his "word of honor as a gentleman," which is about as valueless as one of Mr. Micawber's I.O.U.'s, or the deposit receipt of a bankrupt building society—rather more so, in fact, for the assets of the borrower are always nil, while as to his liabilities their total is unknown, for he keeps no books—except those he borrows.

Should he be compelled, as occasionally happens, to discharge one of his monetary obligations, he takes another leaf out of the Colonial Treasurer's book, and instead of raising the money by his own efforts, or retrenching his expenditure by severest economy, borrows from Peter to pay Paul, a system of finance in which long and frequent practice has made him expert. Could the Government only pitchfork every borrower into a snug billet at the Treasury and direct them to devote their united energies to the raising of funds, Mr. See would have no further unpleasant questions asked as to the success of his latest financial scheme, for with such accomplished assistants £1,000,000 would be raised in the twinkling of an eye.

He who goes a-borrowing goes a-sorrowing, said Poor Richard, but the proverb is out of joint with the times. Rather should it read, "he who goes a-lending goes depending," for, on the whole the borrower seems to have all the best of the game. Like the lily, "he toils not, neither does he spin," yet Solomon, in all his glory, was never arrayed like him. He patronises the most fashionable tailors and resides at the best boarding houses, though his term of residence usually expires on the day when his landlady demands a settlement of her account.

The memory of the borrower is as short and defective as his pocket is shallow and empty. If you venture to remind him that a repayment of the temporary loan you obliged him with six months ago on the condition that it was to be refunded next day would be acceptable, he swells with indignation, and muttering something about —— insolence, marches off to raise the wind in another quarter of the financial compass. He has not even the bluntness of the witty and impecunious Sheridan, who on being pressed by a creditor to pay something on account, if it were only the interest, replied that it was not his interest to pay the principal, and not his principle to pay the interest. And so, like the dog in the rhyme, the unfortunate debtor "got none."

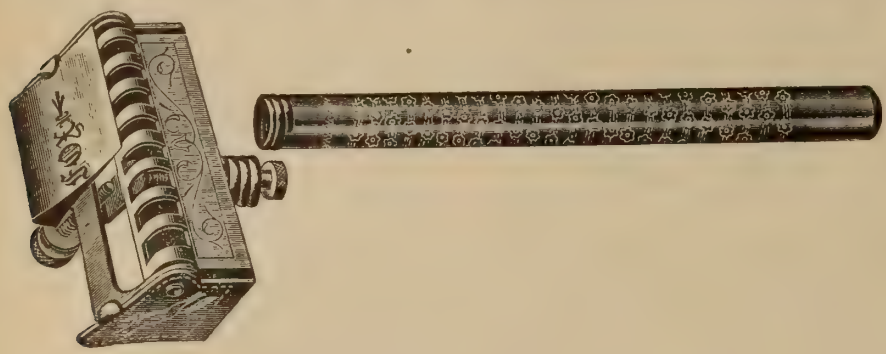
The borrower is credit personified. His sole stock-in-trade is an insinuating address. But it is wonderful what he can do with such slender resources Few men can utilise their resources so effectively. While honest, hard-working, thrifty men are starving, the borrower appears to lack for nothing, and lives on the fat of the land. It is this fact which renders him so dangerous to the unwary or liberally disposed. His formula, where substantial funds are solicited, is that temporary financial embarrassment compels him, much against his will, to request the favor, etc., etc. Where only a comparatively trifling sum is needed the formula is slightly altered, and in a semi-jocular tone he says, "lend me a couple of quid, old fellow; awfully short this week—had to lend that lazy beggar Hardup a fiver yesterday; pay you to-morrow. Ah ! thanks awfully. Ta-ta." And he adjourns to his favorite hotel, where, in the snug private bar he discusses a bottle of Pommery with one of the fair maidens who are ever in attendance at the shrine of Baachus.

Sometimes he adopts a facetious tone and manner, and, like a borrower we once heard of, propounds to his friend the following conundrum : "Suppose you had £10 in your pocket, and I asked you for a loan of £5—how much would remain?" "Ten pounds," was the prompt reply, but it is not often that the capitalist has the moral courage to give so flat a refusal to so subtle a request.

But the last stage of the borrower is worse than the first. His acquaintances soon get to know the value of his promises, and light their pipes with his I.O.Us. When they see him approaching they instinctively button up their pockets, quicken their pace, study the pavement or the sky, and pass him by. The only thing they give him is the cold shoulder. Dunned by tradesmen, worried by a few of his less sentimental acquaintances for a return of cash advanced, every money market closed against him, the borrower turns in sorrow to the sign of the three golden balls, and finds that it is possible to eke out an existence for a week on an overcoat, and to subsist for a fortnight on a gold watch, while a silk umbrella will provide frequent drinks at a threepenny bar for an astonishing period. But it is sorry work. After all, Poor Richard was not far wrong, for though the borrower may outrun the constable, in a figurative sense, in a literal sense the blue-coated guardian of the law usually has the unpleasant task of presenting him at the police court, and while sojourning in the debtor's cell he has ample opportunity for moralizing on the hardship of a man who attemps to fight life's battle without a shot in his locker.—The Storekeeper, (Sydney).

NEW GOODS.

The Fox Cutlery Manufacturing Co., Canadian branch, Temple Building, Montreal, are introducing the Fox Safety Razor, which is claimed to be the only safety razor with an adjustable blade. It is formed of an outside frame and guard in one piece, 2 inches long, the razor blade is 1 7-8 inches long, and the handle 4 inches. Within the outside frame is another movable frame, which presses against the blade when inserted. The pressure is accomplished by turning the rear set screw, which allows the blade to be adjusted to the guard as high or as low as desired, while the top screw in the middle of the inside frame holds the blade in the desired position. By loosening the rear screw the inner frame falls back and the blade can be taken out. The frames are silver plated, the handle nickel-plated. For stropping and honing of the blade there is an extra nickel-plated holder with wooden handle attachment, and the complete outfit is put up in a neat cloth-covered box. The blade is made of the highest grade of Fox razor steel, full concaved, ground and tempered with the utmost care and set ready for use. It will be sold at a price within the reach of all.



THE FOX SAFETY RAZOR, ¾ SIZE.

KNOWING AND DOING.

Perhaps the most important remark which to be made is to point out the great gulf which exists between knowing what ought to be done and doing it. Possibly most failures could be traced to this cause alone. This or that system may be adopted, but unless it is properly worked, and all the details fully carried out, it will prove of little or no benefit.

Ironmongers have more intricate detail to overcome than any others. If the individual does not make a determined effort to conquer the detail it will conquer him, and he will pass his business career in a greater or less state of muddle. To attend properly to details without spending too much labor upon them is impossible unless a good system is inaugurated, and although the worry of business will not be entirely prevented there must be considerably less of it, and this is sufficient reward

It is altogether a mistake to condemn a system because an occasional mistake creeps in. Those who do so reason in a most absurd way. They set up an impossible standard of perfection, and profess to be dissatisfied if it is not attained! Surely it is more sensible to institute the comparison between that which is in practice and that which is proposed as an improvement thereon. Then the question resolves itself into one test—not whether either of the systems is absolutely faultless, but whether one of them excels the others in possessing greater advantages and smaller drawbacks.

And a system adopted should have a fair trial before alteration is made in any of its details, because the first troubles may be solely due to faults in administration, although this is not always easily demonstrated at the beginning. Some time should be allowed to elapse, that those who carry out the system may become thoroughly experienced in working it. After that alterations may safely be effected. Parliament rarely permits a new law to be altered until it has been in force for some time, in order that its effect may be fully felt before any amendment is made.

Apart from what may be called the technical part of his career, the business man should zealously cultivate those qualities which everyone, whatever his occupation, needs in order to successfuly accomplish his part in life. One of these is promptitude. Nothing is more harmful than the habit of procrastination. It is so easy to put off until to-morrow that which ought to be done to-day. Once aquired, this habit leads a man to evade every difficulty instead of manfully encountering it, and by-and-by those who have dealings with him get to regard him as unreliable, as not possessing sufficient stamina to be entrusted with other than the meanest commissions. "Do it now" is a motto I once saw posted up in a merchant's office, and I do not think I ever learnt a more useful lesson.

To do anything well requires continual practice. So many seem quite satisfied as soon as feat a has been accomplished once. The successful man is he who has attained perfection by its only way—practice.

Procrastination springs chiefly from indecision of character—that disposition of mind which is analogous to physical indolence. Decision of character must not be confounded with that want of due deliberation which is really carelessness, and which frequently culminates in rashness, but is rather that habit of mind which boldly faces the difficulties which have to be encountered, resolves upon a course of action, and then steadily pursues it till the end is reached. Occasionally a mistake will be made, for this is inevitable, but this is by no means so bad as that greater mistake of drifting with the tide hither and thither, and never reaching port at all.—Ironmonger.

BRITISH EXPORTS OF TIN PLATE TO THE UNITED STATES.

Exports of tin plate from Great Britain to the United States in the periods given have been as follows, the figures representing tons of 2,240 pounds :

	1892-3.	'92-'91.	'91-91.	'89-90.	'88-99.
July	24,750	4,323	37,011	23,718	27,458
August.....	24,221	5,629	25,519	26,756	28,506
September...	22,535	11,139	25,557	28,890	25,783
October.....	19,901	12,461	36,955	25,647	24,492
November ..	20,634	14,832	28,330	30 415	24,347
December....	....	13,536	25,709	21,765	21,586
January	.....	17,554	32.018	23,613	28,471
February	....	22,268	28,253	18,384	27,879
March.....	.....	22,789	38,638	17,245	30,936
April	....	31,061	45,208	23,373	31,017
May.....	....	23,799	55,569	25,619	31,929
June.....	....	23,550	63,539	30,793	29,269
Totals	.....	203,941	442,306	296,218	331,673

The export of tin plate from Great Britain to the United States in November, although slightly in excess of the export in October, is considerably less than the export of July, August, and September. It will be noticed that in 1889 and 1890 the export of these two months, October and November, has been somewhat greater than the export during the three preceding months, while this year it is considerably less. Comparing the export of last November with the export of the same month in previous years, it will be noticed that it exceeds the export of the previous November by about 6,000 tons, but falls short in the export in November of 1888-89-90 by an average of about 7,000 tons. The same comparison may be made with the month of October in the various years, but the same variation is noticeable in an even more marked degree. The total of the five months in the first column of our table is 112,041 tons. The totals for the same five months in the immediately preceding years are respectively 48,384, 153,372, 135,426 and 130,586 tons. It will therefore be seen that the export for the five months from July to November, inclusive, this year are largely in excess of the exports in the corresponding period last year, but are an average of 20 per cent. below the export during that period the three preceding years.

An old mercantile house of St. John's, Nfld., H. & L. Tessiers, have assigned, with liabilities stated at about $800,000. Their London agents will be the heaviest losers. The Newfoundland creditors, it is said, will not be seriously embarrassed by their losses. Speculations in the fish trade are given as causes of the heavy losses. The house has been in existence upwards of 50 years.

H. S. HOWLAND, SONS & CO.,

37 FRONT ST. WEST, TORONTO.

WHOLESALE HARDWARE

- - ORDERS SOLICITED - -

JAPANESE IRON WORKERS.

The Japanese have excelled all other people in the manipulation of iron. As an extraordinary example of the pains taken in iron-working there may be here mentioned a knife handle (kodzuka) in which a horse is represented seen from behind on a surface not three-quarters of an inch wide, the whole being not two inches in height. The foreshortening of this figure is simply marvellous, and there is nothing in it except a dot of gold for the eye of the horse. The workmanship is of great skill and grace.

A striking Chinese piece is a bronze vase of very graceful shape, with eight deep swells outward. On two opposing swells, curious cat-like animals, with manes and exaggerated tails, serve for handles. The vase is set upon teak basis. A square fire-pot, whose cover has been lost, has rich designs on the sides. A little yellow bronze, with a peculiar handsome design in the open-work cover, and the sides of a cone-shaped fruit and leaves like the bay-tree. There is a teapot in Shibnichi which is full of effective grace.

An incense burner, which rests on a beautiful teak base in the shape of a leaf, is adorned on top with a creature which is something like a dog, but has hoofs and a head that looks like an alligator's. The Japanese artists just let their fancies work when it comes to details, and many of the most attractive pieces in the collection seem to testify chiefly to the freakish fancies of the artist—although without knowing to the bottom the mingled theogony of Japan and all its legends, one cannot surely express an opinion in these matters.

A number of figures of much interest are also included. One of these is undoubtedly of Hindoo origin, representing some personage of the Hindoo pantheon. It is a figure half reclining on the right arm, the left arm resting on the left knee, and a curious, half-mocking expression in the open mouth. This is a very dark bronze, the effect of age. A very odd bit in rich yellow bronze shows a very grotesque person, bent on his left knee, endeavoring with much strain to lift upon his shoulder a heavily laden sack which lies behind him.

The expression on the face is funny in a notable degree, his mouth is wide open, showing his teeth, his eyes are fairly starting out, his bushy eyebrows and chin tuft, which forms his only whiskers, are all alike contributive to the humoristic effect. Another of these little figures is the god "Bishmon," a light bronze of a brassy tinge. He is all wrapped up in a mantle, thrown over his head; his wide mouth, his turzy eyebrows, his wrinkled countenance,combine to show him a very wise individual.

But the most curious of all is a fat-faced fellow, with both hands propped under his chin, who is simply tied up in a blanket done in a double knot on his back. He is a riddle of which we do not possess the solution. A small but interesting bit is evidently a perfect likeness of the Hindoo yogi or mendicant magician, his lean legs, his meager frame, whose ribs can be counted, and the whole physiognomy are unmistakeable. It is probably not only a Hindoo subject, but a specimen of Indian bronze work—it is not finished in the same exquisite way that the Japanese bronzes are, nor does it resemble the Chinese work in this line.—Springfield Republican.

CATALOGUES ON APPLICATION.

The trade catalogue is a special form of business literature. It is here to stay both as an index of product and a convenience to the purchaser. These catalogues represent heavy costs, and considerable time and care in preparation. In an artistic sense some of these are unique and elegant, while in classification and arrangement they are models of critical accuracy and cyclopoediac information. We venture to say that an exhibition of these volumes would compare in appearance and cost value with the choicest productions of modern bookmaking. When one considers that the compilers and publishers of these numerous and costly volumes are business men, who are not likely to invest their money without some tangible or prospective returns, it is obvious that the results are or have been of a solid and remunerative nature. In this, however, as in every other enterprise, the emulation of competitors is apt at times to rattle their usual business sagacity. In such instances, vanity is apt to secure a corner on common sense, and involve a man in the necessary consequences of putting more sail on the ship than he had ballast to carry. In most cases the waste of the trade catalogue is the more common mistake. The proof of this can be found in the bags of old paper that go to the purveyor of a paper mill, or the torn pages that are utilized by a janitor in lighting a fire, or by the clerk of a store in rubbing fly spots from a window, or blockading an aperture where the rat or the mouse take their daily constitutionals. It is an inglorious termination, but is none the less the first destination of catalogues that have made a useless trip by mail to persons or places where they are neither appreciated nor wanted. It is also a well-known fact that a mania for securing anything free of cost is one of our national characteristics. Men, women, and even children search the papers daily for publications that can be had free on application. This appetite for what is gratis is by no means fastidious. It can absorb a gross of annual calendars, and even a railway time table has no effect on its voracity, while a trade catalogue, no matter its specialties—stoves, woodenware, millinery or lumber—each and all are equally available for stove or scrap book purposes. So great has this evil become that some of our business men restrict the circulation of their trade catalogues to those who have a business claim on their attention and service. Others confine their notice of publication to the trade journals representing their special lines. In this instance the evil of indiscriminate distribution is necessarily restricted but by no means avoided. Others seldom revise their mail lists, and continue their annual donation of printed matter to men who have long since changed their residence and are out of sight in a distant state or a local cemetery. It is obvious that a little less of dissipation in this matter would be a wholesome reform. The trade catalogue is designed for business, and not for picnic or sandwich uses. It can do no good where it is not wanted. Sapolio is not needed where the natives have nothing to wash, nor locomotives where nobody travels, and it is equally inconsistent to introduce a costly catalogue where its specialties are as foreign to the recipient as a tooth pick would be in an oyster bed or a hen roost. Everybody knows this, but the misfortune is often that the literary department of a business is too often left in irresponsible or incompetent hands. It goes with the telling that in so important and costly a branch of modern business as the trade catalogue, a more definite and prudent method of distribution would add to its value, and avert the blind waste both of paper and money.—Age of Steel.

INSTRUCTION NEEDED.

It is too often the case that goods are sent out by the wholesale houses to dealers without any definite instruction as to how they should be sold. For instance, a stove or furnace is shipped to the dealer and a certain amount of information is given, but often times this is only general knowledge, and if trouble arises the retail dealer does not know what to do.

The country dealer is certainly capable of learning about the construction of stoves, furnaces and almost any other article, if he has a good chance. But one cannot expect him to study the matter without help.

The retail merchant naturally looks to the manufacturer for instruction. He should learn not only how to set up a stove and get the fire to burning, but he should know about its construction. Then if any trouble arises he is better able to cope with the difficulty.

Not only is this true with stoves and furnaces, but it is also with all sorts of machinery. Manufacturers ought to give very explicit directions concerning every part of a machine. These points may prove useful to the retailer every day. He does not know when the knowledge will be needed.

When an entirely new line of goods is put on the market the dealer wants to know all that he possibly can about it. He wants to know the selling points if he is to be successful. By giving information the wholesaler may help his customer to make many a sale he would not otherwise get any benefit from.

Another thing ought to be kept in mind. It is always best to tell the truth about an article. If it is guaranteed to do certain things the guarantee should be backed up. If a thing is not guaranteed the dealer should know it so he can act accordingly.

What applies to the wholesale dealer applies in a great measure to the retailer also. He should not only know all about the line of goods he handles, but should be able to give instruction to his customers. For this reason he cannot know his business too thoroughly. If the manufacturer of a stove, furnace or farm implement gives a clear representation of how the articles are constructed, the dealer should certainly make an effort to study the matter up.

In selling the article the dealer needs to be just as careful about representing it as it really is, and for this reason he must know from the manufacturers just what he can say for it. Without information he is at a loss what to tell his customer. If goods are always represented as they are there will be comparatively little trouble with customers.

Instruction about handling or running his stove or machine should be given his customer by the merchant. There are a number of little things that are liable to be overlooked, and the understanding of which will save a vast amount of kicking in the end.

This is an age of progress and the dealer who expects to do business has to understand its ins and outs. He must be educated in the science of running a stove with profit just as much as the journeyman must be familiar with his trade. It takes brains to run a store successfully just as much as it does to teach a school successfully.

The retail dealer of to-day is a man able to take in all there is to be known about an article, provided the manufacturer chooses to tell him, and it is certainly to the manufacturer's interest to give him all the information possible, for the more he knows the more successful he will be in making sales, and in establishing a paying trade. Both the retailer and manufacturer are benefited by working for each other.—Stoves and Hardware Reporter.

STICKING TO BUSINESS.

There are many men, and particularly young men, who are always getting dissatisfied with what they are doing. When they have been working in a certain line of business for some time they begin to think they are better fitted for something else.

Instead of working right on at what is plainly set before them to do, they allow the spirit of unrest to take complete possession of them, and they are of no account in the positions which they occupy, and they might be of less account in something they had not tried.

No one wants to discourage ambition in any way, but there may be a difference of opinion as to what ambition is. According to Webster the word means "An eager and sometimes inordinate desire of preferment, honor, superiority or power." In its original use it meant going around seeking votes for office, but the quoted definition will best apply to business purposes.

The ambitious youth would do well to study this definition, before allowing his desires to get away with him. He ought to consider what preparation he has had to entitle him to preferment, superiority or power. Would he know what to do with himself if exalted to the position he might crave? Many things should be taken into consideration.

One needs executive ability to hold high positions in business life to-day. The man of ideas is the man who "gets there" in the store, in the manufactory and in every other place in the business world. He must know his business "from the ground up" to attain the best results.

There are many men, it is true, who are placed in positions where they are not at home; where they have no special adaptability for their work, but still if these are the only positions which they could secure for the time being, it is best to do something until the right thing comes along.

If we are intended for a special position in life we will surely get to it provided we do each day the work that is next to us. Very few, comparatively, secure just what they think they want to start with, but if they persevere to make themselves as useful as possible in the positions that open to them, they will either get into the places first sought after or will find that after all they were fitted for just what they got into.

If a young man sees that he can do better in another situation and everything draws him that way it is all right for him to go, but his decision should not be too hasty. There are many things to be taken into consideration before making a final decision. Young America is impulsive and should hold in a little if possible. The same thought applies to the dealers. If they are already in a good business no change ought to be made without careful consideration. If a dealer has been making and saving money and has a good amount to put into a larger establishment it is quite right to do so.

The spirit of unrest is altogether too prevalent in our country. People are after money, more money, and they care very little how they secure it. There is danger in this changeful disposition. Many good qualities which should be sought after are overlooked entirely in this greed for gain.

Not long ago a business man said, "I should consider my life ill spent if I thought I did not fill a place where I could be of use to my fellow men." This man is at the head of a large establishment which gives employment to a large force of men. It is in giving these men work and looking after them that this man finds his reward.

It takes time to tell whether one is well fitted for a place or not If he is able to do the work well there is reason for his sticking to it until he knows that he is wanted elsewhere and the way is clearly pointed out to him to change. The place first secured may be the one which will lead upward to a rich reward.—Ex.

AS TO GIMLETS.

There are about twenty-five different patterns of gimlets made by a dozen manufactories, none of which make them exclusively, the industry being generally associated with that of auger bits. They are sold by the gross, and are manufactured with extraordinary cheapness. Among the better sorts is the Star, which is suited to all sorts of woods, having what is called the German cut. They are of the most expensive sort, being tempered in oil, and made with either a screw or diamond point. When a metal handle is used, pains are taken to have it of a substantial character. It is cast solid about the shank, and no rivets are used. This makes a smooth surface for the hand, and at the same time prevents the handle from becoming loose. When the handles are of wood, they are either of rosewood or maple. One sort has a solid head, the whole being made of one piece. The double cut gimlet is for soft wood, and is made in a variety of styles.

The nail gimlet, the cheapest of all, is made by the bushel, and is often packed in cases containing twelve gross. When the price for some of them is known to be $4.50 per gross, it can readily be seen how cheaply they can now be manufactured. A cast steel gimlet fitted with a handle costing less than a cent at first hands is a marvel. The pod and spike nail gimlets are variations of the foregoing.

The skill of the gimlet maker is probably found in the bell hangers, which are sometimes 36 inches long and as small as 3-16 of an inch in diameter. It is made double cut, or with a diamond or screw point, and of extra cast steel. The 36-inch gimlet sells for about $15 per dozen.—N. Y. Hardware.

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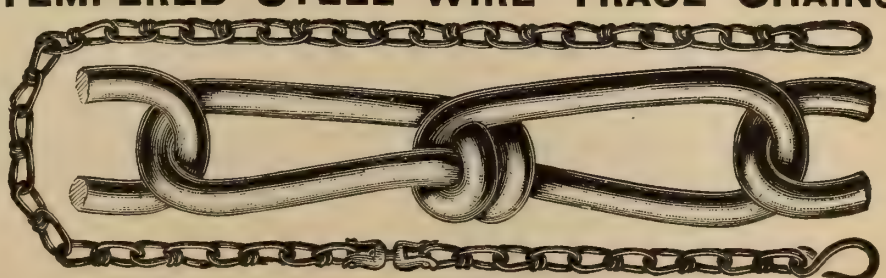
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HARDWARE AS SPECIFIED.

This term covers "a multitude of sins," as it is almost universally used by the architect in making up the plans for buildings. It is all right that such an expression be used and the specifications may make the work of estimating an easy task easier. The trouble lies in the fact that while the specifications are quite explicit as regards the woodwork, the masonry, etc., in all probability a page will be devoted to hardware, and will read something after this manner: "Hardware to be of good quality"—that's definite—"and bronze on first and second floor; attic to be trimmed with rim locks and jet knobs; front and vestibule doors to be supplied with first-quality interchangeable key locks"—each maker has a first quality lock. The balance of the page in reference to hardware is devoted to sash pulleys, shutter butts, window fasts, and other minor details, but never a word to enlighten one as to the grade, style or quality of goods to be used throughout the house. It therefore rests with the estimating party to decide what is right and proper for general application where no rules are laid down; and with this state of affairs, the floor plans and elevations before us, we will take the place of the estimating clerk and start in to trim.

In the basement, according to the plans, there is an entrance door leading to the street. Obviously, this door must have a good lock, and if the best lock is used on the main entrance, then this lock should be equally secure. To this door we will apply a mortise flat-key vestibule latch. In all probability there will be an iron gate used outside, but it does not show on the plans. Specifications do not say. Now there is the back door leading to the yard. This door does not need so expensive a lock as the front one, but we will use a three-tumbler 5-inch mortise bit-key lock here, bronze knob outside and black iron inside, and a combined escutcheon plate outside, as we did on the front door lock. Left to our own decision, we will use 5x5 butts, solid bronze, for these two doors, and the remaining basement doors we will trim with 4x4 iron butts. We take it for granted that the doors are light, and that baseboard moulding is very thin. As for locks for the other doors, 4-inch mortise key locks and plain knobs should be the proper trimming. But here is the pantry door: What shall we put on this door? Must it be secure? Off we go again in the dark and trim the pantry with a flat-key dead bolt, a pair of knobs operating a spring latch. Our competing neighbor may use a cheap mortise lock. At this point we are again brought to a halt, and try and solve the question as to whether the cupboard doors are rabbeted or plain, as it makes quite a difference in the cost, but to be on the safe side we will use rabbeted locks. In the laundry the washtubs need butts and lifts, but we will leave that for the carpenter to trim, as well as seat in toilet. The toilet door we will trim with spring latch and small dead bolt operated on inside by thumb piece. The windows we will trim with a cheap fast and hook lifts, as cup lifts are not made for use in the case where servants with wet hands need to lift a window. The dumb waiter to butler's pantry we will also trim with hook lift, for the reason given before. Having finished the basement, we turn the plans and start the work on the first floor.

The main entrance door is the first to receive attention and we supply our best front door locks, 5 1-2x5 1-2 or 6x6 butts, keys to pass front and vestibule locks, as this for a wonder was mentioned in specification, but at this point we stop. How about the escutcheon, hinge plates, dummy trimming, push button, etc.?

We solve this problem, but in a very unsatisfactory way, by simply trimming the active doors in plain bronze or brass, and trust that we can adjust the other matter, provided we get the order. It is not safe to estimate $50 for front and vestibule trimming, while our competitor uses plain bronze and as little of that as possible. Of course, we might have asked the architect about this—that is not the point—we might ask about 50 other details which should all be explained in the specifications. The doors from main door to parlor, to library, to dining room, are all double sliding doors—are they to be hung overhead or to have brass sheaves and way? The most approved style is to hang them, so we'll use hangers, and as we do not know whether locks are wanted or only pulls, we use the locks to be again on the safe side.

From the plans it is impossible to tell whether butler's pantry door is double or single acting—how easy it would have been for the designer to have shown this by using his compass, and indicated, so all might read, by means of a half or quarter circle? We will run the risk and use a double-acting butt, even if it does increase the amount $10. We finish the rest of the floor in the regulation way, as the minor trimmings do not signify one way or the other, except for those windows to the porch. Are they rabbeted or plain? Again we overlook the cost and use the figure for rabbeted locks, and trust the other man will do the same. Cupboards, closets, etc., we trim in regulation style, and again turn the plans to the second floor.

The specifications said bronze here, so we will proceed to trim the chamber doors with 4 1-2 inch mortise locks, 4 1-2 x4 1-2 loose-pin butts, combined escutcheon plates and plain bronze knobs. On the closets we will modify the trim by using escutcheons on outside only. For the bath room we will use a lock similar to the other door locks, but add a dead bolt and thumb piece for inside operation. We cannot tell from plans whether the square window in bath is hinged, pivoted or lift; we will suppose it is pivoted, and furnish pivots and an adjuster, say 12 inches in length. From the plans we imagine that inside blinds are to be used; accordingly, we furnish butts, flaps and shutter bars throughout. If we are mistaken in this supposition, then we have increased our figures to such an amount that our chances for success in getting the order are very slim, as small butts and flaps are very expensive. Trimming the windows on this floor is very simple, only an ordinary fast and flush or cup lifts, two of the latter to each window. Having finished this floor, we now turn to plan of attic.

Rim locks, jet knobs, and properly black iron butts here; butts 4x4, and small key plates black iron, or more properly speaking, Bower-Barff. All the closets we will trim the same as the chamber doors, except we will use half pairs of knobs. The lumber room door we will trim as we do the other doors, but will add a flat-key dead lock, as this door may require security. Lastly, we trim the hatch to roof with a pair of 3x3 butts, a hook and staple, and a scuttle chain. This completes the trimming all but a few small pieces, these being closet hooks, door stops, etc. We now check back our work to be sure that nothing has been omitted, and finding we are right, we proceed to figure up the amount. A glance over the work convinces us that it would be impossible to cheapen the trimming in any way and have the house trimmed as it should be, therefore, when we find the amount to be, say, for example, $540, we feel confident that we are right. We send the plans to the architect, and by mail inform him of the amount as found.

The result is that we get no reply and never hear of the matter again until, by chance, in passing, a call is made on the designer, and in answer to the question as to what disposition was made of the "Doe Residence," he replies, with a smile, "Why, we gave the order to Lox & Nobs; they were over $100 less than you." Here we are curious to find out what sort of trimming is being used that cost $100 less than the trim we would have used, and just for satisfaction's sake we run to the town nearby, and look over the residence. They are not using a butt in the house that is over 4x4, except on the front door. They are using one-tumbler locks all alike; there is not a door or window rabbeted, not a piece of ornamental trimming being used. The successful party has used the cheapest, meanest kind of hardware. The owner is pleased at the small cost. Will he be pleased with the wear and appearance after a year has passed? Would it not be better if the architect were more explicit in his specifications, thereby giving each one estimating a fair chance? Would it not tend to freeze out that class of tenement house hardware manufacturers who are a constant drawback to reputable houses whose names are synonymous with high-class goods. The firm that always get the order because their estimate is lower than their competitors' and the architect, who always gives the work to the lowest bidder, irrespective of quality, together do a great injury to the owner, to the trade, and to the general advance of art in this direction.—Metal Worker.

Discussing the proposal to pass a Dominion insolvency law, the St. John Telegraph remarks that by it Toronto and Montreal wholesalers and manufacturers hope to be placed in a more favorable position with respect to maritime debtors than they now are. This, says the Montreal Gazette, about describes the situation. The western wholesalers hope, by an insolvency law, to secure the same share of a maritime insolvent's assets, when he owes them money, as his local creditors obtain. They do not ask any more, and they ask this because as the law now is they very rarely can obtain it.

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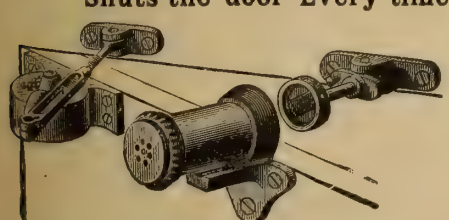
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TRADE CHAT

[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Wednesday.]

The business men of Sarnia are trying to organize a board of trade.

S. S. Edison, Bowmanville, has opened a branch hardware store in Newcastle.

George M. Wilkinson, one of the oldest merchants in Kingston, died last week.

W. W. Ogilvie has been unanimously elected president of the Montreal Board of Trade.

The hardware store of L. J. Herard, St. Lawrence street, Montreal, was destroyed by fire one night last week.

Among those who met with loss in the Norwich fire of last week were T. Batty & Co., dealers in hardware and tinware. Their loss on stock was $300.

G. J. Troop has been elected president, and James Morrow and Michael Dwyer, first and second vice presidents respectively of the Halifax Board of Trade.

In Toronto City Council Ald. Carlyle has introduced a motion that a special committee consisting of the Mayor, Bell, Maloney and the mover be appointed re the establishing of smelting works.

The Canada Gazette contains notice of application of incorporation for the "Safety Barb Wire Company" of New Toronto, York county. One of the principal promoters is A. A. Beers, of Toronto.

There appears to be considerable dissatisfaction among importers in Winnipeg at the tardy manner in which entries are passed through the Custom house. There is said to be a good deal of friction between the Customs clerks.

A gang of counterfeit coin-makers are at work in the neighborhood of Lancaster, near Kingston, and have succeeded in floating a good deal of "stuff" around. They are making quarters and half dollar pieces, and it is said they have a dollar piece out.

D. R. Wilkie was unanimously elected President of the Toronto Board of Trade to succeed H. N. Baird. Hugh Blain, of Eby, Blain & Co., was also re-elected first vice-president without opposition. William Ince and John I. Davidson are among the nominees to the Council.

In the Quebec Legislature last week Mr. Auge moved a second reading of his bill respecting the early closing of shops, but just as the Speaker was putting the motion to the vote, Mr. Martineau rose and moved the six months' hoist, seconded by Mr. Kennedy. Mr. Martineau was about to speak to his motion, when Mr. Auge raised the objection already made that his bill was not printed in both languages. He therefore asked permission to withdraw it. Leave was granted and the bill withdrawn.

A large number of the business men of Wingham met A. C. Strathdee, agent of the G.T.R., at the council chamber there the other day, and presented him with a kindly worded address. Mayor Clegg occupied the chair, and the recipient made a neat reply. Mr. Strathdee has been removed to Brantford.

Looking around Sheffield one cannot help nowadays noticing the enormous quantity of plated handles—what are called in the trade solid-handled hard silver work—for steel blades. These "hard" handles have a very strong and durable appearance. They look neat, wear well, and seem to be taking the place of ivory to a considerable extent.—The Ironmonger.

For the past week or more Warden Massie and the other officers of the Central prison have been introducing to the prisoners of the cordage factory, a new industry within the walls of the prison. A large number of the prisoners have now been made acquainted with the workings of the different machines.

Congdon & Marshall's hardware store, Dunnville, Ont., was entered by burglars one night last week. About a dozen revolvers and some small goods were taken from the store and about $35 and some cheques on the Bank of Commerce, made payable to L. A. Congdon, secretary, and belonging to the Dunnville Natural Gas Company, were stolen, also a large bundle of receipts.

The directors of the Consumers Cordage company, who now own the whole stock, $3,000,000, are offering ten thousand shares ($1,000,000) to the public. The company practically controls the manufacture of its specialties in Canada, having all the leading factories under its management, and is free of mortgage indebtedness. The dividend to the present shareholders last year was at the rate of 8½ per cent., and the experience of the directors, they declare, warrants the belief that annual dividends of 7 per cent., if not more, may be counted on. Applications for shares will be received up to 15th February.

A man who went fishing with President-elect Cleveland and Joe Jefferson tells this story that illustrates a trait in Grover's character that some of us would do well to imitate at times: Joe Jefferson got restless before we had been out half an hour; he kept wanting to move around—was sure that it was "better fishing on the other side of the pond." It worried Cleveland a good deal, and by and by, said he: "Joe, when I was a small boy I went fishing with my Uncle Elihu, and I remember that he told me that one of the secrets of success in life was to stick to the place where you'd thrown your anchor out. 'Too many folks,' said Uncle Elihu, 'spend all their time pulling up anchors and rowing around; they don't catch the fish.' As for me," says Cleveland, "when I start in to fish, I set right there and fish, until either the pond runs dry or the horn blows for supper!'"

The Montreal Early Closing Association held a special meeting the other afternoon to put the last touch to the organization of the movement in favor of the bill for the early closing of all stores, presented by Mr. Auge at the last session of the Legislature. Mr. C. Fournier presided. He made a few brief remarks, in which he said that the movement in favor of early closing was opposed on the ground that it was an infringement of personal liberty. The liberty claimed by their opponents, however, was only the liberty to tyrannize over their employes. L. J. Dzois, A. Rouleau and O. Legendre were appointed a delegation to go to Quebec to urge the passage of the bill. Copies of resolutions adopted by several organizations have been printed and will be sent to all the members of the Legislature. The meeting was largely attended. Subscription lists to help the cause will be circulated.

The stove and tinsmithing business for many years conducted on Cork street, Guelph as part of the estate of the late Wm. Ker, has been acquired by W. B. Ker, who has taken into partnership his brother James B. The name of the firm henceforth will be Ker Bros. Both young men have had a large experience in the business. They are well and favorably known to the public and should certainly succeed in expanding the already large business connection which this house enjoys. The history of the business is briefly stated in the following facts:—In 1873 the late Wm. Ker opened business on Cork St., continuing until his death in 1879, when the late Mrs. Ker together with her son, W. B. Ker, continued the business until her death, which occurred in 1885. Since then W. B. Ker has been managing the business for the estate. This makes nineteen years they have been doing business on Cork St., which is a good record.

Established 1864.

CLARKSON & CROSS,
CHARTERED ACCOUNTANTS
NO. 26 WELLINGTON ST. EAST
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THE J. B. McLEAN PUB. CO. LTD.

. . . . TORONTO . . . .

MARKETS

TORONTO MARKETS.

TORONTO, Jan. 27, 1893.

HARDWARE.

Jobbers draw no roseate picture of current trade. It is scarcely worth boasting about, if reports give it its due. The sorting up demand which was fairly active for the fortnight that followed the holidays appears to have very nearly exhausted itself, for the orders on current account are sparingly dealt out and in the aggregate they do not run into big figures. Travellers are variously reported to be doing well, ill or indifferently on their samples for spring delivery. The retail trade are not all acting alike in the different parts of the country. The orders from some sections are free and ample for delivery in March or April; from other sections little intention of doing a spring business is yet signified. Travellers appear to be making better headway, however, than they did a year ago. Retailers retained control of their wants last year as long as they could, and refrained from stocking in advance of requirements that had not begun to outline themselves. The state of payments is not perceptibly on either side of the average.

METALS.

The demand is beginning to dilate, new holes and corners of consumption are being discovered by sellers, who lose no time in filling them up. The foundries are getting upon spring work, the machine shops are busy, a considerable motive to activity being imparted by calculations of demand from Manitoba and the North West, whose buying power—particularly for agricuitural implements is supposed to be consIderably enlarged by the proceeds of last harvest. Bar iron and cast steel are selling fairly well. Pig iron is getting started for the season, and some demand for both copper and tin is cropping up. Import orders for tin plate are also being placed. A return of excitement to the tin market in New York and London is about the only disturbance to note in the metal trade.

PIG IRON—A 100 ton lot of Carnbroe iron was placed this week at a price approximating $19 75. A considerable amount of business for spring delivery is expected to be booked about the first of February. Some late specifications for Summerlee are being figured on. Deliveries of United Statesiron on contracts are increasing, but new business is not heard of. The lowest grade of Southern foundry is $18.10 laid down here. There appears to be an increasing demand for New Glasgow pig, and founders are calling for more C. I. F. charcoal, as they find about 15 per cent. of it is an excellent toughener of furnace plates.

BAR IRON AND STEEL—Considerable irritation finds expression among both jobbers and manufacturers, about the advance the rolling mills people have made in bar iron. The protection accorded to the manufacturers of bar is felt to be taken undue advantage of, and is unpopular with many interested people that before approved it. The price is steady at $2.05, and there is a fair business done. Cast steel at about 10 to 12c. is in large demand, particularly by the tool and implement men. The engine and boiler manufacturers are calling for a considerable quantity of plate these days.

ANTIMONY—This metal is quiet. The price remains 13¼c. for Cookson's and 12¾c. for other brands.

CANADA PLATES—The demand is almost completely off, just now. Prices range from $2.65 to $2.90.

COPPER—This metal has behaved steadily for some time past. The turn it took towards the end of the old year was expected in some quarters to be followed up after the holiday dulness should pass away, but the movement appears to have spent itself. The price is 14 to 14¼c.

GALVANIZED IRON—None of the industries that call for this metal as raw material are very busy just now. It is quiet at 5¼c. upwards.

INGOT TIN—Throughout last week the outside market was very buoyant. Speculation on the strength of the chances that after all the duty would be imposed in the United States revived and caused excitement both in London and New York. The price has slid back this week, but not to the full extent of the preceding upward movement. The local jobbing price is 22¼ to 22½c.

LEAD—This metal is still lifeless. Ordinary lots are bought at 3¼c.

TIN PLATES—The large consumers are now placing their import orders. Importers say they find the mills busy, and that they have had in some cases to take substituted brands for those specified in their orders. The most popular brands are said to be oversold so far ahead as April. Cokes are $3.75. IC charcoals are $4 25, with $1 added for each cross.

ZINC AND SPELTER—Sheet zinc is 6¼c. in casks and 6½c. in broken lots. It is quiet. Zinc spelter is steady at 5c.

OLD MATERIAL.

Prices are unchanged and business is dull We quote the following : No. 1 heavy cast scrap 65 to 70c. per 100 ; stove cast scrap 40 to 45c. ; No. 1 wrought scrap 60 to 65c. ; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c. ; new light scrap copper, 8 1-2c. ; heavy scrap copper 9½c. ; old copper bottoms, 8c; light scrap brass 5½c. ; heavy yellow scrap brass 7½c. ; heavy red scrap brass 8¼ to 8½c. ; scrap lead 2c. ; scrap zinc, 2½ to 2¾c. ; scrap rubber, 2¼ to 2½c. ; country mixed rags, 80 to 85c. per 100 lbs ; clean dry bones, 50 to 60c. per 100 lbs. ; plough shares, 60 to 65c ; burnt cast scrap, 15 to 20c. ; railroad iron, 65 to 75c. ; malleable scrap, 25c.

PAINTS, OILS AND COLORS.

Manufacturers' orders for paints now supply a respectable volume of power to the paint market. The one event of importance this week is the arrangement among white lead grinders to quote a common price of 5¼c. until the end of this week. They met on Tuesday and Wednesday in Montreal, but were unable to conclude any more radical or permanent agreement. It is expected, however, the understanding may be renewed. Linseed oil in 1 to 3 barrel lots 57½c. freight allowed to delivery station; 4 to 9 barrel lots, 56½c. delivered; 15 barrel lots and over, 51½c. at point of shipment. Three cents added to these prices gives the quotation for boiled in the respective lots. Turpentine is 53c. in 1 to 3 barrel lots and 63c. in broken packages.

PETROLEUM.

In the oil market prices remain unchanged and business quiet. Canadian refined quotes at 14 to 14½c., and other grades at the figures given in our Prices Current.

The Petrolia Advertiser reports : Petrolia crude $1.18 per barrel ; Oil Springs crude $1.19 per barrel. A very firm feeling prevails all along the line. Crude continues at $1 18 with very little business doing. The weather has been so cold the past few weeks that it keeps producers busy keeping their wells going, the blizzard having hidden most of them from view. Refined is moving out rather freely, with quotations the same as last week, 10½ to 11c., car lots. As soon as the weather moderates some of the more prominent drillers will have their hands full, as in interviews with several the past week



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Milk Cans, Creamery Cans and Delivery Cans made up.
All sizes body stock for Cans and Cheese Vats.

If you have not used our Trimmings a sample order will make you our customer.

THE McCLARY MF'G. CO.,

LONDON, TORONTO, MONTREAL, WINNIPEG

MARKETS—Continued

we find them with contracts ahead for close on two hundred wells, with our Oil Springs friends busy right along as well.

HIDES, SKINS, WOOL, TALLOW.

WOOL—Fleeces are steady at 18 to 19c. Pulled wools are worth 22 to 23c. for super, 26 to 27c. for extra.

SKINS—Sheepskins are scarce at $1 to $1.15. Calfskins are unchanged at 5 to 7c.

HIDES—No. 1 green cows' are 4½c. Cured are 5¼c.

TALLOW—Is quiet at 5½c. for rendered and 2c. for rough.

AMERICAN MARKETS.

New York, Jan. 27.

Pig iron.—The local market is without decided change. Sales agents are securing small orders that make a fair showing all told, but it is the exception that foundrymen who buy here anticipate their future wants with any liberality, and business is therefore tamer than usual at this season of the year. Deliveries have been somewhat freer the past few days, probably because of improvement in river and harbor navigation, but trouble in getting supplies forward to some points is still experienced, and foundries thus unfavorably located are employed in part only. The offering of both northern and southern brands is just about the same in general character as it has been for several weeks, with enough anxiety on the part of some sellers to keep prices rather soft, but not enough pressure to prompt greater concessions than were made a week ago. The range of quotations is as follows: Northern brands—$14.75 to $15 for No. 1 X Foundry, $13.75 to $14 for No. 2 X foundry, $13.25 to $13.50 for grey forge. Southern brands— $14.50 to $15 for No. 1, $13.50 to $14 for No. 2foundry and No. 1 soft, $13 to $13.50 for No. 2 soft, $12.50 to $13.00 for grey forge, all at tidewater.

Scotch pig iron is selling in small lots only, and the demand continues narrow. Prices are fairly steady and quoted about as follows: $21.50 to $22 for Coltness, $21 to 21.50 for Summerlee, $20 to $20.50 for Carnbroe, and $19.50 to $20 for Eglinton.

In the absence of improvement in the condition of the steel trade business in foreign spiegelleisen and ferro-manganese continues slow. Offerings here are not particularly heavy, but sufficient to keep prices rather weak. At the moment $26 for 20 per cent. spiegel and $59 for 80 per cent. ferro appears to be top rates.

Old Material.—Moderate sales of No. 1 wrought scrap iron have been made at $16 to $16.25 f.o.b. Jersey City, and those prices represent full value at the moment. Iron tee rails are quoted at $17 to $17.50 f.o.b. Jersey City, but move very slowly. Small lots of old steel rails may be secured at $14 there, but that price has been bid for large lots for delivery during the spring months. Whole car wheels are quoted at about $13.50, but broken wheels would bring a ltitle advance on that price.

Manufactured Steel and Iron.—Few and only unimportant orders for steel tee rails have been placed latterly, and buyers appear very backward about paying the "combine" prices for standard sections, in view of the comparatively high prices of the same, and evidence of anxiety for business on the part of some sales agents. The general quotation on heavy sections is $29 f.o.b., but net cost to buyers is somewhat less where good sized lots may be involved. Light section and girder rails have been selling very fairly at comparatively good prices. In the line of track supplies, spikes, plates, etc., business continues slow, and prices are still rather weak.

Billets, rods, and other soft steel find very fair sale, and some quite good orders have been placed latterly for structural material. Competition in the several lines continues keen, however, and prices are still weak, with the level as low as it has been at any time this year.

Copper.—The demand is without visible improvement. There are orders in the market for Lake Superior ingot at 12c. involving a considerable amount of stock,but small parcels offered at 12.10c. net cash go a begging, and that fact gives the market a weak appearance, although most producers stand out for 12 1-4c. Casting brands are quite as easy at 11 1-2c., and find limited sale. London cables indicate a rather soft market there for merchant bars, the latest wires quoting £45 12s. 6d. for prompt and £46 5s. for future delivery.

Pig Tin.—In the absence of encouraging advices from London or improvement in the local demand, prices dropped a fraction, and the market presented a dull, flat appearance. The idea seems to be more general that the McKinley duty will go into effect at the prescribed date, and that present stocks are very well under control. Still prices move about here in harmony with London fluctuations, and there is no evidence of distinct local support or implicit confidence in the future among operators here. For that matter, fears of London manipulation carry the most weight.

Lead.—There are still buyers of domestic pig at 3.85c. and sellers at 3.09c., but neither interest manifests anxiety, and business therefore continues slow. Probably 150 tons have been sold here thus far this week.

Spelter.—Western brands are offered in carload and larger lots at 4.35c. January, February and March shipment. The price appears too common to be attractive, however, and only routine sales of moderate volume are making.

Tin Plate.—Spot business has been very fair the past few days and chiefly at old prices, but contracts for future delivery are hardly up to the average. Sellers prices show no radical change, but lean slightly in buyers' favor.

OUR LONDON LETTER.

London, January 14.

The outline given in my last letter respecting the depression in our metal and manufacturing industries generally, has, I am sorry to say, received additional confirmation now that the reports from firms who have taken stock are received. In Birmingham, this annual operation has just been completed, but the results are eminently unsatisfactory. Stocks that ought, in the usual way, to have been cleared off, are still on hand. Business has been scarce and prices have been cut so fine among metal dealers and hardware men, in consequence of the severe competition, that heavy losses have often resulted. Nor have the cycle makers been exempt from disaster. This trade is overstocked like everything else and several failured have occurred during the past twelve months. The iron and steel wire trades are suffering from the effects of German competition. Just to give an instance of the cut-throat competition going on, I will state a case that recently came to my notice from



Sheffield. The Egyptian Government has been asking for tenders for files, and it is found that the Germans went one lower than the Americans. The latter quoted 70 per cent. discount, but the Germans are said to have contracted to deliver the files at Alexandria at very near 80 per cent. off the Sheffield price. And yet amid all this competition, the men's trade unions are always trying to force the hands of employers, and, by raising wages, put themselves more completely out of competition. When continental employers consent to raise wages and reduce hours of work, the English manufacturer will gladly do so too.

BAD TIMES ALL ROUND.

In English trade 1892 was a year of liquidations, of disallusions in finance, of declining trade, diminished savings, and falling wages. The returns of the London Bankers' Clearing House show a decrease of over 5 per cent. when compared with those for 1891, which in their turn showed a decrease of 12 per cent. when compared with those for 1890—a year of inflation. Contemporaneously with the decline of trade, there has been a general fall in prices. What could be sold for $500 twelve months ago only fetches $465 or thereabouts. Wheat has fallen 30 per cent during the year, barley and oats 20 per cent. The fearful depression in agricultural circles tells heavily against implement makers and hardware men. I have not been able to obtain reliable data showing the total number of farms to let and acreage out of cultivation this year, but the area must certainly have increased since 1890 by 30 per cent.

THE CLEVELAND IRON TRADE.

The annual return showing the production and consumption of pig iron this year has just been issued by the Cleveland Ironmasters' Association. On Dec. 31 makers had stocks on hand and under warrant to the extent of 114,339 tons. Four months ago stocks were only 46,000 tons. The production was over 239,000 tons, 6,000 tons more than in November, 123,000 tons being hematite, and 116,000 tons Cleveland iron from 91 furnaces in blast. The stock at the end of 1891 was 263,000 tons. The production of pig iron for the year was 1,937,469 tons. This is 685,000 tons less than in the previous year, due to the Durham colliers' strike, shipments of pig iron and manufactured iron and steel for the year were 920,000 tons, against 1,271,000 tons in 1891.

THE YEAR'S TRADE IN THE UNITED KINGDOM.

The following are the figures for last year's import and export trade, together with those for the two preceding years:

Imports: 1890, £420,886,000; 1891, £435,691,000; 1892, £423,892,000.

Exports, British and Irish, 1890, £263,530,000; 1891, £247,235,000; 1892, £227,060,000.

Exports, Foreign and Colonial, 1890, £64,349,000; 1891, £61,797,000; 1892, £64,400,000.

The great drop in the value of imports is mainly due to the heavy decrease in

receipts of raw cotton from the United States and wool from Australia. We get abundance of food and receive the surplus grown abroad at little more than the cost of handling and transport. The decline in exports is due not so much to a falling off in the volume of trade as in the value of goods sent. Low prices is the great problem which the English manufacturer has to solve in the future.

THE COURSE OF TRADE WITH CANADA.

It may be useful if I briefly recapitulate the value and volume of exports from England to British North America in 1890, 1891, and 1892.

Hardware and Cutlery, 1890, £94,725; 1891, £97,286; 1892, £95,634.

Pig iron, 1890, 40,435 tons; 1891, 32,917 tons; 1892, 29,988 tons. 1890, £109,970; 1891, £91,584; 1892, £79,024.

Bar, angle, etc., 1890, 8,814 tons; 1891, 5,298 tons; 1892, 4,992 tons. 1890, £68,957; 1891, £41,674; 1892, £37,255.

Railroad iron, 1890, 108,985 tons; 1891, 86,139 tons; 1892, 89,176 tons. 1890, £588,842; 1891, £426,406; 1892, £373,550.

Iron, hoops, sheets, and boiler plates, 1890, 11,413 tons; 1891, 12,854 tons; 1892, 10,434 tons. 1890, £93,728; 1891, £101,398; 1892, £83,469.

Galvanized sheets, 1890, 4,052 tons; 1891, 3,075 tons; 1892, 3,637 tons. 1890, £74,062; 1891, £66,383; 1892, £60,367.

Tin plates, 1890, 16,133 tons; 1891, 19,935 tons; 1892, 14,864 tons. 1890, £245,881; 1891, £309,766; 1892, £225,-789.

Cast and wrought iron and manufactures, 1890, 8,655 tons; 1891, 9,455 tons;; 1892, 9,317 tons. 1890, £113,,-368; 1891, £112,849; 1892, £102,742.

Steel, unwrought, 1890, 13,941 tons; 1891, 16,622 tons; 1892, 15,540 tons. 1890, £139,753; 1891, £150,829; 1892, £135,110.

Lead, pig, sheet, etc., 1890, 4,154 tons; 1891, 3,528 tons; 1892, 2,628 tons. 1890, £55,584; 1891, £46,739; 1892, £30,730.

Tin, unwrought, 1890, 6,264 tons; 1891, 7,225 tons; 1892, 8,352 tons. 1890, £30,975; 1891, £34,194; 1892, £39,804.

Steam Engines, 1890, £10,682; 1891, £21,518; 1892, £11,750.

General machinery, 1890, £89,769; 1891, £84,096; 1892, £127,309.

The total value and volume of our exports of iron and steel to all parts have been as under:

Volume, 1890, 4,001,430 tons; 1891, 3,240,146 tons; 1892, 2,740,217 tons.

Value, 1890, £31,565,337; 1891, £26,-87,000; 1892, £21,763,190.

THE EFFECT OF THE McKINLEY TARIFF ON BRITISH TRADE.

A good deal has been said respecting the effect of the McKinley tarriff on English trade. Taking the year 1889—before the customs duties went into force—and comparing it with 1892, we find the following results:

Hardware, 1889, £400,000; 1892, £255,000.

Pig iron, 1889, 117,000 tons; 1892, 44,000 tons.

Bar iron, etc., 1889, 5,000 tons; 1892, 3,000 tons.

Railroad iron, 1889, 19,000 tons; 1892, nil.

Iron wire, hoops, etc., 1889, 35,000 tons; 1892, 19,000 tons.

Tin plates, 1889, 337,000 tons; 1892, 278,000 tons.

Iron, cast, etc., 1889, 29,000 tons; 1892, 20,000 tons.

Steel, 1889, 35,000 tons; 1892, 21,000 tons.

Lead and tin, 1889, 5,000 cwt., 1892, 4,000 cwt.

Machinery and engines, 1889, £890,000; 1892, £1,052,000.

As regards the total value of exports to the United States, the facts are as follows:

1889, £22,713,000; 1890, £23,282,000; 1891, £20,564,000; 1892, £19,715,000.

So that the decline since 1889 has been about three million pounds, or say 13 1-2 per cent.

PRICES IN 1892.

As the question of low prices has played such a large part in trade affairs during 1892, the following will enable HARDWARE readers to better understand this side of the matter:

Prices per ton:

Steam coal f.o.b. Cardiff, Jan, 1889, 9s.; Jan. 1891, 15s.; Jan. 1892, 13s.; Jan. 1893, 10s.

W. Hartley coal f.o.b. Newcastle, Jan. 1889, 8s.; Jan. 1891, 12s.; Jan. 1892, 10s. Jan. 1893, 8s 9d.

Pig iron at Glasgow, No. 3, Jan. 1889, £2 3s.; Jan. 1891, £2 6s. 8d.; Jan. 1892, £2 7s.; Jan. 1893, £2 2s.

Pig iron at Middlesboro', No. 3, Jan. 1889, £1 13s. 6d.; Jan. 1891, £2 2s. 6d.; Jan. 1892, £1 18s. 6d.; Jan. 1893, £1 17s.

Iron ship plates at Middlesboro', Jan. 1889, £4 15s; Jan. 1891, £6; Jan. 1892, £5 10s. 6d.; Jan. 1893, £4 17s. 6d.

Iron bridge plates, Jan. 1889, £6; Jan. 1891, £7; Jan. 1892, £6 5s. 3d.; Jan. 1893, £5 2s. 6d.

Steel bridge and ship plates, Jan. 1889, £7; Jan. 1891, £7 10s.; Jan. 1892, £6 10s.; Jan. 1893, £5 15s.

Steel rails, f.o.b., Jan. 1889, £4 3s.; Jan. 1891, £5; Jan. 1892, £4 2s. 6d.; Jan. 1893, £4.

ANOTHER MANUFACTURER'S GRIEVANCE.

I say "another grievance" because our manufacturers, like the farmers, always have a waggon load of them; but the grievance referred to is a very reasonable and tangible one. The case stands thus: Some three years ago the Government appointed the Board of Trade to investigate into the question of the justness of railway rates. The whole subject of railway transport, so far as regards cost, was gone into then, the manufacturers contending that the rates bore too heavily on them, preventing them from successfully competing with foreign importers. After some hundreds of meetings of all concerned, the railway companies have drawn up their revised scale of rates, but in many cases instead of being lower, they are higher. The makers of iron-plate goods, tanks, cisterns, and general hollow-ware, assert that the new rates will put an end to their trade beyond a limited radius. A rise in the price of coal is also likely, and in South Staffordshire an increase of 24 cents a ton is already announced. If the new rates continue in force the large manufacturers principally affected will send most of their goods by small coasting craft so far as is possible. Continental manufacturers are at a great advantage over English makers in this matter. Abroad the rates rule very much lower, say from 30 to 30 per cent. less than here, and yet give better returns. There are many advocates here for adopting the American logie truck for saving space, and reducing wear and tear and expense of working to the railway companies. Our railway system, and particularly our goods traffic, has undergone but little alteration in principle for fifty years, when railways were started, although the goods traffic has increased by leaps and bounds. It is clear that the railway companies will have to meet the traders, and if rates can only be reduced to reasonable dimensions by adopting the American logie truck, then the sooner the companies do this the better for their own dividends. It would be a costly undertaking, but better now than ten years hence.

CHOOSING A COST MARK.

Ever since the storekeepers bought at wholesale and sold at retail, it has been a time-honored custom, to make the cost and selling price upon articles for sale. That these marks, or at least the cost mark, might be clear and enlightening to the merchant and his employees, while baffling and untranslatable to the rest of the world, considerable ingenuity is sometimes employed, but the average man is content to take some easily remeberable word having ten letters to represent the ten Arabic numerals.

The choice of a cost mark is an easy matter. The most common thing is the first ten letters of the alphabet. Next to that the last ten. But these are quickly guessed. Better than these are words (one or more) which have ten letters. All that is necessary is to be careful to choose a word in which there is no duplicate letters. For instance:

1 2 3 4 5 6 7 8 9 0
B R I S K T R A D E

will not do, because 2 and 7 are represented by the letter R. Substitute Quick for Brisk, and the cost mark will be all right.

1892 was presidential year, and a political cost mark was appropriate. Here is

1 2 3 4 5 6 7 8 9 c
R E P U B L I C A N

That's a good one, easily remembered, and all right if capitals are used to express the cost. If small, or, as printers say, "lower case," letters are written, there may be some confusion, unless care is taken to make a distinction between the "e" and "l" and between the "u" and "n."

If your predilections are for the opposite party you might use

1 2 3 4 5 6 7 8 9 0
D E M O C R A T I K

You will notice that this is spelled with a "K." That saves the word, for a repetition of the letter "C" would destroy its usefulness for this purpose.

If you are leaning toward the Prohibition party this might suit you:

1 2 3 4 5 6 7 8 9 0
B A D W H I S K E Y

Here are a few words or phrases which are used for this purpose. A merchant must be very particular if he cannot be suited in such a list. You might get a Snug Profit or a Cash Profit. If you keep a Gainful Job, you must stick to the Big Factory. If you are a Big Scholar you should be an Elucidator of what is Profitable. Keep in mind the Importance of attending to your own business. Keep away from the law. Don't be So Friendly with the disciples of Blackstone as to get upon the wrong side of the Prison Gate.

Don't Be Lazy. Bear in mind the Importance of Industry. My Wife Joan, who formerly lived in Charleston, but whom I married in Cumberland, says: "Now Be Sharp. Don't neglect your store unless You Are Sick. Don't let your Fish Tackle draw you away from your business. If you do, you will find that your Corn Basket will be empty, that

GUNS | CHAS. STARK CO.

We beg to advise the trade that we are more in it than ever this year, and will give pecial attention to all trade orders.

Write for catalogue and prices.

S. S. SMOKELESS POWDER
NOW TAKING THE LEAD.

Chas. Stark Co. 56, 58 & 60 Church St., Toronto

you cannot even afford Brown Sugar in your coffee, and that Cigar Smoke will be an unattainable luxury."

A shoe dealer can easily remember Kip Brogans or Tan Blucher. A horseshoer can readily recall Blacksmith, and he frequently shoes a Black Horse. If he is a negro he would be a Black Shoer. A poker player is familiar with a Big Jack Pot, but he cannot use a Faro Bank without changing one letter and adding one. Wall street operators may remember Blue Friday, and Bucketshop proprietors likewise.

The question, Can You Swim from Perth Amboy to Leavenworth? contains three cost marks. The Christian Endeavorer may make use of the phrase He Is My Rock.

When it comes to proper names, one can readily be found which will answer the requirements. One of the largest dry goods stores in the Union uses the name James Worin.

More than one firm uses the name Jane Bishop or Bishop Jane. The writer knows a David Wilson who uses Wilson Dave, and also another whose name, John Bagley, is his cost mark.

Better than any of these, however, is a lot of letters which will not spell anything. Such a cost mark is a little more difficult to memorize, but once learned it is better, as it lessens the chances of guessing or making it out. I have heard of Wig Buf Kymp being used for this purpose.

Another way is as follows: If an article cost $3.50 the cost is made by adding one to each of the numerals, and placing 1 each side of it, thus:

3 5 0
1 4 6 1 1

This is quickly legible to the initiated, but baffling to the guesser.

A very good plan is to draw two upright lines, with two across them, thus making spaces for the nine numerals, thus:

2	4	6
8	9	1
3	5	7

The figures can be arranged to suit. The symbol that surrounds the figure is used to represent that figure. For instance, a figure like U with square shoulders would represent 4, and one like L would mean 6, the square would stand for 9. Either an O or an X could be used for the cipher.

This scheme may be modified by turning the figures cornerways, in which case the hieroglyphics would resemble V or A or portions of a diamond. Such a list should satisfy the demand of any reasonable person in need of a cost mark. There are thousands of others, but enough have been given to show what can be used. If there are none there which suit the reader, he is invited to hunt one up, or make one to suit himself.—Ex.

TURNING OVER NEW LEAVES.

The end of one year and the commencement of another is a time when it is very usual to indulge in mental retrospects of a more or less interesting nature, and to form sundry resolutions for amendments and improvements in the future. The incoming of a new year is commonly supposed to add force to these good resolves, and it is an ordinary thing for much "turning over of new leaves" to be promised as from the first day of any and every January. Of themselves these promises of reformation are good, but it is not a little unfortunate that many of them never reach the stage of fruition. This is more especially the case, probably with personal changes, such as diminished smoking or drinking, but it is to be feared that many other changes are either postponed indefinitely or gone into so half-heartedly as to be virtually ineffective. It is a matter of common experience that this is the case. It is human to err, we all know, and it is very human, apparently, for new years' good resolutions to come to nothing. Yet, after all, the beginning of another twelve months is a very appropriate time for inaugurating changes and making improvements. The end of the old year means the closing of one period, and the advent of the new year means the commencement of another. Surely, therefore, it is a proper time to set one's house or one's business in order, and, if they are in order, to see whether they cannot be made still better! Few men, probably, can look around and say with truth that they and their businesses are all that they should be. There is no perfection anywhere or in anything. Some men and some things are better than some others, but the superiority of the best is only comparative, and in all things there is some room for improvement or some alteration which will give good results. The ironmonger who will quietly study his business and his business methods is almost certain to conclude that in something or other he might get better results, save time or labor, or have a more thorough oversight of all his transactions. The manufacturer will almost certainly see that some economy might be effected in production, something saved in assembling or in transit, and something gained by greater concentration or by the stricter division of departments. There may be some who are thoroughly satisfied with themselves and everything about them. If they are prosperous, and have found their plans give good results, they have some reason for feeling satisfied; but in a general way self-satisfaction is a very dangerous frame of mind, and should never be indulged in save with the strongest of convictions—and a very substantial balance at the banker's! It will be observed, possibly, that we ourselves have not failed to practise that which we are now preaching to others. A glance at the contents of this issue will show that we have deemed The Ironmonger—well done as it has long been admitted to be—capable of some alterations and improvements. These changes do not seriously affect the general contents of the paper, which the best of evidence has shown are highly and universally appreciated; but the new features will serve, we think, to add to the attractiveness of the journal, and thereby augment its utility to an ever-increasing circle of readers. As heretofore, the contents of The Ironmonger will be sober, useful and practical, and the contributions which appear in its pages will be from the same practical pens as previously, reinforced by some of that "new blood" which is so essential to the maintenance of a large and comprehensive "circulation." When Thackeray idealized The Pall Mall Gazette of the then distant future, he wrote of it as being a paper "written by gentlemen for gentlemen." In the case of the Ironmonger it may be truthfully stated that much of it every week is "written by ironmongers for ironmongers," and the rest of it by men who are practically acquainted with the subjects on which they write. Many of the leading metallurgists of the day continue among our contributors, and there is scarcely any branch of metallurgy in which we are not able to count upon the services of experts. It is an advantage to all branches of the iron, steel, hardware and metal trades that this should be the case, and we mention the fact, not as boasting, but simply to show that, admirable as The Ironmonger has been in the past (for that must be taken to be the evidence of our always growing list of subscribers), we are not so supremely self-satisfied as to imagine that we cannot make some changes for the better. We hope to preserve this open-minded attitude, and to show as occasion may serve that we are able to keep pace with the demands made upon us by an extraordinarily varied circle of supporters. There is no other trade or calling, so far as we are aware, which embraces so much or so many kinds of goods as the ironmongery trade. Ironmongers sell almost everything "from a 40-ton gun to a packet of pins," and if no one ironmonger stocks everything, the whole category is to be found within the range of the trade. It is this huge diversity which makes the ironmongery trade so much more interesting than other trades, but it also renders it the more difficult for the whole to be covered. Yet difficulties exist only to be conquered, and it is something on which we venture to pride ourselves that we cover the whole of the metallurgical industries completely and well, and that if any demand arises for our services in any direction, within the proper limits of the trade, we do our best to meet the wishes of our friends. That is the policy we propose to pursue in the future, as we have done in the past. We plume ourselves upon giving good value for money received, and we do not propose to belie our reputation on any occasion or in any direction.—The Ironmonger.

H. N. Baird, the retiring President of Toronto Board of Trade, entertained the members of the Board of Trade Council and a few other friends at a banquet in the council room of the Board of Trade building on Tuesday evening.

SOMETHING TO BE PROUD OF.

Personal vanity is not a good thing, but there is a personal pride that is ; a pride in having a high name for honorable dealings, a pride that's one word is implicitly relied upon ; this sort of pride is to be cultivated. Every merchant and every manufacturer ought to be proud of their business, and they each ought to try to have a business that they can be proud of because it is one of the keenest incentives to continued improvement.

In speaking of his spring line a manager in this city said recently : "I have done all that I could to give the boys a line to be proud of," and by so doing recognized the fact that a strong feeling that your business, whatever its kind may be, will succeed better if it excels.

How many country merchants strive to have a store that they can be proud of? There are many who do, and on the other hand there are many who recognize that their store is not what it should be, and put the suggestion by with the thought that it answers its purpose and is good enough for their trade.

This is a mistake. A store is not good enough for its purpose unless the proprietor fully believes that he has an establishment that is just as clean, neat, well arranged and generally modern as he can possibly accomplish. The idea of selling goods over a board laid across a couple of barrels is thoroughly exploded. People don't admire cheapness in a store. They like to make their purchases among comfortable and pleasant surroundings. It is not enough that the goods are all right in quality. They will not look right when the surroundings are wrong.—Ex.

THE QUESTION OF GOOD ROADS.

The subject of country roads, to which an article is devoted in a contemporary, is a matter of the utmost importance to country merchants. In some districts, where the settlements are comparatively old, and where the natural advantages force prosperity on the inhabitants, it is a strange fact that the public highways are little better than the trails formed and used by the aborigines. At certain seasons of the year business is practically suspended in such districts. Each year will witness a recurrence of such as long as the merchant and the farmer, who are in a particular manner interested, maintain a position of indifference or comparative inaction.

When comparisons are drawn between the country roads of the United States and those of some country in the Old World, it is usual to advance the recent settlement of this country as an excuse for the non-existence of good highways. Such an excuse is allowable in remote districts where settlement is recent and population scant, but in the case of districts where the settlement is comparatively old, where the population is numerous and prosperous and where cities, towns and villages grow up and thrive, such an excuse cannot be made. Take the case of the poorest agricultural county in England or its neighbor, Ireland, where, owing to the excellence of the methods of making and repairing, the roads will bear a flattering comparison with those of a richer and more prosperous district of like size in the West. In England, Ireland and Scotland, a conscientious county government jealously looks after the interests of the rural population in the matter of providing and repairing roads. Ways of communication are ample, and travelling on firm, clean and well-shaded roads is a pleasure. Here, except in the immediate neighborhood of the larger towns and cities, travelling is a torture, and sometimes full of danger. A complete development of the West cannot be had until the present system of roadmaking is improved. It is a consummation devoutly to be wished by merchants throughout the country. Good and plentiful means of inter-communication are a simple necessity towards a further prosperity.—Ex.

THE GRIP SACK MAN.

I do not believe there is any class of men whose life and position is more misjudged and so little understood as that of the traveling salesman. To the hard worker at home there is an incentive, a support, a help from home and friends that the traveling man has not. His work compels him to stand independent and alone. Regardless of everything he must appear jolly and content, interested in everything from the buying of a ticket for a patchwork quilt to the probable success or failure of the Columbian exposition. He must be a small unbounded edition of Moses and Solomon both. He must compass his spirit with meekness and strangle a natural oath. He must leave all his wrongs to the future and carry his heart in his cheek. He must do an hour's work in a minute and do ten days' work in a week. He must courteously talk to an equal and brow-beat an impudent dunce. He must keeps things in apple-pie order and do half a dozen at once. He must press all the springs of knowledge with quick and reliable touch. He must be sure that he knows how much to know, and know how to not know to much. He must know how to spur up his virtue and put a check on his pride. He must carry a gentleman's manners within a rhinoceros hide. I do not wish to carry the idea that there are no pleasures connected with the hard work. He meets many strangers that become warm friends. He carries in the little inland towns a touch of the outside world that makes his coming welcome and a pleasure to all. True he is oft times called a bore and there have been reports of his ability to talk a man's arm off, while some have been unjust enough to suspect his being guilty of flirting with pretty girls. Regardless his faults, he has become a necessity. Give him credit for much disagreeable hard work, ann give him a hearty hand shake that means success go with you, remembering that the knights of the grip would be sadly missed.—Ex.

SOME PROPERTIES OF ALUMINUM.

According to a recent article by Mr. Hunt, of the Pittsburg Reduction Company, under ordinary circumstances pure aluminum withstands the action of wind and weather exceedingly well ; but the presence of silicon greatly reduces its resistance to atmospheric influences. Metal with 4 or 5 per cent. of silicon very soon collects a thick coating of oxide upon it, if severely exposed. Aluminum can be rolled or hammered cold, but the metal is most malleable at, and should be heated to, between 350 to 400 degrees Fahrenheit for rolling or breaking down from the ingot to the best advantage. Like silver and gold, aluminum has to be frequently annealed, as it hardens up remarkably upon working. Due to this phenomenon of hardening during rolling, forging, stamping or drawing, the metal may be turned out very rigid in finished shape, so that it will answer excellently well for purposes where the annealed metal would be entirely too soft or too weak, or lacking in rigidity, to answer. Especially is this true of aluminum alloyed with a small percentage of titanium, copper or silicon. It can be safely stated, as a general rule, that, under similar conditions, the purer the aluminum the softer and less rigid it is. Aluminum can be annealed by heating and allowing it to cool gradually; the best temperature is just below the red heat. Thin sections can be annealed by heating in boiling water. Aluminum can be easily and readily welded by electrical apparatus, and a cheap and satisfactory solder has been discovered. Sound castings of this metal can be made in dry sand moulds or metal chills. It requires, however, some experience to master its peculiarities before sound castings can be uniformly made. The aluminum should not be heated very much beyond the melting point; if too hot it seems to absorb gases which remain in the metal, preventing sound castings.

SITUATIONS VACANT.

WANTED—HARDWARE TRAVELLERS with good connections in Lower Provinces and in Ontario. None but first-class men need apply. H. S., GAZETTE Office, Montreal.

BUSINESS CHANCES.

Advertisements inserted under this heading one cent per word each insertion.

FOR SALE—STOCK OF GENERAL HARDware, paints, oils, stoves, &c. Business established 25 years. Value about $3,500. Address, Estate J. Cameron, Beaverton tf.

BUSINESS WANTED.

HARDWARE BUSINESS WANTED—IN thriving village. Stock from $2,500 to $3,000. Must have satisfactory reasons for selling. State full particulars. E. W. Highet, Cobourg. 5

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Caskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

WESTERN BRANCH :

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

The Best in the Market.

BALDWIN'S



THICK FELT. GREASE-PROOF. OVERSHOT.

GUN WADDING,

For SPORTING and other CARTRIDGES. Best Hair, and Brown Felt of uniform thickness ; also Best Cloth, Field, Grey Felt, Black Grease-proof and Card Wads. Overshot Wads, printed name and number. Indented Wadding, suitable for muzzle loading guns.

To be had of all Jobbers and Dealers in Sporting Goods.

JAMES BALDWIN & SONS,

ORIGINAL MANUFACTURERS,

Morville Street, Birmingham, Eng.

Agent:--W. H. JAGGER,

24 Front Street West, TORONTO.

Price Lists and Samples to the Trade Only.

We are now in position to enter into contracts, or book orders for Spring shipments for following goods :——

Spades and Shovels
Harvest Tools of All Kinds
Green Wire Cloth
Window and Door Screens

ANY ENQUIRIES FOR PRICES AND TERMS WILL RECEIVE PROMPT ATTENTION.

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, Toronto.

ENGLISH HOUSE: SAMUEL, SONS & BENJAMIN,
164 Fenchurch St., London, E.C.

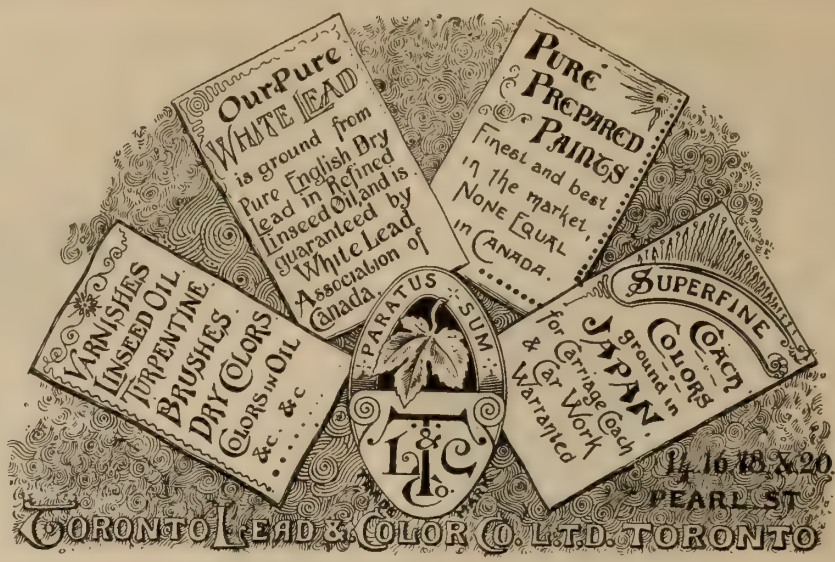
Our - - Paints

Are acknowledged as the

CANADIAN STANDARD

Our prices are Low - - and shipments prompt.

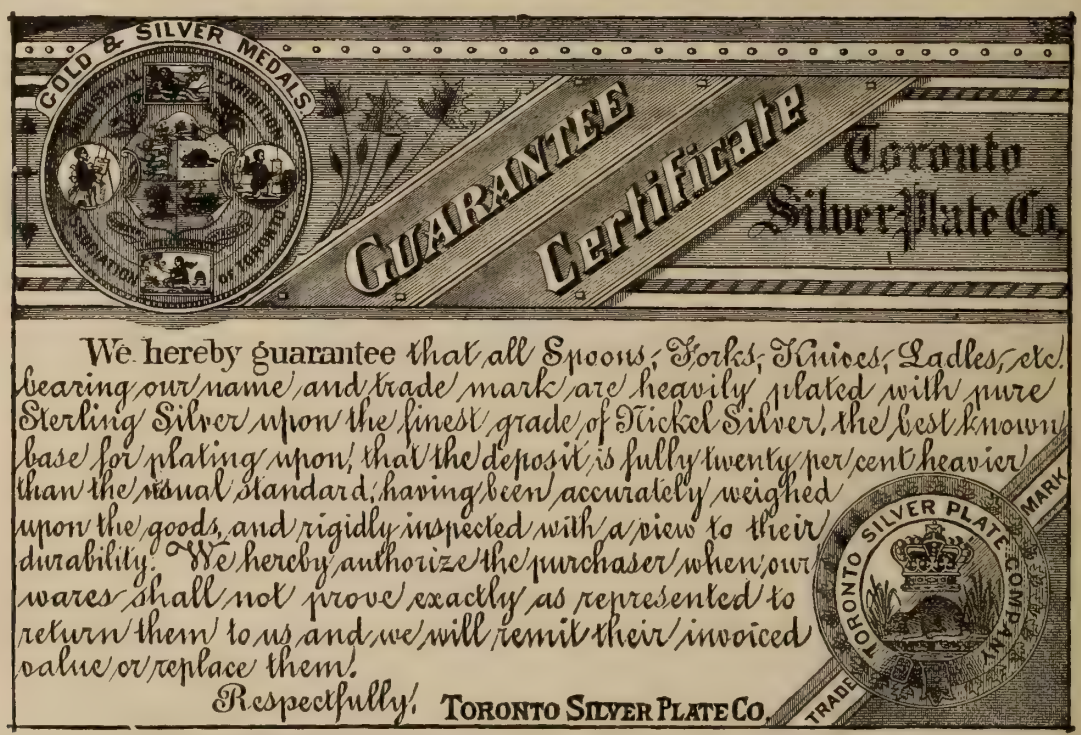
Every Package Guaranteed



Toronto, Jan. 27, 93.

- - Our travellers are on the road ready for the frap, give them a chance to show their mettle. . . .

We will back them up



E. G. GOODERHAM, Manager. JNO. C. COPP, Sec.-Treas.

A NEW DEPARTURE IN GOOD, CHEAP, REVOLVERS!



S & W MODEL

In both Styles: Hammerless and with Hammer

..SAFETY..

In the handle, accidental discharge impossible

Low Prices to the Trade

Retailed with a Handsome Profit

Send for Illustrated List of Guns, Rifles and Revolvers

PAINCHAUD, SQUIRE & CO., MANUFACTURERS' AGENTS MONTREAL

POSTERS, CIRCULARS, BUSINESS CARDS.

Ayles Bros

PRINTERS

54 YONGE ST. - TORONTO

PRICES RIGHT — TELEPHONE 1785

CONSUMERS CORDAGE CO.,

(LIMITED.)

HEAD OFFICE, MONTREAL.

Incorporated by Letters Patent of the Dominion of Canada, under the "Companies Act."

CAPITAL, - - $3,000,000.

In thirty thousand (30,000) Shares of one hundred dollars each.

DIRECTORS:——

JOHN F. STAIRS, M. P., Halifax, President.
A. W. MORRIS, M. P. P., Montreal, Vice-President.
EDWARD M. FULTON, Montreal, Treasurer.
GEORGE STAIRS, Halifax.
JAMES M. WATERBURY, New York.
CHAUNCEY MARSHALL, New York.
WILLARD P. WHITLOCK, Elizabeth.

SECRETARY:——

CHARLES B. MORRIS, Montreal.

BANKERS:——

THE CANADIAN BANK OF COMMERCE.
THE UNION BANK OF HALIFAX.

SOLICITORS:——

MACMASTER & McGIBBON, Montreal.

The Directors, who are now the owners of the entire Capital stock, have decided, at the request of numerous friends of the Company throughout Canada, to enlarge the proprietorship of its stock, and to offer for sale, at par, ten thousand shares, of one hundred dollars each, fully paid and non-assessable.

Payments are to be made as follows: Five per cent. on application; fifteen per cent. on allotment; twenty per cent. each in one, two, three, and four months from the date of allotment. Applicants have the right to pay in full on allotment.

Applications for shares will be received until February 15th, 1893, at any of the offices of the Canadian Bank of Commerce, at the offices of the Union Bank of Halifax, and at the head office of the Company, N. Y. Life Building, Montreal.

Forms of application for shares may be obtained at any of the above places, or they will be sent by mail on request.

Should no allotment of stock be made to any applicant for shares, the amount paid will be returned in full, and in the event of the directors finding it impossible to allot the full number of shares applied for, the surplus of the deposit will be credited towards the amount payable on allotment.

The right is reserved of withdrawing the offer in whole or in part at any time before allotment, and of alloting to any applicant any less number of shares than the number applied for.

As the dividends of the Company are payable quarterly, beginning with the first day of March next, allottees of stock will be entitled to receive a proportion of the quarterly dividend as declared, corresponding to the amount paid upon their subscription.

It is proposed to apply to the Stock Exchanges of Montreal and Toronto for official quotations of the shares of the Company.

The Consumers' Cordage Company was organized in June, 1890, with a capital of one million dollars, to operate several of the largest Cordage and Binder Twine Factories in Canada. It at first operated these under leases, but its operations having been successful, the Capital Stock was subsequently increased to Three Million Dollars, and the leased properties were purchased.

The Company has no mortgage indebtedness; and, according to the law under which it was incorporated, none can be created without the consent of two-thirds of the share-holders, represented at a meeting called for the purpose.

The Company has placed in the hands of its bankers:

(a) Full statement of its affairs, certified to by Messrs. Caldwell, Tait & Wilks, Chartered Accountants.

(b) The following letter from Messrs. Abbots, Campbell & Meredith, advocates, Montreal, upon the legality of its incorporation and the issue of its stock:

Montreal, January 5, 1893.

Consumers Cordage Co., Ltd., Montreal:

Gentlemen,—We have examined the books and documents connected with the organization of the Consumers Cordage Company, Limited, and are of opinion that it has been properly incorporated, and that its capital stock of $3,000,000, as issued, is fully paid up and non-assessable, according to the provisions of the "Companies Act."

We are, yours truly,

(Signed)

ABBOTTS, CAMPBELL & MEREDITH.

(c) Report from Messrs. McMaster and McGibbon, Solicitors of the Company, that the titles to its Mills have been duly examined, and that no incumbrances exist.

Applicants for shares may examine these documents, copies of which may be seen at the Company's offices, and at the various offices of the Banks mentioned above.

The Consumers Cordage Company is probably the second largest manufacturer of Cordage and Binder Twine in the world, and claims the following very material advantages over its competitors:

1st. Ample capital to conduct its business, which enables it:

(a) To buy its raw material in larger quantities, and at lower prices.

(b) To use only the latest and most improved machinery, thus keeping its mills in the highest state of efficiency.

2nd. Economy in selling and distributing its manufactured product.

3rd. The business covers so wide a territory (its manufactured goods go to almost every civilized country in the world) that it cannot be seriously injured by local troubles; and its manufacturing establishments are so scattered that the danger of severe loss by fire is very slight.

4th. Lower cost of production.

(a) by maintaining the sharpest competition between its several mills, it is enabled to introduce in all the best methods found in each.

(b) By spreading its commercial expenses over a larger output.

(c) By placing in one hand the purchasing of the raw materials and manufacturing supplies for the several mills, thus securing the lowest prices.

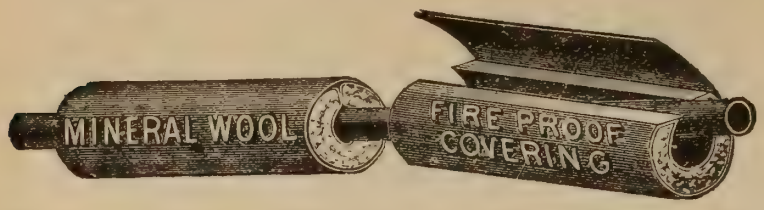
(d) By manufacturing for themselves many of their supplies.

The Company has always found it in its interest to divide the economies effected in production and distribution with the Consumer, and since its existence the Consumer has, upon the average, had a better article at a lower price than previously.

The Company does not claim to have any monopoly, or to earn monopoly profits; in fact, it has not done so. Since its organization it has been able, owing to the advantages above referred to, to earn a net return on its present capital of not less than 10 per cent. per annum (as statement in their Bankers' hands will show), and the Directors believe that these profits will be maintained in the future, as the cost of production and distribution shows each year a marked decrease.

The Dividend for the year ending 31st October, 1892, was at the rate of 8⅓ per cent. per annum. The past record of the Company and its present position justify the Directors in believing that quarterly dividends of one and three-quarters per cent. can be paid, and should the profits for the present year be as large as the outlook promises, the final quarter's dividend might be increased

Any further information may be had at the head office of the Company at Montreal.



A GREAT LOSS?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss. The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

BUSINESS CHANGES.

SALES MADE OR PENDING.

John Dunbar, general merchant, Hopewell, N.S., has sold out.

The general store stock of John McConachie, Honeywood, Ont., is sold.

The crockery stock of J. A. Naud, Montreal, is offered for sale by tender.

D. Weismiller, general merchant, Kippen, Ont., advertises his business there for sale

The general store stock of Griffin & Co., Ridgetown, Ont., was offered for sale on Monday.

W. Milligan, general merchant, King Creek, Ont., has sold out and gone to the North West.

Price & McKay, general merchants, Estevan, Man., have sold out to Lindsay & Patterson of Stonewall.

John D. Buchanan, general merchant, Lake Megantic, Que., offers his stock for sale on the 31st inst.

La Generale Compagnie des Bazars, general merchants, Montreal, advertise to sell by auction on the 30th inst.

PARTNERSHIPS FORMED AND DISSOLVED.

Morse & Thomas, general merchants, Berwick, N.S., have dissolved.

J. Curtis Wilson, general merchant, Kempton, N.S., has registered consent for his wife Bessie to do business.

Chas. H. Denton, general merchant, Rossway, N.S., has registered consent for his wife, Almira J. Denton, to do business in her own name.

FIRES.

Reynolds & Co., general merchants, Manitowaning, Ont., are burnt out. Partially insured.

DEATHS.

John Ewart, general merchant, Medicine Hat, N.W.T., is dead.

E. Strickland, Sr., general merchant, Buckingham, Que., is dead.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES

C. G. Beaulieu, trader, Levis, Que., has assigned.

J. D. Cameron, general merchant, Mahon, N.S., has assigned.

R. A. Troyer, general merchant, Oxbow, Man., have assigned.

Joseph Girard, general merchant, Moose Creek, Ont., has assigned.

D. R. Thompson, general merchant, Sunny Brae, N.S., has assigned.

The affairs of P. Lallier, general merchant, St. Jerome, Que, are being investigated.

P. & L. Tessier, commission merchants in fish, oil, etc., St. John's, Nfld., have suspended.

Smith & Jones, general merchants, Mount Albert, Ont., have called a meeting of their creditors.

F. X. Berthiaume, general merchant, St., Genevieve, Que., has assigned to Amedee Lamarche, Montreal.

The stock in trade in the estate of C. L. Ingraham, general merchant, Windsor, N.S, has been assigned at 35 per cent. of cost.

CARE OF A GASOLINE STOVE.

In a recently issued catalogue the following directions are given for the care of a gasolene stove:

Use only 74 degrees deodorized gasolene.

Good gasolene will not clog a burner.

Never use a funnel or measure that has been used for coal oil, as a single drop of the latter will cause the burner to smoke and clog the orifice. Only use new and clean cans and use them for gasolene only.

Trouble is sometimes experienced on first starting a stove to get the gasolene to flow when filling drip cup. This is caused by the air in the pipes, which is easily forced out by opening the generator valve a few minutes.

Keep the burner clean, on the under side particularly. The accumulated soot should be removed at least once a week with a feather or wing of a fowl, or where the latter is not handy, with a stiff bristle brush. Care should be taken not to strike or bend the needle points, as this would affect the smooth running of the burner.

Every spring the sediment should be cleaned out of the pipes. This is easily done by removing the sediment plug, and allowing at least a half gallon of gasolene to run through same. Never use water for this purpose.

Should the valve leak at packing nuts, screw them up with wrench that goes with stove, but not too tight.

Do not force the valves too hard in closing, as this is apt to enlarge the orifices. Only a slight pressure is sufficient to close them. Never close tank valve while generator is not, as the pressure in the generator is apt to force a leak in some part of the burner.

Always let the generator burner run at least two minutes before starting any other burner.

In case the generator burner should produce a reddish, sluggish flame, wipe the top of the generator orifice, and then screw up the cleaning valve until the needle point projects. Then screw it back again three or four turns. Should generator flame burn too large, regulate it to proper size with the cleaning valve.

It is not necessary to burn the flame to its full extent, as good results can be obtained by burning a smaller flame, and a saving of fuel effected.

Never run the sub-burner and generator burner at the same time, as either one generates sufficiently to run the stove.

Caution.—Never fill stove with flame of any kind near it. Do not keep gasolene in a cellar. It should be kept outside of the house if possible, where there is plenty of circulation of air.

"Burham"

PORTLAND CEMENT.

BEST ENGLISH BRAND MADE.

Canadian Consignees:

McRAE & Co.,

Ottawa and Toronto.





The order issued by the Canadian Pacific railway some time ago prohibiting passengers from travelling by freight trains is disapproved by the Winnipeg Board of Trade. It is claimed to be a hardship to commercial travellers, who are thus compelled often to drive from one town to another, and the effect on business is already felt by the wholesale houses.

OFFICES: 100-102 Reade St., New York, U.S.A.

KEARNEY & FOOT CO

WORKS: Paterson, New Jersey, U.S.A.

Manufacturers of FILES AND RASPS.
Superior quality fully guaranteed.

CAPACITY OF WORKS: 1,200 doz. per day.



Illustrated Catalogue Price Lists mailed on application.

PLEASE MENTION THIS PAPER WHEN WRITING US. Agents, M. & L. Samuel, Benjamin & Co, Toronto.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer



ELECTRICAL
HOUSE -:- FURNISHINGS.

Bells,
Batteries,
Push Buttons.

The largest and best assorted stock in Canada.
Send business cards for discounts.

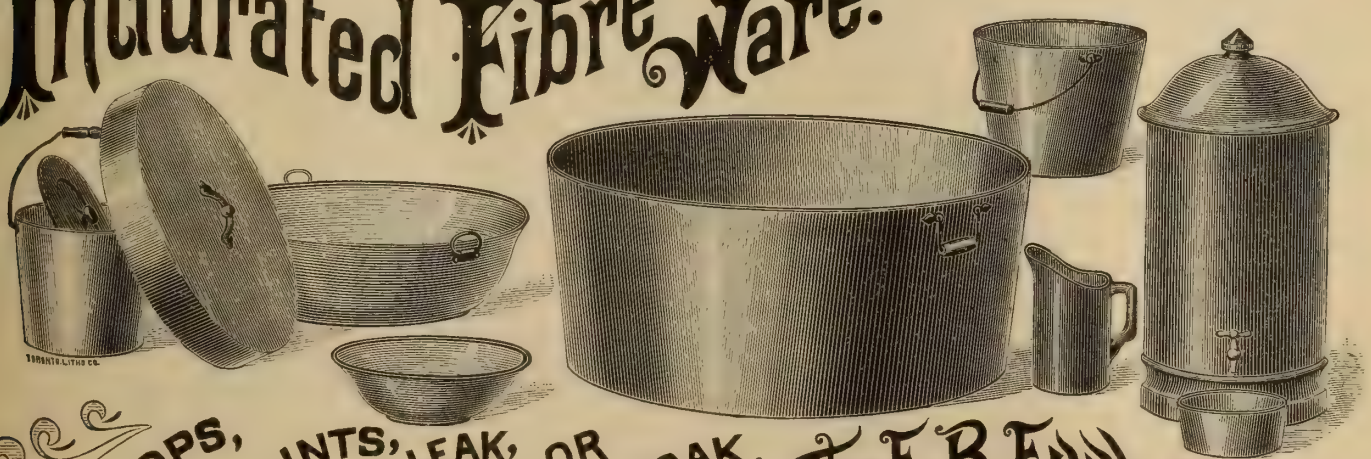
T. W. NESS,
749 Craig St., MONTREAL.

THE BEST
English Sporting Gunpowder
USE THE
"ALLIANCE"
PRIZE POWDER.
—Made only by—
Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.

Always obtainable from
Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.

The Old Wooden Bucket Must Go

Indurated Fibre Ware.



NO HOOPS, NO JOINTS, CANNOT LEAK, SWELL, OR WATER SOAK.

The E. B. Eddy Co.
MAMMOTH WORKS
HULL, CANADA.



..WIRE..

GALVANIZED, ANNEALED, OILED AND FENCING

Best quality, even weights, prompt delivery of import orders, lowest prices, write for quotations.

A. C. LESLIE & CO.

MONTREAL and TORONTO

MUNN'S LIQUID GLUE

IS THE BEST.

Kennedy Bros., Agents

101 Bay Street, TORONTO.

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.

GALVANIZED SHEET IRON. SP

WHY IS IT

THAT THERE IS A STEADY INCREASING DEMAND

FOR GLOBE FILES?

Because every file is warranted, equal to the best imported, and prices much lower. Because the Consumer has no Duty to pay on these files.

GLOBE FILE MFG. CO.,

WALTER GROSE, Montreal, P. Q. **PORT HOPE, ONT.**

FOREIGN CORRESPONDENCE.

Letters translated from or written in any foreign language.

J. H. CAMERON, 10 Front St. E

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	24, 25½
Strip "	25, 26½

Tin Plates—*Charcoal Plates, Bright.*

Bradley M.L.S.	Per box
I.C., usual sizes	$6 00 $6 25
I.X., "	7 25 7 50
I.X.X., "	8 50 8 75
Raven & P.D. Grades—	
I.C., usual sizes	4 50 4 75
I.X., "	5 50 5 75
I.X.X., "	6 50 6 75
I.XXX., "	8 50 8 75
D.C., 12½ x 17	4 00 4 25
D.X.,	5 00 5 25
D.X.X. "	6 00 6 25

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be purchased of 10c. per box less.

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	8 00 8 25
I.X. Terne Tin	10 00 10 25
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65,	

Tinned Plates

72x30 up to 24 gauge	6½ 6¾
26 "	7 7¼
28 "	7½ 7¾

Iron and Steel.

	Base	Price
Common Iron, per 100 lb	$2 05	2 15
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼inch	$2 45
16 "	2 35
¼ " and thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2⅞, 2¾
26 "	3, 3¼
28 "	, 3½

Canada Plates.

Blaina	½ bright 2 65 2 70
Abercarne	2 65 2 70
Lion	2 65 2 85

Iron Pipe.

Wrought 62½ per cent.
Galvanized, 35 to 37½ per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	5¾ 6
" ¼ " "	5½ 5¾
" 5-16 " "	4¾ 5
" ⅜ " "	4⅜ 4¾
" 7-16 " "	4¼ 4½
" ½ " "	4 4¼
" ⅝ " "	3¾
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 14 0 14½
Lake Superior	0 13 0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20 0 22
" 35 to 45 " "	0 19 0 20
" 50 lb and above per lb	0 18 0 19

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 06½ 0 06¾
Domestic "	0 06½ 0 06¾

Zinc Sheet.

5 cwt casks	0 06 0 06½
Part casks	0 06½ 0 06¾

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, per square ft, by roll	0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¾ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

Half-and-half (guar.) per lb	0 17 0 19
Standard	0 16 0 18

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½ 0 14
Other makes "	0 13 0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per lb	4½ 5
No. 1 Do "	0 5
No. 2 Do "	0 4½
No. 3 Do "	0 4

Prepared Paints.

(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1 10
2nd qualities "	0 90

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 14

Colors, Dry

Yellow Ochre (J.C.) bbls, p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
Venetian Red (R.C.2) " "	1 50
Ven Red, Cookson's "	1 80 1 90
English Oxides per cwt	3 25
American " " "	2 25
Canadian " " "	1 75
Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" Lemon pure, 8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 65
Extra "	1 00
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 90
No. 1 Carriage "	1 50
Gold Size Japan "	1 40
Pure Orange Shellac "	2 00
Hard Oil Finish "	1 50

Linseed Oil (in bbls)

Raw, per gal	0 56½ 0 57½
Boiled "	0 59½ 0 60½

Turpentine (in bbls)

Selected Packages, per gal	0 50

Castor Oil.

Best, per lb	0 07½ 0 08½

Cod Oil.

Cod Oil, per gal	0 48

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet makers	0 17 0 18
White	0 16 0 17

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50, 50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 30 and 5 off Revised list to 35 per cent
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 37½, 40 per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 to 65 and 5 per cent

Wrought Steel.

Fast Joint, dis. 65 to 65 & 5 pc.,
Loose Pins, " 65 to 65 & 5 pc.,
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... ..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 40 to 45 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10 p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.40	2.70	2.00	
26 to 40	1.50	2.90	2.25	
41 to 50		3.30		5.00
57 to 60		3.60		5.50
61 to 70		3.90		6.00
71 to 80		4.50		6.75
81 to 85		5.20		7.50
86 to 90		5.90		8.50
91 to 95				9.50
96 to 100				10.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 90
Enamelled " 0 55 1 20

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb . 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 4½ 0 05
Screw and Strap, per lb .. 0 03½ 0 04½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

BOWMAN, KENNEDY & CO.,

LONDON, ONT.

Large consignment of WINDOW GLASS via "Pickhuben," just unloading at our Warehouses.

Full assortment of sizes now on hand. Prompt shipment Guaranteed.

SEND US YOUR ORDERS AND THEY WILL HAVE GOOD ATTENTION.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 40 0 45
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am. per gross 1 60 4 75

Knobs.

Door, japanned, and N.P, Can. list dis, 50 p.c.
Bronze, Berlin, per doz .. 2 75 3 25
" ronze, Gem, " 6 00 9 00
" ays " 8 75 10 00
" hutter, porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy.....	2 30
40dy.....	2 35
30 dy.....	2 40
20, 16 & 12 dy.....	2 45
10 dy.....	2 50
8 & 9 dy.....	2 55
6 & 7 dy.....	2 70

2. American Pattern Only

from 4 to 5 dy	2 90
3 dy. (lath).....	3 30

3. Canada Pattern Only

from 4 to 5 dy	2 80
3 dy. (lath).....	3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 5 per cent. cash in 30 days.
Brads & Moulding Nails, 75 per cent from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pamp, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz..... ... 2 25 3 25

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3¼ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33½ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	22	25
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 0 70 0 75
" N P. " 1 00 1 10

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 30 and 5 p.c. to 35 p.c
Emery, per quire..... 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent.
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 30 to 35 per cent.
Hack, complete, each.... 1 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H. " 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P,, 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, p. gro. 1 65 5 50
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia ½ gross boxes..... 3 25
" ¼ and ⅛ gross boxes per gross net cash 12 00

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Snaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4¾
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2, " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 06
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 50 per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 50 per cent.
" Tacks, 45 per cent.
Trunk and Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz ..... 1 [illegible] 2 50

Tinner's Shears and Snips

P.S.&W., 10 p.c. advance on American list.
Canadian net list.

Tinware.

Stamped, dis. Assn list, 70, and 12½ per cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Iron and Steel, bright, annealed, oiled, coppered, galvanized, spring, nail, bolt, rivet, etc.
15 per cent. f.o.b Montreal, off revised list, Dec. 1, '92.
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6½c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4½ 4¾
" 4 " 4 & 6 " "
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04¾
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90 2 00

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10p.c.
Coe's Gen'ne, dis. 30 to 32½ p. c
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3
" S., per doz..... 5 80 7 0
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

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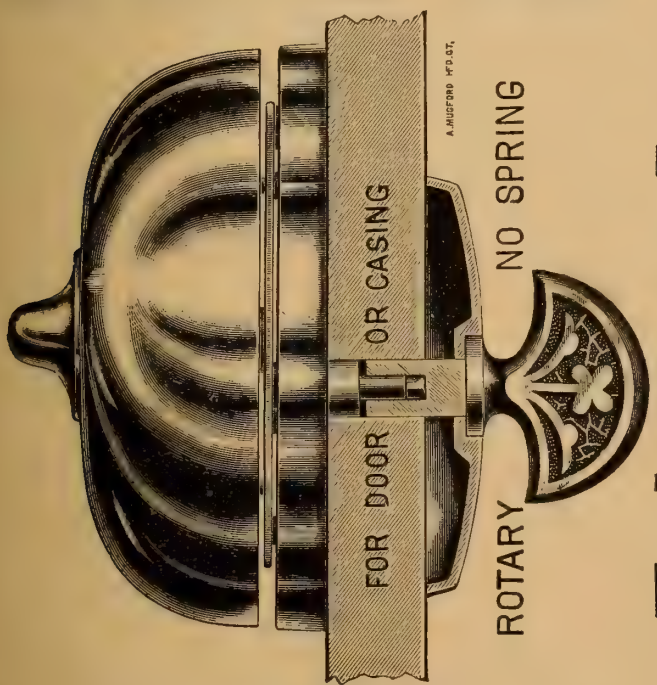
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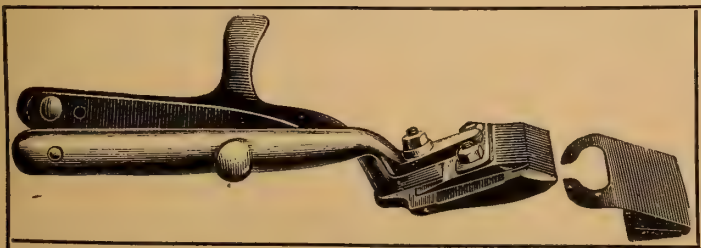


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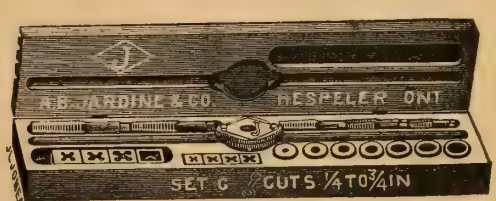
CONTENTS: Starting a Hardware Store; What Hardware Dealers may Sell; Hints about Inventory; Behind the Desk; Ratio of Expenses to Sales; Retail Advertising; System in the Store; The Use of a Store Window; The Holiday Trade in Hardware; John Jones, Jr.; The Successful Merchant; Parable of a Foolish Trader; Cordiality Between Competitors; Commercial Value of a Smile; More about Advertising; Business Education; Fable of the Magnet; Why One Merchant Failed; The Other Half; Cash or Credit; Don't Get Into a Rut; The Value of Price Lists; A Store Library; Books for Hardware Men; Advertisements of Leading Manufacturers.

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MADE OF THE BEST QUALITY OF SIEMENS-MARTIN PICKLED AND COLD ROLLED STEEL.



THIS PAN is drawn by means of dies and is finished with a flanged edge as shown in the cut. This flanged edge enables the housewife or cook to lift the pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan made of common stove pipe iron is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the pan which prevents it from warping and twisting, which is the case invariably with the old style lapped edge pan.
3. The pan retains its shape, thereby insuring an even bake.
4. It is much cheaper as it will outlast several of the old style pans.

Made in the following sizes: 8x10 in., 8x14 in., 10x15 in., 12x17 in.

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You sell Chimneys !
You sell Burners !
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We mean nice Lamps !
They are just as staple and a good profit !

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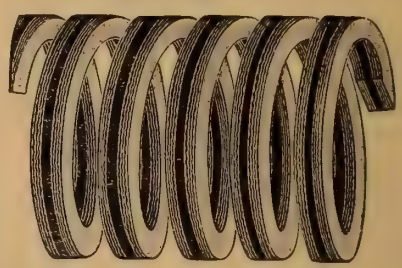
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Price per lb. $1.20. Special Discount to Dealers.

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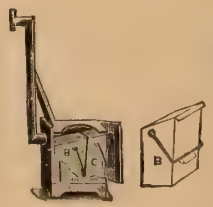
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Butcher Knives

and Steels,
Farriers' and Shoe Knives

Are the best in the World.

Trade  Mark

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VOL. V. TORONTO, FEBRUARY 4, 1893. No. 5.

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MONTREAL OFFICE, H. McLaren & Co., Agents.

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"Aluminum Bearing Metal,"	18c.	"	"	"	"
"Big 4 Babbitt," - -	14c.	"	"	"	"
"Pyramid Metal," - -	10c.	"	"	"	"
"Mystic Metal," - - -	8c.	"	"	"	"

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McCloskey's Liquid Wood Filler and Stains
Mander Bros. Varnish
Blundell, Spence & Co's Enamels
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Lathes, Bench Vises, Screw Plates, Chucks, Drills, Reamers, Etc.

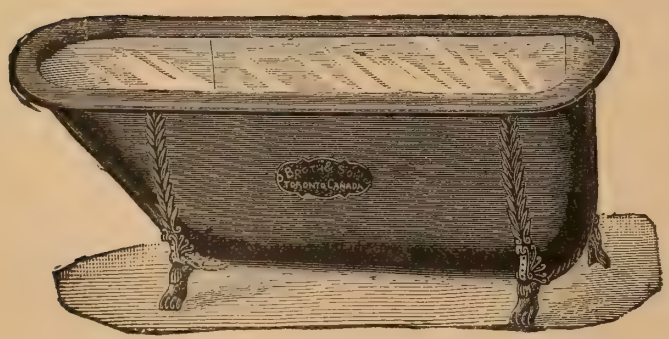
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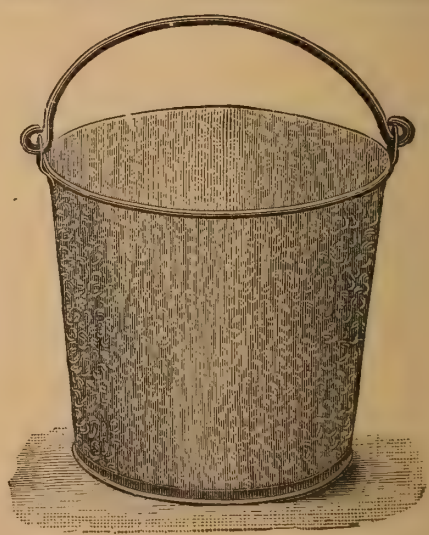
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GALVANIZED STEEL BUCKETS.

IMPROVED PATTERN.



IMPROVED PATTERN.

Something entirely new, and superior to old style Buckets, made in three sizes.
They are superior to the ordinary Flaring English Bucket, being of greater capacity.
They are stronger in shape, consequently more durable.
They will not slop over or tip over, owing to the wide bottom.
They nest very close and firm, which protects them in shipping.
The rim is in one piece with the body, consequently cannot get knocked off.
They are galvanized and not lead coated.

For Sale by all Wholesale Hardware and Tinware Houses.

KEMP MANUFACTURING CO.

TORONTO, ONT.

HARDWARE

ORGAN OF THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

PUBLISHED WEEKLY—SUBSCRIPTION $2.00 A YEAR.

Vol. V. TORONTO, FEBRUARY 4, 1893 No. 5

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

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R. Hargreaves, Manager.

A bicyle show was one of the attractions in Philadelphia last month, and all the manufacturers indulged in a generous spirit of rivalry. Toronto has reached the status of a big bicyle town, and whs should she not follow the example of the Quaker City? There are enough different makes here to guarantee the variety that would be essential to success, and the bicyle clubs of the city could possibly be induced to lend their assistance in devising ways and means of attracting the public. The sooner the matter is taken in hand the better.

* * *

Necessity is the mother of invention. The unusually severe weather they have been experiencing in England this winter has induced an inventive genius to invent what is termed a "surefoot" grip to prevent pedestrians slipping on icy pavements. The grip is described as being forged from Sheffield steel, is readily fastened to the instep of the sole of the boot by small straps, and can be easily removed when not needed. The part which covers the instep is sufficiently broad to give a firm bearing to the foot, whilst the spikes on each side penetrate easily into ice or snow, and effectually prevent slipping. Another desirable qualification is that in price it is within the reach of all. If the "surefoot" is as near perfection as it is held to be it looks as if English inventors have evolved something better than have yet their confreres on this side of the Atlantic, where the necessities are larger.

* * *

Trusts seem to be multiplying as fast in the United States as mushrooms in a meadow on a summer's night. Among the latest additions to the already extensive list are combinations on emery wheel and plate glass. The former is to start out with a capital of $6,000,000, and its avowed purpose is to get control of all the emery mills and corundum factories in the country. Emery wheels, it is scarcely necessary to explain, are extensively used in cutlery making, machine shops and all work where polishing is necessary. It is not the first time the glass manufacturers have made an attempt in the direction of associated effort to control prices and so forth. But heretofore the bands binding them together have been about as brittle as the material turned out of their factories. The United States tariff upon plate glass is in some instances as high as 50 per cent., and there are not wanting those who hold the opinion that this should enable the plate glass manufacturers to get along comfortably independent of the protection that mutual agreements create.

* * *

Apropos of the above comes the intelligence from Washington of pending legislative attacks on the fortresses of trusts, notwithstanding the forelorn enactments that have already been sent out only to be dashed to pieces against their walls. The plan of campaign is to utilize the tariff as a battering ram. Mr. Harter of Ohio is the moving spirit. Some time ago he introduced a bill authorizing the suspension of the duty on articles which are the subject of trust combinations, but, through the alleged influence of the powerful combinations, it has been allowed to get dusty in somebody's pigeon hole. Mr. Harter has now taken an aggressive turn. He is a member of the committee on manufactures and is seeking to get his bill referred to it for consideration. He hopes to get the chairman to call a meeting and report the bill within a few days. Similar lines of attack have been adopted before to overthrow the trusts but, as everyone knows, they have ignominously failed. But the superiority of Mr. Harter's bill over previous measures is that it suspends duties and patent rights only so long as a trust continues. Persons engaged in a trust can thus have their option, to meet free competition abroad or to abandon combunation at home and have foreign competition again shut out by tariff duties. Whether Mr. Harter will be successful yet remains to be seen.

* * *

In Canada, while we are not by any means free from trusts, they have not yet reached that high state of development that is apparent in the United States. Same persons however claim that it is only a matter of time before they will. But the question is whether we have not started too late to get ahead of the dead set which public opinion is developing against combines, trusts and all attemps to unduly interfere with the law of supply and demand. True, trusts develop rapidly. So, sometimes does public opinion and particularly too when that public opinion is being affected in the pocket.

* * *

Efficiency is the condition that usually characterizes the officers of the Toronto Board of Trade, and the result of the recent contest is a quarantee that there will be no impairment in this particular during the ensuring year. Mr. D. R. Wilkie, as president, will give grace, dignity and capability to that office. In years past he has been one of the most faithful members and painstaking officials of the board, and his elevation, by acclamation, to the highest position in the gift of the members is a just recognition of services well and honorably rendered. It was only proper that Mr. Hugh Blain

should be kept in the vice-chair for another term. Mr. Blain is destined, both by order of advancement and by meritorious services, to fill the presidential chair, and when he vacates his present position it will doubtless be to take the one higher. The centre of interest was around the contest for the second vice-presidency, but the lot again fell to Mr. S. F. McKinnon. It is gratifying to see Mr. John J. Davidson again in official harness. When he retired from the presidency a year ago neither coaxing nor coercing could keep him from his purpose of stepping down among the private members. He may be expected to give a good account of himself in the council of 1893. It is pleasing to note that the Board of Trade will not for a year lose the services of Mr. H. N. Baird as it did when Mr. Davidson vacated the presidency, he having allowed himself to be placed on the council.

* * *

John Burns, the English radical and leader of the labor party in the British House of Commons is not always noted for the wisdom of his sayings. Like too many of his stamp his remarks tend to excite rather than to benefit his auditors. The other day he made a laudable departure and, strange to say, his criticism was not of capitalists or of employers of labor, but of the working people themselves. The occasion was a meeting held in London in favor of the early closing movement. He declared that the onus for the present unsatisfactory condition of trade should rest on the shoulders of the purchasing public rather than on those of the assistants, and he declared that he knew no more disgusting or degrading sight than was to be found in any poor man's market-place between the hours of nine and twelve at night. The waste, the extravagence, the dishonest trading could there be seen. Working people connived at late shopping to an extent neither right nor justifiable. All shopping should be done between sunrise and sunset. He would like to see the shops open for twelve hours only, with the assistants working only eight however.

* * *

As long as there is a trout in the stream the angler will fish; as long as there is a customer on the street the average storekeeper will keep his shutters down, or rather, in more modern parlance, keep his window blinds up. In this city, and in fact in this province, much has been done in regard to educating both merchant and customer in the principles of early closing, but there is still much to be done. Better work, and on the whole more work, can be done in a reasonable than in an unreasonable period of continuous labor, for the brain is clearer, the heart lighter, and, consequently, the energy more active. But the wheels of progress move slowly.

* * *

The annual meeting of the Board of Trade held a few days ago was more than usually interesting in the sense that before it was delivered two important addresses—that of the retiring president and that of the president-elect. The address of Mr. Baird was devoted largely to the consideration of the question of extended trade relations with the Mother Land. His views are pretty well known in this particular, and during his recent deliverance he did not say much that was particularly new. But a good thing is worthy of repetition, and what he did say was said well. His words were the expressed opinion of a mature mind and the deliberations of a practical business man, and not the verbosity of the average politician; he spoke for his own and for the pocket of his fellow exporters. He pointed out that in spite of a McKinley tariff the export trade of the Dominion had been larger during the past year than before, but, at the same time, he doubted whether the middle man and the producer had "shared to a like degree in this activity and profit." As to how the desideratum of extended trade was to be secured he carefully steered clear of anything that policians would define as being flavored with partyism. He merely referred to what others had said regarding the advisability of lowering our tariff "on goods imported from Great Britain that we ourselves do not manufacture and on the goods produced by those who have expressed their readiness to compete with outside manufacturers." And while he did not go so far as to unequivocally commit himself he intimated that greater trade interchanges would be the result. "Increased exports and imports usually go together" was his final deliverance upon this question. He referred to the steps being taken to provide an insolvency law, and uttered a truism when he added: "It is proper, however, to remind you that so long as trade is overdone and conducted on unsound principles no law will save merchants from loss by bad debts." The Dominion, he held, had outgrown the present Atlantic service, and he expressed his hearty approval in the efforts being made to increase its efficiency.

* * *

Mr. Wilkie also paid some attention to the tariff. He expressed the hope that whatever changes were made "the welfare of the Dominion of Canada as an existing and as a continuing whole will be the one object kept constantly in view." The iron industry came in for some mention and the question was asked: "Is it not possible by an extension of the bounty system and by a reduction in the tariff on iron to fuse the apparently diverse interests of producer and consumer?" He intimates that in his opinion the renewal of the royalty upon the ore would assist in the premises The slow and indifferent Atlantic service was held to be the means of diverting "the flow of a most desirable class of agricultural settlers to other shores, gives to foreign lines of railway and foreign steamship companies the benefit of a very considerable portion of our carrying trade, helps to maintain high rates of freight, which must be borne for the greater part by the agriculturists and hinder the development of the provinces from Nova Scotia to British Columbia." Mr. Wilkie intimated that the payment of a reasonable subsidy by the Dominion Government towards the maintenance of a fast Atlantic service would receive his endorsation and, he hoped, that of the board as well. The need of better railway communication between Toronto and New York was pointed out and an early revision of the inland postal rates urged. A subject that should receive the careful consideration of the board was his reference to the extension of the arbitration privileges. Arbitration is more and more coming to the front as a medium for the settlement of disputes of all kinds, and the Toronto Board of Trade, if it is to maintain its characteris ic spirit of progressiveness, cannot afford to allow its esteemed president's suggestion to pass unheeded. And judging from remarks dropped here and there it is not unlikely to.

* * *

Governor Fowler of New York State proposes to extend the trolley system to the propulsion of canal boats on the Erie Canal. The idea, so far as we know, is a new one but that is no reason why it should not be feasible. The trolley has proved successful for propulsion on land; why not on water? The Governor thinks the trolley system

could be applied to the Erie Canal between Albany and Buffalo with great advantages, including the saving of from three to five days' time on the journey of the boats. The distance is about 305 miles, and it is estimated that by the trolley system it could be covered in about three days. Rapid transit means in the long run cheaper transit, and the result of Governor Fowler's suggestion will be watched with interest by shippers and business men generally.

A LEAD COLOR POOL.

The cutting and competition between the lead and color manufacturers is likely to have the result predicted for it in the fall at the time the fight was raging at its bitterest. There has been a conference of the trade in Montreal during the week, and, although at the time of writing nothing definite is known, as the parties who are interested say that it would be premature to divulge anything, it is more than probable that next week will witness the formation of a regular pool worked on the percentage system, with an agreement binding all the lead and color manufacturers to observe a uniform scale of prices. Of course, the proceedings were private, but it is known that the Canada Paint Co., the Toronto Lead and Color Co., Ramsay & Son, McArthur, Corneille & Co., etc., in fact, all the leading makers attended the conference and that something like an advance of 25c. will represent the new basis of cost, with a discount of 5 per cent., to be governed by the quantity taken by the purchaser. The pool is to be worked on the percentage system, that is, the business is to be distributed between the parties to the agreement on a ratio proportioned on the business that they have transacted during the past season.

It is right in this connection, and in relation to the causes which brought matters to a head that there is considerable talk among the trade in Montreal. It will be remembered that during the month of December last there was a big fight going on between some of the big manufacturers, and that cuts of all sorts were made, in fact, lead costing $4.50 was sold for $4.25. The cutting was first introduced by a big firm in Montreal who control works in Toronto as well, and when the fact became palpable, another big Toronto firm took up the gauntlet and proceeded to give the former parties a Roland for their Oliver, making it plain that they would continue the cutting tactics until a proper understanding was arrived at for the resumption of business on a profitable basis. In fact, the probable consequence of the struggle was the result at present under discussion of raising prices all round. And it is said that the Montreal firm had the object of a pool in view and commenced the cutting deliberately with the object that if it was formed their percentage of business for the year would be increased, and so entitle them to a more favorable position in the ratio of distribution once the pool was consummated. The Toronto people probably saw through their little game, and the fact no doubt accounted for a good deal of the bitterness of the fight. Now that the matter is likely to be settled, however, as above outlined, those in the trade who were outside the fight are devoutly thankful, as the disturbance seriously interfered with their legitimate business.

BRITISH IRON AND STEEL TRADE.

Reference has been made from time to time to the continuous and steady decrease in the export of British iron and steel of late, but the total figures for 1892 emphasizes how remarkable this decrease was. It is necessary, says the London Iron, to go back 14 years to find a year when the exports of British iron and steel have been less than in 1892. Since the maximum figures of 1889, the shrinkage has been very rapid, the quantity shipped in 1890 showing a loss of 185,000 tons, those for 1891 a further reduction of 760,000 tons, and those of last year a still further decline of 500,000 tons. There was a decrease in the total tonnage exported for 1892 of 15 per cent. as compared with 1891, viz., 2,740,217 tons, of a value of £2,763,000, which is a loss of 19 per ceut., or £5,000,000, and besides this it is worthy of note that the range of valuation was much lower in some years than in 1892. The decrease extended over every class of material manufactured from iron in Great Britain, the fact being undeniable testimony of the widespread depression in iron trade circles to which we have pointed from time to time.

Railway material furnishes a shrinkage of 33 per cent., being the most notable example in this connection. Taking the distribution of the exports of this class, it will be found that most of the customers of the English iron masters took less than before. For instance, the Argentine Republic took 75,000 tons less; British South African possessions, 58,000 tons and Australasia 58,000 tons. There was an exception to this in some cases. Sweden and Norway imported 21,000 tons more of British railway material, while China proper and Hong Kong increased their imports from 412 tons in 1891 to 9,926 tons in 1892.

In pig iron the falling off of 73,000 tons in the exports was chiefly due to the diminished quantities taken by Germany, 20,000 tons; Holland, 31,000 tons; Belgium, 11,000 tons, and Australasia, 12,000 tons. On the other hand, the shipments to Sweden and Norway increased 5,000 tons, while Italy took 6,000 tons and Russia 7,000 tons more.

It is easy to explain, says the London Iron, for the falling off in tin plates. Exports of these decreased 53,152 tons, of which the decrease on United States account accounts for 46,664 tons alone.

In bars and angles the decrease was high also, being 20 per cent., principally accounted for in the decline in exports to the British East Indies, Australasia and Japan. On the other hand, the Argentine Republic took 5,700 tons more than in 1891.

In cast and wrought iron lines Australasia was again the chief cause of the decrease, having taken 31,000 tons less from the Mother Country than in the previous year, but there was a falling off also of 16,000 tons in the quantity sent to Brazil. The following table of the total exports of all varieties to the six largest customers show that all except Australasia has decreased in its takings each year, and that even the latter took much less in 1892 than in 1891:

To—	1890.	1891.	1892.	Decrease from 1891.
United States	526,177	437,784	384,788	52,996
British East Indies	412,042	300,637	276,989	23,648
Germany	365,175	240,722	223,716	17,095
Argentine	361,857	122,644	67,441	55,203
Australasia	334,281	381,747	212,531	169,216
Holland	248,944	185,258	152,460	32,798

The interesting fact of all this is that despite of tariffs and all adverse circumstances, the United States remains by a long way the best individual customer of the iron and steel trade of Great Britain, and London Iron says as much in its comment.

BOARD OF TRADE ELECTIONS.

The result of the elections of the Toronto Board of Trade is as follows:

President—D. R. Wilkie (acclamation).

First Vice-president—Hugh Blain (acclamation).

Second Vice-president—S. F. McKinnon.

Treasurer—J. L. Spink (acclamation).

Council—William Christie, John I. Davidson, W. R. Brock, D. W. Alexander, H. N. Baird, W. D. Matthews, G. M. Bosworth, Arthur White, Michael McLaughlin, George H. Bertram, A.A. Allan, Warring Kennedy, William Ince, Robert Jaffray, Barlow Cumberland.

Representatives on Harbor Commission—W. A. Geddes, J. T. Matthews.

Board of Arbitration—William Galbraith, J. H. G. Hagarty, J. D. Laidlaw, Thomas Flynn, R. J. Stark, R. S. Baird, R. C. Steele, John Earls, M. F. Brown, J. H. Sproule, Charles Pearson, S. Crane.

Representatives on Industrial Exhibition—James Carruthers, M. F. Brown, W. B. Hamilton.

The successful candidates for the council and the board of arbitration were elected in the order given.

MONTREAL NOTES.

W. M. McNally report some fair sales of fire bricks during the week.

H. R. Ives offer of 75c. for his estate has been refused, and the estate and plant advertised for sale.

Ramsay & Son's travellers are commencing their trips with their special brands of mixed paints and varnishes.

Buyers are thinking about the firmer tendency of leads, and W. H. Cottingham & Co. have their usual lines in good supply.

F. Hyde & Co's. lines of pure Scotch unglazed fire clay-pipes are specially adapted to our climate, and are giving satisfaction in consequence.

Some fair orders for leads have been booked here, on Western account, at the old basis during the week, for spring delivery despite advices of firmness abroad.

The Canada Iron Furnace Co. through their agents Drummond, McCall & Co., have booked some fair orders on Western account for their C.I.F. charcoal iron.

American enquiry has caused another jump in steam refined seal oil, a small sized lot selling at 50c. the other day. The enquiry is from New York and Chicago.

PIG IRON SOLD BY ANALYSIS.

The Ironmasters' Laboratory, which was established in Philadelphia, Pa., a quarter of a century ago, and which has influenced the investment of many millions of capital, recently came into prominence with the iron trade by fixing a scale of prices for a superior grade of laboratory work unprecedented in this country. This innovation has been brought about in obedience to the demands of the commercial age, and is the result of mature experience in analytical work on pig iron. Improvements in methods and apparatus, as well as enlarged facilities and economies consequent upon the new and favorable location of the laboratory in Warrenton, Va., have combined to make possible a minimum expense and to allow the following prices :

For determining iron in commercial ores	$ 1.00
For each additional constituent	50@2.00
For determining the usual constituents in iron or steel, each	2.00
For making the usual full analysis of a limestone	3.00@4.00
For making the usual full analysis of coal	3.00

With corresponding rates for other work.

This is not the creation of a day. The laboratory under the direction of Mr. J. Blodgett Britton for years past has been laboring to afford a higher order of technical work at a materially lessened time and money expense, and now an almost radical change in some features of laboratory work has been effected. It has long been the desire of the trade, particularly the purchasing portion, to make practicable the selling of pig-iron by analysis as well as by grain appearance of fracture, but the project has generally been regarded impracticable by reason of the difficulty in the way of obtaining trustworthy analysis with promptness and at an economical figure. These obstacles the Ironmasters' Laboratory claims to have overcome. There seems to be no reason why reliable work may not be done at a price to allow pig-iron to be sold according to analysis. Thus, if any reasonable number of samples of ore to be tested for iron be posted in New York in time for the night southbound mail, no accident occurring, the results can be wired back the next day at a total cost to the sender of $5 for each batch of five ; and there are few iron centers east of the Mississippi with which the same can not be done within 30 to 50 hours from the time the sender mails his samples. The improvement in determining iron in ore consists mainly in first so treating the mineral that within a few minutes every trace of iron is brought into solution without loss, and all interfering organic matter is destroyed, allowing the percentage found to be about as close as can be reached volumetrically. To obtain an average sample for analytical purposes, it is best to break out a section from the center of a pig at right angle with the fracture, and take drillings from its face near the top, the middle and the bottom. The metal should be in uniform and fine divisions, so that it is important that the drill be sharp, moderately small in diameter, and steadily run. Drillings should be caught in a perfectly clean vessel or on a clean paper. The drillings just as the drill produces them should be sent in quantities of not less than 1½ ounces, each sample for full analysis.—Iron Industry Gazette.

HARDENED COPPER.

A company has been formed in Chicago under the name of the Excelsior Hardened Copper Company to manufacture a large line of products of hardened copper. The process to be used is the discovery of Peter Johnson, machinist, a native of Sweden, but of late years a resident of Dassel, Minn. Johnson can, he says, harden copper without destroying its ductility. If this can really be accomplished, a great field is open for those who use his process in the manufacture of specialties for electricans. One of the important exhibits made by the men who are introducing Johnson and hardened copper to the world is a small plate ½ inch thick. With it is shown a steel plate of the same thickness. Both were shot with the same rifle at 120 paces. The bullet in each case was propelled by 60 grains of powder. The steel plate was pierced and shattered ; the copper plate stopped the bullet almost at the surface and turned it back flattened. From this and other similar experiments it is inferred that hardened copper, for resistance and melleability, will displace steel in the manufacture of armor plate. An effort will be made to have the metal tested in a comprehensive way at the navy yards of this country. Like experiments will be arranged for abroad.—Iron Age.

TREATING TERNE PLATES.

Mr. E. Jones, of Monmouthshire, England, has secured a patent on a method of treating terne plates. As the plates are taken from the grease pot of the tinning bath they are placed on a slide by which they are mechanically fed to a chamber forming a part of the apparatus for which this patent has been taken out. The said chamber contains sawdust or other substance such as is usually employed for cleaning terne and tin plates, and the said plates are drawn into the chamber and through the sawdust by a pair of rollers coated with india rubber. In their passage through the chamber the plates are rubbed with india rubber vanes fixed to spindles rotating in the chamber at a greater speed than the rate at which the plates travel. By this means the sawdust is rubbed upon both faces of the plates and the grease partly removed. The plates are then seized by a second pair of india rubber coated rollers, between which and the first pair is a pair of dusting rollers having a coat of horse hair or like substance, sufficiently stiff to brush the plates, but not so rigid as to scratch them. The plates finally are passed out by a third set of impelling rollers, between which and the second set is a pair of roller brushes similar to those previously mentioned.—American Manufacturer.

MAKING OIL OUT OF CORN.

A sugar refining company in Chicago is making oil out of corn. It is said to be a soft, yellow liquid that resembles linseed oil in appearance. The process of separating the oil from the corn was discovered by Dr. Arno Behr. It had been known for a long time that maize contained an oily property, but it remained for some one to turn the idea into account. There is no danger," says Dr. Behr, " of corn oil ever taking the place of linseed oil. In the first place, it will always be too scarce. The amount of oil contained in corn is only about 4 per cent. of its total weight, and we find that we lose about half of it in the process of extraction, so that we get a very small amount of oil after all. The assertion has been made that corn oil can be put to little use—that it cannot be employed in making either soap or paint. The great value of linseed oil for paints is that it dries readily, and it has been asserted that the corn oil will not dry. Now, this is a mistake, and as a matter of fact corn oil can be used in making paint or varnish, and also in soaps. It makes a splendid soft soap. That there are valuable uses to which it can be put is shown by the fact that there is a demand for it in foreign markets." As only one company has the secret of the process and employs it, after the corn has been converted into starch or glucose, so that nothing shall be wasted, there is no danger of a glut of corn oil in the market.—Evening Post.

H. S. HOWLAND, SONS & CO.,

37 FRONT ST. WEST, TORONTO.

WHOLESALE HARDWARE

IF OUR NEW NET PRICE LIST OF CUT AND WIRE NAILS, BAR IRON, STEEL AND WIRE, HAS NOT BEEN RECEIVED, DO NOT FAIL TO SEND FOR ONE.

COMMERCIAL EDUCATION.

At the autumnal meeting of the Association of Chambers of Commerce of the United Kingdom, held in the Town Hall, Newport, on the 20th and 21st September, technical and commercial education formed the subject of an animated and interesting discussion. Needless to say, the resolution embodying the recommendtion of the Association to all Chambers of Commerce to use their influence in impressing upon the commercial men the importance of aiding the progress of technical and commercial education, by showing a preference for those who have received such instruction, and by any other means in their power, was unanimously adopted.

To sing the praises of technical and commercial education would be as superfluous as to "gild refined gold, to paint the lily," or any other "wasteful and ridiculous excess" specified by Shakespeare. The advantages possessed by the man of trained hand and brain over the unskilled workman are apparent to the least intelligent. Brute strength is of little value in the battle of life unless it be directed and controlled by trained intelligence. Mind has long since triumphed over matter, and the club of Hercules stands no chance against an Armstrong gun or a Winchester rifle. This change has been entirely wrought by the progress of education. And education itself —fortunately for mankind, has not escaped the influence of progress. It has greatly improved within the past few years, and is still improving. Once we were only taught:

The languages—especially the dead,
The sciences—especially the abstruse;
The arts—at least all such as could be said
To be the most remote from common use.

Nous avons change tout cela. The modern Dominie Sampson has been duly impressed with the idea that what the world wants is practical men, men who, when they leave schools of youth, are possessed of knowledge which they can turn to immediate and profitable account. But it is a fatal mistake to suppose—as many do—that our education ceases when we quit the schoolroom to enter the counting-house. It has only just begun. At school we lay the foundation of our knowledge, and on those foundations the fabric of our life's work must rest. The best men the world has ever known—the men who have written their names indellibly on the tablets of history, are those who never lost an opportunity of adding to their stock of knowledge. Whatever pursuit a man may engage in, if he desires to succeed and rise to the top of the tree, he must devote his whole mind to it; he must familiarize himself with every detail in connection with it; he must be constantly increasing his store of information; in a word, he must be thorough.

In order to attain excellence one should begin young—at once. The mind requires to be trained if it is to perform its work efficiently. An untrained mind is like an untrained athlete, liable to break down at the most critical point of the race.

It is, of course, perfectly true that the claims of what is called technical education appear more particularly to those engaged in manufacturing industries,but what may be termed the technicalities of commerce should receive far more attention than they do from the retail distributor. It is as important to him to know the effect upon the market which known or possible causes will produce, as it is for the chemist to know the action of every acid with which he experiments. A retailer should endeavor to be conversant with every detail of the commercial machine, just as an engineer knows the minutest point in connection with the locomotive he constructs or controls. Danger lurks in superficiality. Possessed of complete, absolute and accurate knowledge of his business and all that appertains to it, even in the remotest degree, a tradesman is in a position to operate with advantage, to realize a profit where others cannot make both ends meet, and so lay the foundation of fortune, or, at least, a substantial competency.

Do not be guilty of the folly of dismissing this subject from your mind with the remark that it has no bearing on your particular occupation. That is not so. It is open to every man whether engaged in commerce or any other pursuit to climb upward. How many of England's and America's merchant princes and millionaires commenced life without even the proverbial half-crown? Arkwright, George Moore, Sir Titus Salt, A. F. Stewart, Jay Gould, and a host of others testify to what a poor man may do by the exercise of thrist, industry, perseverance, enterprise, and the natural gifts given to him by Providence. Therefore train yourself. Cultivate the habits of industry, of observation, of patience. Broaden your intellectual horizon by reading, conversation and study. Seek to bring into action every power you possess. Do not expend your energies upon that which is unremunerative, unproductive and useless. Conserve it for better ends. And whatever you do, do it with all your might. Concentrate all your faculties on the matter in hand. Do one thing at a time, and that thing thoroughly and well. Let no failure or disappointment dishearten you. Learn from experience the best methods to adopt to accomplish your purpose. Do this in connection with your business and you will have a clear apprehension o fthe best kind of commercial education.— The Storekeeper (Sydney).

A TYPEWRITER TRUST.

Rumors are flying thick and fast as to the formation or attempted formation of a typewriter trust. That such a combination is in process of formation there can be no doubt, although the alleged promoters of the scheme are evidently withholding the facts until they are assured of success. The name of E. N. Fowler, of the Equitable Mortgage Compnay, 40 Wall street, is most prominently connected with the matter. The scheme, so far as facts can be arrived at with the meager information granted, seems to be the formation of a single comany which shall be composed of all or as many as possible of the firms engaged in this line of business.

Each company will be represented in the combination to the extent of the value of its business. This company will issue $20,000,000 of stock, of which each company in the trust will hold shares equal to the value of its plant, the value of which in each of the companies concerned is now said to be in process of adjustment. The sum mentioned is undoubtedly far too large, as good authority says that it is more than double enough to buy up all the typewriter companies in the country. Under such a combination it is alleged that the price of machines will not be advanced, and that the only object is to do away with the severe competition which enters into the transaction of business as now conducted, and thus reduce the expenses, and, incidentally, of course, increase profits.—American Stationer.

BENEFIT OF A TRADE JOURNAL.

In nearly every instance, the merchant who finds himself able to cut prices and undersell his competitors, is the merchant who takes a trade journal, reads it closely, and thus keeps informed relative to the markets, latest methods of doing business, &c. He knows when, where and how to buy. Such merchants attract patronage and gain fortunes. The others howl over his superior methods and abilities, decry his cut prices, and eventually go to the wall.—Denver Com'l Tribune.

THE PATRONIZING MERCHANT.

There is nothing so ridiculous and so easily discernable in a merchant as an air of patronage toward customers. It is a species of vanity which is as ludicrous as it is disagreeable. This weakness is called bumptiousness and is repelling to the general run of customers, who are quick to distinguish it from a pleasant presence. A pleasant presence in the store is one of the essentials towards the success of a merchant. This essential of a pleasant presence is made up of simplicity. Just that and nothing else. Simplicity is the most charming of all qualities and is and always has been possessed by the men and women that the world deems great. The simple man is natural and is possessed of a suavity which is real. Assumed suavity is generally made up of bumptiousness and is as different from the inherent quality as the sweet violet is different from the violet of the millinery counter.

The bumptuous merchant in his vanity reckons himself somewhat of a philanthropist. His behavior towards his customers is offensive to those amongst them who are of a keen or sensitive nature. In his overweening vanity he reckons himself the patron and the customer the beneficiary. Every action of his conveys that expression. When he is sympathetic he is condescendingly so; heartness is luring and often vulgar, his insincerity is apparent, for humanity is a distinctive judge of disposition and character. The patronizing merchant is a humbug.—Ex.

CULTIVATE A MEMORY FOR NAMES.

"As good a piece of advice as I could give a young man starting business," said an old successful merchant, "would be to get his customers' names right. Of course, everybody means to do this, but I don't think everybody attaches to it its full importance. The fact is that almost every man is proud of his name, whatever it may be, and he dislikes to see it misspelled or incorrectly written. There are plenty of names which sound alike, but which vary in the spelling, perhaps by only a single letter; and, too, in taking a man's name it is not so difficult as one might imagine to make a mistake in the initials, for there are letters which sound very much alike. When you get a new customer get his name right to start with. No man likes to receive a package or a bill or a communication of any sort with his name misspelled however modest and good natured he may be, he is pretty sure to be annoyed by it."—Sun.

A BIG SINGLE-ORE DOCK YARD.

The Duluth, Mesana & Northern road has let the contract for the sub-structure, 800 piles, for the largest single-ore dock in the world, to be put up at the foot of 31st avenue west, Duluth. It will be 2,500 ft. long, with 200 pockets on each side, with storage capacity for 7,200 tons, and shipping capacity for 2,500,000 tons a year. In the dock and approaches 10,000,000, ft. of pine and 2,000,000 ft. of oak and maple timber will be used. Its floor will be 52½ ft. above water, and it is 50 ft. wide. There will be four railway tracks on the dock floor. Work is already begun, and it is hoped to ship over it in August. It will not be fully completed before a year, and will cost $400,000.

HOUSE WARMING.

There are few subjects relating to domestic economy of more vital importance than that of maintaining the temperature of our dwellings at the point requisits for health and comfort, and yet it will hardly be questioned that there is no branch of what may be termed "domestic engineering" in which the application of correct principles of known physical laws is more utterly ignored. The formulation of those laws and the demonstration of the correctness of the now universally accepted theories are due to the untiring and exhaustive researches of some of the most eminent scientists—men whose intellectual calibre was such that they were able to deduce and demonstrate facts from data so meagre and apparently so irrelevant as to place them far beyond the comprehension of the average intellect, and to gain the unbounded admiration of those who, while unable to successfully emulate, could still appreciate, the results of their labors.

And yet to many so-called "practical" men the word "science" is like a red rag to a bull. They do things according to accepted practice—not because they know it to be right, but that is the way they were taught. On the other hand, we have a class of practical men who, while doing things as they have learned them from teaching or observation, are in sharp contrast with the former type, by reason of giving some thought to "why." Such men are the progressive ones, and they are willing and anxious to learn, not only from their own observations and reasoning, but from that of others as well—and it is to them alone that all practical improvements in "applied science" are due.

Every practical man, whether he be workman or superintendent—the latter being usually a development of the foreman—can decide for himself to which of these classes he belongs; if to the first, he will do well to change his allegiance as promptly as may be. With a few notable exceptions, the men by whom these scientific principles were evolved have limited their efforts to the demonstration, rather than extending them to the application of their discoveries, and upon the practical men the latter labor devolved—with what result may be seen in the wonderful progress of this era in all branches of engineering.

The reason for the limited advance in improvement of methods and facilities in connection with matters purely domestic may be found in the fact that while in the aggregate they constitute a field of vast magnitude, the individual units composing this aggregate are on so small a scale as to be more or less neglected. To the rank and file of householders the lack of economy and efficiency of domestic appliances is not realized, as, from want of a technical understanding of the subject they compare what they have, not with what might be, but with what is, and their standard of comparison is, therefore, erroneous, from the fact that the logical result must be slow process or none at all. Also, the possible saving in expense of each item, even though representing a large percentage, is comparatively small, if merely considered as an abstract matter of dollars and cents. Ten ones, however, make ten, and an aggregation of many small economies may make quite a large one, therefore, as the cost of housekeeping is made up of sundry small "ones," the resultant ten, if reduced by a large percentage, would be very appreciable.

But, even if we ignore this phase of the matter and consider merely the question of comparative efficiency, the importance of the subject suffers no diminution, as the comfort, health, and, in fact, the very lives of the family are more or less dependent on all features bearing directly or indirectly on the sanitary condition of the dwelling. The proper heating and ventilating, no less than correct plumbing, may be considered as important factors in sanitation, and to the first we propose to direct a few enquiries with a view to comparing the results of ordinary practice with the theoretical and also the practical possibilities, as deduced from ordinary practice on a scale sufficiently large to be dignified by the term "engineering." The subject is one of many ramifications, on account of the many different systems of heating, and also that, from the interdependence of the two the matter of ventilation must be considered jointly with that of heating.

In order to make the specific comparisons necessary in this connection, the use of numerous calculations will be unavoidable. The latter will, however, be kept strictly within the practical limit, and based upon simple and familiar formulae, in which only the ordinary arithmetical rules are necessary. In such cases as a complete analysis of the details would render the work too voluminous the simple formulae or quantities will be given, together with the name of the authority to whom they are attributed. On the subject of fuels, American data only will be used, except in relation to such as present the same characteristics in all localities. In regard to general principles and physical phenomena, being of a purely abstract nature, they are entirely independent of local influences. Before proceeding with the classification of heads referring to the several systems of heating, it will be well to briefly consider the subject in a general way, and also, incidentally, call attention to its effect or dependence on the matter of ventilation.—Metal Worker.

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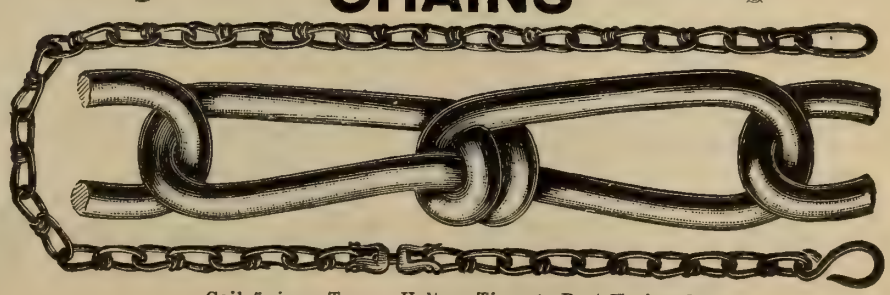
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Coil, 7 sizes; Trace; Halter; Tie-out; Post Heel and Cow Tie Weights, and Evener Chains, Etc.

MANUFACTURED BY THE B. GREENING WIRE CO., LTD., HAMILTON, ONT.

Write for Catalogue and Prices.

A GIGANTIC SAW.

The biggest saw in America, if not in the world, is said to be the new one recently put in the armor plate department at the Homestead mill (Carnegie's). It cost $35,000, weighs 110 tons, and will cut a nickel steel armor plate as an ordinary saw does a plank —armor plates ranging in weight from eight to thirty-eight tons, and sometimes 29 feet long and 20 inches thick. The saw has a blade 7½ feet in diameter, geared from above and revolving horizontally, and with it an angular slab of cold nickel steel, weighing about a dozen tons is taken off like the slab of a pine log.

THE VALUE OF A TRADE NAME.

In discussing stove trade matters recently a very prominent manager made the striking assertion that if he were given the choice between the right to use the trade-mark of his company and their entire property in plant, including ground, foundry, machinery, materials on hand, &c., without the trade-mark, he would instantly take the former, even without a dollar to back it up. It was strong testimony to the value of a good name, long before the public known in almost every home in the land, and known also as a guarantee of high quality. The name of the company was regarded as of no consequence. Without the use of the well-tried and thoroughly advertised trade name the company would find itself without a market. The same superintendant might run the same foundry with the same set of moulders on the same patterns, but his customers would want the old name on their goods or else be educated by a long and tedious process to the fact that the stoves offered them were just as good as those they had been in the habit of buying. The old trade-mark given to a new foundry would spring at once into the possession of a trade empire, in which it had been the acknowledged souvereign, and from which it could not be driven, except, perhaps, by immense expenditures and only after a long period of persistent warfare.

An interesting episode, illustrative of the difference between a widely advertised name and the mere name of a company has since then fallen under our notice. A stove manufacturer visited a neighboring city, and while there concluded to call upon a fellow manufacturer, whose company, if mentioned would be recognized as one of the best known in the country. Having arrived, as he supposed, in the immediate vicinity of his friend's foundry, but seeing no sign of it, he entered, according to his story, a corner drug store, and asked the vendor of pills to kindly direct him to the works of the Greater Mfg. Company. The apothecary scratched his head, but could not locate the concern. Thought he had heard of it, but wasn't exactly sure. Asked how long he had been on that corner, replied over 20 years. And in all that time never heard of the Greater Mfg. Company, who make the world renowned Black-Elm stove? he was asked, the inquirer gazed with astonishment at such an exhibition of ignorance. A flood of light irradiated the apothecary's countenance, and he hastened to assure the stove man that he was within two blocks of the foundry, and if he had only said Black Elm stoves at first he would have instantly been properly directed.

There is vastly more in a trade-mark than merely business egotism. Every manufacturer who thinks it worth his while to lay the foundation of an enduring business should adopt a distinctive name for his products and not change it. Year in and year out, day by day and every day, he should keep the name before the trade until it became better known than his own. Occasionally, in the case of something having special merit but which has never been named distinctively, the trade will, through some curious chain of circumstances, coin a name by which the article will be known. This is in accordance, evidently, with a natural trade law out of which the trade-mark has grown. The name of a company, or more especially of a firm, is too long for mankind generally to bother with. A short name takes the fancy. If it is particularly smooth, snappy or euphonious, and if, moreover, it represents a really high-grade article, it makes an impression on the minds of those interested which is almost ineradicable.—Iron Age.

EVOLUTION OF THE PIN.

The prehistoric pin was a thorn or a fish bone. It had no experience with dry goods till Adam improved on the fig leaf toilet necessities, says Age of Steel. The natural thorn is still in use in some of the Upper Egypt districts, where the Birmingham or Connecticut article is a curiosity and an innovation. In the ruins of Pompeii, Roman pins of bronze and hair pins of bone have been disinterred from that historic sepulchre, while ancient Egypt has disclosed the indispensable article with a head of gold. Bronze pins were known to the lake-dwellers of Europe, some being artistically ornamented and elaborated with exquisite formations. Some that have come to light were of the duplex type, having double stems, and others the same in form as the safety pins in use at the present time.

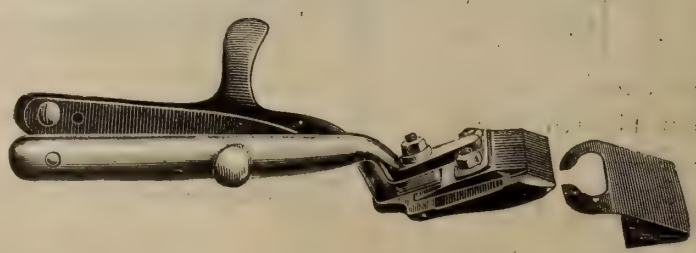
Previous to the introduction of machinery the pin was, of course, entirely hand made and required a passage through no less than fourteen different manipulations before finding its way as a finished product into the market.

The modern product is turned out at the rate of 160 per minute, the daily product of Birmingham alone being placed at 37,000,000. The early pins of English and American use were made with globular heads of fine wire secured to the shank by compression. The solid headed pin was an afterthought, coming into use about 1840. In 1483 the domestic pin was of sufficient importance in England as to secure legislative notice, a McKinley of that date prohibiting its importation. In 1543 an act was passed providing that "no person shall put to sale any pins but such as shall be double-headed and have the heads soldered fast to the shanks of the pins, well smoothed, the shanks well shaken, the point well rounded, filed, canted and sharpened."

About 1626 the manufacture of pins in Gloucestershire gave employment to a large number of persons, and some ten years later the manufacture was brought into Bristol and Birmingham. The English daily product is at present date about 50,000,000. The American pin industry was inaugurated by colonists of Carolina, but it can not be said to have taken its place as a progressive and permanent industry until the year 1836. The industry is now largely centered in Connecticut.

As an article of domestic use the modern pin is now practically ubiquitous. In tonnage of metals used the totals are comparatively enormous, while as a special industry it is the means of livelihood to thousands of operatives. What becomes of the domestic pin has long been a query of interest. The manufacture is heavy and the demand continues, while a surplus pin seems to be a rarity in any household. As it seldom wears out and is by no means perishable, the query has an added interest and can only be approximately settled by the fact that economy in the pin line is not by any means popular, and that in this as in other products of a cheap, though indispensable kind, care is fixed by the price, and what is easily replaced is as easily lost.

THE ONTARIO TACK CO
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
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No. 41
The best value in moderate price Clippers in the market
PAINCHAUD, SQUIRE & CO., AGENTS, MONTREAL.

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WANTED—HARDWARE TRAVELLERS with good connections in Lower Provinces and in Ontario. None but first-class men need apply. H. S., GAZETTE Office, Montreal.

WANTED BY 15th DAY OF MARCH—A good hardware clerk, with some years experience. Steady job for a sober man. Address, John Lorentz, Baden, Ont. tf

BUSINESS CHANCES.

Advertisements inserted under this heading one cent per word each insertion.

FOR SALE—STOCK OF GENERAL HARDware, paints, oils, stoves, &c. Business established 25 years. Value about $3,500. Address, Estate J Cameron, Beaverton tf.

BUSINESS WANTED.

HARDWARE BUSINESS WANTED—IN thriving village. Stock from $2,500 to $3,000. Must have satisfactory reasons for selling. State full particulars. E. W. Highet, Cobourg. 5



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Manufacturers of

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Berger's celebrated Pail Ears, Saucpan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

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ASK FOR THE GRAHAM NAILS.



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RAZORS . .
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HEAD OFFICE: HAMILTON, CANADA

¼ the PRICE of Iron. Write for Discounts

READY MIXED PAINTS

TRADE  MARK

Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

Manufactured by **A. RAMSAY & SON**

MONTREAL

WIRE =

Barb, Plain Twist, Iron and Steel, Annealed, Coppered, Iron, Copper, Steel and Galvanized.

Pure White Lead
Ready Mixed Paints
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Extra Quality Machine Knives, etc.

OUR SPECIALTIES:

KNIVES FOR Mowers, Reapers, and Binders, Root Pulpers and Straw Cutters.
" " All kinds Wood Working Machinery.
" " Paper Mills.
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W. & B. Diamond Twist Drills.



Spring Keys, and Cotters.

Goods the best. Prices moderate
Quality Warranted.

TRADE CHAT

[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Wednesday.]

Three large cordage factories have recently been started in the United States.

Seventy-nine vessels, principally schooners and small steamers, were built on the Pacific coast last year.

Iron Age says large quantities of case oil (kerosene) are going forward to River Platte ports, by steamer and otherwise, causing a sharp advance in freight rates.

Retail hardware merchants of Omaha have entered into an agreement to close their places of business during January, February and March at 7 o'clock each evening except Saturday.

Mrs. Mooney (to her husband)—Teddy, go out an' shwear over th' back fince at th' Callahans, so they'll t'row our shtove lids back at ye, or sorra th' bite av dinner Oi can cook this day.—Judge.

The amount of the precious metals that go into the gold and silversmiths' arts is enormous. Europe consumes upward of $24,000,000 worth of gold and silver annually for plate, jewellery and ornaments.

Notwithstanding the combine and the advanced price of anthracite coal, the aggregate output for 1892 was the largest in the history of the United States, and exceeded the product of the previous year by nearly a million and a half tons.

A Hannibal, Mo., man has had an iron box made all in one piece, with a slit in the top. When he feels like taking a drink he drops a dime in the box and swallows a glass of hot tea. The box holds half a bushel, and he expects to fill it by spring.

A contemporary says that a remedy for iron rust is to dip the spots in a strong solution of tartaric acid and expose to the sun. Wet the article in warm suds, rub the spots with ripe tomato juice, expose to the hot sunshine until nearly dry, then wash in another suds.

Rust may be removed from finely polished steel without injury to the surface by cleaning the article with a mixture of ten parts of tin putty, eight of prepared buck's-horn and twenty-five of alcohol, and then rubbing with soft blotting paper.

Enameled ware pots are now being fitted with protectors placed on the bottom of each. They raise the vessel slightly above the heated surface of the stove, and by thus allowing a circulation of air, prevent the possibility of scorching or burning the food.

It is stated that machinery is producing 90 per cent. of the manufacturing labor of the United States; the remaining 10 per cent. is performed by men, women and children. In spinning cotton, one machine to-day can do as much as 100 operatives could do two generations ago.

The science of mechanics probably obtained no greater impetus during 1892 than in the application of the ball bearing axle and pneumatic tire to the sulky, remarks a contemporary. As this reduced the speed of the horse, as it has that of the rider himself, to a phenomenally low time, it seems to prove that its application will be extended to many things in everyday practical life. To ride ten or fifteen miles in a carriage nowadays is very fatiguing, and there is room for great improvement in the direction of ease and comfort.

The Employers' Liability Assurance Corporation has decided to discontinue its fire reinsurance business in Canada, which it practically dropped in London two years ago. During the six years which the Company has been carrying on the business there the loss ratio has been only about 56 per cent. The specialty was given up owing to the wish of a majority of the stockholders that the Company's lines be confined exclusively to employers' liability and guarantee business.

The most approved methods of artificial ice making and cold storage will be exhibited at the World's Fair. These processes will be shown in a very fine building, 130x255 feet, and five stories high, with observatories at the corners and a lofty tower at the centre. About eighty tons of ice will be manufactured daily, three methods being employed, namely: The plate system, from filtered water; the can system, from condensed steam filtered and purified, and the can system from deaerated water. Three different processes of cooling rooms will also be shown.

A well known iron manufacturer of the Mahoning Valley is thus quoted as to manufacturers and men as to pay for the next turn in the dispute between puddling: "Next summer will witness the great and decisive struggle between the manufacturers and the Amalgamated Association. It cannot be postponed any longer, and the clash of arms will be heard all along the line, and mind this prediction, iron will be puddled for $3.50 per ton, and I would not be surprised if it went down to $3 per ton. Everything is now ready. If Carnegie and Frick could single-handed cope successfully with this association there remains nothing only to make a determined charge along the whole line to secure a final and lasting victory."

Discussing the proposal to pass a Dominion insolvency law, the St. John Telegraph remarks that by it Toronto and Montreal wholesalers and manufacturers hope to be placed in a more favorable position with respect to maritime debtors than they now are. This, says the Montreal Gazette, about describes the situation. The western wholesalers hope, by an insolvency law, to secure the same share of a maritime insolvent's assets, when he owes them money, as his local creditors obtain. They do not ask any more, and they ask this because as the law now is they rarely can obtain it.

The sword-making industry of England is not much older than two centuries, but its rise and progress have not been without incident. An agitation arose in London in 1783, at which time the government was petitioned to allow German swords to be imported duty free, on the ground that none could be made in England that were reliable. A hundred years before that James II. had prohibited the importation of foreign swords. The debate in Parliament was long and conducted with considerable acrimony, and finally a manufacturer in Birmingham undertook to make swords as good as the Germans. At the proper time a test was made, and the English manufacturer was victorious. Continental Europe is, however, popularly stated to manufacture the best swords.—Hardware.

An electrical writer has calculated that the firing of a small pistol sets free about 600 foot-pounds of energy, while a watch consumes about 1-54-000,000th of a horse power, the energy of the bullet being sufficient to keep the time for two years. An Edison telephone transmitter requires about 1,000th of the energy in a watch, it would therefore be worked for 2,000 years on the energy exerted in the pistol. A lightning flash of 3,500,000 volts and 12,000 ampheres, lasting 1-21,000 of a second, would run a 160-horse-power engine for 10 seconds.

THE GREAT KRUPP WORKS.

One of the greatest manufacturing establishments in the world is the Krupp steel works at Essen, in Germany. Experiments at improving the conditions of the laboring people employed there have been going on for 25 years, during which period the number of employees has been increased from 8,000 to 25,000, and, with their families, from 30,000 to 85,000 persons. For 20 years before 1870 the condition of the people in the growing town was very unsatisfactory, and landlords and traders practically robbed them. The sanitary conditions were very bad, the annual death rate being over 5 1-2 per cent. of the population. These conditions led to revolutionary and socialistic meetings and outbreaks, and finally to a great strike in 1872 that lasted six weeks. The firm has already been building houses for its employees, and now took hold of matters with more energy and determination. According to the Providence Telegram its efforts have resulted in the erection of over 3,700 comfortable dwellings and in the establishment by the firm of large stores to free the working people of the exactions of the old traders.

The scheme which has been carried out consists of four branches: 1. The building and renting of workingmen's dwellings. 2. The firm's co-operative stores and boarding accommodations for unmarried workmen. 3. The treatment and prevention of sickness and disease. 4. Insurance against accident and sickness; pension fund, savings banks, etc. To these are also added the establishment of common and industrial schools, the education of apprentices and the training of young girls in housekeeping; humanitarian rules in factory work; assistance in maintaining religious teaching, and in charity work. In buildings the firm have invested about $3,500,000. They refuse to sell them to their men, fearing they might thus pass into the hands of speculators. A co-operative store, already existing in 1868, was bought by the company and its scope enlarged. All sales are on a cash basis. Anybody can buy from it, but the employees only are entitled to books, in which all their purchases are entered, and at the end of the year they receive a cash rebate proportioned to the amount of their sales. This store now comprises perhaps fifty branch establishments, such as fifteen retail groceries, a shoe factory and stores, clothing establishments and so on. Among the employees of these stores are more than 500 widows and daughters of workmen.—Ex.



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Brains Experience Capital

Will be Employed in the Production of the Spring . . Trade Number of

THE HARDWARE MERCHANT

THIS issue will penetrate to many places seldom or never visited by your travellers, as well as to every centre of commerce where orders for goods are likely to be forthcoming.

Special—We will make a specialty of binding in price lists, lithographs, circulars, etc., on any colored paper, thereby enabling this large number of circulars or lists to be sent out incorporated in a journal of high reputation, at a minimum price. To send the same out by post in the ordinary way would cost more than double our charge, and with infinitely less probability of being read or preserved for reference.

We would ask as a favor that you let us know at once if you can take space. We will therefore be able to give you better position and general attention. Respectfully yours,

THE J. B. McLEAN PUB. CO. LTD.

. . . TORONTO . . . .

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and inour Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL Feb. 3, 1893.

HARDWARE.

The houses have not got all their travellers out yet, so that the volume of trade in hardware shows very little difference as compared with a week ago. Some sorting-up orders are coming in for shelf goods, nails, bar iron, etc., but it does not amount to much in the aggregate. Building material is quiet. In crude material pig iron continues featureless. There has been some import business for forward delivery in coke tin plate, but buyers as a rule do not show much urgency. Other lines do not show any change. In leads and colors there is the strong probability of the formation of a pool, but the new basis is not definitely announced, so our quotations remain unaltered.

PIG IRON.

British advices quote a somewhat better feeling in the iron market, but the fact has not been sufficient to agitate importers here about the question of spring supplies and the market, so far as business in this connection goes, is still a blank. There is no change in the spot market either, the only business in pig being the sale of an occasional car lot of Scotch at quotations. We quote Summerlee and Longloan, $20.50 to $21; Eglinton, $19.50; Carnbroe $19 50; Nova Scotia, Siemens No. 1, $19.50.

BAR IRON.

There are already reports of a cutting in bar iron under the standard of $2.05 but makers here deny that it is true alleging that the report has probably arose in connection with the sale of a round quantity on which the regulation drawback was allowed. They report business quiet so far as they are concerned and are not booking any large contracts while business from jobbers hands has not really commenced in earnest yet.

SCRAP IRON.

There is only a moderate quantity of wrought scrap offering here and business in it has not been large. We note the sale of one lot at $15 which is within our previous range of $15 to $16 so that there is no occassion to alter it.

TIN PLATES.

There has been some business in coke tin plate for spring delivery on the basis of 12s. to 12s 3d., but the generality of buyers do not show any marked inclination as yet. We quote our former range of $3.25 to $3.50 for coke and $4. to $4.25 for charcoal.

CANADA PLATES.

The supply of Canada plate on spot is very moderate and values are firm but business is limited to a few jobbing sales. We quote $2.50 to $2.60 according to quantity.

TERNE PLATES.

Terne plates furnish no change, and prices are nominally unchanged at $7.25 to $7.75, according to the grade.

OTHER METALS

Copper is steady but quiet at the advance quoted last week, viz: 13¼ to 14c.

The advance in pig tin given last week is maintained, and outside markets advise firmer prices. We quote 23 to 23½c.

Antimony is unchanged at 12 to 13c.

Spelter is dull at $5 to $5.50.

NAILS.

Makers do not speak of any particular activity from first hands, and jobbers have not got down to business in earnest yet.

PAINTS, OILS AND COLORS

Leads and paints are becoming more active as all the travellers are now out, and orders are more numerous and tolerably heavy. In fact prospects are for a very long turnover while values show a very much firmer tendency. Cables report leads fimer choice English white lead having been turned over at $5.50 to $5.75. During the week there has been a conference of manufacturers here, and the formation of above discussed, but at the time of writing matters are not consummated,so we allow our quotations to stand as follows:—Government standard $5.25; No 1 $4 75; No 2 $4 25; No 3 $3.75; dry white lead 5c; red lead pure 4¼c; ditto No 1 4c.

In oils linseed keeps firm at former prices at 57c. to 58c. for raw and 60c. to 61c. for boiled. In seal oil the advanced prices are firmly maintained 51c. to 52c. being made in a jobbing way. Newfoundland cod oil moves at 38c. to 38½c. Gaspe 37c. Nova Scotia 35c. to 36c. cod liver oil 65c. to 75c.

GLASS.

There is no change in the glass market, which rules steady and unchanged on the basis of $1.35 for first breaks.

CEMENT.

There is very little doing in cement and prices remain unchanged. We quote English brands at $2.35 to $2.55, and Belgian $2.20 to $2.35 per cask. Fire bricks are in fair demand, prices ruling at $18 to $24 per 1,000 as to brand.

NAVAL STORES.

The naval stores business is very dull at the moment. Turpentine is not so strong, but the demand is so small that the price is not quotably changed. We quote:—Turpentine, 51 to 52c.; resins, $2.50 to $5, as to brand; coal tar, $3.75 to $4; cotton waste, 5½c. for colored and 7c. to 10c. for white; oakum, 5½ to 7½c. and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep sea line. Pure Manilla, 12c. for 7-16 and upwards and 13c. for smaller sizes.

PETROLEUM

The petroleum market is very quiet as is usual at this season and prices are unchanged. We quote: Canadian 12¼c. to 12½c. at shed in Montreal for round lots and 13½ for small quantities. American petroleum, 19⅝c. in car lots, 20c in 10-barrel lots, 20¼c. in 5barrel lots, and 20¾c for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c.; Canadian benzine, 10¾c Petrola; 12¾c. Montreal.

TORONTO MARKETS.

TORONTO, Feb. 3, 1893.

HARDWARE.

There has been if anything a slight improvement in trade this week, but jobbers anticipate that the bulk of the business will only be done till about March 1, as buyers throughout the country are now placing orders for immediate shipment only where the wants are pressing. Any large orders that are being booked are for shipment a month hence. In view of the probable revision of the tariff the market is somewhat unsettled and no material change in business is anticipated till the Government has defined what these changes will be and how they will affect the hardware market. Stock-taking has not yet been completed, and travellers report sales very small in consequence, but the great trouble seems to be the want of a sufficient amount of ready money in country



Milk Can Trimmings.
Creamery Can Trimmings.
Railroad Delivery Can Trimmings.
Milk Cans, Creamery Cans and Delivery Cans made up.
All sizes body stock for Cans and Cheese Vats.

If you have not used our Trimmings a sample order will make you our customer.

THE McCLARY MF'G. CO.,

LONDON, TORONTO, MONTREAL, WINNIPEG

MARKETS—Continued

towns which would be largely obviated if the farmers were to realize upon the grain they are still holding back. Payments are reported to have improved considerably.

METALS.

Nothing materially new has developed in the metal market during the week. In lead there seems to be a tendency toward higher values. Pig iron is unsettled because of an anticipated change in the tariff, but some fair orders are nevertheless reported for spring trade. The extra list of the Bar Iron Association formed recently has been issued but no material changes are shown. Copper shows some improvement.

PIG IRON—Some large orders are reported booked for spring trade. Business is not, however, by any means brisk, and it is not at all helped in the premises by the expectation that bar iron is one of the things on which the tariff may be changed.

BAR IRON AND STEEL—Comparatively speaking stocks of bar iron are light, but the demand is by no means good. The Bar Iron Association issued Wednesday the list of prices for extra sizes of bar and other iron. There are a few slight changes in small rounds and squares, where reductions are shown. This is the list: Bars—Flat ½ in. x, 3-16 $1, ¼ 75c., 5-16 75c., ⅜ 60c.; flat ⅝ in. x, 3 16 75c., ¼ 60c., 5 16 60c., ⅜ 45c.; flat ¾ in. x, 3-16 60c., ¼ 45c., 5-16 45c., ⅜ 30c., 7-16 30c., ½ 30c; flat ⅞ in. x, 3-16 45c., ¼ 30c., 5 16 30c., ⅜ 15c., 7-16 15c., ½ 15c., 9-16 15c., ⅝ 15c.; flat 1 in. x, 3-16 30c., ¼ 15c.; flat 1⅛ in x and up, 3-16 15c.; small, round and square, 3-16 $1 25, ¼ 60c., 5-16 45c., ⅜ 30c., 7-16 15c.; oral and half round, ¼ $1.50, 5-16 $1.20, ⅜ $1, 7-16 $1, ½ 80c., 9-16 80c., ⅝ 60c. ¾ 40c., ⅞ 20c., 1 20c.; half oral, 3¼ 15c., 3½ 30c., 3¾ 45c., 4 60c.; band iron (No. 10 U. G.) 1 to 6 inch, 50c., ½ $2, ⅝ $1, ¾ 40c., ⅞ 20c. over 1 inch. Cutting to exact length 10c. per cwt. extra. A quiet trade is being done in steel at unchanged prices.

ANTIMONY—Still being held at last week's figures and there is very little doing.

CANADA PLATES—Demand continues limited at unchanged prices.

COPPER—Trade in this line is somewhat better and prices are being firmly held. Demand is principally for electrical purposes, and for this reason higher prices are anticipated.

GALVANIZED IRON—As is usual at this time of year the demand is limited.

INGOT TIN—The market on this article remains as before. The local jobbing price is 23 to 23½c., which could be shaded a fraction for large lots.

LEAD—This metal remains as before, quiet, but prices are firm with an upward tendency.

TIN PLATES—Moderate orders are being taken. Stocks held by jobbers are not heavy and fresh arrivals will only reach here about March 1st. Prices unchanged.

ZINC AND SPELTER—Trade quiet with prices unchanged at 6¼c. for sheet zinc in casks and 6½c. in broken lots; zinc spelter steady at 5c.

OLD MATERIAL.

Trade is still characterized by extreme dullness, both supply and demand being poor. Wrought scrap is quoted 5 to 10c. lower. We quote the following: No. 1 heavy cast scrap 65 to 70c. per 100; stove cast scrap 40 to 45c.; No. 1 wrought scrap 50 to 60c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c.; new light scrap copper, 8 1-2c.; heavy scrap copper 9½c.; old copper bottoms, 8c; light scrap brass 5½c.; heavy yellow scrap brass 7½c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1¾ to 2c.; scrap zinc, 2½ to 2¾c.; scrap rubber, 2¼ to 2½c.; country mixed rags, 80 to 85c. per 100 lbs; clean dry bones, 50 to 60c. per 100 lbs.; plough shares, 60 to 65c; burnt cast scrap, 15 to 20c.; railroad iron, 65 to 75c.; malleable scrap, 25c.

PAINTS, OILS AND COLORS.

Trade for the month of January was not up to last year's standard, more particularly in the city. It was due to a large extent to the fact that dealers were not pushing white lead. General orders for future delivery are good, particularly in Paris green. We quote: Linseed oil in 1 to 3 barrel lots 57½c. freight allowed to delivery station; 4 to 9 barrel lots, 56½c. delivered; 15 barrel lots and over, 51½c. at point of shipment. Three cents added to these prices gives the quotation for boiled in the respective lots. Turpentine is 53c. in 1 to 3 barrel lots and 63c. in broken packages.

PETROLEUM.

There is a good active demand for burning oils, and prices are firm at last week's quotations. Refined Can., 13½ to 14c.; Canadian water white, 20c.; carbon safety, 17 to 18c.; American water white, 23 to 24 .; photogene, 25c. Pratt's Astral, 25c. Benzine firm, at 15c. for single barrels and 13c. for 5 or 10 barrel lots.

HIDES, SKINS, WOOL, TALLOW.

WOOL—Trade good; prices strong, with upward tendency in some lines. Market is pretty well cleared out of fleece; 18 to 19c. would now be paid for strictly merchantable fleece wool. Pulled wools unchanged at 22 to 23c. for super, 26 to 27c. for extra.

SKINS — Sheepskins continues scarce at $1.10 to $1.25. Calfskins are unchanged at 5 to 7c.

HIDES—No. 1 green cows' are 4½c. Cured are 5¼c.

TALLOW — Has advanced in price, and dealers are paying 5½c. and selling at 6c.

TRADE NOTES.

Wholesalers do not anticipate any improvement in trade in nails and bar iron till the opening of navigation, when lower freights will go into force.

A good demand is reported for glass.

"Binder twine is a thing out of which hardware merchants make nothing," said a well-known dealer to HARDWARE Thursday. "The profit has been to the large manufacturers, and if a change is made in the tariff on this article I don't suppose it will benefit any but the farmers. As far as we are concerned I don't think it will make any particular difference."

"What the people seem to be clamoring for," said a gentleman to HARDWARE, "is a revision of the tariff on articles appertaining to the hardware trade."

The hardware stock of John Nimmo, of 534 Queen street west, has been sold to E. W. Maas of Spadina Avenue.

W. McDowall, dealer in sportsman's supplies of this city, has called a meeting of his creditors.

HAYES' PATENT
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TORONTO
ILLUSTRATED CATALOGUE FREE
STEEL LATHING

AMERICAN MARKETS

NEW YORK, Feb. 3, 1893.

Pig Iron.—Local sales agents report a routine business of fair proportion, but remark that buyers are still exceedingly cautious, and that individual orders rarely involve deliveries further ahead than thirty or sixty days. As regards their particular brands, it is almost invariably affirmed that the prices publicly quoted are adhered to, but the remark is not infrequent that someone else makes concessions of 25c. to 50c. occasionally, and that another competitor meets the cut. Upon the whole, the market may be summed up as being rather soft in tone, and slower, if anything, than usual at this season of the year, yet not weak enough to warrant a reduction in the general line of quotations. We quote prices as follows: Northern brands, $14.75 to $15 for No. 1 X foundry, $13.75 to $14 for No. 2 X foundry, $13.25 to $13.50 for grey forge. Southern brands, $14.50 to $15 for No. 1, $13.50 to $14 for No. 2 foundry, and No. 1 soft, $13 to $13.50 for No. 2 soft, $12.50 to $13 for grey forge, all at tidewater.

Scotch pig iron is taken in small quantities only, chiefly for immediate shipment from the foreign market, and the business passing is at about former rates. Parcels to arrive are quoted at about as follows: $21.50 to $22 for Coltness, $21 to $21.50 for Summerlee, $20 to $20.50 for Carnbroe, and $19.50 to $20 for Eglinton.

Old material is selling in a moderate way only, and the transactions that take place are chiefly at former prices, say $17 to $17.50 for iron tee rails, $13.50 to $14 for steel rails, $16 to $16.50 for No. 1 wrought scrap iron, all f.o.b. Jersey City, and $13.50 to $14 here for car-wheels. Machinery cast scrap of the better class is in some demand at $12.50 to $13 here.

Steel Rails, Etc.—Information as to business in steel rails and the prices at which orders are taken is still closely guarded. Sales agents, in fact, have little to say outside of giving it to be understood that they know of none but small orders, and are unaware that any cut in prices for heavy sections below the basis of $29 f.o.b. at eastern mill. It is learned in some instances, however, that quotations for rails delivered at certain points on the basis of the $29 mill rate with lowest possible freight charges have been turned down, and the explanation given that the quotation was too high. From this it is inferred that a little piece has been taken off of either the mill price or the regular freight rate.

Soft steel, in the form of billets, rods, etc., is being sold by both eastern and western manufacturers at or about previous low rates. The same would appear to be the case in the instance of steel plates, structural material, track supplies, and ordinary merchant bars and sheets, indicating continued weakness of values despite quite liberal business.

Hugh W. Adams & Co., local sales agents, announce that the "Wharton" furnace at Port Oran, N.J., and one of

MARKETS.—Continued

the Reading Company's "Bushong" furnaces have been blown in during the past few days.

Copper.—There were more cheap lots of Lake Superior ingot on the market, and some indications also that 12c. is nearer to true market value than are the quotations of 1-8c. to 1-4c. more given by selling agents. However, business was on too small a scale and the attitude of both buyers and sellers so much at variance that the correct figures are uncertain at the present time. Casting brands are quoted at 11 1-4c. upward, but quotations and selling basis seem to be somewhat variable in this line as well as in the instance of Lake Superior product. The London speculative market was reported a shade easier, latest cables quoting marchant bars at £45 2s. 6d. for prompt and £45 10s. for futures, with sales of about 600 tons.

Pig Tin.—Boustead's cable as to shipments from the Straits during January placed the total at 4,000 tons, including 3,650 tons to Great Britain and America, and 350 tons to the Continent. The popular estimate latterly had been about 3,000 tons, since the December shipments were 2,980 tons, and the incentive no greater for much heavier movement during the past thirty days. On its face the news appears "bearish," but after opening at £92 10s. for prompt, and £92 17s. 6d. for future delivery, the London market receded only 2s. 6d. and New York holders made quite a prominent display of apparent indifference to the record of shipments.

Pig Lead.—About 400 to 500 tons of common western were taken yesterday and to-day,by consumers, at 3.90c. and a single car load or two realized 3.92 1-2c. Offerings at those prices were subsequently withdrawn by most producers, and 3.95 fixed as the lowest at which orders for early shipments will be taken at the moment, giving the market a firm appearance for the time being at least. London cables quoted £10 there for soft Spanish.

Spelter.—There are no signs yet of improvement in the demand for ordinary western product, and 4.35c. stands as the top price for car load or larger lots for February shipment. The European market continues easy. Tuesday's London cables quoted £17 15s. for Belgian.

Antimony.—About the routine demand is experienced. Prices stand at 10 1-8c. to 10 1-4c. for Hallett's, 10 1-4c. to 10 1-2c. for L. X. and 10 3-4c. to 11c. for Cookson's.

Tin Plate.—Ordinary cokes have been sold to a very fair extent for future delivery, and are a shade firmer in price; but spot business shows no decided increase, and the sales making are at about former prices. We quote prices as follows: I C charcoal, Melyn grade, 1-2 X assortment, $6.40; I C charcoal, Melyn grade, crosses, $8; I C charcoal, Allaway grade, any assortment, $5.70; I C charcoal, Allaway grade, crosses, $7; I C charcoal, Grange grade, any assortment, $5.80; I C charcoal, Grange grade, crosses, $7.10; charcoal, terne, M. F., 14x20, $7.75; M. F., 20x28, $13.50; Worcester, 14x20, $5.70; Worcester, 20x28, $11.35; Dean grade, 14x20, $5.30 to $5.40; Dean Grade, 20x28, $10.50 to $10.60; D. R. D. grade,14x20, $5.25; D. R. D. grade, 20x28, $10.50; I C coke, Penlan grade, scarce; J. B. grade, 14x20, scarce; I C Besemer steel, coke finish, 14x20, full weight, $5.30; do. do. 100 lbs., $5.10 do. do., 95 lbs., $4.95; do. do. 90 lbs., $4.80; I C Bessemer steel, coke finish, squares, $5.60 to $5.65; I C Siemen's steel, coke finish, squares, $5.75; Wasters, S. T. P. grade, 14x20, $5; S. T. P. grade, 20x28, $9.75; Abercarne grade, 14x20, $4.95; Abercarne grade, 20x28, $9.62 1-2.

THE MAN IN HIS OWN LIGHT.

The mission of the trade press and the mercantile organizations—what they might accomplish—is thwarted by the large percentage of men who have drifted into business who cannot be brought to see advantage of the most advantageous plans and lines of united effort.

There are two classes of men among the ranks of this detrimental influence in our mercantile circles. One is that pitiable class who would do better if they knew better, or, in other words, that deplorably ignorant element who are simply business machines, continuing in the groove in which they were started by long superintended practice in a clerkship, and, consequently, men who have not sufficient breadth of intellect to comprehend a progressive idea. Then we are cursed with another class who either from a purely selfish or a mulish, stubborn motive, refuse to be convinced of what their better judgment tells them is the proper course to pursue. The first we pity, but for the second we can only have contempt.

Men are in business for legitimate profit, yet many times they throw an impassable barrier across the shortest route to success by taking the most absurbly foolish and boyish views of their own work. A hundred little jealousies arise to prevent the unity of action which should exist. This man is afraid that if he should enter into any compact or agreement it might deprive him of his personal liberty. While he has no conception of the grandeur and sublimity of thought, the scope of freedom and ennobling influences contained in the idea of a manly man in the enjoyment of personal liberty, yet somewhere he has absorbed in a spongelike manner, from contact with others the dimly defined concept of a curtailed personal liberty, whenever he allows himself to agree to any proposition which will help others as well as himself. Hence it is that we find this man blocking the wheels of progress to the most plausible plan of enterprising procedure. His neighbor has read somewhere that a monopoly is not quite the thing, and, consequently, with the heroic flourish of a martyr to the right, he refuses to act in accordance with the desire of the majority because it might appear as a monopoly working against the few. So we will find all these characters doing their little to prevent the most desirable outcome to any question at issue.

Men who stand in their own light. How well this homely old proverb expresses the action of many of our professed business men, whom we would naturally suppose possessed sufficient common sense to lead them to change their position when they found that their own shadow was casting darkness and a prophecy of failure along their business path, or at least making it more difficult to travel. No matter what you bring before a body of men you will invariably find these "kickers." Take the most simple cases for illustration. Start out in your own city, and work continuously from now until the middle of next summer, when the thermometer stands at 100 degrees in the shade, trying to get every man in the grocery business to see the advisability of and to sign an agreement promising to close at a seasonable hour during the warm weather, and just as sure as you make the trial in this or any other city, or even in the village containing ten merchants, you are sure to find the usual percentage of "sore heads" who will refuse, upon one pretext or other, to agree to the most reasonable proposition.

It is only necessary to pay one visit to any mercantile organization in our city upon any regular meeting night to hear a "holy howl" go up regarding poor profits, cutting of prices, etc. This discordant yell of dissatisfaction is about the most unanimous expression you can get out of the assembly. Every man agrees that it is an evil that should be corrected, but when you come to discuss ways and means, and lay plans before these same men for their consideration, plans which would, if adhered to, to a large extent obviate the existing trouble, it is quite a different thing, and the man who stands in his own light, and is always present at these meetings, is sure to come to the front with his nonsensical ideas on his narrow, contracted, selfish prejudices, and do all in his power against the accomplishment of the very result he claims to desire. If his influence stopped here it would not matter, but it does not. Take, for instance, a case like this. The members or a mercantile organization, or, rather, a majority of them, agree to fix a certain selling price upon some article handled by every one of them. This the majority thinks the best method of regulating an evil which is depriving each of his legimate profit for handling the goods, whereupon Mr. Sorehead rises to state that he will not agree to such a proposition, as it will deprive him of his personal liberty. He wants to fix his own prices, and is going to do it if he chooses. Of course, he wants it understood that he is not one of the foolish merchants who "cut" the living profits out of business, but he wants his liberty, and if he wants to sell Mrs. B. one article below what he should, in hopes he can sell her another at an exorbitant profit to make up, he is not going to enter into an agreement which will prevent him doing so. This is the character who makes utterly worthless the effort of the others to do business on a business basis. He sells his articles at the price he desires, and while he is doing this his neighbor sells the very article he gets a good price for at a cut rate. Now, the result is very evident, for in the near future Mrs. B. informs her friend, Mrs. A., that article number one can be had at a much lower price of her merchant,while Mrs.A. in return gives the information that she knows where she can buy article number two for half the money, and our "cutting soreheads" reap the harvest.

The only remedy possible in the case is for the wholesaler and manufacturer to protect the majority by refusing to sell to the few who persist in standing in their own light.

Aside from this, however, the mercantile organizations have a work to perform. What is the use of organization if it counts for nothing in actual results? If a resolution is passed by a majority and a minority refuses to be governed by it, then the sooner the organization respectfully requests the resignation of these "sorehead" characters the better. Let our business men who profess to be united for mutual advancement, act like men in the transaction of their business and be governed by the voices of the greater number.—Merchant Sentinel.

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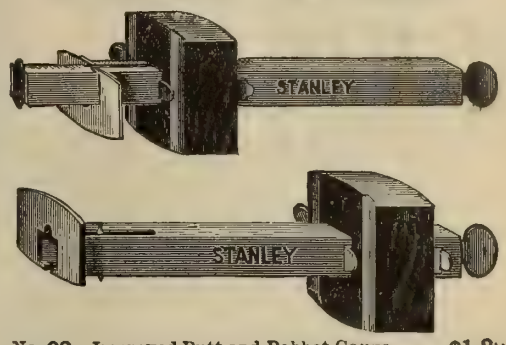
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By placing the outer surface against the back of the Rabbet in the door-casing, the owner can gauge correctly for the back leaf of a Butt; and the inner surface of the steel plate will then act as a guide for the other marker in gauging on the edge of the door, for the front leaf. The thickness of the plate (1-16th inch), will set off the door sufficiently to clear the jamb.

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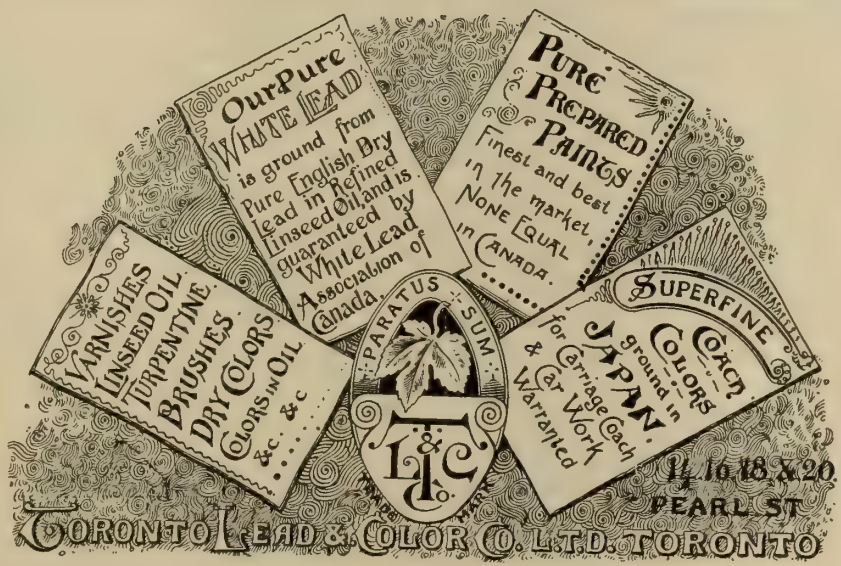
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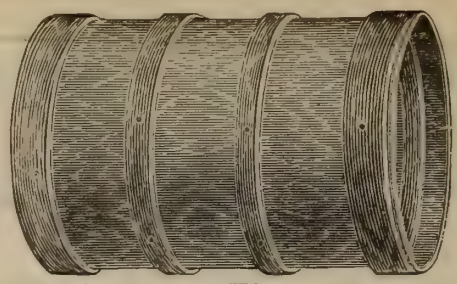
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STEEL TRACK FOR A DOOR HANGER.

An improved steel track for a door hanger is described as consisting of flat steel 1¼ by 3-16 inches in size and supported in position by hollow iron brackets, which are fastened to the building by a single screw at distances corresponding to holes in the track, and when so fastened a common coach screw or carriage bolt is put through the hole in the track, passing also through the bracket into the building, making a neat appearance, and it is also very strong. The lower edge of the track is even with that of the brackets, and the door, being hung beneath as nearly as possible without contact, effectually prevents derailment. The track requires no boxing or roofing, and no snow or ice can lodge in it.

THE VALUE OF A TRADE.

Speaking of the value of learning a trade, A. D. Pentz, in the Manufacturers' Record, says: Now, no matter what may be the social development of the near future, whether the present order of society shall be conserved or a new order shall be inaugurated, it is advisable that every boy shall be able to support himself by his hands, and do it as well as he can, by having them trained to the greatest skill they are capable of acquiring; for, if there be no change in the order or class of society as they now exist, there may be changes in the circumstances of the individual, so that one who to-day adorns the summit of the highest class in society may next year disgrace the calling of a beggar by a failure to make it support him. This condition is of such frequent occurrence that it may be said to stand across the future of every man as rather more than a possibility. Hence, if a man were master of any modern trade, no circumstances could fall upon him hard enough to crush him. Therefore, a trade should be considered a necessity to any man in any condition. The trade to teach a boy is often difficult to decide, but to the right boy the machinists' trade is the best, for in the future, if advance continues to be made on present lines, all things will be made by machinery and all workmen will either be machine makers or machine tenders. A machine maker must be very skillful, but a machine tender may need but little skill and may command inferior pay; hence, it is fair to assume that the skillful machinist will maintain his superiority hereafter as in the past. As an art, machine building has no equal; it rests solidly on the necessities of the human race; it extends above all other arts and demands of science its most perfect work.

FROM CLERK TO MERCHANT.

It has come to be a trite remark in large cities, that in business a small dealer has no chance against the aggregations of capital with which he must compete. Department stores have grown to mammoth proportions, and by absorbing trade in congested centres, have gradually reduced in number the small houses in the various lines included in the department store's stock. This is possible only in large cities where people are closely massed. Throughout the land the small dealer with a stock of from one to ten thousand dollars will always be a necessity. While many trades, such as shoemakers and cabinet makers, have been depleted, in fact, almost exhausted, by the cheapening of products in large plants, the number of retail merchants in the land is constantly increasing. It is a notable fact, also, that a large proportion of the prosperous retail merchants have served an apprenticeship in mercantile life, and made their first start in business by their frugal savings. Thousands of clerks and salesmen are to-day carefully hoarding their earnings until the amount will be sufficient for them to enter business for themselves. They watch for their opportunity and when it appears step from the position of employe to employer. The hardware trade is full of instances of this kind. If the opening does not present itself in good time, the ambitious clerk makes one at some promising location, and becomes a new competitor with the business houses already in operation. It is perhaps the turning point of his life, and the time that most needs his careful attention, for new responsibilities are thrown upon him. He must buy his own goods, and to do this he must keep in mind the character of his customers and the goods he can sell them; instead of drawing a weekly stipend, he must arrange to meet bills and all expenses. He must keep expenses below profits, and in a thousand new ways use his judgment. It is the test of his adaptability to mercantile life, and if his ambition is strong it will help him drive sales and keep expenditures down. No rule can be laid down as to the amount of capital he requires, or for the general arrangement of his plans. The local environment will be the invariable test, and according to it he must regulate his plans. He can receive helpful hints from various sources but his judgment must pass on all of them. He will make mistakes in both over and under doing, but will grow wise with experience if he keeps his senses alert. Above all things, he should be conservatively progressive and progressively conservative.—Chicago Ironmonger.

PIG TIN STATISTICS.

We publish to-day statistics of tin which show an increase of 2,340 tons in the total visible supply. The stock of tin in London and afloat thereto show a total of 8,200 tons, while the similar figures for America are 6,410. In other words, there is at the present rate of consumption sufficient tin afloat for London and America to supply the demand for these countries for nearly six months to come. The figures are somewhat startling, and have been followed by selling on the part of the bull operators here.

CHRISTIANITY IN BUSINESS.

We often hear it affirmed that in these days successful business cannot be operated on Christian principles. If this is untrue anywhere it is in the retail dry goods store, where the aim is to win a customer's constant trade by establishing yourself in his confidence for honesty and straightforwardness. And the application of the golden rule, as all life teaches, is the surest, quickest and safest way to accomplish that end. You may lose a dollar on a sale by giving a customer an inside fact concerning a certain article he is about to buy, but you have won that man's confidence and respect a hundred dollars' worth. The way to win a man's confidence and respect and good will is through kind accommodations, good cheer, soft answers, pleasant words, sincere appreciation, sacrifice of time and effort and other Christian means, and the way to win a customer is no different. The most accomplished buyers are more than buyers. They are men and women. Human nature is strong over all training and acquisition, and that which influences and touches a man or a woman will influence and touch a buyer, a customer.—Exchange.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
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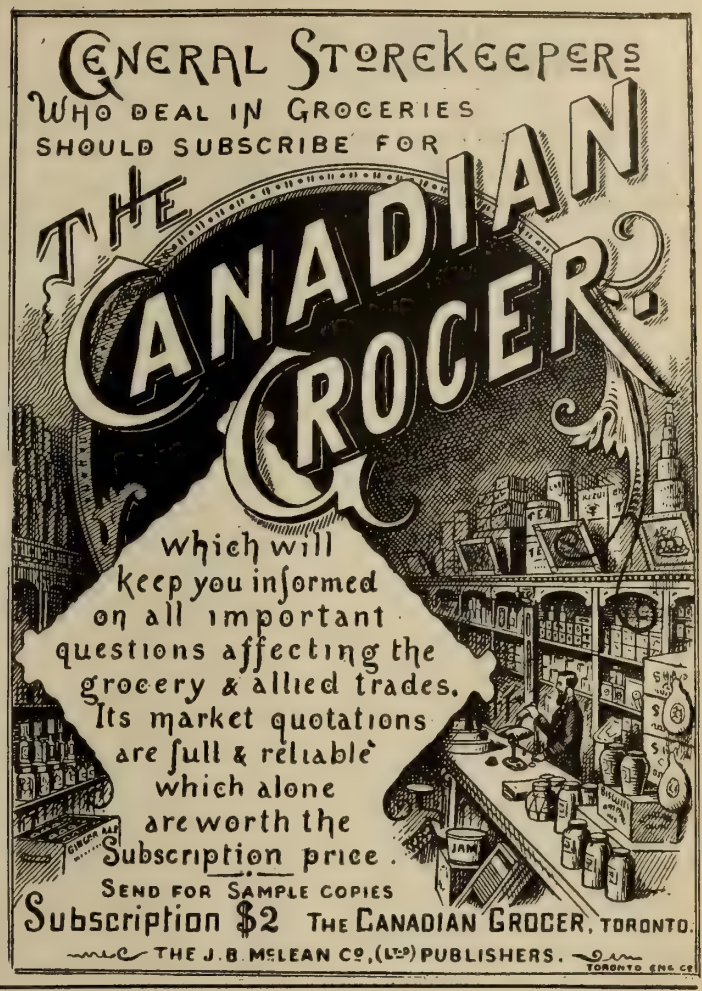
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164 Fenchurch St., London, E.C.

CHANGED CONDITIONS IN THE STOVE TRADE.

Next to the furniture-store element of disturbance to the even tenor of the stove business comes the matter of repairs, the piracy of which is of earlier origin than 1882, but the growth and development belonging to the period of great change under discussion. The traffic in repairs by the so-called pirates has eaten like a cancer into the vitals of the trade of the wholesalers until it has almost destroyed that particular branch or department. It was ignored entirely at first as of little account; in fact, there were for a long time but one or two concerns in the city, and the manufacturers felt it would be uncharitable to attempt to deprive them of a living from the traffic when it affected any one of them so little.

After a while, more and more frequently, the dealers called at the regular houses for light castings and odd plates, after purchasing from the pirates, for the same stove, grates and other heavy castings which they had with them, and the manufacturers, more from chagrin than from the loss of trade really experienced, consulted legal counsel to find out how to proceed to close them out. Their chagrin was not lessened to find that, however it might be criticised on high moral grounds, the business of the pirates was legal, and before they could be held amenable the manufacturers would have to patent the design of every part of their stoves, or else by legislative enactment declare the piracy of repair patterns unlawful.

Both of these remedies were entirely too expensive to think of, and agitation of the matter was dropped. It is a mooted question after all whether the trade in pirated repairs, which is not prohibited by law, is not perfectly honorable and fair. Less odium attaches to it nowadays than in former years, and the repair dealers themselves show less consciousness of the fact that their trade was frowned upon by manufacturers and some stove dealers. Of course there are many persons who would avoid any business that had to be conducted to a certain extent on the sly, as this has been. For instance, when some orders have made it necessary to purchase odd pieces of the manufacturers or when they have had to get pieces for new stoves introduced by the manufacturers to "file up." At such times they have been obliged to resort to sly means to get what they wanted, knowing the manufacturers would refuse them if they ordered in person or in their own name, but such practices are not very unlike the methods adopted by manufacturers to get a competitor's stove which they desire to imitate, or hardly less questionable than the subterfuges employed to get inside information of a rival's business or points regarding his constructions.

The pirates have always been looked upon as bitter enemies of the stove wholesalers, and regarded with unconcealed contempt. The enterprise displayed by the repair men was not calculated to mollify this feeling in the slightest and it kept increasing in proportion as the repair men's business increased and the wholesalers' declined. Their close contact and relations with the stove dealers put them in possession of information about new goods introduced for which repairs should be made, and kept them abreast of the times and with complete stocks for the accommodation of all.

The main reason why they were patronized in preference to the stove makers was, of course, the lower price at which they sold repairs. The better class of retailers for a long time refrained from trading with them on account of the better fit of original repairs, but were gradually driven to do so and get the benefit of the reduced price to hold their own trade against the competition of smaller concerns, basement traders and second-hand men, who did and were able to undersell them. But other agents were instrumental in helping the growth of the repair business among the pirates—namely, the expressman, city and suburban, who, receiving orders from several customers for a variety of repairs from several of the different wholesalers and jobbers, found it very convenient and advantageous to make all their purchases in one store instead of visiting all the makers or regular agents, and any manufacturer who from a lack of system of keeping repair accounts was unable to realize the falling off in his repair trade needed only to look in the express waggons as they backed up to his door for stoves to be convinced, for there he would see the evidence in packages of repairs for his own stoves just from the repair shop. It may be remarked that sometimes an unprincipled expressman would buy repairs at the repair shops at the reduced price and charge the dealers for whom he bought the manufacturers' price, keeping the difference himself, the deception being discovered when, on account of some mistake in size, the dealer brought back the grate or bricks to the stove manufacturer, only to be informed that they never came from his place.

It seems incredible that the manufacturers should be so blind to their own interests as to let this trade, an important item, be taken from them, when, for several years it was within their power to suppress the traffic by reducing the price of repairs so low that the pirates would be unable to make any money. Putting the price at cost for two years would have forced them all out of business, and the loss to the manufacturers would have been a bagatelle compared with all the losses of the years since, to say nothing of the future. They have been forced to make reductions from time to time anyhow during the past ten years, to hold fast to some lingering trade and stem the tide as much as possible, but the opportunity for crushing the competition and reclaiming the business has gone by. Instead of weaklings at first, they have powerful rivals to fight, men strengthened in purse by the accumulations of profits for ten years, and more securely entrenched behind a business whose scope has been vastly enlarged since its birth.

The craze for the artistic decoration of stoves has benefited them, and so has the demand (so liberally met) for dustless stove polishes and plastic cements; and the trade in tile, nickel and bronze ornaments, stove paste, polishes, to say nothing of the other sundries, such as finishing rings, chimney caps, drip pans, etc., yields a comfortable income to some regardless of stove brick and castings.

All this trade might have dropped into the laps of the stove men if they had nipped the competition in the bud.

In 1882, when the stove salesman booked a winter stock order for stoves from the retail dealer, he likewise received a stock order for repairs, consisting of grates, bricks, rests, fire pots, etc., by the dozens, for all the stoves, new and old, of his firm's manufacture. They were delivered with the stoves; they amounted to as much as ten or twelve stoves and yielded a profit twice as large. In place of every hundred such orders in 1882 they get one now—the repair men get the rest. They do get a complimentary order now and then for an oven front or check slide for old stoves, for which a pattern has to be hunted up and the piece cast, and on which the profit very seldom is "in it." At any rate, the main trade from the stove dealers consists of orders for pieces that th pirates do not keep, oven and fire doors, oven tops and bottoms, ends, backs and bottoms of ranges and the light parts of heating stoves, pieces so seldom called for compared to heavy castings that it does not pay them to make patterns for or cast them. Even this trade the manufacturers are prevented from making any money on, as an advance in price of such pieces would drive the pirates to making them at once. The only other trade left to the manufacturers is from such people out of town, more or less remote from a city, who write to the stove makers not knowing of the existence of the other shops, the number of whom, however, grows less and less as the repair men reach them by circulars and price books and persistent advertising.—Metal Worker.

HIS BUSINESS METHODS.

A well known Minneapolis wholesale dealer thus describes his business methods: "On the principle that half the failures come from this infernally foolish anxiety to spread out and overdo, I've cut my garment according to my cloth, and by so doing gained the confidence of the banks and men who afterwards became my backers. It's a great thing to be able to discount all obligations, and so far as possible, I've done it, but when I couldn't, I've watched my purchases, and checked up the sales with a carefulness that —well, that you quill drivers never could imagine. My experience in selling to others has been that hell is paved with the promises of slow-paying customers. Unless from some unusual cause, they're generally a slip-shod lot. The man who discounts his bills buys far more cheaply, and, of course, sells on a better margin. Another thing, every merchant should take a complete and careful inventory of his stock at least once a year, though twice is better, and draw up a statement as a standard of comparison with the record of former years. In this way he can detect the weak elements, and correct or do away with them. I believe firmly in insurance, no matter what the rates may be. If the risk is great for the companies, it is equally great for the owner, and a business that can not carry a good insurance might better be given up. One other point, I advise those who deal with us to let their goods stay on the shelves rather than sell them to irresponsible or slow-paying customers. In the one case you have something to show for time and money expended, in the other you have less than nothing.—Ex.

Competition is keen and active and the only way to meet it successfully is to buy from the best houses, and at lowest prices.

CONSUMERS CORDAGE CO.,

(LIMITED).

HEAD OFFICE, MONTREAL.

Incorporated by Letters Patent of the Dominion of Canada, under the "Companies Act."

CAPITAL, - - $3,000,000.

In thirty thousand (30,000) Shares of one hundred dollars each.

DIRECTORS:—

JOHN F. STAIRS, M. P., Halifax, President.
A. W. MORRIS, M. P. P., Montreal, Vice-President.
EDWARD M. FULTON, Montreal, Treasurer.
GEORGE STAIRS, Halifax.
JAMES M. WATERBURY, New York.
CHAUNCEY MARSHALL, New York.
WILLARD P. WHITLOCK, Elizabeth.

SECRETARY:—

CHARLES B. MORRIS, Montreal.

BANKERS:—

THE CANADIAN BANK OF COMMERCE.
THE UNION BANK OF HALIFAX.

SOLICITORS:—

MACMASTER & McGIBBON, Montreal.

The Directors, who are now the owners of the entire Capital stock, have decided, at the request of numerous friends of the Company throughout Canada, to enlarge the proprietorship of its stock, and to offer for sale, at par, ten thousand shares, of one hundred dollars each, fully paid and non-assessable.

Payments are to be made as follows: Five per cent. on application; fifteen per cent. on allotment; twenty per cent. each in one, two, three, and four months from the date of allotment. Applicants have the right to pay in full on allotment.

Applications for shares will be received until February 15th, 1893, at any of the offices of the Canadian Bank of Commerce, at the offices of the Union Bank of Halifax, and at the head office of the Company, N. Y. Life Building, Montreal.

Forms of application for shares may be obtained at any of the above places, or they will be sent by mail on request.

Should no allotment of stock be made to any applicant for shares, the amount paid will be returned in full, and in the event of the directors finding it impossible to allot the full number of shares applied for, the surplus of the deposit will be credited towards the amount payable on allotment.

The right is reserved of withdrawing the offer in whole or in part at any time before allotment, and of alloting to any applicant any less number of shares than the number applied for.

As the dividends of the Company are payable quarterly, beginning with the first day of March next, allottees of stock will be entitled to receive a proportion of the quarterly dividend as declared, corresponding to the amount paid upon their subscription.

It is proposed to apply to the Stock Exchanges of Montreal and Toronto for official quotations of the shares of the Company.

The Consumers' Cordage Company was organized in June, 1890, with a capital of one million dollars, to operate several of the largest Cordage and Binder Twine Factories in Canada. It at first operated these under leases, but its operations having been successful, the Capital Stock was subsequently increased to Three Million Dollars, and the leased properties were purchased.

The Company has no mortgage indebtedness; and, according to the law under which it was incorporated, none can be created without the consent of two-thirds of the share-holders, represented at a meeting called for the purpose.

The Company has placed in the hands of its bankers:

(a) Full statement of its affairs, certified to by Messrs. Caldwell, Tait & Wilks, Chartered Accountants.

(b) The following letter from Messrs. Abbots, Campbell & Meredith, advocates, Montreal, upon the legality of its incorporation and the issue of its stock:

Montreal, January 5, 1893.

Consumers Cordage Co., Ltd., Montreal:

Gentlemen,—We have examined the books and documents connected with the organization of the Consumers Cordage Company, Limited, and are of opinion that it has been properly incorporated, and that its capital stock of $3,000,000, as issued, is fully paid up and non-assessable, according to the provisions of the "Companies Act."

We are, yours truly,

(Signed)

ABBOTTS, CAMPBELL & MEREDITH.

(c) Report from Messrs. McMaster and McGibbon, Solicitors of the Company, that the titles to its Mills have been duly examined, and that no incumbrances exist.

Applicants for shares may examine these documents, copies of which may be seen at the Company's offices, and at the various offices of the Banks mentioned above.

The Consumers Cordage Company is probably the second largest manufacturer of Cordage and Binder Twine in the world, and claims the following very material advantages over its competitors:

1st. Ample capital to conduct its business, which enables it:

(a) To buy its raw material in larger quantities, and at lower prices.

(b) To use only the latest and most improved machinery, thus keeping its mills in the highest state of efficiency.

2nd. Economy in selling and distributing its manufactured product.

3rd. The business covers so wide a territory (its manufactured goods go to almost every civilized country in the world) that it cannot be seriously injured by local troubles; and its manufacturing establishments are so scattered that the danger of severe loss by fire is very slight.

4th. Lower cost of production.

(a) by maintaining the sharpest competition between its several mills, it is enabled to introduce in all the best methods found in each.

(b) By spreading its commercial expenses over a larger output.

(c) By placing in one hand the purchasing of the raw materials and manufacturing supplies for the several mills, thus securing the lowest prices.

(d) By manufacturing for themselves many of their supplies.

The Company has always found it in its interest to divide the economies effected in production and distribution with the Consumer, and since its existence the Consumer has, upon the average, had a better article at a lower price than previously.

The Company does not claim to have any monopoly, or to earn monopoly profits; in fact, it has not done so. Since its organization it has been able, owing to the advantages above referred to, to earn a net return on its present capital of not less than 10 per cent. per annum (as statement in their Bankers' hands will show), and the Directors believe that these profits will be maintained in the future, as the cost of production and distribution shows each year a marked decrease.

The Dividend for the year ending 31st October, 1892, was at the rate of 8⅓ per cent. per annum. The past record of the Company and its present position justify the Directors in believing that quarterly dividends of one and three-quarters per cent. can be paid, and should the profits for the present year be as large as the outlook promises, the final quarter's dividend might be increased.

Any further information may be had at the head office of the Company at Montreal.



The Toronto Silver Plate Co.

- - Manufacturers of - -

Sterling Silver and Electro Silver Plate

Factories and Salesrooms, 570 King St. West Toronto

E. G. GOODERHAM, Manager. JNO. C. COPP, Sec.-Treas.

BUSINESS CHANGES.

FIRES.

The hareware and tin shop of A. U. Otton, adjoining the Traders' Bank, Glencoe, was destroyed by fire Saturday night. Loss partly covered by insurance.

The total loss by fire in London, Ont., during 1892 was $32,000, and the total insurance thereon was $600,000. There were 133 fires in all, and in only three instances was there no insurance held on burned property. Good for the Forest City.

Oil City was visited by a destructive fire Friday. The fire broke out in the building owned by James Keating who occupied the second and third stories as a dwelling, the first story being occupied by W. T. Trott as a general store. This building and the post office and a vacant store owned by J. B. McGregor, were all destroyed. Mr. Keating has $1,000 insurance on the building and $250 on furniture. Loss, $3,000. Mr. Trott has $5,500 insurance on stock. Loss, $7,000. Mr. McGregor has no iusurance. Loss, $1,500. The fire originated in Trott's store. Everything was a total loss.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES

R. J. Har-ison, a Teetersville general merchanl, has assigned to George Hayes.

John Nimmo, hardware nealer of this city, is offering to compromise and is closing up business.

Samuel S. Edsall, hardware merchant, of Bowmanville, offered his creditors 50c. on the dollar, and failing in this assigned to William H. Garrett.

E. Snell, general merchant, of Jamestown, has assigned to C. B. Armstrong; and D. F. Armstrong, boots and shoes, of Kingston, has done likewise to W. Downing.

Victor Rebanlet, proprietor of the Montreal Cork Company, has found business too light and he is reported to have left. His creditors will meet and weigh matters Feb. 6.

George Halliday, general merchant, of Arnprior, has assigned to Alex. Mutchmor. Samuel Straith, in a similar line of business at Harrow, has placed his affairs in the hands of R. S. Macdonald.

Michael Bulger, of Bulger, Ont., general merchant, has been unable to meet his liabllities and his creditors have compromised with him at 50c. on the dollar. Lester Day, of Harlem, Ont., general storekeeper is seeking a like favor from his creditors.

A BIG LOCOMOTIVE.

The biggest and most powerful railroad locomotive in the world, according to Locomotive Engineering for January, will soon be running on the Mexican Central Railroad. It was constructed at the Rhode Island Locomotive Works, with a couple of like companions. The monster weighs 130 tons when in working order, and was built to climb the steep grades in the mountains of Mexico, and to drag leavy loads around sharp curves safely.

The engine looks like a couple of locomotives of the "Mogul" pattern backed up together, with the two cabs joined. It is an odd form, and was constructed after a design by Superintendent of Machinery F. W. Johnstone of the Mexican Central.

JAPANESE AS IRON WORKERS.

The Japanese have excelled all other people in the manipulation of iron. As an extraordinary example of the pains taken in iron working there may here be mentioned a knife-handle (kodzuka), in which a horse is represented seen from behind on a surface not three-quarters of an inch wide, the whole being not two inches in height. The fore-shortening of this figure is simply marvelous, and there is nothing in it except a dot of gold for the eye of the horse. The workmanship is of great skill and grace.—Chicago Journal of Commerce.

GOOD BUSINESS POINTERS.

Keep in touch with the market, and always see that you are buying at the lowest possible price. Don't carry a stock that is going to give you any trouble to pay for, simply because you find that your competitor is carrying a larger one than you are. Keep your stock in a well lighted, well ventilated place, giving it frequent applications of the dust brush. The observance of the above, in connection with a sharp eye on collections, would doubtless be the means of stopping some of the leaks to be found in the farm tool business.—Farm Tools.

A movement is on foot in Pittsburg to form a national organization of shippers of goods.

A recent report from Chicago says there are indications of a deal in butter similar to the recent one in eggs. As in the latter product, the reserve supplies of butter have been eaten up, the production is down to a very low point and the demand is very good. Butterine men, under existing circumstances, are in a position where they are compelled to help the deal along—at least up to a certain point.

DIRECT IMPORTERS AND DEALERS IN

SCOTCH FIRE CLAY-BRICK



DRAIN AND WATER PIPES.

Double strength for railway culverts, etc.

Sewer Bottoms or Invert Blocks, Cement.

NOTE.—Only pure SCOTCH unglazed Fire Clay Linings and pipes are kept in stock; any other quality is worthless for resisting heat and frost. Correspondence invited. Quotations promptly furnished.

OFFICE: 31 Wellington St., Montreal.

THE OAKVILLE BASKET CO.,

MANUFACTURERS OF





ALL KINDS OF

BASKETS.

THE OAKVILLE BASKET COMPANY,

OAKVILLE, ONTARIO.

OFFICES: 100-102 Reade St., New York, U.S.A.

KEARNEY & FOOT CO

WORKS: Paterson, New Jersey, U.S.A.

Manufacturers of FILES AND RASPS.
Superior quality fully guaranteed.

CAPACITY OF WORKS: 1,200 doz. per day.



Illustrated Catalogue Price Lists mailed on application.

PLEASE MENTION THIS PAPER WHEN WRITING US. Agents, M. & L. Samuel, Benjamin & Co, Toronto.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer



ELECTRICAL
HOUSE -:- FURNISHINGS.

Bells,
Batteries,
Push Buttons.

The largest and best assorted stock in Canada.
Send business cards for discounts.

T. W. NESS,
749 Craig St., MONTREAL.

THE BEST
English Sporting Gunpowder
USE THE
"ALLIANCE"
PRIZE POWDER.
—Made only by—
Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.

Always obtainable from
Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.

The OLD WOODEN BUCKET MUST GO

Indurated Fibre Ware.



NO HOOPS, NO JOINTS, CANNOT LEAK, SWELL, OR WATER SOAK.

The E. B. EDDY Co.
MAMMOTH WORKS
HULL, CANADA.

..WIRE..

GALVANIZED, ANNEALED, OILED AND FENCING

Best quality, even weights, prompt delivery of import orders, lowest prices, write for quotations.

A. C. LESLIE & CO.

MONTREAL and TORONTO

"Burham"

PORTLAND CEMENT.

BEST ENGLISH BRAND MADE.

Canadian Consignees :

McRAE & Co.,

Ottawa and Toronto.

MUNN'S LIQUID GLUE

IS THE BEST.

Kennedy Bros., Agents

101 Bay Street, TORONTO.

Established 1864.

CLARKSON & CROSS,

CHARTERED ACCOUNTANTS

NO. 26 WELLINGTON ST. EAST

E.R.C.Clarkson,F.C.A.
W. H. Cross, F. C. A.
Edward Still.
John F. Helliwell.

TORONTO, ONT.

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.

GALVANIZED SHEET IRON. SP

FOREIGN CORRESPONDENCE.

Letters translated from or written in any foreign language.

I. H. CAMERON, 10 Front St. E

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	23½, 24½
Strip "	24½, 25½

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
Bradley M.L.S.		
I.C., usual sizes	$6 00	$6 25
I.X., "	7 25	7 50
I.X.X., "	8 50	8 75
Raven & P.D. Grades—		
I.C., usual sizes	4 50	4 75
I.X., "	5 50	5 75
I.X.X., "	6 50	6 75
I.XXX., "	8 50	8 75
D.C., 12½ x 17	4 00	4 25
D.X.,	5 00	5 25
D.X.X., "	6 00	6 25

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be purchased of 10c. per box less.

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	8 00	8 25
I.X. Terne Tin	10 00	10 25
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65,	

Tinned Plates

72x30 up to 24 gauge	6½	6¾
26 "	7	7¼
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$2 05	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼inch	$2 45
16 "	2 35
¾ " and thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2⅝, 2¾
26 "	2¾, 3
28 "	3 , 3¼

Canada Plates.

Blaina	¼	bright	2 75
Abercarne			2 75
Lion			

Iron Pipe.

Wrought 62½ p. c. to 62½ p. c. and 5 p.c. Galvanized, 35 to 37½ per cent.

Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	5¾ 6
" ¼ " "	5¼ 5½
" 5-16 " "	4¾ 5
" ⅜ " "	4⅜ 4⅞
" 7-16 " "	4¼ 4½
" ½ " "	4 4¼
" ⅝ " "	3¾
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 14	0 14½
Lake Superior	0 13	0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in	$0 22	$0 25
" round & square 1 to 2 in	0 20	0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16	0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17	0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26	0 27

Braziers. (In sheets.)

14x6 ft, 25 to 30 lb ea, per lb	0 20	0 22
" 35 to 45 " "	0 19	0 20
" 50 lb and above per lb	0 18	0 19

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21	
Spun " "	0 25	

Wire.

Pure, in coils—		
From 1 to 20 gauge	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20	0 21
" " 27 to 30 "	0 23	0 25
" " 30 and up	0 26	0 28
Sheets, hard-rolled 2x4 ft	0 21	0 23

Zinc Spelter.

Foreign, per lb	0 05½	0 05¾
Domestic "	0 05	0 05½

Zinc Sheet.

5 cwt casks	0 06	0 06½
Part casks	0 06½	0 06¾

Lead.

Imported Pig, per lb	0 03½	0 03¾
Domestic "		0 03¾
Bar, 1 pound		0 05
Sheets, 2½ lbs, per square ft, by roll	0 04¾	0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¾	0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

Half-and-half (guar.) per lb	0 17	0 19
Standard	0 15	0 18

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½	0 14
Other makes "	0 13	0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per lb	5	5½
No. 1 Do "	0	5
No. 2 Do "	0	4½
No. 3 Do "	0	4

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1	10
2nd qualities "	0	90

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 14

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35	1 40
" " (J.F.L.S.) "	2	75
Venetian Red (R.C.2) "	1	50
Ven Red, Cookson's "	1 90	1 90
English Oxides per cwt	3	25
American " "	2	25
Canadian " "	1	75
Paris Green, per lb	0 13	0 15
Burnt Sienna, per lb	0	08½
Burnt Umber "	0	05
do pure	0	08
Drop Black "	0	09
Chrome Yellows "	0	12
" " Lemon pure, 8 lb. tins, per lb	0	19
Chrome Greens "	0	12
Golden Ochre	0	03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0	65
Extra "	1	00
Brown Japan "	0	65
Brown Japan, Turpentine p. gal.	0	90
No. 1 Carriage "	1	50
Gold Size Japan "	1	40
Pure Orange Shellac "	2	00
Hard Oil Finish "	1	50

Linseed Oil (in bbls)

Raw, per gal	0 56½	0 57½
Boiled "	0 59½	0 60½

Turpentine (in bbls)

Selected Packages, per gal	0 50

Castor Oil.

Best, per lb	0 07½	0 08½

Cod Oil.

Cod Oil, per gal.	0 48

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet makers	0 17	0 18
White	0 16	0 17

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50, 50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 37½, 40 per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 and 5 pc.

Wrought Steel.

Fast Joint, dis. 65 & 5 to 65 & 5 pc.,
Loose Pins, " 65 to 65 & 5 pc.,
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 40 to 45 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.40	2.70	2.00	
26 to 40	1.50	2.90	2.25	
41 to 50		3.30		5.00
57 to 60		3.60		5.50
61 to 70		3.90		6.00
71 to 80		4.50		6.75
81 to 85		5.20		7.50
86 to 90		5.90		8.50
91 to 95				9.50
96 to 100				10.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 90
Enamelled " 0 55 1 20

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross..... 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw and Strap, per lb .. 0 03½ 0 04½
Per doz. sets
Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.
Per doz. pairs
Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

BOWMAN, KENNEDY & CO.,

LONDON, ONT.

Large consignment of WINDOW GLASS via "Pickhuben," just unloading at our Warehouses.

Full assortment of sizes now on hand. Prompt shipment Guaranteed.

SEND US YOUR ORDERS AND THEY WILL HAVE GOOD ATTENTION.

Wrought Hooks and Staples, Amer- dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padock, Am. per gross..... 1 60 4 75

Knobs.

Door, japanned, and N.P , Can. list dis, 50 p.c.
Bronze, Berlin, per doz .. 2 75 3 25
ronze, Gem, " 6 00 9 00
ass " 8 75 10 00
hutter, porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy.....	2 30
40dy.....	2 35
30 dy.....	2 40
20, 16 & 12 dy.....	2 45
10 dy.....	2 50
8 & 9 dy.....	2 55
6 & 7 dy.....	2 70

2. American Pattern Only

from 4 to 5 dy	2 90
3 dy. (lath).....	3 30

3. Canada Pattern Only

from 4 to 5 dy	2 80
3 dy. (lath).....	3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pamp, per doz 12 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz..... ... 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Star R & L Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... .... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	22	25
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 0 75 0 85
" N P. " 1 00 1 10

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.

Hack, complete, each.... 1 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P , dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P,, 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, " 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps,

Harness, German, p. gro. 1 65 5 50
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia ¼ gross boxes..... 3 25
" ½ and ½ gross boxes per gross net cash..... 12 00

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2, " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 9 06
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 57½ per cent.

Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P. S. & W., 10 p.c. advance on American list.
Canadian 10 per cent dis.

Tinware.

Stamped, dis. Assn list, 70, and 12½ per cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Washers "Iron," 40 per cent., 4 mos., or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
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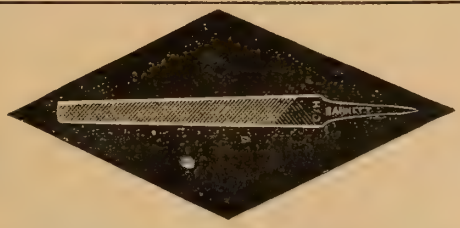
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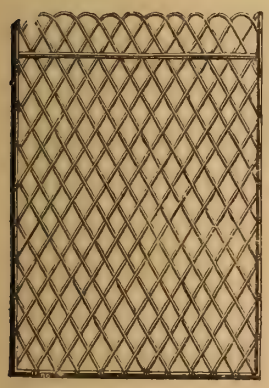
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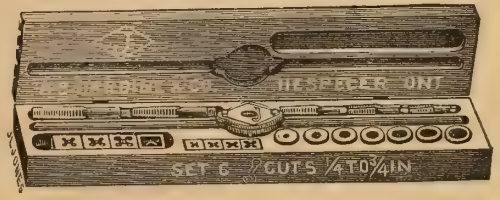
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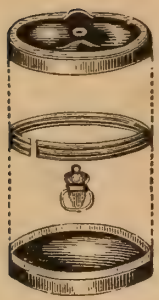
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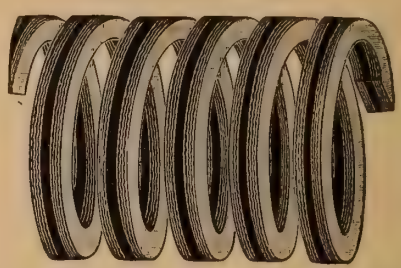
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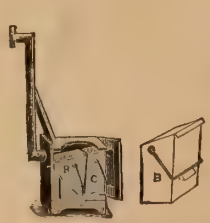
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VOL. V. TORONTO, FEBRUARY 11, 1893. No. 6.

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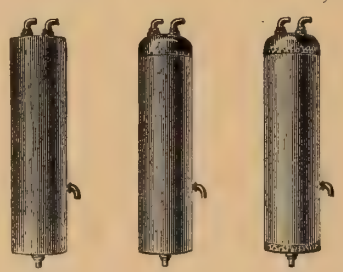
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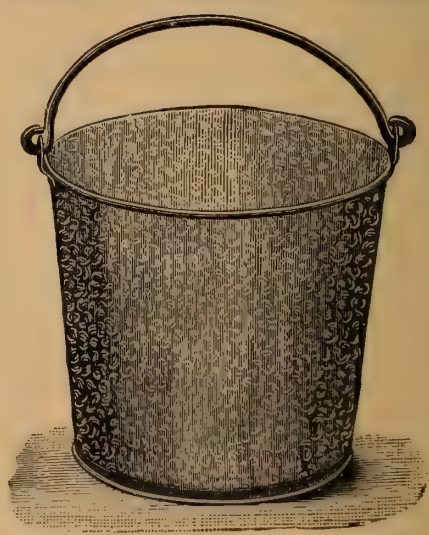
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Vol. V. TORONTO, FEBRUARY 11, 1893 No. 6

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The visit of Mr. Moorhouse, the representative of a New York ironworkers' syndicate, to this city regarding the establishment of smelting works on Ashbridge's Bay, may or may not result in anything, but it is an indication that there are capitalists outside the city who are taking some interest in the matter. The city of Toronto is favorably situated for such an industry. Communication with the outside world by lake and rail is excellent, and we are within reasonable distance of fuel fields. An influential company, with a provisional board of directors, has been in existence here for some time, but nothing practical has yet been done. About a year ago it asked the Ontario Government to bear the expense of ascertaining the probably paying qualities of the iron ore in this province, and to otherwise financially aid the establishment of smelting works. Since then nothing has been heard from the government, and next to nothing from the company. The latter advances as an excuse for its inaction that it is awaiting the decision of the Government. The city, on the word of Mayor Fleming, will not grant a money bonus, but would deal liberally with responsible parties who may desire to establish works on the reclaimed land in Ashbridge's bay. The extent of this liberal dealing has not yet been defined, but it will probably mean a free site and at least a reduction in taxes and water rates. But in the meantime Ashbridge's bay has got to be reclaimed. And after years of agitation it is gratifying to know that there is a probability of the work being commenced before many more months have elapsed.

* * *

Outside of nickel the mineral production of the country has been almost stationery during the past few years. Iron ore is found in great abundance and variety in all the provinces of the Dominion except Manitoba, but in spite of this the total production in 1891, the last year for which there is an available record to hand, was only 76,511 tons against 78,587 tons two years previously. Nova Scotia was the only province which did not show a decrease. In regard to Nova Scotia, it is the most blessed by nature for iron industries, the three essentials, flux, fuel and ore, being found in closer proximity than in any other province in the Dominion. But even there the development has not been what the circumstances would warrant. In the face of sluggish markets it seems strange that the development of the iron industry of the country has been so slow. Lack of capital and the evident diffidence of those who have money to invest it are probably the principal reasons. It cannot be for the want of raw material, for of this we have enough and to spare. One cannot, however, fail to realize that such unlimited resources as the country is blessed with must ere long be developed more extensively. Anyhow it is only, comparatively speaking, within the last few years that the world obtained any idea of the vastness of the mineral resources of the country, and it takes a lot of judicious advertising to draw the attention of capitalists to this or any other industry before it can be made a success. Yes, and in regard to this particular industry more so than in any other.

* * *

Mr. Nicholas Flood Davin, M P. for West Assiniboia has given notice of a bill to abolish the privilege of grinding in bond. The privilege has been in force since 1880. Mr. Davin, in introducing his bill, was not travelling exactly along the line of facts when he intimated that the privilege was granted Ontario millers because they could not at that time get enough wheat in this country to keep their mills running. What it was really created for, was to ensure to the miller a supply of wheat, whereby he might be able to compete, on an equal footing, with his American confrere in the British market. At least this what the millers themselves contend. Under the present system, if Canadian wheat should rise in value above that of the American the miller in this country can send across the border, get the wheat he desires, run it through his mill in bond and then export the product to Great Britain on the same basis as the miller across the line. From what we can gather there has practically been no wheat ground in bond during the last year or so, but the millers are loath to part with it nevertheless. "I look upon it as being something like a safety valve, we may never have any further use for it, but if we should we would want it to act quickly," said one miller to the HARDWARE.

* * *

The millers also contend that the privilege of grinding in bond tends, in the long run, to ensure a better price to the Canadian farmer for his wheat. And they reason something like this: "It is well known that you can get a better price for an article that is always before the public than you can for one that is only on the market occasionally. Well, then, supposing these grinding in bond privileges were taken away and the price of Canadian wheat was to reach a point which would prevent our selling flour in the British market as cheap as the Americans, what would be our position? Why it would simply mean that we would have to cease exporting till prices dropped sufficiently to enable us to again ship at a profit. But in the meantime we would have probably lost

our grip on the market there. The result would be that we would be compelled to accept proportionally lower prices, and of course we would in turn have to pay the farmer less for his wheat."

* * *

The position of red clover is such that those who are handling the article will do well to exercise a good deal of care. The lightness of the crop in the United States last year has enabled certain speculators to get it in a corner. It seems that the greater portion is held in Toledo, a centre of one of the red clover growing districts. The effect of this corner has been to greatly excite the Canadian as well as the United States market. The western parts of the Province of Ontario is particularly agitated, and exceptionally high prices are being paid by those who have caught the speculative fever. Those who seem to be the most affected outside the producers are country merchants. The big seed dealers profess to be little concerned, and they are refusing to pay more than what they consider the legitimate value. Corners are as a rule uncertain things, for there is no telling when the barriers that enclose them may be knocked away, and the less faith one pins in them the better.

* * *

A good many merchants lose accounts because they are diffident. An account should be presented as soon as it is due. No man ought to be timid about asking for what is his own. The retailer should remember that he has obligations to the wholesaler that he must discharge, and this he cannot do unless he is prompt in his demands upon his customers.

* * *

Good country roads is the desideratum which about every municipality on this continent is seeking. The New York World has taken such an interest in the matter that it has sent out an exploring wagon for searching out bad roads in the neighborhood of the city. Good highways are only a question of money and time.

* * *

It is seldom that business men are without a grievance of some kind. The particular grievance of the moment is against the railways. Up to within a few months ago it was customary for the railways to deliver without extra charge all goods carried over their lines. Now, when the consignee receives his bill of lading he notices that, in addition to the usual freight rates, he is charged so much per hundredweight for cartage. When this first occurred the carters were naturally asked for an explanation, and their answer was to the effect that they neither had a hand in imposing the charges, nor did they receive any benefit from the same. The railway companies were next interrogated, and the sum and substance of their reply was that where hitherto goods had been delivered at the warehouses free, it was now proposed to charge for the same. Consignees contend that merchandise was never in reality delivered free, but that the cost of cartage was taken into consideration when the freights were being fixed, and, therefore, that the charge now imposed for carting goods from the railway to the warehouse is merely a roundabout way of raising the freights. There is a good deal of discontent about the matter.

* * *

COMBINE ON WHITE LEAD.

It is understood that the white lead manufacturers of the Dominion have at last succeeded in forming an association. Its object is to regulate prices.

For some months the white lead trade has been in a demoralized condition. In the eagerness to secure business prices were slaughtered with a recklessness that betokened desperation. Sales were frequently made at less than actual cost. The pace finally became too fast for some of the grinders, and they practically retired from the contest, refusing any longer to at least push business under the prevailing conditions. In the meantime overtures for peace began to be thrown out by the different manufacturers. Several meetings were held to pave the way for the final chrystallization of their object. This was accomplished this week in Montreal, several grinders from here being present at the ceremony. The association, it is understood embraces all the white lead manufacturers in the Dominion. These are thirteen in all, and are as follows: James Robertson & Co., Toronto Lead and Color Co., Ontario Lead and Barb Wire Co., Lyman Bros. & Co., of Toronto; A. Ramsay & Son, Canadian Paint Co., William Johnston & Son, P. H. Dodds & Co., Robertson & Son, of Montreal, and the Ottawa, Halifax and St. John, N.B., factories. West of Toronto there are no factories. It is the general opinion among the trade that the cutting of prices in the first instance was induced by a desire to force the formation of a combine. Notwithstanding this, however, it is said to have taken a good deal of persuasion to bring all the grinders into line.

Under the agreement entered into the price of white lead has been fixed at 5 1-2 cents per pound, and all other grades in proportion. Ready mixed paints were subsequently considered by the mixed paint manufacturers, and price arranged for pure goods at $1.20 per gallon for ordinary colors, and second grade goods at $1 per gallon. Carriage varnish, coach colors, and all other lines have entered into the agreement and a small advance has been made on all prices.

A GOOD INDICATION.

It is a healthy sign of growth when a business outgrows the dimensions of the store, warehouse or office. This is the position in which Mr. H. D. Simmons, the well-known manufacturers' agent, found himself, and a few days ago he removed his offices and sample rooms from 74 York street to No. 85 in the same street. His new premises are situated in the Rossin block. They are the beau ideal for a manufacturers' agent, and their original aptitude has been increased by the construction of a suite of convenient and attractive little offices. The private office of Mr. Simmons fronts immediately on York street, and the eyes of the curious on the street have been cut off by a natty little curtain. This curtain also proves an attractive background for the display of the celebrated Goodhue belting, which is artistically arranged in the window. A tasty linoleum covers the floor of the office, and the furniture is in keeping with the general surroundings. It looks as if the trained hand of a woman has had something to do with the arrangement, so inviting is the general appearance.

Mr. Simmons has been in business as a manufacturers' agent for ten years, and from a small beginning he has worked up a large and extensive trade. Among the firms he now represents are: J. L. Goodbue & Co., leather belting, Danville, Que.; Globle File Manufacturing Co., of Port Hope; Alex. McArthur & Co., tarred felt, building paper, etc., of Montreal; Peck, Benny & Co., Canada Rolling Miss, of Montreal; Sheppard Hardware Go., of Buffalo, N. Y.; The Belgium Syndicate, importers of iron, metals, window glass, etc. The leather belting and files he keeps on stock on the premises, samples of which are tastefully arranged in glass cases, etc., along the north wall. The stock of paper is kept in a down town warehouse. The large plate glass window in the front of the office is decorated with the firm name of Peck, Benny & Co., and the class of articles it manufactures. It is decidedly attractive.

WILL THERE BE CHANGES ?

The subject that is agitating the minds of the iron trade in Montreal is, What readjustment does the Government propose to make in the tariff regarding the iron duties ? There are apprehensions in some circles that changes are intended, and the fact is interfering with business in certain lines for delivery a long way ahead. For instance, there is an indisposition to place orders for either pig or bar iron until something definite is known in regard to the matter. A canvass of the trade reveals the fact that although they want to be certain, they do not consider any change probable in the duty on pig. With regard to bar iron, however, they are not so certain, but if any change in this connection is intended it is likely to have strong opposition, owing to the strength and powerful influence of the various concerns interested in having the duty maintained. The merits of the case have already been gone into in these columns, so that repetition is needless, but in the meantime the uncertainty is seriously interfering with business and the trade generally will be glad when the budget has been brought down and it is over.

CONSUMERS CORDAGE COMPANY.

There has been considerable discussion regarding the Consumers' Cordage Co. owing to the recent offer of its stock on the market and its relations with the National Cordage Co. of the United States. Mr. R. D. McGibbon, the counsel for the Consumers Co. in Montreal, has been writing to the press to correct some misapprehensions in regard to this and other points, and has requested HARDWARE to do the same.

Speaking to its Montreal correspondent last week, he said that the Consumers' Co. is and has always been controlled by Canadian parties, and that it is not increasing its stock, but simply offering, as its "ads" state, some of its regular issue for sale to the general public. In fact its directors, the majority of whom reside in Canada, are simply trying to give their fellow-citizens a chance to share in the "enormous profits" that the company are said to be making. Only one of the mills controlled by it is shut down, while the establishments in Montreal, Brantford, St. John, Port Hope, Toronto and Halifax are all in full operation, the exception, the Lochute, being closed for good and sufficient reasons.

In fact, the company's endeavor is to be fair to all parties, according to Mr. McGibbon, and the attacks upon it he characterizes as a tissue of falsehoods. Its employees are all Canadians ; its customers, if they have any reason for complaint, do not say so, and there has been no watering of its stock.

CANADIAN MANUFACTURERS ASSOCIATION.

At the annual meeting of the above association held Tuesday in the Canada Life building, this city, the keynote of President McNaught's address was preferential trade with Great Britain, which he thought, if obtainable, would assist in building up the Canadian North-west. "The national future of Canada does not in my opinion, depend upon the good will of other countries so much so as, under Providence, what her own people make it. If we are but true to ourselves we need have no fear of what the future has in store for us," were his concluding sentences.

The association protested against the employment of convict labor in any manufacturing industry ; approved of a Dominion Insolvency Act, and expressed the opinion that the government should "grant a subsidy sufficiently large to guarantee the establishment of a fast Atlantic steamship service between this country and Great Britain."

These officers were elected : President, John Bertram ,of Dundas ; first vice, P. W. Ellis ; second vice, W. H. Law, of Peterboro'; treasurer, George Booth ; secretary, J. J. Cassidey ; Chairman of executive, F. Nicholls ; chairman of Tariff Committee, R. W. Elliot ; representatives on board of Industrial Exhibition, J. J. Cassidey, W. R. McNaught, R. W. Elliot, G. Booth, S. May.

HAVE ASSIGNEES HAD THEIR DAY ?

We live in a period of evolution. For years the official assignee has been a prominent figure in the commercial world. He was a necessity of the age, and upon the misfortunes of others he lived and thrived. In the settlement of difficulties between debtor and creditor he was called in as counsellor. When the debtor, weighed down by his burdens, could carry on his business no longer, the assignee was placed in charge. When the estate was to be wound up on him devolved the duty.

During the last five or six years the number of assignees have increased at a rapid rate. The influx to the profession was induced by the large number of failures from time to time occurring. Accountants saw in it an opportunity for making more money, and into the business many of them launched. As in other professions, some were successful but a good many were not. They could not all, like Cæsar, say : "I came, I saw, I conquered."

During the last twelve months or so there has been a marked decrease, not only in the number of failures, but also in the average of liabilities. As a result there came a falling off in the demand for assignees. Some of them did not get much to do even in the days when the crop of business failures was large ; under the altered circumstances they could not glean enough "wherewithal they might be clothed." Some of them, as a consequence, have gone out of the business altogether, while with others the assignee branch has become a secondary consideration, their energies being devoted to the cultivation of expert accountantcy, such as auditing and the supervision of books. Even the largest assignee firms in this city have had recourse to this plan, and they seem to be finding plenty of employment in this sphere for their talents.

GOSHEN SWEEPER CO.

A representative of this journal, while on a western trip a few weeks since, had the pleasure of interviewing F. Letellier, secretary-treasurer of the Goshen Sweeper Co., Grand Rapids, Mich. This company moved to Grand Rapids two years ago from Goshen, Ind., where it gets its name. They are located in a large factory 60 by 100, and equipped with special machinery to manufacture sweepers. Their trade has since increased some three fold. The special features of their sweeper are simplicity and lightness of construction. Until this season the trade in Canada have not been called on by a representative of the company. — J. Jeandron, 3 Wellington st., east, has been appointed agent for Ontario and Quebec, and will shortly call on the trade showing samples.

'TWAS ON THE WHOLE DISAPPOINTING.

The Ironmonger, in an article reviewing Great Britain's trade with Central and South America and the West Indies, sums up as follows : It will be observed that in hardware and cutlery there was a slight decrease in 1892 as compared with 1891, and a rather large drop as compared with 1890. In bar, angle, etc., iron there was a satisfactory increase with the Argentine Republic, which is the only country in South America separately distinguished under that head. In railroad iron and steel of all kinds there was a great falling off, the total for 1892 being much less than half of that for 1891, and not one-sixth of that for 1890. The shipments of wire also fell off considerably. In hoops, sheets and plates there was, however, a very good increment, both with Chili and the Argentine. The shipments of galvanized sheets in 1892 were the largest in the three years, and were very appreciably more than in 1891. In cast and wrought iron the total was somewhat lower than in 1891, and little more than 50 per cent. of the total for 1980. In all kinds of machinery and millwork there was a marked falling off, but this was more noticeable with Brazil than with the Argentine Republic. Thus for the year 1892, as a whole, our South American trade was disappointing, yet it is gratifying to be able to obtain gleams of hope from the December returns, and to infer that the reduced premium in gold at certain South American centres is an indication of growing stability and recuperation generally.

OUR LONDON LETTER.

London, 28th Jan, 1892.

BIRMINGHAM TRADE.

There is a trifle more doing now in the hardware branches, travellers having resumed work, and sent home a few orders. Patterns are now being got out for the coming season's goods. The home and foreign railway companies are sending in some good orders to rolling stock makers, but prices are very low. There is a good trade passing in foundry work for engineers, but iron founders and metal rollers are not so well off. The strike in the iron plate trade continues, and there is no immediate prospect of settlement. These men have gone over to the large army of unemployed, which is numbered locally at about 10,000 men. Makers of nuts and bolts are doing little. There is a steady recovery in the manufacture of coffin furniture. Both light and heavy branches of the steel toy manufacture are dull. Seamless steel tubes are in better request. Irregular employment still continues in the iron trade of the district. There is no official change in the price of any class of iron, but quotations are weak and irregular, and great competition exists for the few orders going.

THE MIDDLESBOROUGH TRADE.

The tendency of prices of pig iron is towards a downward grade. Shipments of pig iron to Scotland have been smaller this month than last. Connal's warrant stock has not shown the same rate of increase as last month. The addition to the stock amounts to 450 tons. There is still an entire neglect of forward business with the pig metal market. The outlook generally gives but little encouragement for the future.

NEWPORT TRADE BRIGHTER.

There is a better feeling in the metal trade of this centre. The booking of orders has been of a more satisfactory nature than heretofore. The labor market in this town is also better, less friction prevailing between the colliers and the colliery owners. A good understanding between employer and employed is certain to lead to improving results during the year. The rail trade shows signs of wakeing up; some of the mills in this line are doing more than they have done for years. Of course, this cheering state of things is sure to affect the minor industries in a favorable way.

TRADE STILL DULL IN SHEFFIELD.

There are very few signs of a revival of trade in the old centre of cutlery manufacture. The makers of light goods are well employed, the table knife makers being very prosperous. The introduction of American zylonite as a substitute for ivory has stimulated this branch of cutlery. The scissor trade has improved, but the pen and pocket-knife departments are not so well engaged. There is nothing much doing in the heavy metal trades. There is a quiet demand for steel for spindles and other parts of machinery used in the cotton goods trade, due of course to the strike in this department of the textile trade. A good many men are idle, and relief committees have been formed to meet the distress. Up to the present time we have had but few signs of returning prosperity, and the only ground for hope appears to lie in the knowledge that stocks are getting low everywhere. I informed you some time ago that the Sheffield people were thinking of forming a chamber of arbitration to deal with disputed cases without having resource to the divorce courts. Information just reaches me that at a meeting held there a few days ago it was decided to establish a chamber similar in principle to the London Board of Arbitration. I gave you an outline of the latter body in a recent communication.

THE RAILWAY RATES QUESTION.

The action of the railway companies in raising their rates to traders sending goods, is giving rise to a good deal of angry talk on the part of manufacturers. It is likely that the railway companies will juggle with the revised scale of rates and make reductions that will be more apparent than real. Of course, in the home market, it will be the poor consumer or purchaser who will suffer, because the manufacturer will simply raise his price to the retailer, who in his turn will clap on an extra 10, 15 or 20 per cent. to the article. Curiously enough we won't have protection, as such under that name, but it is permissable for the railway companies to protect their interests at the expense of the public. The new rates hit the hardware men very heavily, and some of the Staffordshire hardware firms say that they will have to give up certain branches of the industry if the new rates are to be upheld. In many cases they are doubled, and in others from 10 to 30 per cent is put on to the old list.

NEW CATALOGUES FOR 1893.

Our makers of hardware will be getting out their season list very soon. There has been nothing new for some time, and anything attractive would "catch on" well. There is a fancy among "people for brass things—such as brass candelebras for pianos, etc., and a good trade might be cultivated in London alone for such lines. Anything fanciful takes the fancy now-a-days.

THE EARLY CLOSING MOVEMENT.

I am glad to see that the early closing movement is progressing in Canada. It is certainly doing well in England, where the bulk of the shops (except refreshment houses) are closed one evening a week, and sometimes from 1 or 2 p.m. Judging from what I have seen in the matter I don't think the shopkeepers are one single cent out of pocket through it. Life is getting to be such a struggle that one must have a little recreation. People shut up in a shop or a store from 8 a.m. until 10 p.m., as they have been there every day in the week, and 12 p.m. on Saturdays, surely want a change once in seven days. If it is to become absolutely general in England it will be by the voluntary system, and not by the Legislature passing an act. People here don't mind closing of their own free will, but they like to have the option.

THE VALUE OF SILVER.

Silver, in its relative value to gold, has varied greatly at times. In the days of patriarch Abraham it was eight to one; B.C. 1000, it was twelve to one; B.C. 500, it was thirteen to one; at the commencement of the Christian era it was nine to one; A.D. 500, it was eighteen to one; in 1100 it was eight to one; in 1400, it was eleven to one; in 1554, it was six to one; in 1551, it was two to one; in 1600, it was ten to one; in 1727, it was thirteen to one; in 1880, it was fifteen and a half to one. It maintained the latter ratio until 1872, when it began to rise, and in 1876 it attained to twenty to one; it soon after gradually declined, then advanced again, and August 1, 1886, reached the highest point ever known, since which time it has gradually declined to twenty to one.—Ex.

IRON CASKS.

According to experiments which hav been conducted by Herr Arthur Holle, o Munich, with a view to manufacturing iron casks suitable for transport purposes, it is demonstrated that simple coating of the interior of the barrel with various kinds of lacquer, enameling, and also tinning, zincing, nickeling, and coppering are unsuitable. In the end the German technologist found that the lacquered sheet-iron was best adapted to the object in view, but he endeavored, at the same time, to secure a fitting insulating coating by means of an intermediate layer. Strong paper, it was shown, became decomposed; the use of thin gauze material was also pronounced to be impracticable. The best intervening agent proved to be silk paper.

The operation of applying the coating was as follows: The interior of the barrel was first lacquered; the tissue paper was then evenly put in position with the aid of some varnish, and finally it was furnished with a finishing coat of lacquer. The covering thus obtained resisted the influence of heat, moisture, and of acids which were much stronger than those contained and developed in beer. It is to be noted that a special kind of lacquer is used, so that the fluid may not savor of the varnish.—London Iron.

A REMEDY FOR STEAMY WINDOWS.

A correspondent of The Metal Worker submits a sketch of a show window that is apt to be obscured by steam, and enquires if the plan which they think of trying is likely to remedy the defect. The plan is as follows: We are thinking of putting in a small gaspipe, with outlets in it, as shown in the plan, so as to allow the heat from 1, 2, or 3-foot burners, as it may require, to pass up along the window. The window is for the display of fancy hardware, and we cannot allow any air in it at all. There is a lamp on the outside, but in cold weather it leaves a large circle where the heat strikes. In commenting upon this idea, The Metal Worker remarks: If our correspondent finds it so necessary to prevent all circulation of air within the window, we do not see how he expects to get any very lively stream of warm air from the burner he describes. Of course, if holes are provided at the top of the window there will be a current of warm air rising along the glass that may prevent the trouble he refers to. It must be borne in mind, however, that unless the funnel is brought well down over the flame so as to act as a chimney, the heated air will not travel through the pipe in any great quantity. Furthermore, the apertures nearest the funnel will flow most freely, and the further end of the pipe will receive little, if any, warm air. For this reason the holes should increase in size away from the gas flame. We have never seen plans referred to by our correspondent tried, so cannot speak from the point of experience. A great many remedies have been suggested for steamy windows, one of the most common being to take a double window, and permit the air to circulate between the two plates of glass or sashes, as the case may be. In this way the place for the display of the hardware articles can be kept tight, and at the same time the circulation of air carried along the inner face of the outside window will prevent condensation.

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THE HISTORY OF THE FORK.

Speaking of the fork, says C. Andre, in the Revue Professionelee, an interesting dscussion has been raised between M. Sardou and M. Carcel, the Director of the Cluny Museum. In the course of his beautiful drama, Theodora, the eminent dramatic author, places a fork in the hands of the wife of Justinian, and researches into the history of the useful utensil has become the mania.

The introduction of the fork is less an cient than one would believe, because it dates only to the 10th century. This little instrument originated in Italy, and the wife of Pietro Orseolo, Doge of Venice, appears to have been the first who made use of it; although it was a simple two-pronged affair, still it was considered by the historians of the age to be an unpardonable luxury of the Venetians of the 11th century. Until then only the simple sharpened rod was known, which is still employed by certain nations of Asia and Oceanica.

In the following century the fork passed from Italy and Europe. The first distinct mention we have of it is in the list of the silverware of the favorite of Edward II., Father Galveston, who owned sixty-nine spoons and three forks. It is stated afterwards that these forks simply served for eating pears.

Queen Clemence, of Hungary, in 1328, had thirty-nine spoons and one fork, and Queen Anna, of Bourbon, had a gold fork, which Charles V., of France, had inherited, and which he had adorned with precious stones. Besides this one he had seven or eight more, according to an inventory drawn up in 1380.

The silverware of the Chancellor Duprat, which was by experts valued at 33,848 livres, a large sum at that time (15,36), included only one fork, but two dozen of spoons. Also the inventory of the goods and chattels of the Prince of Conde speaks of only one silver-gilt fork.

The use of the fork became more common in France during the 15th and 16th centuries. Certain museums of national antiquities possess small wooden and ivory forks, to which the bowl of a spoon could be readily affixed.

Gabrielle d'Estrees had twenty, eight of which were silver, with coral handles. The beautiful favorite, it is said, simply used them for toasting her bread; in all other cases she prosaically ate with her fingers, as the Prince of Conde himself and all the grand seignors of the court, as well as the common people did.

The use of the fork was at first considered as something scandalous; a curious pamphlet attacks the minions of Henry III. in the following indignant strain: "In the first place, they never seize the meat with their fingers, but they use forks for the purpose, by which they convey it to their mouths by advancing their neck. They also eat their salad with forks, in spite of all difficulties, because it is forbidden to touch a dish with the fingers, and they prefer to touch their lips with this little instrument."

Before the introduction of the fork in good society, there existed a code of good manners for people of good society; one rule says that at table the party must seize the food with three fingers, and that he must avoid touching his nose with the food-conveying hand for fear of being considered a boorish person.

What a revolution has been accomplished in our style of living, and how far are we removed from those barbaric times; yet barely three centuries separate us from the epoch when the English called the traveller, Thomas Conyate, a madman, because he had introduced among them from Italy so useless a utensil as a fork.

TAKE TIME.

Every day you hear some business man or merchant complaining that he gets no time for doing thus and so. It is a very convenient excuse for negligence or lack of a proper system of working. The fact is, there is a time for everything under the sun, if people will only take it, by seizing time by the forelocks as they should. A man has no business to work at anything that he has not ample time for doing, and doing well. If a business man gets insufficient time to attend properly to all the details of his business, there is something radically wrong with his system, or in the running gears of his establishment, that should be righted at once. He lacks sufficient help in some department, or is practicing false economy, or else wasting time somewhere.

Some people foolishly fancy that they get no time for any rest or recreation, they do not even find time to eat or sleep properly, but get so wound up in their business that they fly around like a buzz saw, and those nervous, restless mortals are never still. They are a sort of animated perpetual motion machines. There seems to be no happy medium; people either wear out or rust out, and one way of giving out is as bad as the other.

There is a vast difference between the systematic, methodical, regular, steady-going business man, and the one who flies around until he flies off the handle, and never gets time to properly oil up. These are they who fill our lunatic asylums, or plod around as poor nervous dyspeptics and drop into an early grave, because they never got time to attend to nature's laws. Old father Time reaps them in with his keen-edged scythe, and they are harvested before they are ripe. They have to take time to die, and it is only then that they get their long-neglected rest. The wise man of Holy writ said: "There is a time for all things, a time for rejoicing and a time to mourn."

The true business man never finds time too precious to waste in frivolous things, but he has always time for a pleasant word for those around him. He works like clockwork, and takes time to get around before he runs down. He keeps his hands busy as well. He never wastes time in long stories and useless talk argument. He works easily and smoothly because he is systematic. He finds time to eat his food with a relish, to sleep and rest, to get acquainted with his wife, and play with his babies. He never says: "I had no time to attend to that little matter," because he is punctual to the stroke. He is like a time-piece well regulated. If he does go on tick he is punctual to the hour. He strikes—"while the iron is hot." He keeps all his appointments and engagements to the letter, and those with whom he deals know that they can trust and depend upon him. He is a good time-piece, and all men look up to him with confidence, that they will never be too late for the train.

It is not steady work that kills. It is nervous, fretful worry. It is letting your clock get too fast or too slow. It is getting out of plumb with the world. My friend, if you are a business man, keep your works clean, well regulated and balanced. Mark time as you go, and do not get wound up too tight, or fly off your balance, until the mainspring of life has worn out by time's unceasing stroke, the wheels have ceased to revolve, and the clock has struck, "never to go again," until it is prepared by the great Creator.—Detroit Herald of Commerce.

SMOKELESS POWDER AND MAGAZINE RIFLES.

Report of a lecture delivered before the Toronto Military Institute, Feb. 3, 1893, by L. G. Duff Grant, F. I. S., Secretary of the Smokeless Powder Co. of London.

Few subjects have attracted more attention during the last few years than that of smokeless powder, one reason of this being, I have no doubt, that there are few subjects of such universal interest, embracing as it does not only the manufacture of the substance itself, but the whole machinery and theory of fire arms, shot guns, rifles and artillery, to say nothing of the vast uses it can be put to in mining and engineering in general.

The subject before us is far too wide to be dealt with in a single paper or lecture. If I lectured for a whole week on the subject I am sure there would be one-half left unsaid. To-night I purpose first just to glance at the reign of black powder and at the causes that have led to its overthrow, for there is no doubt that the days of Shakespeare's "villainous saltpetre" are numbered, then to touch lightly on the weapons now being mostly used with smokeless powder, especially for military purposes, and on the various smokeless or rather nitro powders now in existence, and then to deal with the history of the particular powder in which I am most interested.

It is a notable fact that in the history of human progress when something new is demanded by any change of existing conditions, it is certain to make its appearance. There is no exception to this in the matter now before us. The rush of inventions in substances which for centuries have been looked upon as already perfected seems marvellous, and as if a new light had been suddenly thrown upon a branch of science which had hitherto lain hid in obscurity.

The old and time-honored black powder is so well known that it would be unnecessary to make more than a passing reference to it, were it not that the qualities of the new chemical and scientific compounds cannot be fully set forth without giving a brief description of the old. Dismissing the legends as to its Asiatic origin and the rival claims of its European inventors, for it is of little consequence as far as we of this generation are concerned, whether it was invented by Roger Bacon in 1292 or by Schwartz in 1320, it is enough for the present purpose to state that it was first used in England for military purposes in the year 1346, exactly 500 years before the invention of gun cotton—so that it enjoyed an uninterrupted monopoly of five centuries. During the whole of that period no important improvement was made in its manufacture, except that of its granulation, this being comparatively modern, and of late years carried to an extreme extent, so that black powder is now made with grains much finer than mustard seeds on the one hand, and larger than walnuts on the other, with wide diversity in the shape of the greater sizes. This diversity in size and shape is intended to govern the rapidity of combustion, which becomes slower as the size is increased; and the requirements of modern artillery, strange though it may seem, demand a slower and slower rate of combustion, which, in black powder, is attended with a corresponding increase of smoke.

The force of all explosives is created by the sudden formation or ignition of more or less elastic gases. These, while occupying marvellously small compass when confined, swell to immense proportions on being set free. An expansion of 1,500 times their previous bulk has been commonly received, but as so much of this depends on the temperature, there is great diversity of opinion on this point, and also on the amount of pressure exerted on the fire arm and the projectile, as calculated upon the square inch of the chamber of the gun. Authorities differ on the carbonic acid and oxide gases contained in black powder, but the following list of gases evolved in expansion will I believe, be found as nearly exact as possible: Carbonic oxide, 20.12 (elastic—some authorities give about 25); carbonic acid, 0.94 (non-elastic—some authorities give over four times this proportion); nitrogen, 9.98 (extremely elastic, up to violence); sulphuretted hydrogen, 0.18 (non-elastic); marsh gas, hydrogen, and oxygen, in all 0.16—total gaseous products, 31.38, and with 68.62 solid products by weight, gives the whole products as 100. It will thus be seen that black powders give less than one third of useful forces, no less than over two-thirds being inert or detrimental. The advocates for the nitro compound explosives or "smokeless" as they are now generally called, assert that the inert products of the black powder are instantly recondensed, and it is greatly this which unduly heats and fouls the gun barrel and causes recoil. Black powder, I need hardly state, is a mechanical mixture of saltpetre, charred wood, and sulphur, in the several proportions of, say 78, 12 and 10 parts in the hundred, and of those the last is held to be the chiefly detrimental one, and therefore the one principally to be got quit of. With the above startling disproportions in the useful and useless product, sooner or later science must step in to adjust them, and the wonder is that this movement has been deferred so long. The only explanation I can give of the delay, is that black powder has been so good and so reliable a servant, doing all the work hitherto required of it so well, that no change or improvement was sought for or proposed.

The task set for accomplishment was to get quit entirely, if possible, of sulphur, and to reverse the proportions of useful and detrimental products of combustion. This an Austrian chemist, Schonbein, endeavored to do by treating dry carded cotton with nitric and sulphuric acids, and in 1846 he announced his inventio. Schonbein, like many pioneers in invention, only narrowly missed the mark, and to him great honor is certainly due. He had actually aimed too high. His products were only too good, too refined, for the every-day work to be done in fire arms, for which certain conditions must be strictly complied with. His combustion was too quick for artillery, and after many attempts to lessen this rapidity gun cotton is now only used for blasting purposes.

The following table of the products by combustion of this wonderful, but ungovernable explosive, will explain much of its unfitness for fire arms:

Carbonic acid	33.86
Carbonic oxide	29.97
Marsh gas	4.28
Hydrogen	0.24
Nitrogen	13.16
Carbon	1.62
Vapor of water	16.87
Total	100.00

It is owing to its very large proportion of the extremely elastic nitrogen that gun cotton possesses such rending powers, nearly equal to one-half of the whole elastic forces of black powder, and it is this very richness that renders this explosive quite unsuitable for fire arms. The only solid product appears to be a little carbon and water, while the latter being converted suddenly into a highly elastic vapor, forming nearly 17-100ths of the whole, may add considerable to what the French appropriately term "la force brutale" of the explosion.

The next problem to be solved was how to bring this undoubtedly otherwise valuable force, as obtained from a nitro compound explosive under due control.

Chemists working in their laboratories and knowing the effect of certain chemical substances upon each other in producing explosion when ignited, seem to have unaccountably fallen into the error of believing that they had discovered forms of explosives of practical use. Readily enough obtaining an explosive mixture, and fancying their task accomplished, they rashly cried, "Eureka," while, in fact, they had only entered on the first stage of their work. As a proof of this, take the explosives containing chlorate of potassium. This substance is always a dangerous ingredient to deal with, so much so in fact that the manufacture of explosives containing it has now been made illegal in England. Yet no fewer than over 80 chlorate of potassium compounds have been brought out and presumably patented. Had the inventors of these consulted any sound authority great loss of money and much disappointment might have been prevented. It must be remembered that a practical gunpowder has not only to explode but also to fulfil certain stringent and widely different requirements. For this reason the next step was by far the most difficult and important if a truly reliliable explosive was to be obtained. The most likely manner in which this could be achieved was by the combined efforts of the chemist and the proficient in practical gunnery, seeing that the most highly scientific compound, from a chemical point of view, might be worthless from a practical—the latter being apparently the result is an overwhelming number of cases, and, as will be seen, the practical introduction and ultimately victorious advocacy of these new explosives are to be attributed to a Scotch gunmaker, who had unusual facilities for dealing with them.

Many of you, I have no doubt, know to whom I refer, for I believe that the name of the late Mr. J. D. Dougall, senior of the firm of J. D. Dougall & Son, gun and rifle manufacturers, of London and Glasgow, is almost as well known on this side of the "herring pond" as on the other. A few years ago, in England "Dougall" guns were all the rage. It was not an uncommon thing in the sporting field, when a man was not distinguishing himself with good shooting, to hear the remark, "you ought to get a Dougall."

It was about the year 1865 that the invention of Capt. Schurltze, an officer in the German army, who afterwards distinguished himself in the Franco-Prussian war, was brought to Mr. Dougall's notice. Had it not been so, probably Capt. Schurltze and his invention would have returned to the "Fatherland" and been heard of no more, and Schultze powder, now so well known, would have ceased to exist. Of course, it was not at that time an ideal or perfect explosive, but in such hands as those of Capt. Schultze, a born chemist, and Mr. Dougall, than whom no one possessed a higher knowledge of gunnery and gunpowder, its improvement was only a matter of time.

(To be Continued)

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MISREPRESENTING GOODS.

There is little question but that, theoretically, the average merchant subscribes to the highest ethics of shop-keeping, says the Michigan Tradesman. He finds, indeed, a certain moral satisfaction when giving his concurrence to the opinions of speakers and writers on trade topics, who assume to teach from an elevated point of view, and though it is a question when, after all, in the practical application of such theories, there is not a great deal of divergence from theory itself, possibly the temptation to have a lower code of business ethics than what is conceived to be absolutely just, has its strongest force in the matter of representing goods to customers.

An esteemed English contemporary suggests that "there is a song of a not very elevated character which carries the refrain, 'It's all right, if you love the girl,' and we fear," it adds, "there may be here and there a tradesman who sings as a lullaby to his own conscience. "It's all right, if you sell the goods.' But is it? Is it even all safe and prudent and good policy?"

While this may be regarded as shifting the question to a very much lower plane, it has the advantage of attracting more attention. Our English contemporary argues that the chief reason for a lowering in ethical consideration of the practical side of this question is that "we all know how to live uprightly and won't, whereas we do not know how to make fortunes and wish we did." It, undoubtedly, is true, that business morally has a much better chance, if the odds are in favor of its paying a dividend in hard cash.

The solution of this question in a way that deals fairly with the consumer and satisfies him, and justifies the merchant's own conscience, even when tried rigidly by the standard of the highest business ethics, is to handle only good goods.

We have no question that a man is a better man, better satisfied with himseld, better contented with his business, more successful in his business, more popular with his customers, and more likely to obtain larger custom, if he sells goods that he does not feel he is compelled to misrepresent in order to make them move. Good goods at fair prices, when put into practical effect, therefore satisfies not only the moral, but the material side of the merchant's life. There can be no possible reason why a merchant should not adopt that motto as his own, and put into practical operation. Poor goods at any price do not pay in the long run. Good goods at a fair price always pay.

NEGATIVE ATTRIBUTES OF THE MERCHANT.

A little boy once defined "salt" as "the stuff that makes potatoes taste bad when you don't put any of it on!" This delightful definition suggests that what not to do is as important a question in developing a success as the question of what to do; and suggests also that the negative qualities in a merchant's equipment may be as necessary to consider as his positive requirements, says The Keystone.

Let us name, then, some of these valuable negative methods of the proper merchant, confining ourselves to mental characteristics and ignoring, for the present, practical details.

He does not pretend to know everything; he conveys the impression to his customer that he absorbs wisdom from that customer on all subjects outside his vocation.

He does not dispute with the customer, for he knows that "to win the argument is to lose the sale."

He is not brusque to strangers. He cannot fathom the stranger's business in advance, and may possibly close the door to a good buyer.

He does not boast of his extravagancies. There are more men in the world of economical habits than there are spend thrift fools, and it is always well to "tie to" the good opinion of the good housekeeper.

He does not interrupt, does not look bored.

He does not call people "cranks" who disagree with him; for he knows that everybody, including himself, is a crank to some degree.

He is not fussy and demonstrative in his forms of politeness; and therein shows that he is well bred.

He is not ungenerous in his comments on competitors. He recognizes the wit of "damning with faint praise"; possibly he goes further and praises to the point that carries a conviction to the mind of the listener that such generous mention of a rival could only issue from assured prosperity.

He is not insensible to the advantage of "keeping in" with the society leaders, especially of the gentler sex. He knows the value of this potent medium of advertising.

He is not—so many things that it would be safe to state, comprehensively in, describing the true merchant—he is not unlike the true merchant.—Indistrial Journal.

SHOE BLACKING.

In speaking about shoe-blacking the other day, a gentleman who has given the subject some attention advanced the manner in which the dull material is converted into a shining surface. "The principle ingredient in good shoe polish," said he, "is bone-dust, which is nearly pure carbon. You know that a diamond is the purest form of carbon, and that nothing else glistens so brightly. Well the polishing brush is made of hair, and hair is a good conductor of electricity. Now, I will explain how I account for the polish on your shoes, as a schoolmaster would elucidate an abstruse problem. By using the polishing brush on the surface of your shoe electricity is created by the friction, and you know electricity crystallizes. Well, this is the whole thing in a nutshell: The friction of the brush creates electricity; the electricity crystallizes the blacking and the blacking is converted into diamonds of infinitesimal size. So that whenever you polish your shoes the dusky paste is transformed into glistening gems, and your feet are actually decorated with diamonds."—Minneapolis Commercial Bulletin.

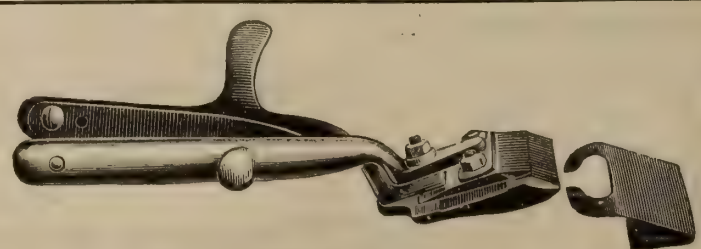
CARELESS CLERKS.

There are some employes in stores who, though not really dishonest, are equally dangerous to merchants. Those are the careless ones. Though they will not actually steal, still they are as criminal as the thief, The losses incurred through the carelessness of employes often escape notice, for it is a species of viciousness the results of which are not always apparent. Yet the merchant suffers all the same. Perhaps we are wrong in deeming this trait vicious. At worst it is but a deplorable weakness of character, often not latent, but acquired by an unwise training. For the possession of this drawback in character, people invariably have to lay the blame with those on whom their early training depended. The boy who learns his early lessons from the man who conducts his business in a slipshod or haphazard manner cannot help possessing a disregard of order in his later years. Habits are easily acquired, but it is wofully hard to rid oneself of them, especially if they are bad habits. The clerk who is careless in even the most trivial things, never will be successful. Business, like life, is a series of incidents; on the attendance of each item depends the success of the whole. The man who shirks, disregards or ignores trifles will not be successful in the main, for great things are but an aggregation of little things.—British Columbia Commercial Journal.

No young man can possibly have mistaken his calling who finds in it what the world wants done

Competition is keen and active and the only way to meet it successfully is to buy from the best houses, and at lowest prices.

THE ONTARIO TACK CO
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton, Ontario.
SP



TOILET
CLIPPER
No. 41
The best value in moderate price . . Clippers in the . . market . . . . .
PAINCHAUD, SQUIRE & CO., AGENTS, MONTREAL

SITUATIONS VACANT.

WANTED—HARDWARE TRAVELLERS with good connections in Lower Provinces and in Ontario. None but first-class men need apply. H. S., GAZETTE Office, Montreal.

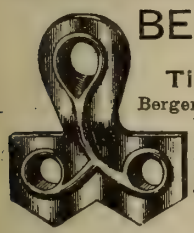
WANTED BY 15th DAY OF MARCH—A good hardware clerk, with some years experience. Steady job for a sober man. Address, John Lorentz, Baden, Ont. tf

BUSINESS CHANCES.

Advertisements inserted under this heading one cent per word each insertion.

FOR SALE—STOCK OF GENERAL HARDware, paints, oils, stoves, &c. Business established 25 years. Value about $3,500. Address, Estate J Cameron, Beaverton tf.

FOR SALE—GOOD PAYING HARDWARE Store, and live business. Last year's turn over $12,000. Stock, etc, under $3 000. Smart town, brick store, modern improvements. Satisfactory reasons for selling. Would sell for two or three years. Don't write unless you mean business. Address T., HARDWARE OFFICE.



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucpan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

H. D. SIMMONS
MANUFACTURERS' AGENT
Has Moved Across the Street to
85 York St., Toronto, Rossin House Block



ASK FOR THE GRAHAM NAILS.



THE Fox
RAZORS..
SCISSORS.
and KNIVES
Are . . . .
Unexcelled

Hamilton and Toronto
SEWER PIPE
—AND—
WATER PIPE CO.
HEAD OFFICE: HAMILTON, CANADA
¼ the PRICE of Iron. Write for Discounts

READY
MIXED PAINTS
TRADE  MARK

Don't place your Spring orders without seeing shades and testing the quality of
UNICORN BRAND We back them against the World
Manufactured by A. RAMSAY & SON
MONTREAL

WIRE = Barb, Plain Twist, Iron and Steel, Annealed, Coppered, Iron, Copper, Steel and Galvanized.

Pure White Lead
Ready Mixed Paints
Carriage Paints
Coach Colors
Etc., Etc.

The James Robertson Co'y, L't'd
TORONTO

The Whitman & Barnes Mfg. Co.


Canadian Branch:
ST. CATHARINES, ONT.
MANUFACTURERS OF
Extra Quality Machine Knives, etc.
OUR SPECIALTIES:
KNIVES FOR Mowers, Reapers, and Binders, Root Pulpers and Straw Cutters.
" " All kinds Wood Working Machinery.
" " Paper Mills.
" " Leather Splitting Machinery.

W. & B. Diamond Twist Drills.

Spring Keys, and Cotters.
Goods the best. Prices moderate
Quality Warranted.

TRADE CHAT

The firm of Walter H. Cottingham & Co., of Montreal, is one of the most extensive importers on Artists' materials in Canada. It pays to handle good goods.

Balck glass was once used in mirrors.

The output of crude iron in the United States is now 173,000 tons per week.

The Quebec cordage factory will shortly be started again.

Prospects are considered bright for a building boom in London, Ont., next season.

The board of directors of the National Cordage Co. have declared the regular dividend of 2 per cent. on the preferred and 3 per cent. on the common stock.

It is understood that a strong company will shortly apply to the London, Ont., city council for a franchise to establish a plant in that city for lighting factories, stores, dwellings, and streets with incandescent light.

Mr. Thomas McIlroy, jr., of this city, has been appointed western and foreign manager at San Francisco of the Eureka Fire Hose and Rubber Co., and his friends entertained him to a banquet in the Rossin house the other night.

Reports from 3,687 hop plantations in the United States show that the 1892 crop was 217,942 bales, as compared with 215,327 in 1891. The average yield in New York state was 9 pounds per acre less than in 1891. The acreage in 1892 was nearly 3,000 greater than in 1891.

A good deal is heard these days about the small proportion of the stores that prove profitable. In another column will be found an announcement offering for sale a hardware business that has paid well. On a stock of less than $3,000 the turnover last year was $12,000.

The bayonet is so called because it was first used near Bayonne. A Basque regiment, hard pressed at that place, having exhausted their ammunition, fixed long knives into the barrels of their muskets and made the original bayonet charge. Afterwards the weapon was manufactured at Bayonne.

The Petrolia Topic says: "We learn from reliable authority that Mr. Benfield, one of Petrolia's expert drillers, has been engaged by a London company to go to Bothwell at once and drill for oil. The past experience of the Bothwell field certainly warrants the expenditure of capital in opening up and developing that long neglected spot."

The chief window glass manufacturers and jobbers of the United States have decided to ally themselves with a combination to be known as the National Glass Company. The avowed object is the maintenance of regular prices, nevertheless a schedule is to be fixed by the directors, which will be enforced on penalty of forfeiture of a large amount of money.

Dull gold may be cleaned as follows: Take 80 grams (1,235 grains) calcium hypochlorite, 80 grams sodium bicarbonate, and 20 grams (307) grains sodium ture in 3 litres (6 1-3 pints) distilled water in 3 litres (6 1-2 pints) distilled water. It must be kept for use in well corked bottles. Articles to be cleaned are put in a basin and covered with this mixture; after some time they are taken out, washed, rinsed in alcohol, and dried in sawdust. They then look like new.

An alloy prepared from 1 part of silver and 3 or 4 parts of aluminum can be highly recommended for articles in which ilghtness is desired—as instruments used by ship captains, octants, sextants,quadrants, etc. The alloy is one-third or one-forth as heavy as brass, and can be easily turned or filed, which is not the case with pure aluminum, which is too soft and cilngs to the file.

The bulletin of the American Iron and Steel Association says that the production of Bessemer steel ingots in the United States for 1892 was 4,160,972 gross tons; for 1891, 3,247,417 gross tons. The total production of Bessemer steel ingots in 1890, the year of largest production prior to 1892, was 3,688,871 gross tons, which was 472,101 tons less than in 1892. The total production of Bessemer steel rails in 1892 was 1,458,743 gross tons, an increase of 219,350 gross tons over the production in 1891.

The Doherty Mfg. Co., of Sarnia, Ont., are to put on the market early in March a new steel range. Its special features are as follows: It will have a deep fire box and a fire grate that will pull out. It will be made of heavy steel, and will have a larger oven than any yet on the market of the same size of range. It will wholesale at about $50. This company also manufacture gas stoves, ranges, hot water boilers, etc. The Toronto agents are McDonald & Willison, and the Montreal representatives, R. & H. Kerr. At the foundry in Sarnia a number of hands are kept busy, and a lot of new machinery is being put in the building.

LAYING IT TO LUCK.

It is a very common failing for many people to ascribe their success of failure in any business or undertaking to what they are pleased to call luck, and at this season of the year when so many changes are made in business houses, employes may be heard to ascribe their condition to luck, just as though their actions and endeavors had nothing to do with it. Observation shows that these devotees of the luck system make it an excuse for their indolence and non-progressiveness. In their superficial manner of looking at events they have neglected those obvious conditions which a more close examination wuld have revealed as the true cause of any person's condition.

Thus two young men may start in life with apparently equal abilities and prospects. One will succeed in amassing a competence, while the other barely manages, as the saying is, to keep soul and body together. If the course of life followed by these 2 men is closely studied the result to which each has come will be seen to be due to the effort, or lack of effort, shown by each, and there would be no recourse to luck to explain the difference in their conditions. It will probably be found that one valued present ease and pleasure too much to make any sacrifice for the future; He lived only for the good each day might bring him. As time passed and he compared his condition with that of the other man, then it was that his failure was laid to luck, and the success of the other to the same convenient term.

While there may be many strange events in men's lives which seem to need chance as an explanation, it will generally be found that each individual has been the arbiter of his own fortune. It is a failing of human nature to shift responsibility upon others; and from the time of the man who said the woman did it, down to the present, the same sort of excuses are rendered. And in the moral world the same scapegoat system is practiced ,and many a sin is laid to the devil by those who need not go outside of themselves for the true source; they desired to do bad deeds, but did not care to shoulder the responsibility. No doubt thousands of people pass through life dssatisfied with themselves and blaming fate for what they themselves are responsible for.—Ex.

IRON INDUSTRY OF SPAIN.

Until a comparatively recent date, Spain had hardly entered the list of iron producing countries, says a contemporary. It is now not only an iron-producing country, but also an iron-exporting country. Some works for the manufacture of iron and steel have existed in Spain for centuries. Spanish cutlery and sword steel have been known in song and chivalry—perhaps to a larger extent than in arts—from almost time immemorial. But within the last few years the old order has given place to the new and modern blast furnaces, modern steel works, and modern foundries are now to be found in full swing within a few miles of the principal mines of the Bilbao region. The actual quantity of pig iron hitherto made in the district in any one year has not exceeded 230,000 tons, but the trade is growing, and pig iron now appears regularly on the list of Spanish exports. Some of the iron so exported, finds its way to England, but, of course, the quantity is too small to exercise the slightest influence upon its markets, although there are those who think that hematite pig iron can be produced at Bilbao, as a regular trade, several shillings a ton cheaper than it can be made in any part of England. It is beyond question that the Bilbao smelter has his ore at least 10s. per ton of pig cheaper than the Welsh or west coast maker, but of course he has to pay considerable more for his fuel, and his labor is, perhaps, not so well in hand.

Catalonia has been pointed to as one of the most promising industrial districts in Spain, and efforts have been made to organize a company for the purpose of building blast furnaces to work the mineral resources there. Hematite ores are found here in large quantities at Ribas, assaying from 50 to 55 per cent. of metallic iron. It is estimated by a competent authority that from one of the mines here from 20 to 30 million tons can be thrown down a shoot at not more than 1s. or 1s. 6d. per ton. North-east of Ripoll, in the same province ,coal of good quality is being worked at an average price of $1 to $1.12 per ton at the pit's mouth, the seams being some three miles in length, and estimated at a minimum thickness of 40 feet. This coal cokes well, and, according to analysis by a well-known English chemist, yields 80 per cent., while the cost of its production is not more than $2.37 per ton. The rate proposed by the railway company for the transport of iron from this place to Barcelona, one of the principal centres of consumption in Spain, is only $1.12 per ton, so that it is calculated that pig can be delivered at that port for not more than $10 per ton, as against an average price of $19 for Cleveland, and of $17.50 for Bilbao iron at the same port. The main obstacle that appears to have lain in the path of the development of an iron industry here has been the insufficient prospect of demand.



Reduced Reproduction from Accepted Design, to be Lithographed in Five Colors

Old Trade Revived . . .

New Trade Made . . . . .

By Advertising in the Spring Trade Number of

THE HARDWARE MERCHANT

THIS issue will penetrate to many places seldom or never visited by your travellers, as well as to every centre of commerce where orders for goods are likely to be forthcoming.

Special—We will make a specialty of binding in price lists, lithographs, circulars, etc., on any colored paper, thereby enabling this large number of circulars or lists to be sent out incorporated in a journal of high reputation, at a minimum price. To send the same out by post in the ordinary way would cost more than double our charge, and with infinitely less probability of being read or preserved for reference.

We would ask as a favor that you let us know at once if you can take space. We will therefore be able to give you better position and general attention. Respectfully yours,

THE J. B. McLEAN PUB. CO. LTD.

. . . TORONTO . . . .

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below, and in our Prices Current, necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL Feb. 10, 1893.

HARDWARE.

Iron and hardware have furnished some change during the week, but so far as the movement from second hands into that of actual distributors is concerned, the week remains much the same as last. All the houses have their travellers out, and some orders are coming in for shelf goods, etc., but the demand does not lead to much activity around the warehouses. Between jobbers on spot, however, considerable business has been done especially in the heavier line. For instance, quite a quantity of pig iron and tin plate have been turned over, and the fact has given matters a livelier look. There is considerable uncertainty regarding the course of the Government in relation to the iron duties, which cover a multitude of lines, and until the budget is brought down and Minister Foster makes the future course clear the trade expect business to hang fire. With regard to payments on the 4th of the month, they did not equal the expectations of some, but satisfaction was expressed by a good many for all that.

PIG IRON.

The jobbers and others having sorted over their stocks, have discovered wants, and the consequence of this has been more trade in pig iron between jobbers here than for some time for supplies re store. All the stock of Summerlee in store here has been turned over mainly on a basis of $20.50, and now the only stock remaining in Carnbroe and Gartsherrie, and a small supply of Langloam. Carnbroe has bee nmoved in fair-sized lots at $19 and Gartsherrie at $20, while Langloam is held at $21 ex store, the figure being a nominal one. There is no purchasing for importation, as the position of affairs at primary centres does not call for any haste, while the uncertainty regarding the intentions of the Government with regard to the iron duties is another deterrant to business in this connection.

BAR IRON.

The week has not furnished much change in bar iron, but jobbers have been buying a little more freely in anticipation of immediate wants on the basis of $2.05, with car lots at $2.00. There is a strong disinclination to operate very far ahead in the case of bar iron, also owing to the uncertainty as to what shape any readjustment to the tariff will take.

SCRAP IRON.

Scrap iron has been a blank, and we only note one sale of any consequence, viz., a lot of wrought at $15.50.

TIN PLATES.

There has been more activity in tin plates for goods re store, and quite a lot of cokes have been turned over since our last aggregating about 3,000 boxes, the regulation boxes being $3.25 to $3.50, but it is understood that some of the transactions were inside this figure for certain quantities. Charcoal is quiet and unchanged at $4 to $4.25. There is nothing doing in an import way in the case of tin plates any more than in pig iron.

CANADA PLATES.

Fair quantities of Canada plate have been changing hands between jobbers during the week, round lots being on the basis of $2.50, but for smaller quantities $2.55 to $2.60 is the idea.

TERNE PLATES.

Terne plates have furnished no business, and prices remain nominal at $7.25 to $7.75.

OTHER METALS

Copper is quiet at 13 1-4 to 14c. and pig tin firm at 23c. to 23 1-2c.

Antimony and spelter are dull and unchanged.

NAILS.

Makers fail to find any improvement in the demand for nails and matters are precisely as they were a week ago.

GLASS.

The glass market is unchanged, on the basis of $1.35.

PAINTS, OILS AND COLORS.

Leads and paints have furnished a fair business during the week, but there is still some uncertainty regarding the standard price. Reference has been made already to the probable formation of a pool, and although matters have not all been arranged yet, they are likely to be by the end of the week. The advance will be about equivalent to that already predicted by HARDWARE last week.

In oils linseed keeps firm at 57 to 58c. for raw and 60c. to 61c. for boiled. Seal oil is strong and the fish oils are likewise.

CEMENT.

Quiteness has been the leading feature of the week's business, and apart from a few car lots business has been a blank. Prices remain the same. We quote:—English brands at $2.35 to $2.55, and Belgian $2.20 to $2.35 per cask. Fire bricks are in fair demand, prices ruling at $18 to $24 per 1,000 as to brand.

NAVAL STORES.

There is no change in naval stores and business rules quiet. We quote:—Turpentine, 51 to 52c.; resins, $2.50 to $5, as to brand; coal tar, $3.75 to $4; cotton waste, 5½c. for colored and 7c. to 10c. for white; oakum, 5½ to 7½c. and cotton oakum, 10 to 12c. Cordage, Sisal at 9¼c. for 7-16 and upwards, and 15c. for deep sea line. Pure Manilla, 12c. for 7-16 and upwards and 13c. for smaller sizes.

PETROLEUM

The volume of business in refined oil continues limited, only a few odd lots moving. We quote: Canadian 12¼c. to 12½c. at shed in Montreal for round lots and 13½ for small quantities. American petroleum, 19⅝c. in car lots, 20c in 10-barrel lots, 20¼c. in 5barrel lots, and 20¼c for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c.; Canadian benzine, 10¾c Petrola; 12¾c. Montreal.

TORONTO MARKETS.

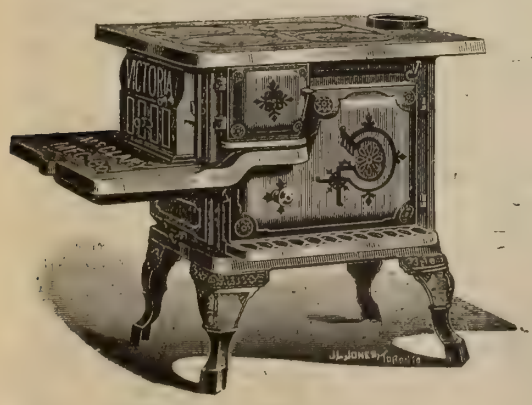
TORONTO, Feb. 10, 1893.

HARDWARE.

There has been no material change during the week. A fair sorting up trade is being done. There is not much doing in heavy hardware, but a good trade is anticipated for March and April, for which month a good many orders are being booked. Shelf hardware is moving fairly well and the volume of business being done in this particular line seems to be more satisfactory than a year ago. The uncertainty regarding the tariff still has a deliterious influence upon the trade. No complaints are heard regarding payments. Country merchants are about through taking stock and some houses report better orders in consequence.

METALS.

Prices are all firmer. Business taken on the whole is quite for prompt shipment, but fair orders are being booked for future delivery. It is said manufacturers contemplate making changes on all iron extras. It is found that the extras adopted by the meet-



VICTORIA—Wood Cook.

A SPECIAL BARGAIN

FOR TWO MONTHS ONLY

A First-class Stove in every respect, with all Modern Improvements. Handsome, suitable for any family. Guaranteed to give perfect satisfaction.

We have an overstock of these Stoves, which we propose to offer our customers for two months, at the following prices and terms, subject to being unsold when orders are received.

No. 8 Square, $7.75 No. 9 Square, $8.20

Size of Oven, 17½ x 18 inches. Length of Fire Box, 23 inches. Shipping Weight, 200 lbs. Terms Cash.—F.O.B. at London.

McCLARY MFG. CO. LONDON, TORONTO, MONTREAL and WINNIPEG

MARKETS.—Continued

ing held in January is not satisfactory for the manufacturers themselves or the jobbers. A change will likely be made next week.

PIG IRON—Nothing new has developed. Trade is dull and is likely to continue so for some weeks yet. Quotations remain as before.

BAR IRON—Orders are small for this line owing to the heavy freights existing, but an improvement will naturally come with the opening of navigation. It appears that combination prices are being strictly adhered to on both bar iron and nails.

ANTIMONY—Market inactive and prices unchanged.

CANADA PLATES—Although the season for this line is over there is still a little doing at steady and unchanged prices.

COPPER—Ingot is in good demand at firm prices.

GALVANIZED IRON—This article is being booked freely for March delivery. This tends to show that a better feeling prevails throughout the country, in regard to work for the coming summer.

INGOT TIN—A fair quantity is being sold, and the demand is reported to be fully up to the average for the season.

LEAD—The market is stiff but the volume of business is small.

TIN PLATES—Good orders are reported being taken for import.

ZINC AND SPELTER—It is of course somewhat out of season for sheet zinc, and the quantities being called for are small in consequence; prices unchanged. There is scarcely anything doing in spelter, and quotations are fractionally lower.

PAINTS, OILS AND COLORS

City trade is very dull and country fair. Payments fairly good. A feature of the trade is an increased demand for artists materials. It is a little early for colors in oil, and demand for these continues light. Much the same applies to dry colors and varnishes; Venetian red (best) is quoted at $1.80 to $1.90. The principal demand at the moment is for linseed oil, prices of which are stiffer; 15 barrel lots are 2c. higher, and the prospects are that there will be proportional advances in other quantities. We quote: Linseed oil in 1 to 3 barrel lots 57½c. freight allowed to delivery station; 4 to 9 barrel lots, 57½c. delivered; 15 barrel lots and over, 51½c. at point of shipment. Three cents added to these prices gives the quotations for boiled in the respective lots. Turpentine is 53c. in 1 to 3 barrel lots and 63c. in broken packages.

OLD MATERIAL.

We quote the following: No. 1 heavy cast scrap 65 to 70c. per 100; stove cast scrap 40 to 45c.; No. 1 wrought scrap 50 to 60c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c.; new light scrap copper, 8 1-2c.; heavy scrap copper 9½c.; old copper bottoms, 8c; light scrap brass 5½c.; heavy yellow scrap brass 7½c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1¾ to 2c.; scrap zinc, 2½ to 2¾c.; scrap rubber, 2¼ to 2½c.; country mixed rags, 80 to 85c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; plough shares, 60 to 65c; burnt cast scrap, 15 to 20c.; railroad iron, 65 to 75c.; malleable scrap, 25c.

PETROLEUM.

Following are the quotations to day:—Canada refined oil 14½c: carbon safety, 17½ to 18c: Canada water white, 20c: American water white, 25c: photogene, 27c.

Petrolea, Feb 10.—On the exchange here to-day Oil opened and closed at $1.18¾.

HIDES, SKINS, WOOL, TALLOW.

SKINS—Sheepskins are still marked by their scarceness, and prices are 10 to 15c. higher at $1 20 to $1.40. Calfskins are in good demand, but there are not yet many coming in, prices unchanged at 5 to 7c.

HIDES—Steady and unchanged at 4½c. for No. 1 green cows' and 5½c. for cured. Car lots of cured changed hands at 5¼c.

TALLOW—Scarce and in active demand, dealers are paying 6c. and selling at 6½c.

WOOL—There is not much that is new to say. A fair trade is being done and prices are well maintained. Little or no fleece is left on the market and blanket wools are scarce. Pulled wools are not in so active request and prices are lower, dealers paying 22c. and selling at 22c. Fleece is quoted at 18c. to 19c., and pulled at 21 to 22c. for supers and at 26 to 27c. for extra.

SEEDS

Speculation still seems to be carrying red clover along and prices are higher at $8.50 to $9 a bushel, an advance of 50c. during the week; offerings limited. The export trade in Alsike has closed but prices of that article, are in sympathy with red clover, firm at $5.50 to $6.50. There is scarcely anything offering in timothy and prices are 25c. higher at $1.75 to $2.25.

TRADE NOTES.

The leather belting season is opening fairly well. Prices are fairly steady, little or no cutting being done.

John Frost, hardware merchant of Queen street east, is offering his stock for sale.

Sleivert & Wood of York street, report having placed an order for 10,000 feet of glass with a German manufacturer for the spring trade.

The Graham Nail Works sent out samples of their nails some time ago to the large purchasers in Ontario and the west. These efforts have proved satisfactory, a great many dealers having written to say that the nails are the best that they have seen, and that they are ordering and specifying Graham nails quite freely.

H. S. Howland, Sons & Co. report the receipt of large orders for Rexford's harvest tools, Sampson's solid steel spades and shovels.

H. S. Howland, Sons & Co. report their stock of Wostholems I. X. L. pocket knives complete, large consignments having reached them the last week.

Samuel, Benjamin & Co. report a big demand for their special brand of galvanized iron, Gordon crown. This is giving universall satisfaction and compares favorably with anything in the market at the same price.

AMERICAN MARKETS

New York, Feb. 10.

Copper.—There are orders in hand for considerable quantities of Lake Superior ingot at 12c. regular terms. Brokers having such orders state that they are unable to secure the goods, and remark also that any price below 12 1-8c. is made by sellers only on small spot parcels and for prompt cash. As a rule, the representatives of the mining companies quote 12 1-4c. upwards, and would appear to be indifferent sellers. Casting brands are



still quoted at 11 1-4c. to 11 1-2c., according to delivery and size of lot, but are meeting with merely routine sale. In the London market prices for merchant bars were somewhat lower. The last cable quotation to the Metal Exchange Recorder were £45 15s. for prompt, and £46 for three months futures, with sales for the day of 275 tons and 200 tons respectively.

Pig Tin.—In the local speculative deal there was nothing distinctly new. The whole affair seems still to be practically in the hands of operators, whose movements thus far this year have not only served to keep prices remarkably steady, in the face of adverse statistical exhibits as to stocks on spot and afloat, but to mystify the trade generally. According to Tuesday's cables to the Metal Exchange, spot stock was taken in London to the extent of 100 tons, while the transactions in futures amounted to only one-half that amount. This was a little surprising, and quite as much so was the fact that prices advanced to £92 2s. 6d. for prompt and £92 15s. for futures, in face of liberal stocks there and unusually heavy amount of tin afloat for both Europe and America, due to arrive during the next six weeks.

Pig Lead.—There was some movement of single car lots at 3.97 1-2c., but otherwise very little business. Bids up to 3.95c. were made on larger quantities, but sellers were apparently very indifferent about going below 4c. and the market, while firm, presented a rather dull appearance. The firmness is due in a great measure to light production latterly, and advance in cost of ores consequent upon unfavorable weather latterly for mining and transportation.

Spelter.—This metal still figures as the conspicuously dull article on the list, and, as far as price is concerned, the weakest also. Single car lots for early shipments are offered at 4.32 1-2 to 4.35c. delivered east, and the indications were that purchases made yesterday at 4.30c. could have been duplicated.

The following interesting information comes from Joplin, Mo., under date of February 4th: The output was materially reduced by reason of the blizzard, which set in Wednesday morning and raged for two days and nights, freezing up everything. The severe weather also retarded the shipments, which were materially lessened. The price of zinc ore has dropped 50c. all around, and lead ore advanced 25c. The American Spelter Company's new zinc smelter at Galena has been forced to shut down, from the fact that spelter is so low that there is no money in smelting zinc at the present prices paid for ore." Output during the week ending Feb. 4, including, 1,132,250 pounds of zinc and 90,030 lbs. of lead in Joplin; 2,292,030 lbs. zinc, 115,180 lbs. lead in Webb City and Carterville; 103,430 lbs. zinc, 3,290 lbs. lead in Belleville; 494,830 lbs. zinc, 164,140 lbs. lead in Galena; 14,280 lbs. lead in Orongo. Total for the district, 4,022,540 lbs. zinc and 386,999 lbs. lead. Since January 1, 22,328,560 lbs. zinc and 3,406,750 lbs.

lead. Production of zinc in the Chartage district during the week was 118,400 lbs.

Antimony.—Outside of routine business there is little doing in this line, and prices remain almost stationary, at about 10 1-8 to 10 1-4c. for Hallett's, 10 3-4 to 11c. for Cookson's, 10 1-4 to 10 3-8c. for LX, and 10 1-2 for Crown.

Quite large purchases have been made the past few days of 100-lb, and lighter weight coke plates for future delivery, and the market for these goods is strong at a further advance of about 2 1-2c. per lb. Spot trade in the same lines has been running very well also, but otherwise the market remains slow and prices barely hold their own.

Pig Iron.—Local sales agents report merely a fair trade in domestic products and to all accounts the general situation is much the same as it has been for a month or six weeks back. Slight deviation from the prices publicly quoted are not uncommon, but there is no evidence of any serious break, although sharpness of competition in come quarters, along with indifferent spirit manifested by most eastern consumers, tends to give the market a rather weak appearance. We quote prices as follows: Northern brands, $14.75 to $15 for No. 1 X foundry, $13.75 to $14 for No. 2 X foundry, $13.25 to $13.50 for grey forge. Southern brands, $14.50 to $15 for No. 1, $13.50 to $14 for No. 2 foundry and No. 1 soft, $13 to $13.50 for No. 2 soft, $12.50 to $13 for grey forge, all at tidewater.

Scotch pig is selling in moderate quantities for shipment from the foreign market, and prices for lots to arrive remain about as follows: $21.50 to $22 for Coltness, $21 to $21.50 for Summerlee, $20 to $20.50 for Carnbroe, and $19.50 to $20 for Eglinton.

Old material is in limited demand at the moment, but the business passing is at steady prices. We quote: $17 to $17.50 for iron tee rails, $14 to $14.50 for steel rails, $16 to $16.50 for No. 1 wrought scrap iron—all f.o.b. Jersey City; $13.50 to $14 for car wheels, and $12 to $13 for machinery cast scrap.

Steel Rails, Etc.—Sales agents reported nothing in the way of important new business in steel mills, and still claim that the $29 f.o.b. mill rate is adhered to for heavy sections. Rumor is still busy with the insinuation that the quotation is purely a "nominal" one, and that little if any of the current sales will net the manufacturers that price. On 40-lb. and lighter sections, competition is very keen, and western concerns, so the report goes, have secured southwestern business at under the lowest ones quoted by eastern manufacturers.

Track supplies are still unsettled in price, competition being very keen, and the demand disappointing thus far. There are sellers of spikes at 1.90 to 2c., fish plates at 1.60 to 1.65c., track bolts, with square nuts, at 2.40 to 2.60c., and hexagon nuts at 2.70 to 2.80c., delivered.

THE PERCENTAGE OF IRON IN MAGNETITE.

Mr. David H. Browne, chemist of the Canadian Copper Company, in a letter published in the Engineering and Mining Journal of Jan 14th, page 28, condemns a reported analysis of iron ore made in the laboratory of the Canadian Geological Survey. He says the figures are "evidently erroneous, and, if not a typographical error, they reflect little credit on the analyst." Mr. Browne's only ground for this declaration is that the analyst reported 61.08 per cent. metallic iron and 19.65 per cent. insoluble residue, to bear out which figures "the Gunflint Lake ore must contain metallic iron." This proposition he proves by asserting that 61.08 per cent. of metallic iron in the form of magnetite would make 84.2 per cent. of megnetic oxide, and the same amount of iron as hematite would 87.2 per cent. of ferric oxide—in either case, leaving much less than 19.65 per cent., the proportion of insoluble residue reported.

Mr. Browne is too hasty in pronouncing the report discreditable to the analyst. He is, apparently, not aware that Mr. Hoffman, the chemist and mineralogist of the Canada Survey, is one of the leading authorities in his department, and that his discovery of native iron on the north shore of Lake Huron in 1890 constitutes one of the ablest recent contributions to our knowledge of the processes of oxidization and reduction involved in the formation of iron ore.

But is it not as Mr Browne seems to imagine, necessary to assume the presence of metallic iron in order to explain the figures which he criticises. What they more probably indicate in the presence of an excess of ferrous oxide in the magnetite. This has been repeatedly observed by first-rate chemists. In some analyses the proportion of the ferrous is greater than that of the ferric salt, although the accepted formula, FeO, Fe2O3, represents only 31 per cent. of the former to 69 per cent of the latter. Such a mixture (or, if it be preferred to speak of it as a definite oxide, the magnetic oxide, Fe3O4) corresponds with Mr. Browne's calculations. But the trouble with his deduction is that this compound does not always constitute the whole of a magnetite.

The observed excess of ferrous oxide in speciemns of megnetite may possibly bear an interesting relation to their mode of genesis. Thus, it has been held that magnetite has sometimes been produced by the action of heat upon spathic iron ore. But the artificial heating of this ore produces a magnetic mixture of oxides similar to hammer scale, which Berthier represented by the formula 4 FeO. Fe2O3; and this formula closely approximates the figures of the Gunflint Lake analysis.

On the other hand, it is a well-known fact that magnetite of normal composition may be altered, not only by higher oxidization, yielding ferric oxide, but also by reduction through organic matter, giving ferrous oxide. Dana (8th ed., p. 226) says the latter "may" become a carbonate or siderite; but I do not understand that this is absolutely necessary as a part of the reaction.

The above is sufficient to convict Mr. Browne of a hasty judgment. I happen to know that the analysis he calls in question was correctly reported, and that Mr. Hoffman stands by the result as correct; and I have no hesitation in saying that his word is authoritative.

On the other hand, I will say frankly that I do not think it wise for the Canada Survey to permit such an analysis to go forth without a special note upon its exceptional character. For, while th variation of the constitution of magnette is well known to chemists, it is, so far as I am aware, never characteristic of large quantities of the ore. The ordinarily accepted formula represents the most stable combination of the two oxides, and the abnormal excess of ferrous oxide is, I believe, found in "specimens" only. In the letter of Mr. Russell, printed in the Journal of December 31st, 1892, and criticised by Mr. Browne January 14th, the emphasis was laid upon the non-titaniferous character of the ore in question, and the percentage of iron was not specially considered. I have no doubt the analysis was correct for the specimen analyzed; and, while I have no reason to believe that any large quantity of the ore would confirm it as to metallic iron, I think it likely to be truly representatvie of the ore as to its non-titaniferous character. At least, in my experience with titaniferous ores, I have never been able get, from any part of a deposit bearing character, samples which did not show it. The percentage of titanic acid may vary; but I think it is not likely to disappear.—R.W.R. in Engineering and Mining Journal.

THE COPPER TRADE IN 1892.

In their annual report on the copper trade Messrs. James Lewis & Sons having detailed the negotiations for the restriction of the American production, state that whereas the United States production and import for the year 1892 is given as 149,734 tons, it is from July 1st to be limited to 139,728 tons, a reduction of 10,000 tons—and that the consumption during 1892 was 21,675 tons greater than during 1891, resulting in a reduction of stocks during the year of 8,929 tons, and of 20,089 tons as compared with December 31, 1890. English consumption and export and French consumption together in 1892 show, on the other hand, a very material reduction, being about 10,000 tons less than in 1891, and 29,000 tons less than in 1890. English consumption alone being 6,855 tons less than in 1891, and 13,802 tons less than in 1890. This is accounted for by the dullness in trade generally and the diminished production of sulphate of copper, after the excessive production of the year 1890. Smaller stocks are also at present probably held by smelters and manufacturers than in former years. English exports have increased 6,486 tons, France having taken 4,657 tons more English copper than in the previous year, and India 2,157 tons more yellow metal, but 1,050 tons less copper. English and French imports are about 10,000 tons less than in 1891, those from the United States showing a diminution of 5,554 tons, and from Japan of 2,822 tons. In consequence of the flooding of the Mansfield mines the imports into Germany, of which no records have been kept, both from England and the United States have probably been larger than usual. The tonnage of steamers and sailing vessels built in the United Kingdom in 1892 was 1,300,412, against 1,267,472 in 1891, and 1,272,263 in 1890. The total production of the world we estimate at 290,000 tons, against 278,000 in 1891 and 272,000 in 1890. Should the international agreement for restricted production be loyally adhered to, as seems probable (and for the six months during which it has already been in force, both American and European production has been considerably below the stipulated maximum), any improvement in trade and consequent incease in the demand for copper would be quickly reflected in reduced stocks, which are already in moderate compass, followed by higher prices. The United States is the only source of supply from which any great increase is at present to be feared, the production there having more than doubled itself in the past seven years, and being now about half that of the whole world. It is, therefore, the interest of American mine owners to do what they can to maintain the value of copper at a level that will make the mining of it profitable.—Iron Trade Circular.

STEEL CASING FOR BLAST FURNACE HEARTHS.

In the "Foreign Abstracts," prepared by the Institution of Civil Engineers, there is a short account taken from a paper by M. Boivin in the "Comptes Rendus de la Societe de l'Industrie Minerale" of a steel cased blast furnace hearth used at Firminy, France. The hearth is 1.80 metres wide internally, and has a wall 90 cm. thick. The wall is made up of 25 cm. of inside brick work, a middle rammed lining 50 cm. thick, and an outside casing of cast steel 15 cm. thick. The steel casing is 2.6 metres high from the bottom of the boshes to the ground, and about one-half of it is below the level of the hearth bottom. It is built up in rings formed of segments somewhat like those of a pit tubbing. The rings are not complete circles, as a space of 70 cm. formed by two upright pillars is left on the tap-hole side, and is filled with refractory material to allow the tapping level to be varied if necessary. The segments are made of annealed cast steel, and are 1 metre long, 48 cm. high and 15 cm. thick. Their average weight is about 10 cwt. and each has a perforated plug projecting in the centre for convenience of handling. When built up they are in contact on the inside to a depth of 40 mm. The outer edges are shaped to form a groove of 30 mm. maximum width, which is filled with clay covered with a packing of asbestos, clamped by the flat side of a piece of iron tee-bar covering the joint. The separate segments are connected by wrought iron rings which rest in grooves of a corresponding shape, formed in the sides and corners of the plates. The whole structure is further strengthened by outside hoops connected to the upright pillars. The weight of the casing is 27 tons. It is cooled by water constantly flowing over the outside.

The furnace was lighted on the evening of November 20th, 1891, and during the first hundred days blowing it made 8,004 tons of pig iron and 5,596 tons of cinder, or a total of 13,600 tons. From 30 to 33 tons of metal and 5-6 tons of cinder are considered as a minimum quantity at each tapping.

Probably the smallest electric light installation in the world is to be found in the village of Bremen, near Dormback, in Thuringia. It comprises a single arc lamp installed in the church, the lamp being operated when required by a small dynamo arranged in the village mill and driven by the mill wheel.

The Phoenicians were acquainted with the use of extremely hardened iron (properly speaking, steel), as their numerous and beautiful works in ornamental metallurgy, and the cutting and engraving of precious stones attest.

The expansion of nickel manufacture at Kirkintilloch, near Glasgow, since it was commenced about eight years ago has been very remarkable. The business was started, it is understood, by a French company, in which the Rothschilds are partners, the object being to exploit the nickel-ore deposits in the French colony of New Caledonia. At first the enterprise looked as if it would fail, but, largely owing to the attention bestowed upon it, at the request of the Rothschilds, by Mr. Wm. Jacks, M.P., so well known in the Scotch iron trade, it has turned out a great success. In 1886 one ship landed at Bowling, on the Clyde, with 700 tons of ore from New Caledonia, but in the past year no fewer than thirteen vessels, a number of them steamers, reached the clyde, bringing not less than 32,000 tons of this ore. After being extracted at the Kirkintilloch Works, the greater part of the nickel is sent to the continent and used for a variety of manufactures.

AVERAGE OF CHICAGO PIG LEAD.

The following is the averages of pig lead in Chicago for 1892, and the averages for each year since 1884:

	Cents.
January	4.00
February	3 93
March	4.0-
April	4.12½
May	4.12½
June	4 05
July	4.07½
August	3.97½
September	3.95
October	3.82
November	3.70
December	3.55
Average for the year 1892	3.94
Average for the year 1891	4 19
Average for the year 1890	4.28
Average for the year 1889	3.67½
Average for the year 1888	4 30
Average for the year 1887	4 34
Average for the year 1886	4.50
Average for the year 1885	3.83
Average for the year 1884	3 58

The highest price last year was in April, 4.17½c. and the lowest, in December, 3.52½c. The average for the year is ¼ cent per pound below 1891, and, excepting 1889, is lower than any year since 1885.—Iron Age.

GUNS | CHAS. STARK CO.

We beg to advise the trade that we are more in it than ever this year, and will give special attention to all trade orders.

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WHOLESALE HARDWARE
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Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11:

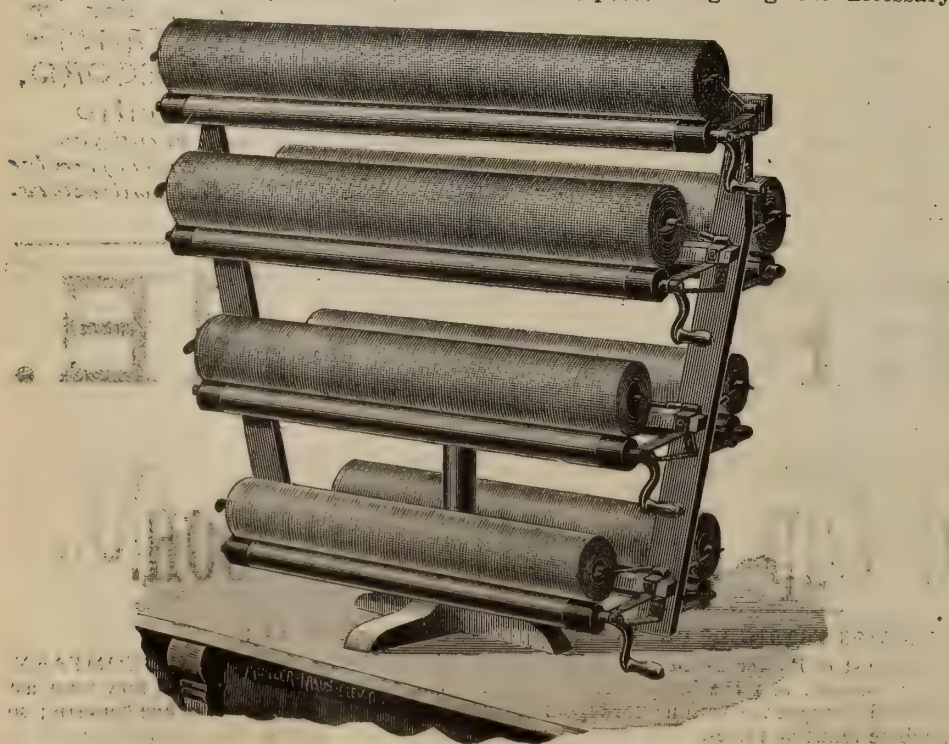
'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern; so that we have the somewhat singular sight of a combine reducing prices."

HOW TO INCREASE TRADE.

An English contemporary, Ironmonger, cites the experience of a certain firm who have increased their sales of garden tools this year sixfold over the total of last year by means of advertising prices of leading lines, and offering a discount of 5 per cent. for cash on or before delivery. We have no doubt that there would have been a large increase in the business of this firm without the discount, for nothing catches a customer so quickly as the advertising of prices. Obviously, too, the customer, or at least many customers to speak less generally, are prepared to pay cash for their goods when there is an inducement for them to do so. That is the whole secret of doing a successful cash business: To offer to the consumer an inducement to pay cash. The average consumer is something of a business man himself, and he is not at all likely to pay cash for any length of time for grocers' goods when the same goods are sold to the credit customer at the same price. However, to return to the first principles, the English ironmongers have done nothing but what any merchant can do if he has the nerve. Let any merchant advertise prices and results—we confidently predict will have an immediate and radically favorable effect on his sales. The fact that B. C. & Co. carry such and such a thing, and will sell them at such and such a price, awakens many customers to a knowledge of the fact that they can secure a great many things for their home without large expenditure of money.

WIRE SCREEN CLOTH HOLDER.

The above is the cut of a wire screen cloth holder, a very ingenius and useful device for hardware merchants. The idea of the device is to do away with the present mode of leaving wire screening on the floor or packed away from view behind counters or upon shelves. The machine exposes the cloth to view, preserves it from the dust and dirt of the floor, and, in addition, makes it much more presentable to the customer. It will hold any thickness of roll and almost any length. It is now being manufactured in Canada, and the price is just half what it was last year. Kennedy Bros., 101 Bay street, Toronto, are the agents.



THE OCCURENCE OF PLANTINUM IN CANADA.

Platinum in small quantity has been detected in association with alluvial gold in Eastern Canada, but no attempt appears to have been made to save it. In Ontario it has been discovered in the Sudbury district. Sperrylite (PtAs) is found in placers in the Sudbury district resulting from the decomposition of portions of the ore of the region. It is associated with silicates, and particles of pyrrhotite and copper pyrites, from which it may be freed by treatment with aqua regia and hydrofluoric acid. Sperrylite forms minute grains with brilliant crystaline faces, is of a tin-white color, and has a specific gravity of 10.6. Some months ago a refiner of platinum in Newark, N.J., informed the writer that a New York dealer in platinum ware had sent him a quantity of Sperrylite, and that he had successfully smelted it and returned the product in the form of wire. The presence of arsenic does not offer any serious metallurgical difficulty. Sperrylite brings a high price as a rare mineral.

A notable quantity of platinum has already been obtained from British Columbia. One firm in the United States claims to have purchased within the last year or two fully 2,000 oz.

An increased output may be expected as the Tulameen Hydraulic and Improvement Co. have made preparations to carry on hydraulic mining on a large scale. The company has erected a saw mill, having a capacity of 5,000 ft. per diem, and has constructed about two miles of flume, five feet at base, 20 inches high, on sills placed on solid bed about seven feet wide, and having a grade of one half inch in twelve feet. The water is taken from Eagle Creek, about fourteen miles above Granite Creek, the only creek capable of giving the necessary quantity of water and pressure. In addition to this flume the company has on the ground and ready for work, about four hundred feet of iron pipe and monitor, which, where work is to be commenced, will work with a pressure of 900 miner's inches, and a drop of about 160 feet.

It was expected that this plant would be in active operation during the summer of 1892, but owing to a combination of circumstances but little actual mining has been done. In the first place, the spring was late, and when it did open it was found that some repairs on the plant were required. Then again in the early summer negotiations were entered into with an English company for the sale of an interest in the Tulameen platinum mines, but owing to unavoidable delays, it was not until the latter part of July that the mining engineer who was asked to report on this property was able to make his inspection. As a result of his examination very valuable data have been obtained. After "cleaning up" the results of the work already done in the earlier part of the summer and making an examination of the benches lower down the stream the engineer concluded that work had been commenced in an unfavorable spot, the amount of the gravel being small in comparison with that composing the large benches on the company's property lower down the river. These latter benches were tested under his direction and resulted as follows:

No. 1 Bench gave a return of 62 grains of platinum per cubic yard, and a few small colors of gold.

No. 2 Bench test gave a return of 15.60 grains of gold per yard and 7.80 grains platinum.

No. 3 Bench test gave 5.90 grains per yard, mostly gold, both gold and platinum being very fine.

It will thus be seen that the proportion of gold and platinum varies, the average being about one-third platinum to two-thirds gold.

The results in the first "clean up" were not as good as in the above tests (for the reason before stated), and as may be expected when the works are extended to the lower benches; it averaged about eight cents per yard, about three-fourths of this being platinum.

Numerous individuals are washing on a small scale in this Tulameen region, obtaining both gold and platinum.

The prospects are that the hydraulic company will operate vigorously during 1893, and a notable output may be expected from this, the only important platinum district yet known in British Columbia.

This Tulameen ore varies gretly in size, some of it being exceedingly fine, while on the other hand nuggets of considerable size are not infrequently met with. The writer knows of several ranging from one-fourth of an ounce to one ounce. According to the writer's experience metallic platinum constitutes about 70 per cent. of this ore.

The following statistics of the production of platinum are taken from the report of the Minister of Mines of British Columbia:

Year.	Quantity.	Value.
1887	1,400 oz.	$5,600
1888	1,500 oz.	6,000
1889	1,000 oz.	3,500
1890	Not stated	4,500
1891	Not stated	10,000

The statistics for 1892 and a thorough article on platinum will be found in the "Mineral Industry" soon to be published.—J. F. Donald, in Engineering and Mining Journal.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

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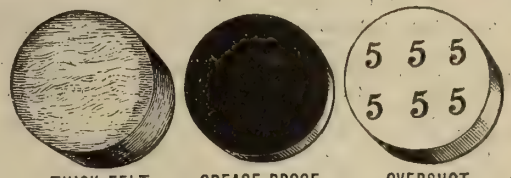
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RESPONSIBILITY OF COMMON CARRIERS.

At the annual meeting of the Montreal Board of Trade, the question of railway and steamship companies' responsibility after a bill of lading had been signed by an authorized official, was discussed. It was held that the names of the parties authorized to sign the bills of lading should be posted on changes. A member said that the question of signing way bills from Manitoba and other western points was of still greater importance. He maintained that they were very often signed in pencil, and, although Montreal merchants honored them, and accepted drafts on the strength of their supposed validity, yet these bills of lading were not worth the paper they were written on. He said that this was a most serious matter, and instanced a case wherein a party had lost 500 barrels of flour, owing to a railway agent, who had also been connected with a milling establishment tht had failed, having signed a bill of lading, and upon the strength of which the Montrealer had accepted the draft. The merchant appealed to the railway company, and was told that they could not be held responsible for illegal acts committed by their agents, and the courts of Ontario had decided that such was the law of the land. The matter had been brought before the railway representatives of the Board of Trade Council, but they had refused to come forward and volunteer responsibility on the part of their agents. The president announced that the matter would be taken into consideration at an early date.—Bradstreet.

MEND YOUR WAYS.

Some business men spend so much time in growling over the trade situation and outlook that opportunities continually slip by them. If they would hustle more and talk less, the causes of their complaints would soon disappear.—Merchant's Review.

The advice contained in the above paragraph is applicable to a host of men in every section. The biggest growlers always inhabit the most demoralized establishments. Their stock is in poor shape, methods slovenly, business habits destructive. They are never prompt, never take account of stock, and, in all human probability, never advertise.

One way to win custom and sell goods, is to keep—always keep one's merchandise in a neat, clean and saleable condition. A stock so kept recommends itself.

Another way, an auxiliary to the first, is to receive one's customers with ready smiles instead of frowns, and show them one's goods confidently, anticipating a sale, as it were. Cheerful good nature, backed by a well-conditioned stock and a known reputation for enterprise and fair-dealing, keep the brow furrowless and relegate "hard times" to the indefinite backwoods. Many a man's downfall is due to slovenly business habits. The world loves indications of prosperity. No matter how dull the times or slack the trade, keep the stock in shape and whistle for fairer winds.—Commercial Tribune.

BITS OF STORE FUN.

The following are samples of the funny experiences of dealers in England, set forth in the Ironmonger:

I am often asked for "stoves that consume their own smoke." It is rather a large order, that I have never yet been able to execute.

"A sheet of tin, please; 10 inches by 14 inches." I departed and returned with the plate, saying: "This is 14 by 10." "Oh, that won't do at all," said he, "I must have it 10 by 14!"

A few weeks since an elderly dame asked me for a pound of yellow paint, and then asked me if I could tell her what color it would be. These are the occasions that try a tradesman's soul. Happily my eye lit on some yellow whisk brushes, and I pointed them out to her, sadly and solemnly. She was much relieved, and I sold the paint.

The story of a brother ironmonger, that he was strongly advised to keep in stock dog collars already engraved with the names of customers, reminds me that I am frequently asked for special sheep brands, such as "J. B." or "A. D.," and customers seem very much surprised to find I don't stock them ready made, somewhat as the drapers keep initial handkerchiefs, I presume.

THE FIRST AMERICAN GLASS WORKS.

It was only a hundred and sixteen years after thh discovery of America that the first glass works were established in the colonies. It was a modest venture in an industrial way, but one to which much importance is attached because it was the first industry started by Europeans on American soil. It thus heads a list which is to-day as long as human needs and almost as long as human desires. It is a list which has been nearly three hundred years in the making.

This was in the year 1608. The pinoneer glass-house was a part of the activities of Jamestown. The spirit of the London Company was distinctly commercial. It had gold and silver in mind as the ultimate goal, but, with a prudence characteristic of British enterprise, it had also an eye to nearer and smaller profits. The plan of colonial manufacture was meant to serve this end. On the second voyage of Captain Newport, eight Poles and Germans were sent over for the express purpose of making glass, pitch, tar, and soap ashes. The glass-house was out in the woods, about a mile from Jamestown. It was a crude affair, but it seems to have been the centre of considerable activity, for when the ship returned to England in the following year, "a trial of glass" was presumably exported in the form of common black bottles, for the state of the art in those days, and the limited time, would scarcely have allowed the evolution of anything more difficult to manufacture.

The progress of the glass industry in America has been far from constant. It has suffered severe and violent fluctuations, amounting almost to annihilation. Several times it has needed to be born again. But the sum total of these successes and vicissitudes has been the establishment of an industry which, while it is the oldest, is also at the present time one of the most promising and most highly developed of all our industries.—Prof. C. H. Henderson, in the Popular Science Monthly for February.

EDDY A MATCH FOR THE CANNIBALS.

It was the good ship "Betsy Jane"
From Halifax sailed so gay,
But she got wrecked on a cannibal isle
Some thousands of miles away.

And only two of her crew were saved
From the maw of the hungry sea
And they were seized by the cannibals, who,
Decided to cook them for tea.

Now Jack was plump and the savages grim,
Proceeded this tar to fix
While the cook was essaying a light to procure
By rubbing together two sticks.

Jack eyed the proceedings with mournful gaze
But true to his nature polite,
Remarked, "if you'll kindly permit it, I'll show
You, how civilized men get a light."

He drew a match from out his box
And striking it soon had a blaze
But the niggers were paralyzed almost with fright
And stood open mouthed with amaze.

For they fancied that Jack was a wizard d'ye see
And speedily he was released
And Bill his mate was seized and prepared
To furnish the cannibal feast.

Now Bill was posessed of a match box too,
And he, not to be outdone,
Proceeded to try and produce a light
Exactly as Jack had done.

But his matches alas, they all missed fire,
And never a one would light,
And he saw that nothing could help him out
Of his beastly unfortunate plight.

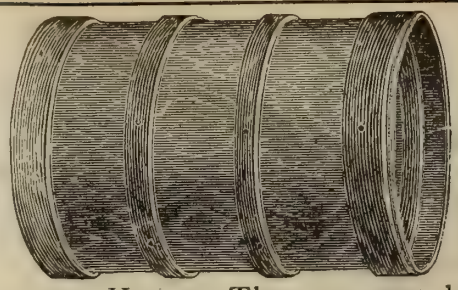
Then up spake Jack: "Oh Bill my mate,
"You now can plainly see
"How blessed a man is who has a wife
"With her head screwed on properlee.

"My Nance, she always will buy of the best
"While your Poll made the fatal mistake
"Of buying of Matches because they were cheap
"That wasn't of Eddy's make.

"Farewell my shipmate, fare ye well
"I see that the kettle is ready,
And you must be boiled while I live and rejoice
"That my matches were made by Eddy."

MORAL, Always buy Eddy's Matches.

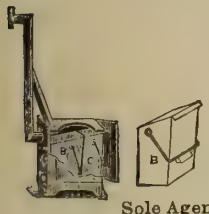
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Cost no more than in Common Kegs. The strongest, handiest, cleanest, neatest, and best store package in use. Made in one solid piece, lined with strawboard. No staves to get loose or break, No shrinkage or falling out of heads.

- Supplied by Graham Nail Works, Toronto; and Peck, Benny & Co., Pillow & Hersey Co,, and Abbott & Co., Montreal. -



PATENT VENTILATED CLOSET. — Absolutely odorless No earth or ashes required. Endorsed by the Medical Profession. Can be placed in any room in the house having a chimney or stove pipe. Send for price list and testimonials.

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Select a fine, soft chamois, to be used for Silverware only, moisten the article to be cleaned with Electorine and carefully rub off with the chamois, and it is ready for use. Do not use whiting or other powder containing grit, as it will destroy the polish and plating.

The Factories and Salesrooms of the Toronto Silver Plate Co. are at

570 KING ST. WEST, Toronto

E. G. GOODERHAM, Manager. JNO. C. COPP, Sec-Treas.

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..SAFETY..

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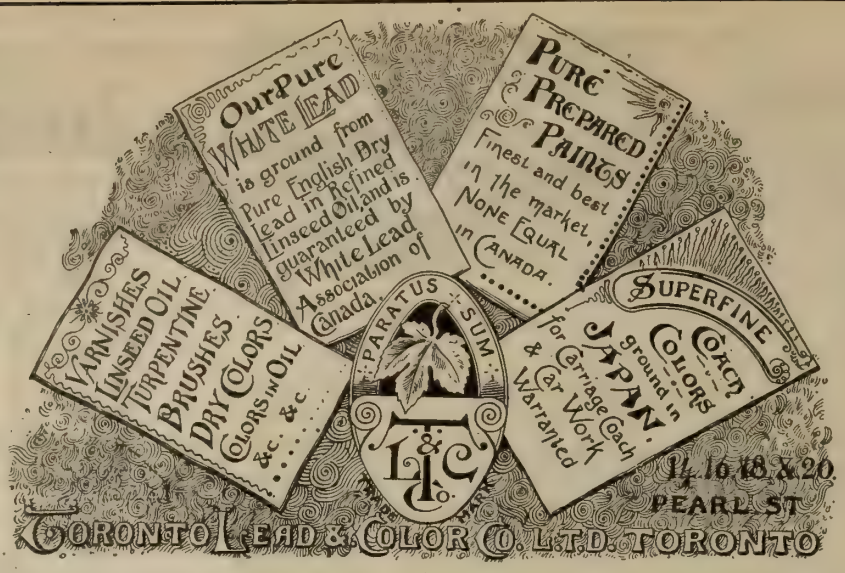
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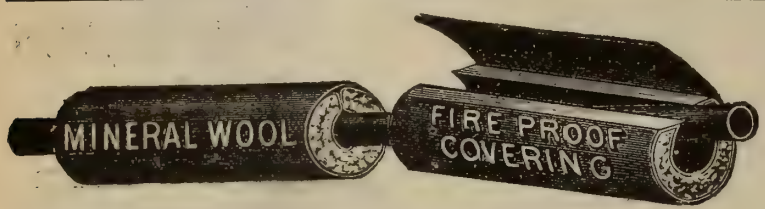
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Toronto, Jan. 27, 93.

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We will back them up



A GREAT LOSS?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss. The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

BUSINESS CHANGES.

SALES MADE OR PENDING.

Wright & Co., of Newmarket, have dissolved, G. A. Binns continuing.

G. B. Stephenson & Sons, general store, has been succeeded by Irvine & Magee.

The general stock of Mrs. F. Strand is to be sold by auction 13th inst.

The stock of Joseph Girard, general dealer, Moose Creek, Ont., is to be sold by auction on Feb. 13.

D. McBride, feed and hardware, of Havelock, has sold out his flour and feed business to E. Williams. Campney & Hubel, blacksmiths, of the same place, have been succeeded by Campney & Richardson.

FIRES.

The Erie Glass works at Port Colborne, Ont., have been destroyed by fire. Loss $30,000 which is partly covered by insurance.

Guelph was visited by a destructive fire Sunday. It broke out in the store of Pringle & Clunis, hardware merchants. An incident of the fire was a loud explosion which smashed the plate glass windows and sent a shower of bullets about the heads of startled bystanders. Mr. John B. Pringle, who lived on the third flat was rescued with great difficulty. The fire extended to Bollert & Co's dry goods store and did a good deal of damage. The stock of E. R. Bollert & Co's., in the store adjoining, was considerably damaged by water. The building was owned by Maurice O'Connor. Loss about $5,000 ; insured for $4,000. Loss on Pringle & Clunis' stock about $10,000 ; insured for $8,000.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

Douglas & McViece, crockery dealers, Montreal, have assigned.

H. R. Ives & Co., founders, have compromised at 85c. on the dollar.

Donald A. Sutherland, general merchant, Kensington, P.E.I., has assigned.

F. X. Berthiaume, general dealer, St. Genevieve, Que., has compromised at 40c. on the dollar.

J. H. Honde, general dealer, St. Bridgette des Saults, Que., is offering to compromise at 65c. on the dollar.

J. B. McDonald, general merchant, Charlottetown, P.E.I., is offering to compromise at 40 cents on the dollar.

The creditors of D. A. McLean, general dealer, McIntyre, Ont., are to meet at Henry Barber's office, Toronto, on the 9th.

G. W. Woodland, general dealer, Durham, Ont., has assigned to H. H. Miller, of Hanover. His creditors will meet on Feb. 13.

Biggs & Co., general merchants, Collingwood, have assigned to John McClung. Liabilities and assets are about the same and reach $20,000.

The Polson Iron Works Co. have assigned to E. R. C. Clarkson of this city. Mr. Justice Meredith, Tuesday, made an order winding up the Company and appointing E. R. C. Clarkson liquidator. Coulter & Campbell of Toronto are the petitioners, their claim being about $3,700.

Douglass & McNiece, crockery merchants, of Montreal, have made an assignment at the demand of the Diamond Glass Company. The liabilities are about $40,000, of which $12,058 is due the Diamond Glass Company; W. & D. Yuile, $9,300; D. J. Macdonald, $4,925 ; St. John's Stone and Chinaware company $2,267; Banque du Peuple, St. John's $1,315.

A STORY OF AN ENGAGEMENT RING.

"When I was a young man,' said Bodkins, "I was employed in a large house in the city, and fell in love with a young woman, to whom I became engaged. About two months before we were to be married I was sent to Australia on important business, occasioned by the death of one of the firm in that country. I took an affectionate leave of my intended, and promised to write to her often.

"I was detained longer than I expected, but just before I sailed for home I bought a valuable diamond ring, intending it as a present for my sweetheart.

"As I was nearing the shore, and reading a paper which the pilot had brought on board, I saw the announcement of her marriage with another, a man I knew very well, which so enraged me that I threw the ring overboard.

"A few days afterward as I was dining, fish was served, and in eating a portion, I bit into something hard, and what do you suppose it was?"

"The diamond ring," exclaimed several.

"No," said the merry Bodkins ; "it was a fish bone."

An Egyptian scythe, dug up on the banks of the Nile in 1890, and said to be as old as Moses, is exhibited among the antiquities in the private museum of Flinders Petrie, London. The shaft of the instrument is wood, set with a row of fine flint saws which are securely cemented in a groove. This discovery answers the oft-asked question, "How did the stone-age man harvest his crops?"—Age of Steel.

OFFICES: 100-102 Reade St., New York, U.S.A.

KEARNEY & FOOT CO

WORKS: Paterson, New Jersey, U.S.A.

Manufacturers of FILES AND RASPS.

Superior quality fully guaranteed.

CAPACITY OF WORKS: 1,200 doz. per day.



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Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

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BRAND "C.I.F." THREE RIVERS

PLANTS AT

Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

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Managing Director and Treasurer



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HOUSE -:- FURNISHINGS.

Bells,
Batteries,
Push Buttons.

The largest and best assorted stock in Canada. Send business cards for discounts.

T. W. NESS,
749 Craig St., MONTREAL.

THE BEST
English Sporting Gunpowder
USE THE
"ALLIANCE"
PRIZE POWDER.
—Made only by—
Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.

Always obtainable from
Frank S. Taggart & Co., Toronto.
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The OLD WOODEN BUCKET MUST GO

Indurated Fibre Ware.



NO HOOPS, NO JOINTS, CANNOT LEAK, SWELL, OR WATER SOAK.

The E. B. EDDY CO.
MAMMOTH WORKS
HULL, CANADA.

..WIRE..

CALVANIZED, ANNEALED, OILED AND FENCING

Best quality, even weights, prompt delivery of import orders, lowest prices, write for quotations.

A. C. LESLIE & CO.

MONTREAL and TORONTO

"Burham"

PORTLAND CEMENT.

BEST ENGLISH BRAND MADE.

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McRAE & Co.,

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MUNN'S LIQUID BLUE

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CLARKSON & CROSS,

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NO. 26 WELLINGTON ST. EAST

E.R.C.Clarkson, F.C.A.
W. H. Cross, F. C. A.
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ADAMS-MARS BEST.

CALVANIZED SHEET IRON. SP

FOREIGN CORRESPONDENCE.

Letters translated from or written in any foreign language.

I. H. CAMERON, 10 Front St. E

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	23, 23½
Strip "	24½, 25½

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
Bradley M.L.S.		
I.C., usual sizes	$6 00	$6 25
I.X., "	7 25	7 50
I.X.X., "	8 50	8 75
Raven & P.D. Grades—		
I.C., usual sizes	4 50	4 75
I.X., "	5 50	5 75
I.X.X., "	6 50	6 75
I.XXX., "	8 50	8 75
D.C., 12½ x 17	4 00	4 25
D.X.,	5 00	5 25
D.X.X. "	6 00	6 25

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be purchased of 10c. per box less.

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	8 00	8 25
I.X. Terne Tin	10 00	10 25
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65, "	

Tinned Plates

72x30 up to 24 gauge	6¼	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$2 05	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
-inch	13½

Steel Boiler Plate.

¼inch	$2 45
16 "	2 35
¼ " and thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2¾, 2¾
26 "	2¾, 3
28 "	3 , 3½

Canada Plates.

Blaina	½ bright	2 75
Abercarne		2 75
Lion		

Iron Pipe.

Wrought 62½ p. c. to 62½ p. c. and 5 p.c. Galvanized, 37½ to 40 per cent.

Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	5¾ 6
" ¼ " "	5½ 5½
" 5-16 " "	4¾ 5
" ⅜ " "	4⅝ 4⅞
" 7-16 " "	4½ 4⅝
" ½ " "	4 4½
" ⅝ " "	3½
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 14	0 14½
Lake Superior	0 13	0 13½

Bolt or Bar.

Cut lengths, round, ½ to 1 in.	$0 22	$0 25
" round & square 1 to 2 in	0 20	0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16	0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17	0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26	0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20	0 22
" 35 to 45 " "	0 19	0 20
" 50 lb and above per lb	0 18	0 19

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21	
Spun " "	0 25	

Wire.

Pure, in coils—		
From 1 to 20 gauge	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20	0 21
" " 27 to 30 "	0 23	0 25
" " 30 and up	0 26	0 28
Sheets, hard-rolled 2x4 ft	0 21	0 23

Zinc Spelter.

Foreign, per lb	0 05½	0 05½
Domestic "	0 04⅝	0 05

Zinc Sheet.

5 cwt casks	0 06	0 06½
Part casks	0 06½	0 06¾

Lead.

Imported Pig, per lb	0 03½	0 30⅜
Domestic "		0 03½
Bar, 1 pound		0 05
Sheets, 2½ lbs, per square ft, by roll	0 04⅜	0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04⅜	0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

Half-and-half (guar.) per lb	0 17	0 19
Standard	0 16	0 18

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½	0 14
Other makes "	0 13	0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per lb	... ...
No. 1 Do "	... ...
No. 2 Do "	... ...
No. 3 Do "	... ...

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 10
2nd qualities "	0 90

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.cwt	1 35	1 40
" " (J.F.L.S.) "	"	2 75
Venetian Red (R.C.2) "	"	1 50
Venetian Red, (best) "	1 80	1 90
English Oxides per cwt	3 25	
American " " "	2 25	
Canadian " "	1 75	
Paris Green, per lb	0 13	0 15
Burnt Sienna, per lb		0 08½
Burnt Umber "		0 05
do pure		0 08
Drop Black "		0 09
Chrome Yellows "		0 12
" " Lemon pure, 8 lb. tins, per lb		0 19
Chrome Greens "		0 12
Golden Ochre		0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 65
Extra "	1 00
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 90
No. 1 Carriage "	1 50
Gold Size Japan "	1 40
Pure Orange Shellac "	2 00
Hard Oil Finish "	1 50

Linseed Oil (in bbls)

Raw, per gal	0 55½	0 57½
Boiled "	0 58½	0 60½

Turpentine (in bbls)

Selected Packages, per gal	0 51	0 58

Castor Oil.

Best, per lb	0 07½ 0 08½

Cod Oil.

Cod Oil, per gal	0 48

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet makers	0 17	0 18
White	0 16	0 17

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads. in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50,50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, " 0 85 1 60
" handled " 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross ... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 37½, 40 per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 5 to 65 & 5 pc.,
Loose Pins, " 65 to 65 & 5 pc.,
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... ..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 40 to 45 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 50
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.40	2.70	2.00	
26 to 40	1.50	2.90	2.25	
41 to 56		3.30		5.00
57 to 60		3.60		5.50
61 to 70		3.90		6.00
71 to 80		4.50		6.75
81 to 85		5.20		7.50
86 to 90		5.90		8.50
91 to 95				9.50
96 to 100				10.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw and Strap, per lb.. 0.03½ 0 04¼

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

BOWMAN, KENNEDY & CO.,

LONDON, ONT.

Large consignment of WINDOW GLASS via "Pickhuben," just unloading at our Warehouses.

Full assortment of sizes now on hand. Prompt shipment Guaranteed.

SEND US YOUR ORDERS AND THEY WILL HAVE GOOD ATTENTION.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padock, Am. per gross..... 1 60 4 75

Knobs.

Door, japanned, and N.P, Can. list dis, 50 p.c.
Bronze, Berlin, per doz .. 2 75 3 25
" ronze, Gem, " 6 00 9 00
" ays " 8 75 10 00
" hutter, porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   Basis—50 to 60 dy..... 2 30
   40dy..... 2 35
   30 dy..... 2 40
   20, 16 & 12 dy..... 2 45
   10 dy..... 2 50
   8 & 9 dy..... 2 55
   6 & 7 dy..... 2 70
2. American Pattern Only
   from 4 to 5 dy 2 90
   3 dy. (lath)..... 3 30
3. Canada Pattern Only
   from 4 to 5 dy 2 80
   3 dy. (lath)..... 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal ..... per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz..... ... 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Star R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... .... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	22	25
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 0 75 0 85
" N P. " 1 00 1 10

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.
Hack, complete, each.... 1 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W, N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P,, 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps,

Harness, German, p. gro. 1 65 5 50
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia ½ gross boxes..... 3 25
" ¼ and ⅛ gross boxes per gross net cash 12 00

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4¼
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2, " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 57½ per cent.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75 p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz 1 25 2 50

Tinner's Shears and Snips

P.S. & W., 10 p.c. advance on American list.
Canadian 10 per cent dis.

Tinware.

Stamped, dis. Assn list, 70, and 12½ per cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... .... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Washers "Iron," 40 per cent., 4 mos., or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Iron and Steel, bright, annealed, oiled, coppered, galvanized, spring, nail, bolt, rivet, etc.
15 per cent. f.o.b Montreal, off revised list, Dec. 1, '92.
Plus 10 cents f. o. b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " } 4¼ 4¼
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¼ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 80 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 30 to 32½ p. c
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3
" S., per doz..... 5 80 7 0
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS.

MANUFACTURERS OF THE

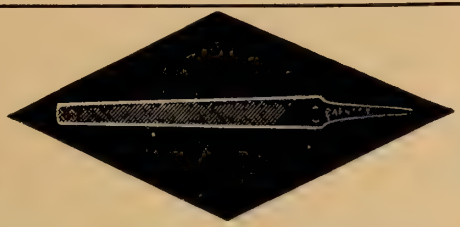
Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

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BLACK DIAMOND FILE WORKS,



21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

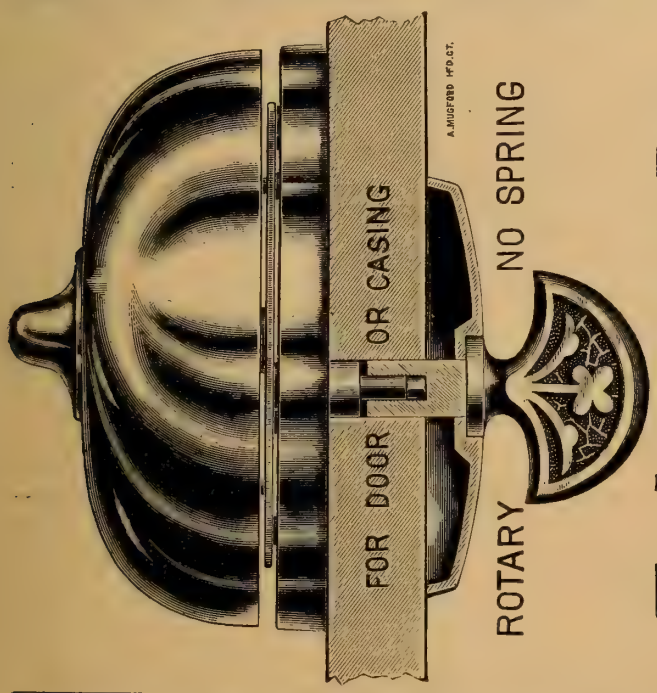
—MANUFACTURERS OF—

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
CLIMAX SAWFILES. LIGHTNING SAWFILES.

—AND—

EVERY OTHER DESCRIPTION OF SAW FILES.

NEW DEPARTURE "ROTARY" DOOR BELLS.



Incomparable!
NO SPRING!
Best Tone, (Sure)
Superior Finish!
Bronze Trimmings!
COMPACT!
CHEAP!

For Circulars, address

THE NEW Departure Bell Co.,

BRISTOL, CONN.

WHY IS IT

THAT THERE IS A STEADY INCREASING DEMAND

FOR GLOBE FILES?

Because every file is warranted, equal to the best imported, and prices much lower. Because the Consumer has no Duty to pay on these files.

GLOBE FILE MFG. CO.,

WALTER GROSE, Montreal, P. Q. **PORT HOPE, ONT.**

IDEAS FOR

Hardware Merchants.

By D. T. MALLETT.

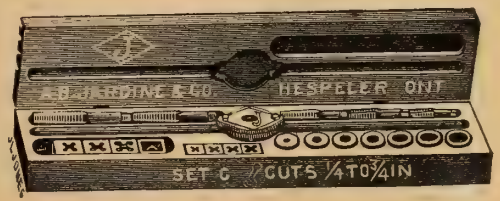
CONTENTS: Starting a Hardware Store; What Hardware Dealers may Sell; Hints about Inventory; Behind the Desk; Ratio of Expenses to Sales; Retail Advertising; System in the Store; The Use of a Store Window; The Holiday Trade in Hardware; John Jones, Jr.; The Successful Merchant; Parable of a Foolish Trader; Cordiality Between Competitors; Commercial Value of a Smile; More about Advertising; Business Education; Fable of the Magnet; Why One Merchant Failed; The Other Half; Cash or Credit; Don't Get Into a Rut; The Value of Price Lists; A Store Library; Books for Hardware Men; Advertisements of Leading Manufacturers.

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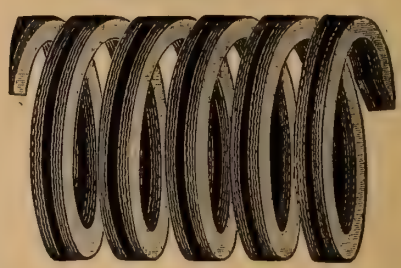
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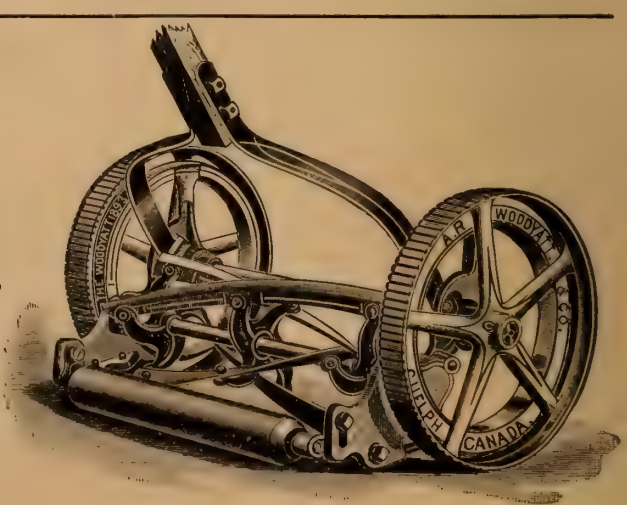
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VOL. V. TORONTO, FEBRUARY 18, 1893. No. 7.

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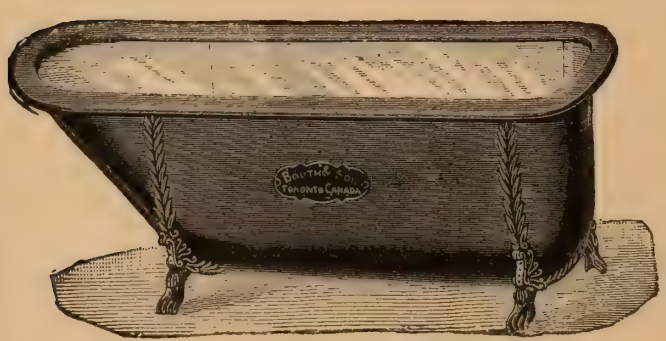
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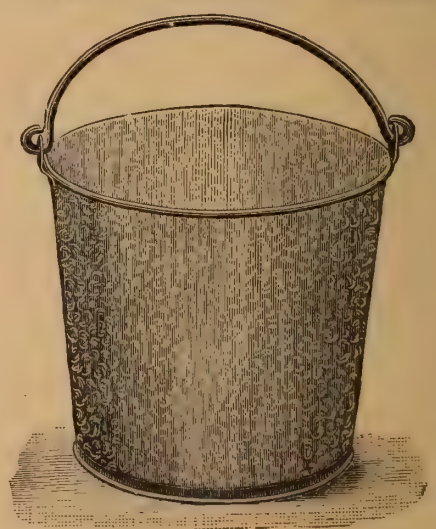
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Vol. V. TORONTO, FEBRUARY 18, 1893 No. 7

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

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The Cleveland raw iron market has been by no means satisfactory since the beginning of the year, and anticipations for the immediate future are not altogether bright notwithstanding the steady feeling in prices. The opening of navigation is what is usually depended upon for giving the market a start in the spring, but this year the prospects are that the Frost King will not release his grip on the waters of the upper lakes as early as usual. And when he does higher freights are looked for because of the increased demand that is likely to be made for vessels to replenish the depleted coal stocks at the upper lake ports. All this means that the navigation season is not only likely to be short but that freights will rule high. The prospect of the latter of course tends to satisfy the vessel men for the loss that may be entailed in the first instance.

* * *

It seems that the last act which is to consummate the formation of an association among the white lead manufacturers has not yet been performed. It is expected, however, that it will be before the present week is out, the representatives of the different parties to the agreement being now in Montreal for that purpose. In the meantime quotations are still off the market.

* * *

Linseed oil seems to be riding well on the horns of the bulls. During the last week the price of the English article jumped equal to six cents a gallon. The association which controls the market in this province has also advanced prices considerably, and the probability is that they will be further enhanced before long.

* * *

One of the industries which the McKinley bill aimed to take under its special care was that of tin-plate. The Americans for several years had been making an effort to supply their own market with the home article, but the success that attended their efforts was indifferent indeed. The Welsh makers were too much for them. It was pointed out during the debate on the celebrated McKinley bill that the American mines would in time be able to support the home market, if given sufficient protection. Accordingly it was decided to impose a duty of 4c per pound on pig tin, the same to take effect on and after July 1, 1893, with a proviso that unless the production of pig tin in the United States is shown to be 5,000 tons per annuam during the ensuing two years, the duty shall thereafter be abrogated. It is now alleged from information gathered by experts, that the home production cannot approach the stipulated quantity. The article is of prime necessity alike to the industries and the arts of the United States, and a strong and united effort is being made to persuade Congress to repeal the McKinley tariff on tin. The importations now reach an aggregate of 21,000 tons per annum, the duty on which at four cents per pound would amount to nearly $2,000,000. The Daily Metal Market Report of New York has been particularly active in seeking to have the tariff on tin repealed, and in a recent issue says: "Recollect that should the duty go into effect, every pound of tin will cost you 25 per cent. more than under the present tariff. The duty will not benefit any domestic industry, but will only serve to permit a speculative foreign syndicate to wring out of American consumers over $1,000,000 on speculative accumulations now in or on the way to this country. Should the duty not take effect in July, you will be able to purchase your supplies of tin at nearer 16 cents per pound than 20, which is about the present ruling price."

* * *

At the moment there comes to hand a forecast of Special Agent Ira Ayer's report regarding the production of tin plate in the United States. He was charged by the Treasury Department with the collection of the statistics of the plate production under the McKinley law, and his report will show the production for the quarter ending December 31, last, to have been nearly twenty million pounds of tin and terne plates proper, besides the manufacture of American sheet steel terned. This is nearly double the production for the quarter ending September 30, which was 10,952,725 pounds, and makes the production for the first six months of the fiscal year, which began July 1, over thirty million pounds. Most of the production has been tin and tin plates lighter than sixty-three pounds per one hundred square feet, which must be produced in the States to the amount of one-third such plates imported and entered for consumption in some one fiscal year before Oct. 1, 1897, to entitle American manufacturers to the continuance of the duty under the McKinley law. The importations for the last fiscal year were about 240,000,000 pounds, so that there might be a production of 8,000,000 pounds during some one year to secure the retention of the duty. "The production for the last quarter reached this rate," adds N.Y. Commercial Bulletin, "and if continued through a complete fiscal year would perpetuate the duty, if Congress does not see fit to reduce it."

* * *

There is a marked and growing tendency of late among business men to call in expert accountants to examine their books. Not a

few have ordered stated periods for these visits. In this way more extensive fields are being opened up to this class of professional work. And it is a good sign of the times. One of the most prolific causes of failures is indifferent bookkeeping. Bookkeeping is something more than merely keeping a record of goods bought or sold. That is only the rudiments of the profession. Beyond that there are depths into which none but experts dare venture. In a word, bookkeeping is a science, and a pretty intricate one at that. In the days gone by, when competition was far less keen and profits proportionally larger, there was not the same necessity for a close scrutiny of the books. The exegencies of to-day, however, demand that every leak shall be searched out and stopped. This can only be done by efficient bookkeepers. There are a large number of business men who cannot afford to steadily employ a first-class bookkeeper, but they can call in an expert once a week or month or just as the occasion may demand. And this is what they are doing. Yes, and not only are the smaller houses doing this, but some of the larger ones are getting into the habit of it. The practice is one that will need still further extension. There are men running stores without absolutely any system of bookkeeping whatever. And there are others who, while keeping a rough record of goods sold on credit, have neither a cash book nor a substitute for one. Others again never strike a balance sheet, thus allowing themselves to drift in blissful ignorance as to whether they are sailing towards success or destruction. A good many only learn when they find themselves hard and fast aground. Then they call in the assignee, while if a year or so before they had called in perhaps the same man in his capacity as an expert accountant disaster might have been averted. Bookkeeping is the business man's chart. Use it, and take an expert pilot on board occasionally to make sure you are steering right.

* * *

It is understood that prominent members of the Toronto Board of Trade are devising a scheme for putting into practice President Wilkie's suggestion for an extension of the principal of arbitration. As is well-known, there is now a board of arbitration in connection with that institution, but in what manner it is proposed to extend its functions is not known. At present where there is a dispute between members they can be compelled to submit their case to arbitration. Even a matter in dispute between persons who are not members the board will arbitrate provided the disputants make application and agree to accept as final the finding of the arbitrators. It is rare, however, that the functions of the board of arbitrators are exercised in settling the difficulties of those other than members.

* * *

Encouraging as have been the results, the present movement to extend the system has drawn its inspiration from another quarter. This particular incentive is the London Chamber of Arbitration, which was established two or three years ago, and the success which has attended it seems to have created a general desire everywhere to extend the principal of arbitration so that it may even appropriate at least some of the functions of the courts of law. The Chamber of Arbitration that is now attracting so much attention was established by the corporation of London in concert with the Chamber of Commerce. It is managed by a committee of twelve, each of the two formative bodies appointing six. The parties to a dispute may select, or at their request the registrar will appoint one, two or three arbitrators, as the case may be. When two arbitrators are appointed they in turn choose an umpire within ten days. Then there is what is termed a legal assessor, who must be a barrister of at least seven years' standing. His duties are to sit with and advise the arbitrators. Any number of parties may join in submitting a case for arbitration, and a submission once made cannot be revoked by either party without the consent of the other unless by leave of the court or a judge. An award can be enforced in the same manner as a judgment or order of the court. Witnesses are either sworn or compelled to make an affirmation. The sittings of the arbitrators are private, but newspaper reporters are allowed admission on the consent being obtained of all parties interested in the case. Regarding arbitrators' and umpire's fees, they are two guineas for the first hour and one guinea for each subsequent hour. The fees are paid on the award being taken up, except in a case of reconciliation, when the fees due are payable by the several parties in equal shares. The fee of the legal assessor is five guineas for three hours and ten guineas if the period of his services exceed that time. The court fee is one guinea, and for copies of documents supplied by the registrar fourpence per folio of 72 words is charged. Last year the board of arbitrators disposed of several thousand cases.

* * *

The principal of arbitration is no modern devise. It came down to us from the Rome in company with the foundation of our law. And that its expansion should have been so small in comparison with the growth of the centuries is surprising. But it looks as if the nineteenth century is hastening in its dying years to make up for some of the time lost by its predecessors. Cheapness and efficiency without distracting technicalities is what is wanted for the settlement of disputes between man and man. And arbitration seems to be nearer possessing these qualifications than is the present law in its general acceptation. The chambers of commerce in some of the large cities and towns in England are moving in the same direction as the chamber in the metropolis, and now Toronto appears to be falling into line. Not long ago the state of New Jersey adopted an arbitration law for the settlement of disputes growing out of employer and employees. The local board for the adjudication of such differences is to consist of five persons, two of whom are to be designated by the labor organization whose members are involved and two by the employer, while the four thus chosen are to designate a fifth person to act as chairman of the board. An appeal may be taken to the state board of arbitration which is a permanent commission of three members holding office for terms of five years each, one of the three being a member of a bona fide labor organization of the State. New York has a similar law.

* * *

In spite of repeated warnings there are still to be found business men who entirely neglect to insure their stock against fire. How many there are is a query, but fire reveals one now and then. One of these revelations came a few days ago when the postoffice and store at Moffatt, Ont., was destroyed, together with the stock and a trunk containing $300 in cool cash. True, the store had only recently been purchased by its present owner, but he was in possession time enough to have had his premises insured. When a man wants to insure his person or his chattels he has no trouble to secure the desideratum. The moment he utters the word the ubiquitous agent is at his command as quickly as the small boy hies to a sugar barrel. Not only should a business man be insured but he should be insured to at least 60 per cent. of the value of his stock. In justice to his creditors he should do this, if for no other reason.

TARIFF CHANGES ON TWINE AND OIL.

The most interesting part of Hon. Mr. Foster's budget speech to the hardware trade was of course the reference to the duty on oil and binder twine.

Almost from the day that the House opened some member has had something to say about the duty on either one or the other of these articles, and it was expected, if for no other reason, that the budget speech would contain some reference to it. Aside however from this the Minister of Finance intimated, during the debates on these motions of private members, that the government would announce itself later regarding the questions which so many of the peoples representatives thought that upon them rested the duty of securing the decideratum of lower duties on oil, binder twine etc. But the Government studiously avoided giving the slightest inkling as to whether its deliverance would contain a sop or a stone for the tariff reformers. Tuesday the announcement came with the delivery of budget speech and the concessions it contained were probably greater than at least most people anticipated.

The reduction of the tariff in binder twine to 12½ per cent. is a radical change, and its ultimate result will be watched with a good deal of interest. Mr. Stairs, M. P, who is at the head of one of the large binder twine concerns in Nova Scotia, holds that the reduction will have the effect of changing the Canadian manufacturer to a dealer, as the 12½ per cent. duty will not he claims be sufficient to keep out the surplus the Americans may have on hand after their harvest. There are other manufacturers, however, in the business who hold the opinion that the change will not make much difference to the trade, alleging that home competition has already cut prices down as low as they can reasonably go. But all seem to agree on this point: If there happens to be an over production in the United States this country would be flooded with the surplus. At the moment, however, the National Cordage Co. is believed to be making an effort to appropriate all the raw material with a view to running the American market to suit itself. As a further step in this direction it has in the meantime withdrawn prices from the market with the intention, so it is claimed, of allowing the small manufacturers to exhaust their stock, after which it will appear on the field, when, with its own guns well primed, it anticipates an easy victory over its ammunitionless competitors. But one of the leading binder twine journals of the United States is dubious about the combine being able to succeed as well as it anticipates.

Even if it should succeed in cornering the raw material, and put up the price of the finished product in the United States, it is no guarantee that the National Cordage Co. would leave Canada alone. Corporations like that have been known to send their products into other countries and sell it at a lower price than the home manufacturers could afford to do, with no other object than to drive the latter out of the field. With the field cleared of competitors prices would be raised to a profitable basis. We do not say this would be done; but in reckoning on the possibilities it seems reasonable that this should be taken into account. A couple of years ago American binder twine produced from jute was placed on this market at 5 1-2c. a pound, while the manufactured price of the same article over there is now 7 1-2c. a pound.

Some years ago the binder twine mills of this country were placed under the control of one syndicate. This syndicate still exists, although it is held to be not a combine. Since that four independent mills, including that at the Central Prison, have been started, and they are now in operation. The standard article is made from sisal and manilla, and all the mills in Canada, with one or two exceptions, manufacture this article. The exception, and the special article, is produced from jute.

The oil men scarcely yet know how the change will affect them. Coal oil has been under the especial care of the Dominion Government for some 20 years, and the proposed change, while not actually interfering with the 7 1-2 per cent. duty, permits free transportation, which in turn means that the American article can be brought into this country in bulk. In consequence of this there will be a reduction in cost of inspection. And taking it all round, on the face of it it looks as if the reduction in the duty will be from two to three cents a gallon. Until, however, further details have been decided—such, for instance, as regulations regarding barrels—the actual reduction cannot be ascertained. It is not thought that lubricating oils will be affected to any great extent by the change in the tariff.

THE TARIFF CHANGES AT MONTREAL.

The budget having been brought down, iron merchants and hardware dealers in Montreal generally are in a discussive humor about it, and the sentiments expressed are made up both of satisfaction and dissapointment. All are glad however, even if some of their little pet theories were not followed, that the uncertainty is over and business can go forward again on a basis of certainty. Some iron men thought that there would be changes or readjus ments in the schedule regarding bar iron, but, as HARDWARE predicted, this has not come true, and none but of the more sauguine enthusiasts ever imagined that there would be any changes.

With regard to binder twine and the reduction in the duty the Consumers Cordage Company, through one of its directors, Mr. E. M. Fulton, states that the reduction from 25 to 12½c. per cwt. will have no effect on that company. The Consumers Company, according to Mr. Fulton, being in intimate and friendly relations with the cordage companies across the lines, cannot be seriously effected, even if the duty was entirely abolished. In fact, Mr. Fulton doubts whether the latter course would not be the best one for his company, as he felt that it would result in larger earnings by it.

The buyers naturally are perfectly satisfied with the change in question, and on the whole the suggestions in the Budget are looked upon with favor, while it is considered as more than likely that if the new U. S. Congress holds a special session and decides upon any new policy toward Canada our Government is likely to meet them half way, which may mean further readjustment.

LIABILITY OF DIRECTORS.

Judge Mathieu has rendered judgment in the superior court dismissing the action with costs taken by J. C. Mullen against William Owens and Alexander Ramsay. The defendants were charged with having mismanaged the affairs of the McLaren Manufacturing Company, and the judge decided against the pretension of the plaintiff, holding that the defendants had done everything in their power to make the company a success, and that the plaintiff had no right to recover from them the amount of his stock.

The growth of the hardware trade in the United States has attained an enormous development. Its usual increase from 1840 to 1860 is estimated at about six millions of dollars a year, reaching an aggregate of a hundred millions at the latter date. Since then the annual increase is estimated at an average of $25,000,000, making the annual aggregate of transactions more than a thousand millions.

OUR LONDON LETTER.

LONDON, Feb. 8, 1893.

EXHIBITION OF CYCLES IN LONDON.

The National Cycle Show recently held in London has been a success. No fewer than 1,400 specimens of cycles were on show. There were very few of the old-time high wheel bicycles exhibited, while the pneumatic tire has come into general use in one or another form. There has been a good deal of grumbling among cycle makers about the "bad times" and excessive competition in the trade, but such dullness is due to the prevailing want of money among our middle class people—the persons who can afford to spend from £15 to £20 for a good machine.

The sale of cycles seems to have almost completely got out of the hands of the hardware merchant. I do not know whether this result is due to the smartness of the cycle maker and dealers or to the slowness of the hardware dealers; but if the latter class had been sufficiently enterprising when the cycle trade started they might have captured the whole industry. But they did not foresee that the manufacture of cycles would develop into such a big trade as it has done and they foolishly let it slip out of their hands.

It may interest Canadian cycle makers if I state the terms on which English makers work, as stated in their circulars, catalogues, etc. In the first case the purchaser pays the carriage on the machine. Crates are charged at the rate of 2s. 6d. to 5s. 6d. each (say 60 cents to $1.36), and are often not returnable, otherwise two-thirds is allowed if returned at once. Anyone wanting a machine repaired has to prepay the carriage and send a check or remittance before the machine is returned. Although makers guarantee their machines for a year, yet this does not extend to the pneumatic tire. The system of monthly or weekly payments is largely adopted by nearly all makers and dealers, but of course it is by far the most expensive way of buying a machine, such purchasers paying quite 30 to 50 per cent. more than the article is worth.

Strenuous efforts are being made here by the trade press to induce ironmongers to take up the cycle business. They are a peculiarly conservative body, and unless they see a certainty of making a good haul, they won't touch anything new. But events have shown that the cycle has come to stay and that there is money in the selling of them. As one of the papers says: "All that is wanted is ordinary business grit in the ironmonger and some cycle knowledge and 'go' in the assistant who is given charge of the department." There are already numerous members of the trade who are doing well with cycles, and what they are doing can certainly be achieved by hundreds, perhaps thousands, of ironmongers. One of the principal objections held by ironmongers against trading in cycles is that such goods occupy a lot of room in their store; they can't be packed away out of sight like most goods are in an ordinary hardware house in England. One of the largest cycle dealers in England, who has also a branch in the United States, says that some of the leading hardware men in that country—firms with from one million to four million dollars capital—have gone extensively into the cycle trade and are doing well at it.

CRINOLINES AND HARDWARE HOUSES

It is an ill wind that blows nobody any good, and the truth of this old proverb is about to be verified in England. The lady folks have been talking about re-introducing the crinoline, and should this dreaded article of apparel come into general use it will give a decided impetus to the manufacture of steel in Sheffield. It would come as a blessing to many makers of steel. Some forty years ago many Sheffield steel manufacturers made lots of money in the production of crinoline wire. So great was the boom that one firm put down over thirty machines for its special manufacture. But fashion is proverbially fickle, and shortly the enterprising firm found that there was no demand for the wire, crinolines having become things of the past.

THE NEW RAILWAY RATES.

The attention of wholesale houses is largely occupied with the question of increased railway rates, as I have previously advised you. The following table will give your readers some idea of the increase in the carriage of machinery :—

Between Newark and	New Rates. s. d.	Old Rates. s. d.
Abingdon	——	——
Athy	——	——
Birkenhead	28 4	18 0
Barnstaple	49 6	32 2
Bolton	26 11	——
Bradford	22 9	18 4
Bristol	33 4	27 6
Birmingham	21 8	——
Brixham	——	——
Brinscombe	30 2	——
Chester	26 9	23 4
Colchester	32 2	——
Exeter	47 5	——
Darlaston	22 2	——
Grimsby	19 3	14 2
Hull	19 3	14 2
Leicester	16 4	13 4
Leeds	21 9	16 8
Lowestoft	33 9	25 10
London	30 7	25 0
Manchester	23 7	18 4
Nottingham	11 10	8 9
Norwich	30 10	22 6
Sheffield	17 2	14 2
Scarborough	27 11	21 6
Slowmarket	29 3	20 6
Stanningley	21 2	18 4
Yarmouth	33 1	25 10

The rates on the carriage of boilers have been increased from 25 to 45 per cent., and in the case of engines between 20 and 30 per cent. C. W. Galloway, of Galloway Bros., the large Manchester firm of boiler makers, says that if these rates are enforced the result will be serious to the trade of the country. Export firms view the prospect with alarm. Mr. Platt, of Platt Bros., Oldham, the celebrated makers of textile machinery, says that his firm employs 11,000 people, which if multiplied by five gives about the total number of people dependent upon his factories for bread. The increased rates, therefore, strike at the workers themselves by handicapping the home manufacturers.

TAKING IT OUT IN LATCHES.

I came across an amusing story the other day, illustrating how keen is the competition for orders on this side. Two agents for gas engines were trying to get an order from a latch maker. Both of the engines were good and the terms about equal. The buyer was puzzled which to select from. At length one of the agents said: "Look here; give me the order for the engine, and I'll take out the amount in latches." He won the day.

A NEW PENCIL.

The New York Times says: Inventive genius promises to do away with all of those petty annoyances which are the the most prolific sources of profanity. True, the saint has not yet appeared who is ready to furnish mankind at a small cost with a patent collar-button finder, or with an opera glass warranted to see through a "love of a bonnet" designed on Eiffel Tower lines, but even those blessings may be hoped for. However, you, who in a loud voice or under your breath, make thyselves undeserving of the gift of speech over such a trivial matter as the breaking off of the points of thy lead pencils at the most inopportune time, there is no longer any excuse for thee. Genius has wiped out that cause of his undoing. Relief has come in the shape of a pencil which, while not everlastingly pointed, yet gives opportunity to men to break about as many points as any reasonable man would want to break, and still have a point left to keep on writing with. The article consists of a very light metal tube, shaped and pointed like an ordinary lead pencil. In this tube are inserted about a dozen short and nicely sharpened pencil points. If you break off the first you just pull it out and stick it in the top. That forces the second point down into position. So you can keep on getting a new point whenever you break one off by just pulling out the broken point and sticking it in the top of the tube.

"But what do you do when you have broken off all of the dozen pencil points?"

"Why, just throw the whole business away. The little tube with its load of sharpened pencils cost just about the same as an ordinary pencil, and will do just about the same amount of work. With it, however, you always have command of a sharpened pencil point and you never have to smudge your fingers as you do when sharpening your pencil."

H. S. HOWLAND, SONS & CO.,

WHOLESALE HARDWARE

37 FRONT ST. WEST, TORONTO.

"Samson" Solid Steel Spades and Shovels.

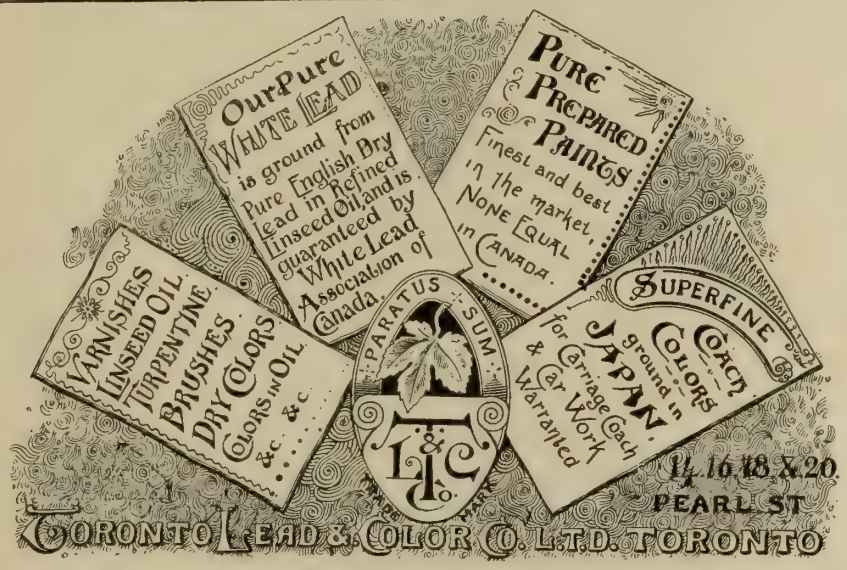
OUR - - PAINTS

Are acknowledged as the

CANADIAN STANDARD

Our prices are Low - - and shipments prompt.

Every Package Guaranteed



Toronto, Jan. 27, 93.

--Our travellers are on the road ready for the fray, give them a chance to show their mettle. . . .

We will back them up

BE PROMPT.

"Do it to-day," says a writer in The Merchant Sentinel. "Meet the day's demands with promptitude, regardless of their seeming insignificance, for there is no better way to place your name between the lips of undesirable business gossips than by showing this lack of promptness in small matters. This does not alone apply to the strictly financial part of your work. There are thousands of opportunities which present themselves where it is possible for the business man to take advantage of the 'stitch in time saves nine' axiom. The 'stitch' is but an insignificant factor in the make up of the long binding seam, but the neglect of the one broken thread. and procrastination's prevention of it's prompt repair, is the ruination of the entire garment. So we find men in their business transactions constantly putting off that which should be done to-day, until an accumulation of the little neglected details form an aggregate with a crushing weight, when the time comes that circumstances give the mandatory command. It must be done! How often do we hear the merchant who is his own bookkeeper lamenting an unpardonable negligence in himself—in the matter of keeping his accounts entered up to date and his books in a condition of intelligent management. A negligence which he would not tolerate in any one in his employ. So easy is it to thoughtlessly 'put off' that which does not make a peremptory demand upon our time, that we are liable to fall into the habit of being behind the details. Better, by far, be ahead of time than constantly lagging. Do everything as it presents itself, for just as sure as you 'put off' until to-morrow, your time will be fully filled by the duty of the day, and you have lost the only opportunity of life open to the neglected work."

HOW COD LIVER OIL IS MADE.

The process of manufacturing cod liver oil at Portugal Cove, Newfoundland, is as follows: It requires as a rule 2 1-2 gallons of liver to produce a gallon of oil. The livers are first carefully washed, and must then be "cooked" at once. For this process they are first put into a large tin boiler, which is plunged into a large iron boiler filled with hot water, the water not being allowed to touch the livers, which are thus gently steamed till a quantity of oil is floating on the surface. This is dipped out and filtered through bags of moleskin. The last filteration leaves the oil perfectly transparent, and without any unpleasant taste or smell. The oil is exported in 60 gallon casks.—Ex.

TORONTO SILVER PLATE CO.

The annual meeting of the shareholders of the Toronto Silver Plate Co. was held recently at their offices, 570 King street west The usual annual dividend was declared and paid. At a subsequent meeting the old board of directors were re-elected, with the addition of Mr. Wm. Biggar, of Dalbeattie, Scotland, in place of his father. Mr. W. H. Beatty again takes the position of president and Mr. A. L. Gooderham that of vice-president. Mr. E. G. Gooderham continues as manager, and Mr. J. C. Copp as sec-treasurer.

The outlook of this company is bright and promising, and their manufactures stand second to none in the market.

SMOKELESS POWDER AND MAGAZINE RIFLES.

Report of a lecture delivered before the Toronto Military Institute, Feb. 3, 1893, by L. G. Duff Grant, F. I. S., Secretary of the Smokeless Powder Co. of London.

(Continued from last week.)

We have seen that while the old black powder was a mechanical mixture of three ingredients, with a narrow range in quality, but with great stability, and that gun cotton was a highly scientific chemical but uncertain product, some happy medium had to be found if any genuine improvement was to be made. Logically, it might have been said: We have only to combine the two things and to make a powder partly of a mechanical and partly of a chemical mixture or combination. This in the abstract would have been reasonable enough and in fact contains much truth, but the difficulty was, how to accomplish it, and this was the task which Capt. Schultze and Mr. Dougall set themselves to solve, and right well they carried out their programme, as has since been proved.

To discover the happy medium referred to, the main point was to diminish the volume of nitrogen in gun-cotton—that being the rending force—and to retain the volume of carbonic acid in black powder.

If it were possible at the same time to increase the latter, all the better. That seemed simple enough, considering the great resources of modern chemical science; but the overwhelmning number of failures consequent on the required conditions has proved it to be otherwise. The process in the manufacture of nitro-compound gunpowder starts upon that of gun-cotton, but the great distinction is that after the substance substituted for the black powder charcoal has been treated with acids, it is saturated with salts in the concrete, there being the equivalent of the saltpetre in black powder, and it is thus that the all-important carbonic acid and other gases are produced in regulated and governable quantities. A number of chemists were known then to be at work to improve upon gun-cotton, but the first trace of anything tangible being done is noted in the Journal of the Royal United Service Institution" of 1868, which contained a lecture on nitro compounds by Mr. Dougall, with Admiral Nicholson in the chair, and referring in particular to the invention of Captain Schultze. That lecture shows that Mr. Dougall had, some ten years previously, published an opinion that we were on the eve of some great invention in explosives, and, being an author of repute and sound judgment, on such subjects, he was naturally sought out by inventors of improvements in fire arms and explosives. He was met with a storm of opposition on every side, but Mr. Dougall stood manfully to his guns, and lived to see the great revolution in explosives virtually accomplished.

The nitro powder invented by Captain Schultze for sporting purposes or shot guns culminated only in the production of smokeless powder for military purposes, for in 1879 Mr. Dougall succeeded in drawing the serious notice of the French government to the advantages of this powder for sporting guns, and French chemists, who are well known as clever inventors and improvers, soon learned to employ it for military purposes.

Captain Schultze and Mr. Dougall, having led the way with sporting powders, other chemists, other than French, soon followed in their footsteps, resulting in the numerous nitro compounds which have since sprung into existence, though many of them existed only to die the death they merited, as less than 5 per cent., when put to the practical test, were found to be of any value. Most of them when "weighed in the balance were found wanting." For adapting it to military rifles there were many obstacles in the way, and one of these applied to all classes of fire arms. It seemed a contradiction in terms to assert, for instance, that a rifle ball could be propelled to an enormous and formerly unknown distance without an equivalent recoil. That was to say in effect, that the force of the explosion, being general, must operate equally on the projectile and on the rear of the gun itself, so that, if you increase the force on the one you must also increase it on the other.

The notoriously heavy recoil of certain military rifles, and the jamming of cartridges in the Soudan gave an impetus to the enquiry for a reliable smokeless powder. And now the problem is practically settled.

At first many inventors confined themselves to modifications especially for artillery purposes of the size and form of the individual masses composing a charge of gunpowder and of their density and hardness.

In the United States, I believe, considerable attention was given to the matter by Rodman and Doremus, and the latter was the first to propose the use of powder masses, produced by the compression of coarsely grained powder into moulds of prismatic form. In Russia the first step was taken to utilize the results arrived at by Doremus, and to adopt a prismatic powder for guns of large calibre, and very soon afterwards by Krupp for his breech-loading guns.

Researches carried on by Sir Frederick Abel, of English fame, and Capt. Noble, with a series of gunpowders differing considerably in composition from each other, indicated that advantages might be secured in the production of powders for heavy guns by so modifying the proportions of the constituents as to give rise to the production of a much greater volume of gas, and at the same time to diminish the heat developed by the explosion. These researches also served to throw considerable light upon the cause of the wearing or erosive action of powder explosions upon the inner surface of the gun, which, in time, and especially in large guns, produces so serious a deterioration of the arm as to diminish the velocity of projection considerably, and to affect the accuracy of shooting. Several causes undoubtedly combine to bring about the wearing away of the gun's bore, which is especially great where the products of explosion, while under the maximum pressure, can escape between the projectile and the bore of the gun. A series of careful experiments made by Captain Noble with powders of different composition and with other explosives afforded decisive evidence that the material which furnished the largest proportion of gaseous products, and the explosion of which was attended by the developments of the smallest amount of heat exerted least erosive action.

It is probable that important changes in the composition of powders manufactured in England for heavy guns would have resulted from those researches, but in the meantime two German gunpowder manufacturers had occupied themselves independently and simultaneously with the question of producing some more suitable powder for heavy guns than the various new forms of ordinary black powder, the rate of burning of which was after all reduced only in a moderate degree by the increase in the size of the masses, and by such increase in their destiny as it was practicable to attain. They directed their attention not merely to an alteration of the proportion of the powder ingredients, but also to a modification in the character of charcoal employed, and the success attending their labors in these directions led to the practically simultaneous production of a prismatic powder of cocoa-brown color, consisting of saltpetre in somewhat higher proportion, of sulphur in much lower proportion, than in normal black powder, and of a very slightly burned charcoal. These brown prismatic powders, or "cocoa powders," as they were termed from their color, are distinguished from black powders by their very slow combustion in open air, by their comparatively gradual and long sustained action when used in guns, and by the simple character of their products of explosion as compared with those of black powder, although the smoke produced upon firing a charge of brown powder from a gun appears at first but little different in denseness to that of black powder, it certainly disperses much more rapidly. This class of powder was substituted with considerable advantage for black powder in guns of comparatively large calibre, nevertheless it became desirable to attain even slower or more gradual action in the case of the very large charges required for guns of the heaviest calibres, such as those which propel shot of about 2,000 pounds weight. But these powders were soon found to be only a midway haven between black and smokeless or practically smokeless, and are now rapidly being superseded. In naval service, more especially for the defence of ships against attacks by torpedo boats, a smokeless powder has come to be an absolute necessity, as, after a very brief use of the machine and quick-firing guns with black powder, the objects against which their fire was destined to operate become more or less completely hidden from those directing them by the dense veil of powder smoke produced.

The properties of Ammonium nitrate, of which the products of decomposition by heat are, in addition to water vapor, entirely gaseous, have rendered it a tempting material to work upon in the hands of those who have striven to produce a smokeless powder, but its deliquescent character has been the chief obstacle to its application as a component of an explosive agent susceptible of substitution for black powder for service purposes. A German chemist and engineer named Gaus conceived that by incorporating charcoal and saltpetre with a particular proportion of ammonium nitrate, he had produced an explosive material which did not partake of the hydroscopic character common to other such mixtures, and that by its explosion the potassium in the saltpetre formed a volatile combine, a potassium amide, so that although containing nearly half its weight of potassium salt, it would furnish only volatile products. The views of Gaus regarding the change which so-called "amide" powder undergoes upon explosion were not borne out by existing chemical knowledge.

(To be Continued)

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

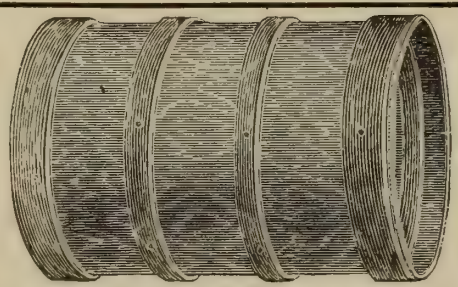
ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friends against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

ORDER YOUR **NAILS** Wire . . . Cut . . . Horse Shoe



IN **PATENT KEGS**

Cost no more than in Common Kegs. The strongest, handiest, cleanest, neatest, and best store package in use. Made in one solid piece, lined with strawboard. No staves to get loose or break, No shrinkage or falling out of heads.

- Supplied by Graham Nail Works, Toronto; and Peck, Benny & Co., Pillow & Hersey Co,, and Abbott & Co., Montreal. -

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BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

KINGSTON BOARD OF TRADE.

At the annual meeting of the Kingston Board of Trade on Friday evening, the 10th inst, the officers elected were: President, G.Richardson; first vice-president, J. Hewton; second vice-president, Chadwick; sec'y-treas., F. King. Council of board, L. B. Spencer, B. W. Robertson, G. E. Hague, G. Y. Chown, R. J. Carson, J. Muckleston, James Minnes, Capt. Gaskin. The report of the council showed that efforts were being made to induce Mr. Rathbun of Deseronto to start smelting works here, and that ten million bushels of grain were handled here last year. Motions were adopted asking for a Dominion insolvent act, to do away with unfair preferential assignments, and recommending the subsidizing of a fast line of steamships between Canada and Great Britain. A motion was defeated asking for a reduction of the import tax on agricultural machinery, implements, tools, and all raw material imported from the united kingdom of Great Britain and Ireland, and also on corn, binder twine and coal oil imported from the United States to Canada. While all the speakers thought the tariff might be modified to the advantage of the people the board thought the motion was too sweeping in its character

THE OLD AND THE NEW.

There is a feature of merchandising that requires too much explanation to pierce through its integument of mystery. Ordinarily a serious-minded man is satisfied to own an article of thoroughly established reputation. In traffic this state of the case is subject to reversal in many cases. Retailers—not all of them—will keep a well advertised article in stock for years, and in the face of large demand for the same risk their present volue of sale in the adoption of some new commodity in the same line. Why holding on to a good thing is not better than attempting something whose value has yet to be approved by patrons, is not at this writing apparent. It does not explain the case to recall the fact that allowing the merchant a larger margin of profit may be responsible for his conversion.

Good business methods can always prove that an undoubtedly superior article always pays better in the end. In the one instance you have already proved your case, and the logical result of patronage will follow. In the other, you have a new case to introduce, with all the delay and argument incident thereto. Grant if you like that the new arrival is good, it has still to run the gauntlet of criticism, and to suffer the condemnation which a stranger usually provokes. In the meantime the good old standby continues to be in demand, is generally advertised by its manufacturers, and requires no effort on your part to get it into the hands of the consumer. It ought not to be difficult to make a wise choice, yet it often seems impossible.—Trade.

INVENTION OF POSTAGE STAMPS.

The invention of postage stamps is said to be due to a printer of Dundee, Scotland. England, 52 years ago introduced the system of prepaying letter postage, and, according to a decree of December 21, 1839, issued the first stamps which were to be put before the public on May 6, of the following year. A year later they were introduced in the United States and Switzerland, and within three years had become common in Bavaria, Belgium and France. One of the most important and valuable collections of postage stamps and other postal devices in the world is in the German Imperial Post Office Museum at Berlin.

It takes 80 men and women to make a postage stamp. First the white paper is cut into sheets, each large enough for a hundred stamps. The stamps on each sheet are counted 26 times to make sure the number is correct. The printer counts and passes the sheet to the gummer, the gummer gums the back, and being counted, gives it to the perforator, who divdes the stamps by rows of little holes, not forgetting to count. It is surprising how quickly and accurately the hands work. Seven hundred millions of postage stamps are made every year in the United States. New York city uses 8,000,000 a month.—American Stationer.

TAKING DOWN THE SIGN.

When a man starts in business he hangs out his sign. It may be but a shingle adorned with lampblack and kerosene, or it may be a gorgeous display of gold letters on an artistic spread of impressive pigments. In either instance it is a tacit acknowledgement of a business necessity. It is to be noted that the art of sign painting is not only moving upward, but that those who use them seldom take them out to the wood-shed before they retire from business. To do so would be understood as an evidence either of closing the doors, or of migrating with goods and chattels elsewhere. The sign idea has, of course, but a local use, and it has, in order to meet the eye of more or less distant patrons, developed into the higher art of advertising. The two, as a business necessity, are practically synonymous; in fact, as between printers' ink and the painters' brush, the former carries the palm as a business builder. This fact is universally acknowledged, and as a factor in business success is second to none in importance. To advertise is not always to succeed, but not to advertise makes failure a certainty. It is, of course, possible to place an "ad." where it is as useless as a necktie on a gate post, or a printing office where the population is invisible. In this instance it is a case of expecting poultry to incubate from chalk eggs, for which the cash has been paid, but the purchaser waits in vain—for a percentage or a chick.

It is also possible to abuse the advertising art by expecting it to accomplish impossibilities, or by running into the ground by idle and suicidal puffery. This vice, like all others, has its logical and inevitable consequences. The knife drops and a head goes into the basket, where, as a fact, it never lacks for an association with other like deposits. It is a misfortune that so much printers' ink has the odor of Annanias. Falsehood is not less a criminal for being dumb, or for being adorned with typographical ribbons.

There are many instances where men advertise beyond their means. They invest in an elpehant, with no means to find him fodder, and when he claims his rations his prospects for a lunch are exquisitely slim. It is as easy for a business man to be as extravagant in his advertising as a dude is in his dry goods or a spendthrift with his cash. These exceptions, however, to discretion and prudence, prove nothing, but the fact is, in every legitimate method to secure business, the needed ounce of common sense can never be safely absent. There is sometimes, of course, an absence of this article in the business hat, but as a rule there is enough of it under the commercial scalp to guide a man in advertising, as in other departments of practical trade. It is, however, a fact that with some men, who, having built up their business by rightly placed advertising, think it unnecessary, after having established their reputation, to continue the same methods for its preservation. This is a mistake, and taking down the sign is, to say the least, an unwise act. Such men would hesitate to drop their names from a city directory, as the absence might suggest a transfer from an office to a cemetery. The same holds good in advertising. Who knows, except a local street car driver or a passing pedestrian, whether architectural iron or lead pipe is being made at the old stand, if the familiar advertisement suddenly drops into oblivion. As between the man who never advertises, and the individual who expects to be boomed for a life time for a three months' parade in a paper, the ratio of common sense is simply in the difference between having but a little and none at all.—Age of Steel.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton, Ontario.
SP

SITUATIONS VACANT.

WANTED—HARDWARE TRAVELLERS with good connections in Lower Provinces and in Ontario. None but first-class men need apply. H. S., GAZETTE Office, Montreal.

WANTED BY 15th DAY OF MARCH—A good hardware clerk, with some years experience. Steady job for a sober man. Address, John Lorentz, Baden, Ont. tf

BUSINESS CHANCES.

Advertisements inserted under this heading one cent per word each insertion.

FOR SALE—STOCK OF GENERAL HARDware, paints, oils, stoves, &c. Business established 25 years. Value about $3,500. Address, Estate J Cameron. Beaverton tf.

A FIRST-CLASS HARDWARE BUSINESS For Sale. Stock about $3500. Last year's turn-over between $1700 and $1800. A splendid chance. Business can be increased. Address A.B., care HARDWARE OFFICE. 8

FOR SALE—GOOD PAYING HARDWARE Store, and live business. Last year's turn over $12,000. Stock, etc, under $3 000. Smart town, brick store, modern improvements. Satisfactory reasons for selling. Would sell for two or three years. Don't write unless you mean business. Address T., HARDWARE OFFICE.

H. D. SIMMONS

MANUFACTURERS' AGENT,

85 York St., Rossin House Block, Toronto

REPRESENTING :

Peck, Benny & Co., Montreal,
Alex. McArthur & Co., Montreal.
J. L. Goodhue & Co., Danville, Que.,
Shepard Hardware Co., Buffalo,
Etc.

Orders and correspondence promptly attended to.

W. J. REID & CO.

IMPORTERS AND DECORATORS OF

Crockery China and Glass.

LAMPS A SPECIALTY.

All glass, Vase, and Library Lamps, in every hue and design.

Our travellers will call upon you shortly with samples.

LONDON AND BELLEVILLE.



ASK FOR THE GRAHAM NAILS.

Hamilton and Toronto



—AND—



HEAD OFFICE : HAMILTON, CANADA

¼ the PRICE of Iron. Write for Discounts

READY MIXED PAINTS

TRADE  MARK

Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

Manufactured by **A. RAMSAY & SON**
MONTREAL

When You . . .
Purchase Paint
Buy the Best .

Warranted Superior to any now on the Market . . . .

Robertson's Ready . . . Mixed . . .

MANUFACTURED BY

The James Robertson Co'y, L't'd

TORONTO

The Whitman & Barnes Mfg. Co.



Canadian Branch :
ST. CATHARINES, ONT

MANUFACTURERS OF

Extra Quality Machine Knives, etc.

OUR SPECIALTIES :

KNIVES FOR Mowers, Reapers, and Binders, Root Pulpers and Straw Cutters.
" " All kinds Wood Working Machinery.
" " Paper Mills.
" " Leather Splitting Machinery.



W. & B. Diamond Twist Drills.



Spring Keys, and Cotters.

Goods the best. Prices moderate
Quality Warranted.

TRADE CHAT

A combination of the bituminous coal producers of Pennsylvania is being arranged at Pittsburg.

A large sewing machine, weighing three and one-quarter tons, is in use in Leeds. It sews cotton belting.

The Brick Manufacturers' Association of Toronto has raised the entrance fee for members to $50, to take effect April 1st.

The contract for the new iron and wood bridge over the Red River at Winnipeg has been let to W. G. Reid, of Montreal. The cost will be $60,000.

The uncertainty of the supply of natural gas in Ohio, which is becoming more apparent, is affecting the permanence of some small manufactures.

The Grand Trunk has awarded contracts for the supply of about 1,000,000 tons of coal for the ensuing year. There were nearly forty competitors.

These are the newly elected officers of the Toronto Industrial Association:—President, J. J. Withrow; first vice-president, W. Christie; second vice-president, Dr. Smith.

A French company's plan for lighting the Atlantic route from Ireland to Newfoundland consists in mooring ten powerful floating lights 200 miles apart and connecting them by electric cables.

The Giant Powder Company intend to erect new works at Cadboro Bay, Victoria, at a cost of $15,000 to $20,000. The new works will be equipped with the most modern machinery, and the company will be able to manufacture all kinds of explosives.

An Eastern (U. S.) file manufacturer states that while the output of American files is steadily increasing, an encouraging feature is the stride made towards the finer qualities. In jewellers' requirements the output has increased 25 per cent. within a year.—N. Y. Hardware.

Mr. F. H. Doty, of the Doty Engine Co., Toronto, will go to Nanaimo in a day or two with the object of meeting some men there who propose constructing a powerful tug for towing vessels, and also barges which it is proposed to build to take coal to San Francisco.—Vancouver News-Advertiser.

It is not often that a blacksmith shop has occasion to celebrate its centennial, but there is one in Williamsport, Pa., which claims that distinction. Its one-hundredth anniversary of its beginning was celebrated not long since, and estimating the average daily horse-shoeing at eight shoes per working day, it shows an aggregate of nearly 250,000 shoes nailed on in this shop in its career.

A special experimental commission at Toulon, France, has decided against the use of petroleum as fuel in torpedo vessels. Eight out of ten cases of petroleum ignited from concussion after 12 shots had been fired at the protecting armor.

The McCormick Manufacturing Co., of Chicago, are said to contemplate the establishment of a branch of their immense factory for harvesting machinery in Canada. An agent of the company was in Hamilton the other day.

Fine-edged tools assume a blue color and lose all temper if exposed for any considerable length of time to the light of the sun, either in summer or winter. A similar effect is exercised by moonlight, a large cross-cut saw with which the experimenters were working having been "put out of shape and its temper ruined by a single night's exposure to a first-quarter moon."

The London Machine Tool Company have recently constructed a mammoth lathe weighing about 25 tons. It has been sold to Alex. Fleck, of Ottawa, for $3,000, and will be shipped at once via the C. P. R. It will be used in the construction of heavy machinery, such as engine cylinders, which can be turned ten feet in diameter or length. No lathe of such dimensions was ever before built in Canada. So much for a London manufactory, says the Advertiser.

Commissioner Miall, of the Inland Revenue Department, in his annual report says:—"The manufacturers of scales in Hamilton still complain of the laxity of inspection in some of the scale factories, and ask for a more uniform original inspection, which they claim can only be obtained by the appointment of a practical man to inspect and direct the work of inspection in the several scale factories. They say that to carry out what they ask for there need be no new appointment made, as they consider that we have men in our present staff quite capable of performing what is required.

English iron masters are astounded at the fact that the Germans are sending steel into the centre of England at prices against which the native workers cannot compete. Steel plates and steel rods are coming into England at prices against which the Staffordshire and mid-England steel makers cannot accept except at considerable loss. German steel rods are £6 delivered, and plates at proportionate low prices. Low through continental railway rates is the only explanation so far offered.

The New York syndicate, which was reported to have secured an option on several Youngstown, O., iron and steel mills, valued at $7,000,000, has not yet taken decisive action. The syndicate was reported to have had an option until February 1, which it was said had been extended until March 15. The Youngstown people deny that any option was given. One manufacturer said the syndicate offered to pay $7,000,000, and the answer was that when the cash was produced the transfer would be made.

Notices have been posted in the Pottsville Iron and Steel Company's rolling mills of a reduction to be made on and after the 15th inst. Heaters will be reduced from 52 to 50 cents per ton on finished iron and from 52 to 40 cents per ton on steel. Puddlers' wages will be reduced from $3.50 to $3.25 per ton. The wages of the other employees of the mill will be reduced in proportion. This reduction has been brought about by the dulness in the iron trade.

Age of Steel says it would be impossible to truthfully say anything encouraging of the spelter situation, for instead of showing signs of improvement it is getting worse and worse. Over 500 tons have been sold on a basis of 4 cents during the week for deliveries extending into April. The London market has had a still further decline, the metal now being quoted at £17 5s., a falling off of 10s. in a week's time. It has fallen fully £6 in the past twelve months, and will probably go even lower. The figures touching the production of spelter in the United States published by us last week have received enough additions during the week past to bring the total up to about 92,000 tons, with more to hear from later on. The increased production of spelter without any corresponding increase in consumption can ultimately have but one consequence—a continual decline in price that will eventually lead to an utter demoralization of the market.

Henry N. Schmidt, grist and saw mills, Mildmay, has assigned.

Theodore Hamel, dealer in asbestos goods, Quebec, has been asked to make an assignment.

Mrs. Nolan, 77 Jarvis street, this city, who deals in stoves and furniture, has assigned to Townsend & Stephens.

Wright & Co., of Esther street, this city, makers of art furniture, have assigned to Charles Langley, with liabilities of $4,000.

At the annual meeting of the St. Thomas Plate Glass Association in Secretary J. P. Martyn's office, St. Thomas, all the officers were re-elected. The losses of last year were but $80, on 15,000 square feet of glass.

These boards of trade have endorsed the Toronto board of trade's position on the fast Atlantic steamship service: Winnipeg, Calgary, Vancouver, B.C., Brandon, Galt. The boards of trade of Quebec and St. John, N.B., have also endorsed the Toronto board's attitude on the law of insolvency.

The exports of mineral oil from the United States during January last were 55,305,668 gallons, valued at $2,788,474, against exports in January, 1892, of 52,565,701 gallons, valued at $3,247,223. The total exports for seven months ending January 31 were 460,183,892 gallons, valued at $24,931,506, for 1893, against 426,839,782 gallons, valued at $26,298,018, for 1892.

The council or the Toronto board of trade has appointed a committee to investigate the matter of the influx of American silver into this country. There is a duty of 20 per cent on silver coins entering the Dominion, but it is practically inoperative. As silver is not legal tender in Canada for more than $10, there is danger of merchants becoming overstocked with it, and glad to dispose of it at a discount.

Adespatch from Buffalo says that a strong company of capitalists has secured possession of a large tract of land near Chippewa, on the Canadian side of the river, for manufacturing purposes. The company is capitalized, it is understood, at $200,000. A manufacturing company, intimately related to the land company, has been organized, and the land company has given it 100 acres of land. A factory will be built for the manufacture of threshing machines, mowers, engines, etc. This company, it is understood, is capitalized at $100,000. Ezra Landis, of Waynesboro, Pa., will be the manager.

Mr. Joseph Barrett has filed a petition in the Chancery Court asking that the Toronto Drop Forge Co., of Mimico, be wound up. The petitioner is a stock holder, director and creditor of the company according to the affidavits. The company was organized in 1891, at Toronto Junction, with a capital stock of $40 000. It was afterwards removed to Mimico. It is a valuable concern, employing about 100 men at times and the total liabilities are said to be $10.000 or $12,000. Though the assets are good it is hard to raise money for pressing needs. The company is solvent, and it is expected that a settlement of some kind will speedily be made. This action was taken to bring matters to a head. The company makes iron, copper, and steel forgings.



Reduced Reproduction from Accepted Design, to be Lithographed in Five Colors

Old Trade Revived . . .

New Trade Made . . . . .

By Advertising in the Spring Trade Number of

THE HARDWARE MERCHANT

THIS issue will penetrate to many places seldom or never visited by your travellers, as well as to every centre of commerce where orders for goods are likely to be forthcoming.

Special—We will make a specialty of binding in price lists, lithographs, circulars, etc., on any colored paper, thereby enabling this large number of circulars or lists to be sent out incorporated in a journal of high reputation, at a minimum price. To send the same out by post in the ordinary way would cost more than double our charge, and with infinitely less probability of being read or preserved for reference.

We would ask as a favor that you let us know at once if you can take space. We will therefore be able to give you better position and general attention. Respectfully yours,

THE J. B. McLEAN PUB. CO. LTD.

. . . TORONTO . . . .

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below, and in our Prices Current, necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL Feb. 17, 1893.

HARDWARE.

The wholesale houses still fail to note any particular activity in the actual way of business and the week has been a rather quiet one. Returns from travellers are not especially brisk, but better things are anticipated in the course of a fortnight, in fact the hardware houses look for a quiet time about this period and don't seem to apprehend any particular change before the beginning of March. The dealings in heavy lines between jobbers here which was the leading feature of last week appears to be over for the time being. This is due to the fact no doubt that they have arranged their supplies in a shape suitable for business when the demand commences. Nothing is doing in the way of business for importation and the week has been extremely quiet on the whole.

PIG IRON.

The business in pig iron nated last week was not continued, and buyers have evidently filled their wants for the time being. We quote $19 to $21 according to grade for all except Summerlee, none of which is to be had.

BAR IRON.

Orders continue small, and makers do not speak of any particular activity. The fact that the budget has been brought down, however, and all uncertainty about the duties dispelled may lead to some improvement in business.

SCRAP IRON.

The scrap iron market is quiet and unchanged at the basis of $15.50 for wrought scrap.

NAILS.

Makers do not report any briskness about orders for supplies, nor do jobbers either. In fact nails share in the general quietness of the situation as regards other lines.

TIN PLATES.

The spurt made last week seems to have taken all the life out of business so far as tin plates are concerned, and now the article is as quiet as ever. It is understood that some of last weeks business was done at pretty close figures considerably inside of our quotations for cables. We allow it to stand, however, at $3.25 to $3 50 for cokes, and $4 to $4.25 for charcoal.

CANADA PLATES.

Canada plates have lost their snap also, and prices are nominal for the week in the absence of transactions at $2.50 to $2.60.

TERNE PLATES.

Terne plates are quiet and unchanged at $7.25 to $7.75 according to grade. There has been nothing doing in them.

OTHER METALS

Copper remains quiet at 13½ to 14c, tin has sold as low as 22c for a round lot, but we quote 22½ to 23c and antimony spelter etc. are unchanged.

GLASS.

There is no change in glass which remains quiet and steady at $1.35.

PAINTS, OILS AND COLORS.

The pool now being a consumate fact prices can be expected to rule steady from now out. Varnishes are in good demand, and the market, now that matters are settled, is showing a better feeling all round.

NAVAL STORES.

The market keeps firm,and with slight supplies prices are steady all round. Turpentine, 51 to 52c.; resins, $2.50 to $5, as to brand; coal tar, $3.75 to $4; cotton waste, 5½c. for colored and 7c. to 10c. for white; oakum, 5½ to 7½c. and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep sea line. Pure Manilla, 12c. for 7-16 and upwards and 13c. for smaller sizes.

CEMENT.

The cement market is quiet and unchanged and likely to remain so, as buyers will not order, except in the case of actual necessity, owing to high freights. English brands at $2.35 to $2.55, and Belgian $2.20 to $2.35 per cask. Fire bricks are in fair demand, prices ruling at $18 to $24 per 1,000 as to brand.

PETROLEUM

The volume of business in refined oil continues small, and there is no change of importance. We quote : Canadian 12¼c. to 12½c. at shed in Montreal for round lots and 13½ for small quantities. American petroleum, 19⅝c. in car lots, 20c in 10-barrel lots, 20¼c. in 5barrel lots, and 20¾c for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c.; Canadian benzine, 10¾c Petrola; 12¾c. Montreal.

TORONTO MARKETS.

TORONTO, Feb. 17, 1893.

HARDWARE.

Trade has not improved any since last week, in fact ifanything the volume is scarcely as large. Enquiries are however coming in freely for quotations on spring supplies and orders are being taken by representatives for shipment April 1. A good trade is anticipated in the country next summer, but the outlook for the city is very slim. From conversation with holders of real estate and with builders, it is learned that the general opinion is that there will not be a great deal of building going on in the city at least for another six months. A feature of the trade is a good demand for manufactured tinware, but the competion for it is very keen. No complaints are heard regarding payments. The market is still unsettled regarding the tariff. No material changes in prices are announced.

METALS.

English makers are for the most part supplied with a fair number of orders, and a better feeling prevails. There is seemingly no tendency towards a reduction in any line coming under the category of metals, prices now being very low. Stocks are now arriving, but not in as large quantities as is probable after the tariff question has been settled.

PIG IRON—Some slight improvement is reported in the demand for this article, but the volume of business is still light. A few import orders have been placed during the week.

Rogers, Brown & Co., Buffalo, N.Y., report the Toronto pig iron market as follows: Some few sales have been made during the week, but the market unquestionably is to be characterized dull. Consumers generally are melting iron liberally, but seem to have largely abandoned for the time being the purchase of round lots. Prices continue weak. We quote on the cash basis f. o. b. cars, Toronto, in bond : IX Foundry Strong Coke Iron, Lake Superior ore, $15.95; 2X Foundry Strong Coke Iron Lake Superior ore, $14 95; 2 Foundry Strong Coke Iron Lake Superior ore, $14.70; Jackson County Silvery 1, $18.00 to $18.30; Jackson County Silvery 2, $17.30 to $17.80; Lake Superior Charcoal, $18 20; Southern Soft 1, $14.10 to $14.35; Southern Soft 2, $13 85.



VICTORIA—Wood Cook.

A SPECIAL BARGAIN

FOR TWO MONTHS ONLY

A First-class Stove in every respect, with all Modern Improvements. Handsome, suitable for any family. Guaranteed to give perfect satisfaction.

We have an overstock of these Stoves, which we propose to offer our customers for two months, at the following prices and terms, subject to being unsold when orders are received.

No. 8 Square, $7.75 No. 9 Square,$8.20

Size of Oven, 17½ x 18 inches. Length of Fire Box, 23 inches. Shipping Weight, 200 lbs. Terms Cash.—F.O.B. at London.

McCLARY MFG. CO. LONDON, TORONTO, MONTREAL and WINNIPEG

MARKETS.—Continued

BAR IRON—A fairly good trade is being done in this line. It is claimed that the combination existing on this article has created a more satisfactory feeling, there now being a small margin of profit for all handlers. It is thought that even should the duty be taken off that the large manufacturers are the only ones who would reap any benefit, and that in their case it would not be materially so.

ANTIMONY—There is not much doing, and prices are unchanged. Stocks laid in last fall are becoming exhausted and an improved demand is anticipated in the near future.

CANADA PLATES—Not much to note. The regular trade being over, it is only for small manufacturing purposes that there is any demand at the moment.

COPPER—Some large sales of ingot copper have been reported during the last few days. Prices remain as before.

GALVANIZED IRON—The season is now approaching for this article and the indications favor a fairly good trade.

INGOT TIN—Demand is steady but the quantities coming out are not large.

LEAD—Much about the same applies to this article as to ingot tin.

TIN PLATES—Demand is good, stocks are not heavy in hands of jobbers, but large shipments are arriving.

ZINC AND SPELTER—There is not much doing in sheet zinc. Spelter has been moving fairly well, but the market seems to have an easier tendency.

PAINTS, OILS AND COLORS

A good country trade is reported and the improvement seems to be developing in this direction earlier than usual. City trade at the other hand is exceedingly dull. Higher prices on turpentine and oil are the features of the market. Payments are fairly good. The agreement on white lead having not yet been finally settled, there are no quotations on this article except on pure, which is quoted at 5¼c. There has been no official announcement yet regarding the price prepared paints,but it is known however that an advance of 10c. per gallon has beeu decided upon. There is a good enquiry for prepared paints for the spring trade. Dry colors are not much enquired for and prices are unchanged. Varnishes are very firm and an advance is thought to be probable at any time. The price of English linseed oil has advanced equal to 6c. a gallon during the last couple of weeks, and it could not laid down here in quantity under 59c. a gallon for raw. Last week the Ontario Association advanced prices 3 1-2c. a gallon, for raw and boiled respectively, present quotations being : One to the 3 bbl. lots, 61 to 64c. ; 4 to 9 bbl. lots 60 to 63c., freight allowed to delivery station. At the cities of Toronto, Hamilton and London prices are 2c. a gallon below these quotations. Another advance is looked for shortly. Owing to the unsettled condition of the market in the United States and the shortage in the present position of the market, the price of turpentine has been advanced, it now being held in Toronto at 55c. in single barrel lots net cash 30 days. There is not much demand for glue and prices are unchanged.

PETROLEUM.

The Petrolia Advertiser, in its weekly report says : The weather of the past week has been of such a varied and inclement kind that drilling has been almost at a standstill. A large number of pumping wells are also shut down, and the production this month therefore will be considerably lessened. The price of crude remains the same, $1.18½, with about the average business doing.

Following are the latest quotations at Toronto :—Canada refined oil, 14c.; carbon safety, 17½ to 18c.; Canada water white, 20c. ; American water white, 25c.; photogene 27c.

GLASS.

Orders are still being booked for import, shipments to arrive in June. Orders being received for spring are both more numerous and larger than usual.

OLD MATERIAL.

We quote the following : No. 1 heavy cast scrap 65 to 70c. per 100 ; stove cast scrap 40 to 45c. ; No. 1 wrought scrap 50 to 60c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c. ; new light scrap copper, 8 1-2c. ; heavy scrap copper 9½c. ; old copper bottoms,8c; light scrap brass 5½c.; heavy yellow scrap brass 7½c. ; heavy red scrap brass 8¼ to 8½c.; scrap lead 1¾ to 2c.; scrap zinc, 2½ to 2¾c.; scrap rubber, 2¼ to 2½c.; country mixed rags, 80 to 85c. per 100 lbs ; clean dry bones, 50 to 60c. per 100 lbs.; plough shares, 60 to 65c ; burnt cast scrap, 15 to 20c.; railroad iron, 65 to 75c.; malleable scrap, 25c.

SEEDS

The excitement among buyers regarding red clover continues, and prices here have forced 25 to 50c. higher, $9 to $9.25 a bushel being paid for prime to choice quality, and offerings are limited at these figures. Timothy is sympathising to some extent with clover, $1.50 to $5.50 being paid. At the moment trade in this article is nearly all speculative, but in another 30 days the price may be expected to get nearer the actual value, as buying for consumption will be due about that time. Alsike is steady at $5.50 to $6 60, the outside price having been paid for best samples. The bulk of the red clover and Alsike seems to be almost marketed.

HIDES, SKINS, WOOL, TALLOW.

SKINS—Sheepskins are still marked by their scarceness, and prices are unchanged at $1.20 to $1 40. Calfskins are in good demand, but there are not yet many coming in. Prices unchanged at 5 to 7c.

HIDES—Steady and unchanged at 4½c. for No. 1 green cows' and 5½c. for cured. Car lots of cured changed hands at 5¼c.

TALLOW—Scarce and ½c. higher; dealers are paying 6½c. and selling at 7c.

WOOL—There is very little doing this week in wool and prices are without change. Fleece and blanket wools are scarce. Pulled wools quiet and unchanged, dealers paying 21c. and selling at 22c. Fleece is quoted at 18 to 19c., and pulled at 21 to 22c. for supers and at 26 to 27c. for extra.

TRADE NOTES.

H. S. Howland, Sons & Co. have just received a large consignment of U. S. navy oakum, which they are offeting at right prices.

The B. Greening Wire Co, Limited, of Hamilton and Montreal, are offering a green wire cloth holder to the trade at a reasonable price.

H. S. Howland, Sons & Co. wish to inform the retail trade that they are prepared to furnish saw mill and lumberman's supplies at favorable prices.

Stewart & Wood, of York street, this city, report that the first shipment of their 10,000 box order of glass, placed with a German manufacturer, is expected to arrive shortly.

CORRUGATED IRON
ILLUSTRATED CATALOGUE FREE
METALLIC ROOFING Co.
MANUFACTURERS TORONTO

The Alabastine Co., Paris, are offering a line of wall coating that is better than kalsomines, and which gives the retailer 50 per cent. more profit. It is made ready for use by simply mixing in cold water. Country dealers have found a large trade for it. A tint card and prices will be sent on application.

H. R. Ives & Co., of Montreal, have resumed control of their business. The Longueuil Works will be run mainly upon staple lines of hardware, and the stock will be kept well assorted. Special lines, such as Mrs. Pott's irons, iron and brass bedsteads, iron railings and crestings, hot water heaters, soil pipe, etc., will receive particular attention. Referring to iron bedsteads the firm advises placing orders early to avoid disappointments during the busy season.

AMERICAN MARKETS

NEW YORK, Feb. 17, 1893.

Pig Tin—London sent somewhat lower quotations, also reports of sales indicating slow business in tin at that point. London is still sending tin to this side of the Atlantic; more by considerable than American consumption requires, and a few tons in excess of what the "bull" element in the local speculative arena takes care of to their entire satisfaction. Still evidence is wanting of sufficient "bear" nerve in any quarter to venture very far on the "short" side of the market, and that fact apparently enables the "long" interest to keep prices from weakening greatly at the moment, despite the rather adverse statistical position and tameness of speculation here and in the London market. Last cables from the latter point were £91 10s. for prompts and £90 9s. 6d. for futures.

Copper—Of other than small quantities of Lake Superior ingots sales are still extremely few and far between, and the demand continues spiritless. Spot parcels are secured at 12.05 to 12.10c. from second hands, and occasionally sales are made at 12 1-8c. by some of the producers, although 12 1-4c. upward is generally asked. Similar undercurrent of softness prevails in the market for common casting copper, and business at over 11 1-4c. is the exception at present. The London market was cabled somewhat steadier; merchant bars quoted at £45 5s. to £45 7s. 6d. for prompt and £45 15s. to £46 1-4 for futures, with total sales of 700 tons for the day.

Pig Lead—About 300 tons have been sold during the past three days at 3.95c. and a few single car loads at 3.97 1-2c. The former price was subsequently bid,

MARKETS—Continued

but little, if any, could be secured at less than 4c., while some sellers raised their limits to 4.05c. Demand does not appear to be general by any means, and the basis of present firmness of the market is light production latterly rather than the volume of consumption. London cables again quoted £9 12s. 6d. for soft Spanish.

Spelter — Western product, prime brands, was offered in round lots, April, May and June shipment, at 4.27 1-2c. landed here. As far as could be learned the price was not attractive enough to induce buyers to take hold. Single car loads at 4.30 to 4.32 1-2c. on the spot move slowly. The London quotation for good merchant brands was again £17 2s. 6d.

Antimony—Demand here is still of routine type, and prices largely hold their own. Current quotations are 10 to 10 1-4c. for Hallett's, 10 1-8 to 10 1-2c. for "L. X.," and 10 3-4c. for Cookson's.

Tin Plate—Spot business has been slow the past few days, and transactions in futures are represented as being of routine character. Prices remain almost stationary, with the tone of the market fairly firm.

Pig Iron—Except that some Southern producers have shown firmness enough to refuse bids that were about 10c. per ton below the prices at which orders have recently been booked, the market for anthracite pig is without interesting feature. Neither transactions or inquiries contrast a great deal with the general run latterly, and the business passing is chiefly at old prices.

For Scotch pig there is little, if anything, more than the narrow outlet that the material has enjoyed for some time past, and prices are without radical change. Lots to arrive are quoted as follows: $21.50 to $22 for Coltness, $21 to $21.50 for Summerlee, $20 to $20.50 for Carnbroe, and $19.50 to $20 for Eglinton.

Old Material—Business in this line continues rather light. There is more inquiry however, and the business passing is chiefly at former prices. We quote :— $17 to $17.50 for tee rails, $14 to $14.50 for steel rails, $16 to $16.50 for No. 1 wrought scrap iron, all f.o.b. Jersey City; $13.50 to $14 for car wheels, and $12 to $13 for machinery cast scrap.

Steel Rails—The New York Central order for about 40,000 tons has been secured by the Lackawanna Iron & Steel Co. A Maine railroad company has placed an order for 10,000 tons with the Pennsylvania Steel Co. Other contracts involving quite good-sized lots, it is understood, have been closed, and upon the whole the rail branch of the steel trade appears to be in somewhat better shape. Sales agents affirm that $29 f.o.b. at mill is still the price. It is an open secret, however, that extremely low prices have been made on fish and angle plates by some concerns that manufacture the fastenings as well as the rails, and rumor has it that guarantee against loss in three to six months figured as an incentive in some recent negotiations. There is the usual insinuation also of specially low freight rates to some points being made.

The Electric Railway Supply Co., Humphreys & Sayce agents, have placed a contract for girder rails for 100 miles of electric railroad in New Orleans. This order, it is understood, is the largest one for girder rails that has been placed in this country up to the present time.

IMPROVED ANNEALING FURNACE.

An improvement in the construction of annealing furnaces is announced in a London journal, by which a prompt action and considerable saving are insured, the method being applicable alike to sheet annealing, hollowware, malleable iron and sheet tin or steel—in the case of the first named the time being shortened by some 50 per cent. besides other advantages. The furnace consists of four outer walls, within which, by the erection of two side walls and one end wall, is a second furnace or annealing oven ; the flames and heated gases from the outer space pass through numerous perforations into the middle chamber, and, after traveling through this space, escape by bottom flues furnished with dampers, to the chimney stack. Only one fire is used, and the pot containing the articles to be annealed is by this arrangement subjected to a uniformly distributed heat ; hence the pot does not suffer from undue strains of buckling, and therefore lasts longer. The uniform distribution of the heat insures annealing in a shorter time, and likewise causes a reduced fuel consumption.—Pittsburg Dispatch.

ORIGIN OF THE SHOT TOWER.

A writer in the Boston Herald commenting upon the fact that many valuable inventions have been suggested by accidents or occurrences which to other minds would have had none or only passing significance, illustrated his subject by the story of the origin of the present mode of shot manufacture.

Before Watts, the discoverer of the present mode of making shot, had his notable dream—said to be induced by over-indulgence in stimulants—the manufacture of shot was a slow, laborious, and consequently costly process.

Great bars of lead had to be pounded into sheets of a thickness nearly equal to the diameter of the shots desired. These sheets had then to be cut in little tubes, placed in a revolving barrel, and there rolled until, by constant friction, the edges wore off from the little cubes and became spheroids.

Watts had often racked his brain trying to discover some better and less costly method, but in vain. Finally, after spending an evening with some companions at an ale house, he went home, went to bed, and fell asleep. His slumbers, however, were disturbed by unwelcome dreams, in one of which he was out with "the boys," and as they were stumbling home it began to rain shot—beautiful globules of polished, shining lead—in such great numbers that he and his companions had to seek shelter.

In the morning Watts remembered his curious dream, and it obtruded itself on his mind all day. This led him to speculate as to what shape molten lead would assume in falling through the air, and, finally, he ascended to the top of the tower of the Church of St. Mary at Radcliffe, and dropped slowly and regularly a ladleful of molten lead into the moat below. Descending, to his surprise and delight, he took from the bottom of the shallow pool several handfuls of the most perfect shot he had ever seen. Watt's fortune was made, for from this exploit emanated the idea of the shot tower, which ever since has been the only means employed in the manufacture of the little missiles which are so important to sportsmen the world over.

TO ECONOMIZE COAL.

"It seems to me," says a Pennsylvania coal operator to a newspaper representative, "that under the present stress of cold weather people, or, at least the poorer classes, would try to economize with their coal. But they don't seem to understand that such a thing is possible. Now, let me tell you how to do it. Start your fire in the morning with the smallest pieces of coal you can find ; when that reddens up into a glowing heat throw on your big chunks, open your draft for about fifteen minutes, and you will have a roaring fire. Then close all your drafts, both front and rear, and your fire will burn for at least five hours without requiring any attention whatever. It will pour its heat out into the room, where you naturally want it, and not up the chimney, where nine cases out of ten, it goes. In warm winter days, if you get them again, keep your fire low by shaking the grate only enough to get a good draft, and when your coal has burned red draw it forward and fill in the back and sides with the unsifted ashes and cinders, mixed with a little coal sweepings. Bank over the top with the same stuff and open your drafts for about ten minutes, and then shut them up for the day. Many a factory is run through the winter on less coal than an ordinary dwelling house, simply because the concern knows how to take care of its coal. You try my plan and see if you do not get the best of the coal barons, as you delight to call them, by at least one-half during the season."

THE IDEAL HUSTLER.

"How do some drummers sell lots of goods and others very little ?" repeated George Washington White, one of the brightest lights of the Quincy crowd, in answer to a query from an outsider. "Well, I'll tell you a little story. I heard two drummers talking once. One was selling stacks of goods, while the other was being left all round. The unsuccessful man had put your query to the other. 'How do you sell so many goods, while it seems I can't make a sale ?' 'Well,' answered the other, 'there is a secret about it. You are just starting out, and, to help you along, I'll give you this pointer, but you must keep it secret.' 'Sure,' replied the younger, beaming with pleasant anticipation, 'how do you manage to be so successful ?' 'I always make it a point,' replied the elder, 'to wear out the soles of my shoes instead of the seat of my trousers.'"

GUNS

CHAS. STARK CO.

We beg to advise the trade that we are more in it than ever this year, and will give special attention to all trade orders.

Write for catalogue and prices.

S. S. SMOKELESS POWDER NOW TAKING THE LEAD.

Chas. Stark Co. 56, 58 & 60 Church St., Toronto

WIRE

Coppered Steel Wire, Tinned Mattress Wire, Broom and Brush Wire, Hay Bailing Wire, Flat Wires, Soft Coppered Wires.

Write for Catalogue.

We guarantee the quality of all our Wires.

MANUFACTURED BY

THE B. GREENING WIRE Co., Ltd., HAMILTON, ONTARIO.

Have You Ever Bought Our Razor Strops?

They Are Better And Cheaper Than Imported Goods.

Send Us A Trial Order.

The Hemming Bros. do., Ltd., 76 York Street, TORONTO.



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

ESTABLISHED 1839.

William Darling & Co.,

WHOLESALE HARDWARE MONTREAL.

Have been appointed Sole Agents for the

Smokeless Powder Co.

Of London, England.

A stock will be kept near Montreal, and orders promptly executed. Full information by letter.



All . . . Silverware Stamped . .

Toronto Silver Plate Co. : : :

Is . . . . . Guaranteed . . As to quality.

FACTORIES and SALESROOMS, 570 KING ST. WEST, TORONTO

E. G. GOODERHAM, Manager.

JNO. C. COPP, Sec.-Treas.

DIRECT IMPORTERS AND DEALERS IN

SCOTCH FIRE CLAY-BRICK



DRAIN AND WATER PIPES.

Double strength for railway culverts, etc.

Sewer Bottoms or Invert Blocks, Cement.

NOTE.—Only pure SCOTCH unglazed Fire Clay Linings and pipes are kept in stock; any other quality is worthless for resisting heat and frost. Correspondence invited. Quotations promptly furnished.

OFFICE : 31 Wellington St., Montreal.

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel, Open Hearth Steel.

James Hutton & Co.,

Agents.

MONTREAL AND TORONTO.

Plate Glass

ALL SIZES IN STOCK.

MANUFACTURERS OF

STAINED GLASS FOR EVERY PURPOSE.

McCausland & Son,

72, 74, and 76 KING ST. W., TORONTO.

Telephone 1112.

THE IRON DUTIES.

At a meeting of the council of the Toronto Board of Trade, held last week, there was a good deal of discussion regarding the present duties on bar, hoop and sheet iron. Finally the question was referred to a committee consisting of Messrs. George H. Bertram, convener, the president, Vice-president Blain, John I. Davidson, William Christie, W. D. Matthews and Barlow Cumberland.

The committee held two or three meetings and drew up a report. This was submitted at a meeting of the council held Wednesday afternoon. It stated that certain leading manufacturers who use iron as raw material in large quantities appeared before the committee and represented that the present high duties on bar iron have the effect of largely increasing the cost of the finished product, and as the duty on the latter is not much over half what they are paying on iron, their business is seriously injured; they also complained of the price of iron having been advanced lately by the Canadian Bar Iron Association, notwithstanding that the price has been declining in foreign markets.

"It appears also," continues the report, "that domestic iron made from scrap is not suitable for manufacturers who use large round iron for shafting, that sheet iron is not made in the country, and the great bulk of hoop iron has to be imported. As your committee was anxious to hear from the makers of bar iron, an invitation was extended to them to be present at an adjourned meeting. None accepted the invitation; but the Ontario Rolling Mills Company, of Hamilton, sent in a letter in opposition to the resolution under consideration, absurdly asserting 'That it was partly for political purposes and partly for the benefit of certain consumers of bar iron, who wish to destroy an important industry in order that they may buy this article cheaper than we can supply them.' Your committee find that practically all the bar iron at present being made in the Dominion is manufactured from imported and domestic scrap—none from native ores—and as the duty on bar iron was raised from 17 1-2 per cent. to over 50 per cent. in 1877 with the express purpose of developing the iron mines of the country, and having bar iron manufactured from native ores, it is quite evident that the increased duty has failed to accomplish what was intended, and that the manufacturer of iron from scrap is enjoying the protection that was intended for the manufacturer who was producing from the ore. As the Canadian bar iron maker was able to thrive under a tariff of 17 1-2 per cent. during the first nine years of the National Policy, it does not appear to be unreasonable that manufacturers using iron as raw material should complain of having to pay high prices with no corresponding benefit to the country in the development of its iron mines. Your committee, after careful consideration, cannot but feel that in the interests of the numerous manufacturing establishments using iron as raw material a liberal reduction should be made in the duties on bar, hoop and sheet iron, so as to enable them to sell at lower prices in the home market, and extend their foreign trade. Your committee is also of the opinion that the development of our iron mines and erection of blast furnaces should be encouraged and sustained by an increase of the present bounty on pig iron, without any reduction in the present duty on that article. Your committee would therefore recommend that the resolution be amended and adopted in accordance with this report."

The report was adopted, and a committee composed of the following members appointed to visit Ottawa on Monday next and lay the views of the board before the Government: Messrs. D. R. Wilkie, president; George H. Bertram, J. I. Davidson, Hugh Blain, H. N. Baird, H. A. Murray, G. G. Grey, John Myles, John Abell and J. J. Taylor.

BICYCLES AND HARDWAREMEN.

It has been again and again urged in these pages that the hardware dealer, whether in a large city or a small town, should be first in the field in securing the agencies for the various bicycle manufacturers, that may now be had, perhaps for the asking, but at a later date may not be so easy to secure. It requires no very wide range of vision to see that this mode of locomotion has passed beyond this stage of experiment—is no longer a toy, but a recognized vehicle to be applied to various uses. The number of machines sold will increase with every year that passes; and the hardwareman who seizes the golden opportunity in time, will find that he has opened a wide avenue for large sales and increased profits in the future. This view, we are pleased to say, is now endorsed by Ironmongery, the leading organ of the Hardware trade of England. Its advice to the ironmonger is to grip the cycle trade and keep it gripped, both for what is is now and what it is destined to be in the future, and because it is his if he will have it and deal with it on generous lines. We know that our advice has been heeded by many, and we have yet to hear a regret uttered where it has been heeded. Others say, in effect if not in words—'we have all we can attend to now; let the cycle agent have his cycles in peace." According to Ironmongery, and according to sound business sense, this is just the thing they should not say. "Now mark," it continues, "where the next step comes. Here is our contemporary, The Cyclist, urging cycle agents to tack on to their summer business a few good lines of Ironmongery to tide them over their lazy time. Good sound advice it is, too, from their point of view, and very likely, indeed, to bear some fruit. At the same time the Cyclist admits frankly that the ironmongers are the legitimate trade channels for the distribution of cycles, and that the cycle agent has been created by the refusal of ironmongers to take the trade. This is as much as to say—since the legitimate trade will not annex the cycle branch, let the cycle branch put itself on a firmer footing by annexing some choice bits of ironmongery. It is quite possible, we see, therefore, for the trade to raise another competitor. We may ridicule the idea, grow merry over the tribulations of the new hand, smile complacently at the hint of possible aggressions from such a source, but we have done all this before in the face of others' threats, and it has not proved itself the wisest course. Let us ship this new flour of competition in the very first symptoms of a bud."

This is sound, sensible advice—advice that should be heeded. Let the retail dealer give the matter a little thought, and he will soon see that it is to his advantage to get in on the ground floor. And the right time to get in is now.—N.Y. Hardware.

TRACTION ENGINES IN ENGLAND.

No less than 12,000 traction engines, it is stated, are at present in use in England for hauling heavy freight, or for passenger service, or for steam plowing or as road rollers, and are built as a rule in one of three sizes. The smallest is an engine weighing 9 tons when fully equipped, and has cylinders 8 by 10 inches in size; the next machine weighs 10 1-4 tons, and has cylinders 8 1-2 by 12 inches; the largest of these machines weighs 11 1-2 tons when carrying 600 pounds of coal in its bunkers and 168 gallons of water in its tank; its cylinders are 9 by 12 inches, and a load of forty tons can be pulled up a grade of one in fifteen on a good hard road. The most economical load for good roads and moderate grades is said to be about twice the weight of the engine, under such circumstances the largest size requiring from 800 to 900 pounds of coal in ten hours. Single cylinder engines are most in favor, but a demand for those on the compound principle, it is believed, will take place before long.

MINING MATTERS.

It is probable that the Revelstoke smelter will be in active operation before next winter. The chemical engineer has authority from London, Eng., to inspect and forward a report as to repairs required.

Very little has been done in Cariboo in quartz prospecting this year, excepting in the Black Jack, on Williams Creek, which company crushed with their small one-stamp mill some 40 or 50 tons. By taking the sulphurates to the Government reduction works, and there treated by Mr. Martin, the superintendent, they produced a very handsome bar of gold worth about $500.

It is believed that the Colville Reservation will be thrown open to prospectors within the next three months, though the agricultural lands may be withheld from settlement for another year. A mining man says: "The land that is to be thrown open to settlement includes nearly 1,500,000 acres. In this area are rich veins of gold, silver, copper, lead, antimony and tin. There are two large bodies of the finest mica on the coast, and I believe there is at least one great bed of coal. There are placer fields on Deadman, Sheep and Catharine creeks, and on nearly every tributary running from Bonaparte Mountain, that will keep 10,000 men busy for a whole year and pay them from $3 to $10 a day. In one place there is a mass of gold, silver and copper that assays $800 a ton that crops out in three places. The first ledge is eight feet wide. Ten steps away is the second, twenty-two feet wide, and sixty feet further on the ore appears a third time. This may be a blanket ledge, but there is a fortune in it. As a rule the quartz in that country is barren, and most of the gold is found on a lime formation."—Vancouver News-Advertiser.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

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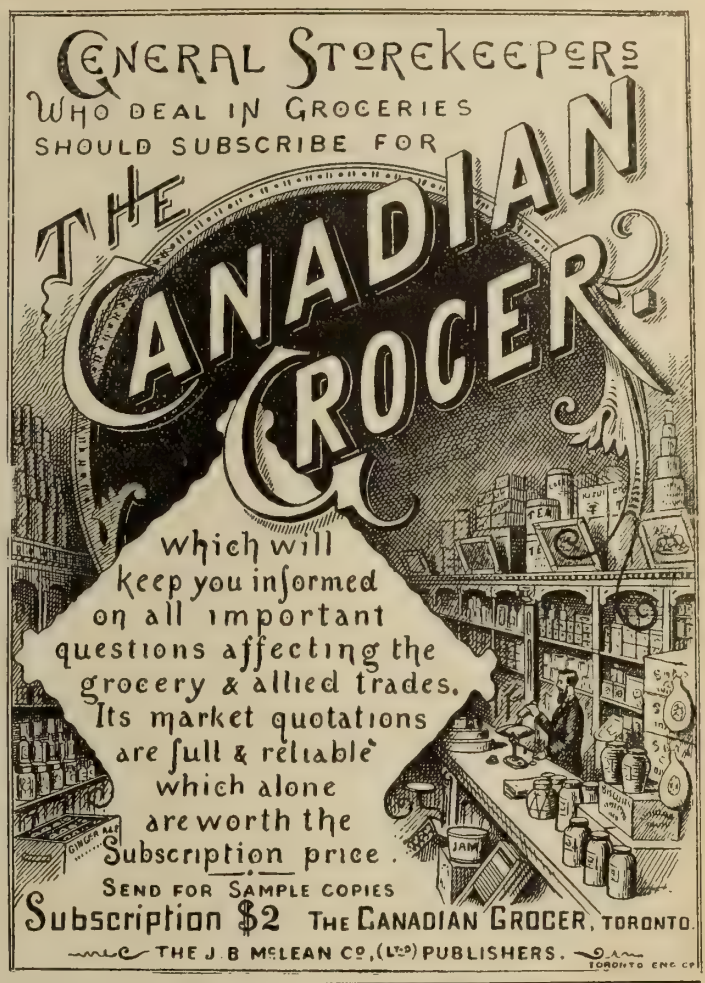
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A PLACE FOR EVERYTHING.

One of the best things in any store is order. If everything is out of order it will be hard to find what is wanted when the dealer comes to look for it. He may look as he will, but in a disordered store he will have a hard time to lay his hands on the article sought after.

This is particularly true in the case of articles for which there is not much call. They have been put away because they are not in active demand and they are put away so effectively that the dealer can't find them—especially if he is looking for them. If he does not look for them they will probably be bobbing up all the time.

It is a very good idea to be methodical in all things pertaining to store management. By this it is not meant that a dealer should get into a rut and never get out, but that all things should be kept in even running order. Every piece of machinery should work in unison with every other piece, so that the whole mechanism is perfect.

Have "a place for everything and everything in its place," and then there will be little friction. Fix in the mind the places in which certain articles are kept, so that you can remember whether in the store or not. If this rule be always observed, there will be no hunting at random all over the store to find what a customer calls for.

However, very few dealers are so careless about the management of the goods on the shelves and in the show cases where they can find them readily as they are about keeping their papers in order. There is perhaps nothing that is more important and nothing that is so much neglected.

First, in regard to business letters. A small country merchant may not get a great many letters, and for that reason he thinks there is no use in being systematic about keeping them in order. Maybe he carries them about in his pocket until that gets full, and then he puts them on his desk or table without filing them at all. The letters may not seem of special importance at the time, but they may prove very important at some future time.

After a letter has been carelessly thrown aside it is very easy to have it lost. It may be brushed off the table accidentally or it may be blown off by a gust of wind. It is then swept up with the refuse paper and that is the last of it. It may be very important for reference, but that does not bring it back again.

If a merchant does not have enough correspondence to need a file—which is improbable—he should at least have a box, or a receptacle of some sort to put all his letters in. Then if anything comes up in which the letters may be of use they are easily referred to. They should be just as carefully kept as notes and receipts.

And letters are not the only articles that should be filed and kept track of. There are circulars of some sort coming every day. Now, I feel sure that half or two-thirds of these find a resting place in the waste basket. This may be all right in a great many cases, but there are cases where the circulars should be preserved. If they relate to anything handled by the merchant or anything pertaining to his line of goods they ought to be kept, in case he should want to refer to them again. He may not want anything described in the circular at the time it comes, but after it is gone beyond his reach he may have use for it, and will not remember the address so that he can get another. If it is preserved the merchant may find it very useful at some future time.

Then there is another class of mail which ought to be cared for even more carefully, and that is the catalogues that come from manufacturers and jobbers. They are prepared and published at great expense and are expected to give information which will save a great deal of correspondence.

It is a good plan to make a place for these catalogues and price lists on some shelf where they will be easy of access and still not be in the way. Some of these lists are very valuable and give information not obtainable elsewhere, so that their loss would be a source of regret. "Oh, well," some may say, "if I lose this I'll send and get another when I want it.' Yes; that is all right, but it is sometimes easier said than done. I've had a little experience in that line myself and I have been disappointed a few times, in not being able to get another catalogue when I wanted it, and wanted it badly, too.

I think that we dealers are too apt to think that the wholesalers and jobbers exist solely for our convenience, and we smetimes take too many liberties. We must remember that they have greater risks and more capital at stake than we have, and their interests ought to be respected once in a while. So all dealers ought to take care of lists of goods which are sent to them, and when they want to ask questions about articles handled or want some information about ordering, terms, or whatnot, let them go to the catalogue, and ten to one they will find what they wanted printed therein.—Ex.

AN EXPERIMENT IN HEATING AND VENTILATING.

An interesting experiment in heating and ventilating a private house is described in the Popular Science. In a house built on marsh land, with a river on either side, and surrounded by houses, some of them stained with damp to the height of 6 or 7 feet, this house of 14 rooms was kept both warm and dry by the use of "10 tons of English household coals per annum." Indeed, so extreme was the dryness that it became necessary to place a large number of plants in different parts of the house to afford moisture and prevent the furniture from cracking. The entire house was so thoroughly warmed that doors and windows were constantly opened, "and this in spite of the exceptionally cold and damp nature of the surrounding soil and the exposed condition of the house." The walls of the house are made of porous bricks, and these walls are double, with a space between them, "like one box inside another box, with a space of 4 to 5 inches between the two boxes." The furnace is placed outside the cellar, at the back of the house, and the heat and smoke from it "pass into a chamber built in the cellar." "From this cellar, and going all round the outer walls of it there is an enclosed passage," in the centre of which there is suspended a "metallic flue" that answers as a chimney and warms the air in the passage. In order to retain the heat the walls of the passage are covered with "sluck wood," which is well known as a non-conductor. The ten inlets for fresh air are covered with "metallic gauze." The air warmed in the passage described, which is kept at a temperature of between 114 and 122 degrees Fahr., rises between the openings in the wall and comes out in the large atic under the roof of the house. The success fo this system of ventilation is dependent in a large measure on the porousness of the walls, and for this reason they are neither papered, painted nor plastered, but hung with woollen tapestries tacked on wooden frames. It is claimed that such covering maintains the warmth of the walls, and that the disagreeable sensation we sometimes experience when it rains are the result of moisture "blocking up the pores of the walls." Contrary to the usual theory that worsted wall coverings are a menace to health, Mr. Somesco, the owner of the house, calls them his "microbe traps," and adds: "If I have any reason to believe that injurious microbes have been introduced into my house, I know pretty well where to find them. It would take but little time to unhook all this drapery and put it into the disinfecting oven; and there superheated steam under pressure, without injuring the cloth, would assuredly kill the microbes."

POINTS FOR CLERKS.

"It would be well for the young men of to-day to take my recipe for becoming prosperous," said a Boston merchant. "I began life at the very bottom rung of the ladder, but with a determination that I would succeed if such a thing were possible with the talent that I possessed. Early in life I came to the conclusion that economy was the first great essential in establishing a fortune, and that labor was the second. I banished from my mind all other considerations when I began to work upon the road that I felt sure would lead to the goal of which I was in search. I remember very distinctly going down Marshall street one day and having my attention attracted by a most tempting display in a confectioner's window. I had what is known as a very sweet tooth, and I brought up standing before the sweet collection as if suddenly arrested by some irresistible force. My hand immediately found its way to the pocket that carried my meagre hoardings, and, before I really knew what I was doing, I had invested two cents in butterscotch. When I got back into the street I began to have a full realization of what I had done, and it is safe to say that no candy ever entered a boy's mouth that was so little relished as was my butterscotch. I regretted that investment for years, and whenever the temptation again came upon me while passing the store, I put it away instantly. Keeping on with this line of strict economy, I found myself at last in a position to go into business. Then, however, I commenced to feel that capital alone was powerless in the attainment of success, unless it was seconded by untiring labor. Here also I met all the necessary requirements, frequently devoting twenty hours of the twenty-four to my business. Gradually I found that I was amassing a fortune, and finally I established the house which now bears my name. After I had accomplished what I started out to do, there came over me an entire change. I had no aspirations to become abnormally wealthy. All that I wanted was a safe guarantee against possible disaster in the future. I devoted a portion of my time to the enjoyment of life, believing that I had earned my right to do so. No, sir; there is no use in filling a boy's head with all the new fangled ideas of getting rich, as they are not practical. Economy and labor are the only elements that enter into the great plan of successful business life."

INTERESTING LABOR STATISTICS.

Mr. Robert Giffen, C. B., the eminent statistician, has given some interesting testimony before the English labor commission. He estimates that during the years 1890 and 1891, a sum of £2,592,000 was lost to the wage-earners of the country by strikes, without reckoning the loss caused by diversion of trade into new channels. His statements on the subject of trades unionism are rather surprising. He says that there are in England some 13,000,000 workpeople—by which expression he apparently means artisans of one kind and another—and 7,000,000 adult male laborers, while "the fullest report of trade unions shows a membership of 871,000 only." According to this not one worker in twenty is a unionist. As for profit-sharing, Mr. Griffin "would not discourage it" but declines to regard the system as the admirable device it is often represented, because "there is always in every trade a portion of capital earning small profit or no profit, and the employers owning that capital must and do give the same remuneration as other employers. Hours of labor, he thinks, have a tendency to diminish, and something very nearly approaching to an eight-hour day will come, he believes, of itself, but reduction of production will mean "reduction of wages of those producing." With regard to alien immigration, he pointed out that England has an enormous interest in emigration, and "anything she did"—with reference to the prohibition of immigrants—"might be turned against itself."

A YEAR'S POSTAL WORK IN CANADA.

The annual report of the Canadian Postmaster-General for 1892 shows that at the close of the year the mail service was established on 1,238 miles of additional railway lines, 510 miles of which was on the Canadian Pacific railway, 16 on the Grand Trunk, 168 on the Intercolonial, and 211 on the Northern Pacific. The actual length of railway in miles over which mails were carried was 13,303. Compared with 1891 this shows an increase of 1,182 miles in the length of railways in operation. The total distance travelled daily was 45,106, and yearly, 14,118,303 miles, an increase over 1891 of 2,827 miles daily and 884,425 yearly. regard to the Atlantic mail service the report says that the contract entered into with the Alians for the weekly mail service between Quebec and Liverpool in the summer and between Halifax and Liverpool in the winter, has been renewed for another year, that is until 24th December, 1893. In the Pacific ocean mail service, it appears that a very large increase has taken place in the amount of correspondence passing between Canada and China and Japan, the number of letters having increased from 61,375 in 1891 to 109,411 in 1892; newspapers from 20,112 to 34,900, and miscellaneous matter from 14,264 to 23,441. The gross postal revenue for the year was $3,542,611.02, showing an increase of $167,723.36 over last year, and the expenditure was $4,205,985.26, an increase of $185,245.32. The large increase in the expenditure is owing to the payment of $53.994.42 to the Canadian Pacific railway for additional mail service, and of $44,673 to the Montreal Ocean Steamship Company for conveyance of mails between Canada and the United Kingdom.

HOW TO HANDLE LOW PRICED BUGGIES.

The majority of retail implement dealers are now handling buggies to a greater or less extent, but some of them are not realizing as much satisfaction and profit from the business as they expected. The success of a few who handle the buggy trade in a peculiar and special manner, and the non-success of the many who adopt no such plans, but allow the business to "run itself," is proof all-sufficient that to make money in this line a dealer must give the matter some especial thought and attention.

In the first place, it is a mistake to expect a high grade of work for a low price. The present prices of low-priced work compel the manufacturers to rush the work of building with all possible speed. Thus things are sure to be slighted.

It also brings about the use of the cheapest material obtainable. In this material there is much good and plenty of bad. The manufacturers find it cheaper to use the stuff as it comes and make good the defects after the work is sold, than to consume the time and labor that a careful selection would entail. Labor must be saved; and time is money. Each additional coat of paint means not only the material and labor, but the time required for drying. It means so much longer to wait before the buggies can go on the market and send back the returns. In the meantime the investment is not reduced, the clerk hire and other expenses go merrily on, and the loss of time is the manufacturer's loss. Therefore, for each additional coat of paint beyond those provided for in the minimum price the manufacturer must add a certain amount to the cost. The same thing holds good in other parts of the job, and so long as the dear public demands low-priced vehicles, the mad rush will go on.

An acquaintance of the writer, who has scored a distinct success in the retail buggy business, has a plan which we consider a good one. His trade is large, and he buys by the car load. Upon receiving the shipment he has each job carefully uncrated and set up on the sample floor. He then makes a careful and minute examination of each job—not merely glancing at the work from a position six or eight feet distant. He gets right down where he can see what he is looking for. Frequently he finds a loose tire or a defective weld, a palpable flaw in the spring which the paint has not concealed from the sharp eye at close range Other points of defect in workmanship or materials are perhaps discovered. He then makes up a detailed list of the defective points and submits them to the factory, telling them what the cost will be to have the work done at home, and awaiting their advice. If they require the parts to be returned to them he does that, but in most instances he has been instructed to have the repairs done at home, as the transportation charges would almost equal the blacksmith's bill. But, no matter what plan the makers may choose, the defects are remedied before they are discovered by his patrons, a most desirable condition, all will admit. Of course, there may be defects that even a microscopic examination will not disclose, but in locating any, if only one, he reduces the chances for trouble to a lesser degree.

Now, as to the painting, he well knows that, although it looks beautiful and may reflect his face in its mirror-like surface, "things are not always what they seem, skim milk masquerades as cream," etc. This being a low-priced job he knows that the paint upon it has not increased the weight of the vehicle to any extent. He suspects that what paint is there may not be of the best, and that it wll, after a while, peel off. You all have known this to occur. The question is how to prevent the paint from divorcing itself from the buggy.

The dealer referred to calls in the painter. He tells him he wants so many jobs varnished with the best varnish obtainable. By "best" he does not necessarily mean the most expensive, but the best for the purpose. A bargain is struck, and every job but one is treated to a glossy coat. The cost to this dealer has been $4 for single-seat jobs, $6 for carriages and spring waggons. One job is left on the floor for the purpose of comparison.

The dealer is now ready for his customers, and when they come he warrants every part of the job, including the paint, and it is an actual fact that, while his increased cost is less than $5 he readily gets $25 to $30 more for the buggies, a margin which will provide for repainting the job in the event of such being demanded before the expiration of the warranty. "I can sell you this job for $70," says he, "but cannot warrant the painting. This one at $95 I will warrant the entire job," and in most instances, it has been his experience, the latter was selected. Except under aggravated circumstances the coat of varnish will nearly always hold the coat on the vehicle until the warranty expires by limitation. The buyer is better satisfied, and the dealer has made more money, a dual result that all dealers aim to achieve.—Farm Implement News.

"I didn't see anything funny in the story that fellow just told. What made you laugh so over it?"

"Do you know who he is?"

"No. Who is he?"

"He's the head of our firm."—Life.

BUSINESS CHANGES.

SALES MADE OR PENDING.

Thomas Gleeson. timber, Chatham, has sold out to Blondie Bros.

William Doanan, blacksmith, has been succeeded by W. W. Fee.

Hutchings & Reiliy, harness, Calgary, have sold out Edmonton branch.

The general stock of D. A. McLean, of McIntyre, is to be sold Feb. 17.

Barrous Bros, general merchants, Olinda, have been succeeded by — Squires.

Robert Russell, gasfitter, Brantford, is retiring and advertises business for sale.

M. J. Courtney & Co., plumbers, Toronto, have dissolved, M. J. Courtney continuing.

The general stock of A. McKnight, Boissevain, Man., is advertised for sale by auction.

Joseph Coleman, blacksmith, Ameliasburg, has been succeeded by Alfred Crosby.

W. S. Heffernon & Co., general merchants, Emerson, are removing to Winnipeg.

The firm name of S. Reynolds & Co, general merchants of Algoma mills, has been changed to Reynold Bros. & Co.

Thorburn Sons, limited, general store, Broadview, Man., are succeeding A.G. Thornburn and are applying for incorporation.

Another lumber dealer has followed many of his predecessors into bankruptcy. Ferguson Bros. of London is the unfortunate in this instance, an assignment having been made to Frederick S. Jarvis.

Ducharme & Noel, general merchants, of Capleton, are advertising their stock in trade for sale by auction on the 21st instant.

PARTNERSHIPS FORMED AND DISSOLVED.

Ste. Marie & Wright, oils, Montreal, have dissolved.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

General store-keeping has evidently not proved profitable to J. W. Tausley of Sevcaburg, Ont, for he has assigned.

J. C. Honey, general store, Castleton, has assigned to John A. Vandervort and a meeting of creditors is called for Saturday.

George McCormick, contractor, Forest, has assigned to R. R. Dickey, and a meeting of creditors has been called for 17th inst.

J. A. McCauley, general merchant, Portage la Prairie, has assigned. W. Walley of Saltcoats, Man., in a similar line of business has done likewise.

A. J. Smith, general storekeeper, Essex, has assigned to John Milne.

J. R. Elliott, general storekeeper, Lawrencetown, N. S., is offering to compromise with his creditors at 33 1-3c. on the dollar.

J. A. Oullet, of Bic, Que., general merchant, has assigned.

A demand ofassignment has been made on August Breux, general storekeeper, of Chambly Canton, Que.

Etienne Levesque, general merchant, of Ste. Flarie, Que., has assigned.

Guy F. Smallwood, of Bradalbane, P. E. I., general merchant, has assigned.

W. J. Vail, of Durham, has been appointed assignee for the creditors of G. W. Woodland, general storekeeper, of Durham, in place of H. H. Miller, of Hanover, who was first appointed.

FIRES.

A. & J. McKay's plowing and pump mill at Trenton has been burned out.

William E. Doke, tinware merchant, Mount Brydges, has been burned out.

A. Carson, a Quensnelle, B. C. blacksmith has been burned out.

Christopher Cook, general merchant, McGregor, has been burned out; partially insured.

Riddell & Davidson's general store, located at Langley Prairie, B.C., has been burned out.

The store occupied by Mr. W. A. Duke, dealer in tinware, of Mount Brydges, formerly of Strathroy, has been destroyed by fire. The stock was insured for $500.

DEATHS.

Hugh Fraser, hardware and coal, Ridgetown, N.S.

Norman Hayes, barrel manufacturer, Halifax.

Warren Doane, general store and shipbuilder, Barrington, Nova Scotia.

J. J. Macdonald, contractor, of Montreal, is dead, aged 57. He was connected with some of the biggest contracting works in the Dominion, including the Intercolonial and Canadian Pacific railways.

THE VALUE OF A TRADE NAME.

In discussing stove trade matters recently a very prominent manager made the striking assertion that if he were given the choice between the right to use the trade-mark of his company and their entire property in plant, including ground, foundry, machinery, materials on hand, etc., without the trade mark, he would instantly take the former, even without a dollar to back it up. It was strong testimony to the value of a good name, long before the public, known in almost every home in the land, and known also as a guarantee of high quality. The name of the company was regarded as of no consequence. Without the use of the well-tried and thoroughly advertised trade name the company would find itself without a market. The same superintendent might run the same foundry with the same set of moulders, on the same patterns, but his customers would want the old name on their goods or else be educated by a long and tedious process to the fact that the stoves offered them were just as good as those they had been in the habit of buying. The old trade-mark given to a new foundry would spring at once into the possession of a trade empire, in which it had been the acknowledged sovereign, and from which it could not be driven, except, perhaps, by immense expenditures and only after a long period of persistent warfare.

An interesting episode, illustrative of the difference between a widely advertised name and the mere name of a company has since then fallen under our notice. A stove manufacturer visited a neghboring city, and while there concluded to call upon a fellow manufacturer, whose company, if mentioned, would be recognized as one of the best known in the country. Having arrived, as he supposed, in the immediate vicinity of his friend's foundry, but seeing no sign of it, he entered, according to his story, a corner drug store, and asked the vendor of pills to kindly direct him to the works of the Greater Mfg. Company. The apothecary scratched his head, but could not locate the concern. Thought he had heard of it, but wasn't sure. Asked how long he had been on that corner, replied over 20 years, and all that time never heard of the Greater Mfg. Company, who make the world-renowned Black Elm stove? he was asked, the enquirer gazing with astonishment at such an exhibition of ignorance. A flood of light irradiated the apothecary's countenance, and he hastened to assure the stove man that he was within two blocks of the foundry, and if he had only said Black Elm stoves at first he would have instantly been properly directed.

There is vastly more in a trade-mark than merely business egotism. Every manufacturer who thinks it worth his while to lay the foundations of an enduring business should adopt a distinctive name for his products and not change it. Year in and year out, day by day and every day, he should keep the name before the trade until it became better known than his own. Occasionally in the case of something having special merit, but which has never been named distinctively, the trade will, through some curious chain of circumstances, coin a name by which the article will be known. This is in accordance, evidently, with a natural trade law out of which the trade-mark has grown. The name of a company, or more especially of a firm, is too long generally for mankind to bother with. A short name takes the fancy. If it is particularly smooth, snappy and euphonious, and if, moreover, it represents a really high-grade article, it makes an impression on the minds of those interested which is almost ineradicable—Iron Age.

HOW CLAY PIPES ARE MADE.

The common clay pipe, like the needle, has to undergo a large number of operations before completion, nearly all of which are conducted without mechanical aid.

The clay, after being levigated, mixed and kneaded to a proper consistency, is rolled out roughly into shape. This the moulder takes, and, placing the head or bowl end in a special support, thrusts a long needle into the centre of the tail of the roll, thus piercing the stem.

Thus pierced, and still containing the needle, the roll is placed in the mold, which is of steel, and made in two parts, and the latter is closed and put in the press. Then a compressor is pushed into the open part of the mold to form the bowl.

Thus the clay is compressed.

The press is now opened, the pipe taken from the mold and passed on to finishers, who scrape out all mold seams, pass another needle into the stem, stamp any letters that are to appear, and send on to the drying room.

Here, when sufficiently hardened, those which have to be polished are polished and all are sent forward to other workmen, who examine them, reject the defective ones, and proceed to put the perfect ones in the saggers ready for the furnaces, which are similar to those in potteries, and where they are exposed for five or six hours.

They are subsequently dipped into a mixture to remove the porosity of clay. This is a mere outline of what is needed for a common clay pipe; the operations in fancy patterns are more complicated.

OFFICES: 100-102 Reade St., New York, U.S.A.

KEARNEY & FOOT CO

WORKS: Paterson, New Jersey, U.S.A.

Manufacturers of FILES AND RASPS.
Superior quality fully guaranteed.

CAPACITY OF WORKS: 1,200 doz. per day.



Illustrated Catalogue Price Lists mailed on application.

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Canada Iron Furnace Co., Ltd.

Manufacturers of
CHARCOAL PIG IRON
MONTREAL.
BRAND "C. I. F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer



ELECTRICAL
HOUSE -:- FURNISHINGS.

Bells,
Batteries,
Push Buttons.

The largest and best assorted stock in Canada.
Send business cards for discounts.

T. W. NESS,
749 Craig St., MONTREAL.

THE BEST
English Sporting Gunpowder
USE THE
"ALLIANCE"
PRIZE POWDER.
—Made only by—
Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.

Always obtainable from
Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.

The Old Wooden Bucket Must Go

Indurated Fibre Ware.



No Hoops, No Joints, Cannot Leak, Swell, or Water Soak.

The E. B. Eddy Co.
Mammoth Works
Hull, Canada.

..WIRE..

GALVANIZED, ANNEALED, OILED AND FENCING

Best quality, even weights, prompt delivery of import orders, lowest prices, write for quotations.

A. C. LESLIE & CO.

MONTREAL and TORONTO

"Burham"

PORTLAND CEMENT.

BEST ENGLISH BRAND MADE.

Canadian Consignees :

McRAE & Co.,

Ottawa and Toronto.

MUNN'S LIQUID GLUE

IS THE BEST.

Kennedy Bros., Agents

101 Bay Street, TORONTO.

Established 1864.

CLARKSON & CROSS,

CHARTERED ACCOUNTANTS

NO. 26 WELLINGTON ST. EAST

E.R.C.Clarkson, F.C.A.
W. H. Cross, F. C. A.
Edward Still.
John F. Helliwell.

TORONTO, ONT.

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.

CALVANIZED SHEET IRON. SP

FOREIGN CORRESPONDENCE.

Letters translated from or written in any foreign language.

I. H. CAMERON, 10 Front St. E

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	23, 23½
Strip "	24½, 25½

Tin Plates—*Charcoal Plates, Bright.*

	Per box
M.L.S. equal to Bradley	
I.C., usual sizes	$6 25 $6 50
I.X., "	7 50 7 75
I.X.X., "	8 75 9 00
Raven & P.D. Grades—	
I.C., usual sizes	4 75 5 00
I.X., "	5 75 6 00
I.X.X., "	6 75 7 00
I.XXX., "	8 75 9 00
D.C., 12½ x 17	4 25 4 50
D.X.	25 5 25
D.X.X. "	6 25 6 50

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be purchased of 10c. per box less.

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65,	

Tinned Plates

2x30 up to 24 gauge	6½ 6¾
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$2 05	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¾ " and thicker	2 25

Sheet Iron.

1 to 20 gauge	2⅝, 3
22 to 24 "	2⅝, 2⅞
26 "	2⅞, 3
28 "	3, 3¼

Canada Plates.

Blaina	½ bright	2 75
Abercarne		2 75
Lion		

Iron Pipe.

Wrought 62½ p. c. to 62½ p. c. and 5 p.c. Galvanized, 37½ to 40 per cent.

Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	5¾ 6
" ¼ " "	5½ 5¾
" 5-16 " "	4¾ 5
" ⅜ " "	4½ 4¾
" 7-16 " "	4¼ 4½
" ½ " "	4 4¼
" ⅝ " "	3¾
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 14 0 14½
Lake Superior	0 18 0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20 0 22
" 35 to 45 " "	0 19 0 20
" 50 lb and above per lb	0 18 0 19

Boiler & T. K. Falls.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 05½ 0 05½
Domestic "	0 04⅝ 0 05

Zinc Sheet.

5 cwt casks	0 06 0 06½
Part casks	0 06½ 0 06½

Imported Pig, per lb	0 03½ 0 03⅝
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, per square ft, by roll	0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¾ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weighs per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

Half-and-half (guar.) per lb	0 17 0 19
Standard	0 16 0 18

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½ 0 14
Other makes "	0 13 0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per lb	... ...
No. 1 Do "	... ...
No. 2 Do "	... ...
No. 3 Do "	... ...

Prepared Paints.

(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.c wt	1 35 1 40
" " (J.F.L.S.) " "	2 75
Venetian Red (R.C.2) " "	1 50
Venetian Red (best) "	1 80 1 90
English Oxides per cwt	3 25
American " " "	2 25
Canadian " " "	1 75
Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure, 8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 65
Extra "	1 00
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 90
No. 1 Carriage "	1 50
Gold Size Japan "	1 40
Pure Orange Shellac "	2 00
Hard Oil Finish "	1 50

Linseed Oil (in bbls)

Raw, per gal	0 59 0 61
Boiled "	0 62 0 64

Turpentine (in bbls)

Selected Packages, per gal	0 53 0 55

Castor Oil.

Best, per lb	0 07½ 0 08½

Cod Oil.

Cod Oil, per gal	0 48

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet makers	0 17 0 18
White	0 16 0 17
London Town	0 7½ 0 08½
Gelatine	0 22 0 27
Stripped	0 15 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12 p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50,50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 37½, 40 per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 25

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 5 to 65 & 5 pc.,
Loose Pins, " 65 to 65 & 5 pc.,
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... .. .. 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 40 to 45 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.40	2.70	2.00	
26 to 40	1.50	2.90	2.25	
41 to 50		3.30		5.00
57 to 60		3.60		5.50
61 to 70		3.90		6.00
71 to 80		4.50		6.75
81 to 85		5.20		7.50
86 to 90		5.90		8.50
91 to 95				9.50
96 to 100				10,50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05
Screw and Strap, per lb .. 0 03½ 0 04½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

BOWMAN, KENNEDY & CO., London, Ont.

WRITE US FOR PRICES ON THE FOLLOWING SPRING GOODS:

Spades and Shovels. Mixed Colors. Cut Nails.
Harvest Tools. Dry Colors. Wire Nails.
Linseed Oil. Paris Green. Fence Wire.
White Lead. Windsor Green. Wire Cloth,

And We will give you Closest Prices and Best Terms.

Wrought Hooks and Staples, Amer dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am. per gross 1 60 4 75

Knobs.

Door, japanned, and N.P, Can. list dis, 50 p.c.
Bronze, Berlin, per doz .. 2 75 3 25
" ronze, Gem, " 6 00 9 00
" " " 8 75 10 00
" hutter, porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy.....	2 30
40dy.....	2 35
30 dy.....	2 40
20, 16 & 12 dy.....	2 45
10 dy.....	2 50
8 & 9 dy	2 55
6 & 7 dy.....	2 70

2. American Pattern Only

from 4 to 5 dy	2 90
3 dy. (lath).....	3 30

3. Canada Pattern Only

from 4 to 5 dy	2 80
3 dy. (lath).....	3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz..... ... 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10⅝	11½ 11⅝
Cotton, per lb.....	22	25
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 0 75 0 85
" N P. " 1 00 1 10

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.

Hack, complete, each.... 1 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 50 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps,

Harness, German, p. gro. 1 65 5 50
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia ¼ gross boxes..... 3 25
" ½ and ¼ gross boxes per gross net cash 12 00

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Snaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4½ 4¾
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans. per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2, " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" " tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 57½ per cent.

Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., 10 p.c. advance on American list.
Canadian 10 per cent dis.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9

Twines.

Bag, per lb..... 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50

Washers "Iron," 40 per cent., 4 mos., or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Iron and Steel, bright, annealed, oiled, coppered, galvanized, spring, nail, bolt, rivet, etc.
15 per cent. f.o.b Montreal, off revised list, Dec. 1, '92.
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6½c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4½ 4¾
" 4 " 4 & 6 " "
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 80 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 30 to 32½ p. c
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3
" S., per doz..... 5 80 7 0
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS.

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AND SOLE MANUFACTURERS OF THE CELEBRATED

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21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

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MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
CLIMAX SAWFILES. LIGHTNING SAWFILES.

—AND—

EVERY OTHER DESCRIPTION OF SAW FILES.

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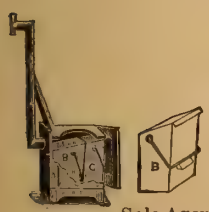
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Because every file is warranted, equal to the best imported, and prices much lower. Because the Consumer has no Duty to pay on these files.

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WALTER GROSE, Montreal, P. Q. **PORT HOPE, ONT.**



PATENT VENTILATED CLOSET. — Absolutely odorless No earth or ashes required. Endorsed by the Medical Profession. Can be placed in any room in the house having a chimney or stove pipe. Send for price list and testimonials.

M. M. Vardon, 67 Yonge Street, Toronto.

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Razors, Scissors

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Pocket Cutlery

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Equal to Copper Plate or Lithography at less than one-half the cost

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54 YONGE ST., TORONTO

"IDEAS FOR HARDWARE MERCHANTS,"

JUST PUBLISHED

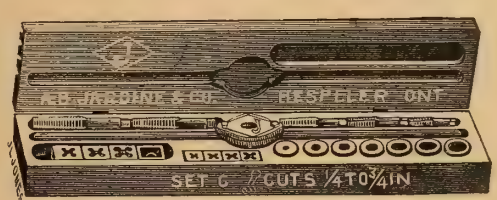
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- Blacksmiths' Tools
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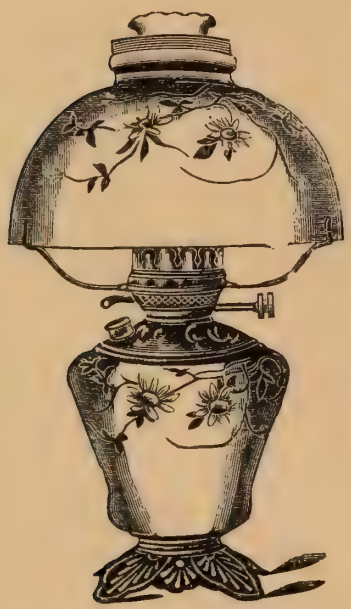
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Lithographed Boxes for Packing all kinds of Goods Made to Order

ENQUIRIES SOLICITED — Thos. Davidson & Co., Montreal

A Job Lot



Is only desirable when sold to the dealer at a price that will leave a

Good Profit at . Slaughter Prices

We have some . Job Lots of Fancy Lamps of this . Kind . . . . .

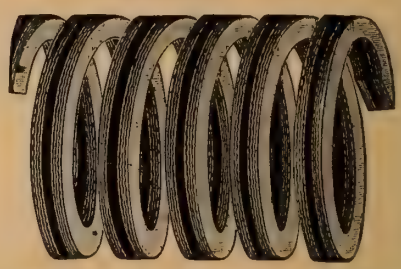
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BRAND OF



SPIRAL PACKING
ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7 16, 1-2, 9 16, 5 8, 11-16, 3-4, 13-16, 7-8, 15 16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.
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61-63 FRONT STREET W., Toronto.

No extra metal used that does not add strength. This Mower is from 5 to 15 lbs. lighter than most mowers.

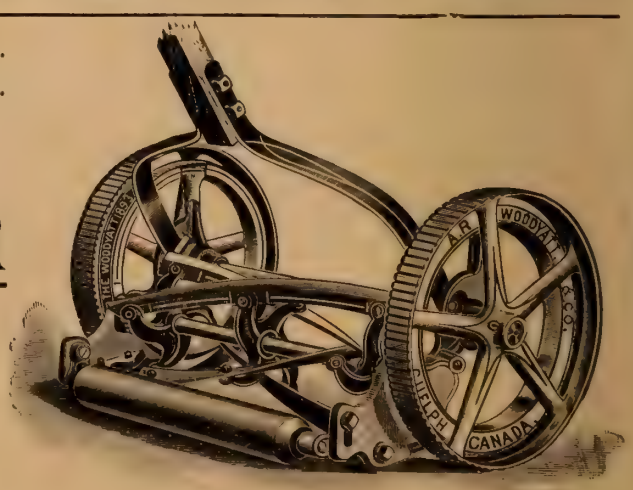
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AND METAL MERCHANT

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NEW YORK ALUMINUM BEARING METAL CO.

NEW YORK OFFICE, N. E. Cor. Washington and Cortlandt Sts. CHICAGO OFFICE, 12 Pacific Avenue.
MONTREAL OFFICE, H. McLaren & Co., Agents.

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"Genuine Babbit," - -	Price	30c.	per	lb.	f.o.b. New York
"Champion Metal," - -		25c.	"	"	" "
"Aluminum Bearing Metal,"		18c.	"	"	" "
"Big 4 Babbitt," - -		14c.	"	"	" "
"Pyramid Metal," - -		10c.	"	"	" "
"Mystic Metal," - - -		8c.	"	"	" "

CLOSE FIGURES MADE ON LARGE ORDERS OR CONTRACTS.

Our metals are superior to any like Babbitt Metals in the market. We Solicit Your Orders.

Green Seal White Lead

STANDS AT . . . THE . . TOP . .

It should be borne in mind that absolute purity is not always a guarantee of good quality. The products of different corroders vary in certain important respects, as does WHEAT grown in different localities. They all possess their own peculiar advantages and disadvantages. We were very careful at the commencement of our career to select and arrange for our continued supply, what is considered the most reliable and perfect Lead made, and the greatest care is observed in the grinding of it, and we know that we have a superior article. In this we are encouraged year by year, for our sales of Green Seal Lead have largely increased each season, and we have received many expressions of satisfaction from the consumers. The chief points of superiority of Green Seal Lead are as follows :—

It is more opaque. It is more finely ground. It is more tenacious and tough. It is well combined with oil. It has a greater covering power. The Green Seal Lead once used will not be replaced. **Try It.**

Sole Proprietors of the Green Seal White Lead

WALTER H. COTTINGHAM & CO., Montreal.

RICE LEWIS & SON, LTD.

FINE MECHANICS' TOOLS - -

Lathes, Bench Vises, Screw Plates, Chucks, Drills, Reamers, Etc.

HOUSE FURNISHINGS - -

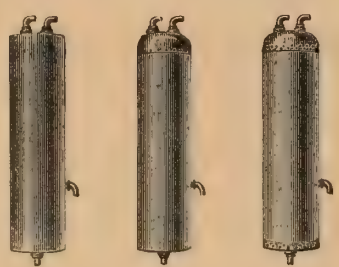
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BOOTH'S COPPER RANGE BOILERS

Best Workmanship.



Test Guaranteed.

26. 27. 27½.

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Consequent upon the ordinary Range Boiler failing to fill the demands of the Trade, we are making a special Copper Range Boiler, Extra Heavy, of the best Lake Superior Copper, flat bottom, top and bottom Double Riveted, with a guaranteed Hydraulic Test of 200 pounds.

This Boiler is known as

"Booth's 27½ Copper Range Boiler,"

and meets the requirements as called for in the specifications of our leading Architects.

Correspondence solicited and Price Lists on application.

THE BOOTH COPPER CO.,

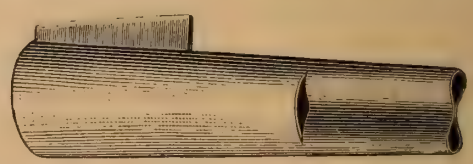
Coppersmiths, 165 York St., TORONTO, ONT.

GEO. BOOTH, Proprietor, formerly Booth & Son.

40% More Sap Obtained

BY USING THE

Maple Leaf Sap Spout.



The Maple Leaf Sap Spout is made of Tinned Steel and will supply a long-felt want for a first-class article at a low price. It is a combined Sap Spout and Bucket Support.

It is guaranteed to obtain the most sap with the least injury to the tree; it only has a small bearing on the inside surface of the hole; it is made in one piece, consequently cannot be broken; the bucket may be covered if desired when using this Spout.

SAP BUCKETS.
SYRUP CANS.

KEMP MANUFACTURING CO.
TORONTO, ONT.

HARDWARE

ORGAN OF THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

PUBLISHED WEEKLY—SUBSCRIPTION $2.00 A YEAR.

Vol. V. TORONTO, FEBRUARY 25, 1893 No. 8

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THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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The oil men are still somewhat at sea regarding the ultimate outcome of the proposed change in the tariff. At present the inspection charges are thirty cents a barrel, while barrels are subject to a duty of $1. What action the Government proposes taking in these particulars has not been announced. And thereon hangs the uncertainty. A rumor has been floating around to the effect that a fee will be imposed for the inspection of American oil and that the amount of fee and manner of inspection will involve an amendment of the Inland Revenue Inspection Act. This lacks official confirmation and consequently no reliance can be attached to it. If the duty on barrels is removed it alone would make a difference of about one cent a gallon in the cost to the consumer. The wholesale oil men claim that whatever the outcome may be that there cannot be much change in the wholesale price. They say that the margin of profit at present is only something like half cent a gallon. The responsibility for the outcry against the tariff they throw upon the shoulders of the retail dealers who, in the country towns particularly, have as a rule been getting, so it is alleged, so big a profit as to bring down about the ears of the producers, instead of about those of the retailers, the wrath of the consumers. During the last few days the retail dealers of this city have inaugurated a cut in prices. It is said to have been started by a Yonge street firm, but now it seems to be general. The prices at which the most of them are selling is 12½ cents per Imperial gallon, which is about cost, thus depending upon the seventy cents they get for returned barrels for their remuneration. This is about equal to ten cents wine measure, which is the standard measure in the United States. Over there, however, as high as fifteen and eighteen cents a gallon is being obtained for an oil much about the same in quality as that retailed by the Canadian retailer. This reference applies particularly to the Western States. In Detroit, on the other hand, competition among the retailers has brought the price down to ten cents per gallon, wine measure, and in some American cities it is said to have touched even as low as eight cents a gallon. It will be observed that the reputed price in Detroit is about equal to that now being obtained by the retailers in Toronto. It is expected that the price of oil will ultimately be affected something like two cents a gallon by the change in the tariff. In the meantime the wholesale price remains as before.

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The Canadian manufacturer of coal oil is placed at considerable disadvantage compared with his American competitor. His first and most grievous obstacle is in regard to the crude article. In some parts of the United States it is so cheap that it might almost be said to have no commercial value, while in Canada it is worth about $1.18 per barrel. The cause of this is of course the relative difference in the cost of production. In the United States wells are often struck that will yield a flow of several thousand barrels a day, while in Canada, on the other hand the average quantity pumped is only something like one barrel a day. The Canadian industry has been protected by the Government for about twenty years, and the tariff as it now is was fixed by the Mackenzie Administration, which went out of power in 1878. Some of the capitalists in the neighborhood of Petrolea, the Canadian oil centre, have invested their all in the industry, and these it is claimed would be ruined if the American article was allowed to enter into free competition with the home article. Then there is the iron piping, plant, etc., and the revenue received by the Government to be taken into consideration. And when free entry to the crude article is talked of those opposed to it take pains to point out these little matters. "Taking one consideration with another,' the Government's lot is not a happy one in determining what is best to be done in the premises.

* * *

If anyone fancies that everybody is wedded to the present three sources of currency—gold, silver and paper—he is mistaken. There are at least two men on this continent who are not, and they are equally distributed between this country and the United States. Both are legislators and both are seeking to incorporate new metals into the coinage of their respective countries. The one is Mr. W. F. Maclean, representing East York in the Dominion Parliament, and the other is a representative in the Illinois State Senate. Mr. Maclean is asking Parliament to adopt a nickel coinage in place of the present copper coinage. His object is the encouragement of native products. The Illinois man wants his legislature to request the representative of that State in Congress to urge the withdrawal of all paper currency, and instead issue a like amount of aluminum coin. His object is the laudable one of protecting the people of the country from cholera, which he claims is transferred by paper money.

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It seems that after all the lead and color manufactures have not yet merged into that harmonious whole so much desired, notwithstanding the many meetings which have

been held to bring it about. The difficulty is not that any of the manufacturers are opposed to the formation of the association. The reckless cutting that had been going on for some time made practically all of them only too willing to join hands and cease the senseless warfare. The bone of contention, so it is said, is the question of pooling the profits. For instance one manufacturer may fancy that his share should be, say 25 per cent., while his confreres think that 24 per cent. should satisfy him, and so on. At the time of writing the representatives of the different manufacturers concerned were holding another meeting in Montreal, and the Toronto contingent was reinforced by a gentleman whose presence it is thought would tend to hasten the combination of what all desire, but upon the manner of which it shall be done there is a divergence of opinion.

* * *

An interesting report has just been transmitted to the United States Congress. It is regarding the production of precious metals during 1892, and was submitted by the Director of the Mint. Gold produced is valued at $33,000,000. This is slightly less than the product of 1891, although somewhat larger than that of the two prior years. The silver produced from the United States mines is placed at 58,000,000 ounces. The commercial value, on the basis of the average price of silver during the year, is $50,700,000, and, reckoning on the coinage value in silver dollars, $74,989,900. Compared with 1891 the product is about 1,330,000 ounces less, and, with the probable repeal of the Sherman Silver Act, the amount mined this year will likely be still smaller. The Government's purchase of silver during the year aggregated in cost $47,394,291, at an average price of 87½ cents per ounce. The total amount of silver thus purchased under the Act of 1890 to December 31, 1892, aggregates 129,779,322 fine ounces, costing $124,652,429, an average of 96 cents per five ounce. Of this 102,947,064 ounces, costing $96,499,989, remains in the treasury in bars. The total coinage for the year was $48,389,780, of which $34,787,222 was gold and $6,333,245 silver dollars. The imports of gold aggregated $18,165,956, and the exports $76,735,592, a net loss of gold of $58,570,536. The silver imports aggregated $31,450,968 and the exports $37,541,301, an excess of silver exports of $6,090,333. The amount of gold used in the industrial arts in the United States during the year is reported at $19,329,000. The total metallic stock on January 1, 1893 was estimated at $1,243,153,385 of which $649,788,020 was gold and $593,363,365 silver. The stock of gold in the United States fell off $30,000,000 during the year, while the stock of silver increased $46,000,000. Taking the gold product of the world last year, there was an increase of over $12,000,000. The world's increase in silver was 7,650,000 ounces, occasioned by an increase of 4,600,000 ounces in the product of the Mexican mines and 3,400,000 in those of the Australian mines. One important fact conveyed by the report is that the United States is being drained of its supply of gold to an alarming extent.

* * *

The collapse of the Reading railroad, which has been the sensation of the week, is not the result of bad business, for the road is said to have done better during the past year than at any time in its history. The cause of the whole trouble is traceable to the ambition of the Reading people to control both the railways and the coal mines of the United States. Almost a year ago Mr. A. A. McLeod, president of the Reading Company, created quite a sensation by effecting a combination of anthracite roads that gave him the control of 75 per cent. of the anthracite trade. Later the combination was strengthened by further acquisitions. Next Mr. McLeod cast his eye on the New England road. He had an idea that the Vanderbilts were after the same prize, and so he began quietly to buy up N. E. This is alleged to have stirred up the fighting proclivities of the Vanderbilt crowd, and the fight waxed warm, the prize in view becoming all the more valuable as the battle proceeded, until at last it reached a sensational value. The indications seemed to favor the Reading Company for in the struggle it had secured most of N. E. stock. But it had overshot the mark. Then came the panic, and the indiscriminate haste of the holders of Reading stock to unload. Monday last the sales of the stock was the largest ever recorded in a single day in the history of the New York Stock Exchange. In the first half hour over 500,000 shares, worth at par $25,000,000 changed hands at a net decline of 6½ points, and the business for the five hours reached the enormous total of 1,499,000 shares. On Feb. 1 the stock was quoted at 51½, while on Monday when the crash came it was down to 28½. The loss to holders aggregates about thirty-one millions of dollars. Impelled by the desire to save the company from the dangers threatening it through the continued onslaughts being made upon its credit, the managers on Monday applied to the courts for protection, and for the third time in fifteen years the Reading railroad was placed in the hands of receivers. There are some who venture the opinion that when the present trouble is over it will be found that the control of the road has passed out of the hands of the Philadelphia syndicate into those of the Vanderbilt-Morgan interests in New York. The company controls 1,173 miles of railroad, 194,000 acres of coal mines, 153 miles of canal, three iron furnaces, 748 locomotives, 747 passenger cars, 34,113 freight cars, 10 steam colliers, 5 tugs and 187 coal barges, besides other valuable property. That part of the affair which proves of most interest to the general public is the probability that following the collapse of the Reading will come the breaking up of the great coal combine. And, as it is shown by official statements that the public has been forced to pay an advance of about $1 a ton for anthracite during a considerable part of the past year, said public is hardly likely to shed many tears at the prospect of the dissolution.

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The annual reports of the Montreal and Toronto Boards of Trade are to hand. The former is 252 pages and the latter 137 pages. Both are well gotten up and both contain much valuable information. The feature of the report of the Toronto Board of Trade is the statistical returns relative to the trade and commerce of the city, while that of the Montreal board makes a historical sketch of its own city a specialty. An interesting feature in this connection is a series of maps of the city, beginning with the first ever produced, and finishing up with Goad's map of 1891. From a perusal of the reports one gets an idea of the important part these two boards play in the shaping of the trade and commerce of the country.

* * *

The prospect of an easy life is the incentive that drives numbers of young men into business. Adaptability is often not taken into consideration at all. Storekeeping is one of the most exacting of callings. The hours are long, and the work fatiguing, while the remuneration, in comparison with the amount of mental and physical energy spent, often less than

in other callings. To crown all, the competition is keener, and the ratio of failures to successes is greater. In some of the young men on the farms realized this there would be less haste to forsake farm for store life, freedom for, at least, a mild form of slavery. Some one has estimated that the percentage of success in farming is ninety above that of merchants. This may be an extreme estimate, but one thing is certain : The young man who remains on the farm will, as a rule, be worth more when his footsteps begin to turn down the hill of life than he who goes into store-keeping. Of course, adaptability should be considered when chosing farming as well as any other occupation, and if a young man is specially fitted for mercantile life, why by all means let him follow it.

A QUESTION OF FILES.

A discussion has been going on in the United States regarding the respective merits of American and foreign files. Albert D. Pentz, in the Engineering and Mining Journal, takes up the cause of the foreign article. He refers to the Grobet file, made in Switzerland. One of these, he contends, will outwear five American files, and intimates that it would pay the home manufacturer to try and find out how the Swiss get the superior article. Turning to English files, he says that a Stubbs will outwear more than two American files. The reason that the foreign files are better than the American is not so much in the cut as in the honest steel that is used, he contends. Mr. T. D. Foot, replying in the Scientific American, practically says that Mr. Pentz does not know what he is talking about. "A well-cut American file will do as much work and even more than a Grobet of the same cut," he adds. "The English Stubbs files have always had a good reputation, and while Mr. Pentz places their quality below the Grobet file, the real facts are the Stubbs files are considered by nearly all file manufacturers, and also by nine consumers out of ten, to be of better wearing quality than the Grobet make." Mr. Foot acknowledges the fine finish and handsome appearance of the Swiss article, but he thinks the Nicholson File Company of Rhode Island, in the manufacture of X F's, exceed in style and finish any maker of small Swiss files.

LONG HOURS IN COUNTRY STORES.

A clerk in a country store writes THE GROCER relative to early closing. "The country stores," he says, "seem to have fallen into the custom of keeping open every evening a great deal later than is really necessary. A great many people in the country seem to do all their work at home, and then start for the store, only to find when they get there that the storekeeper or clerk, as the case may be, has just put on the shutters, or is just about to do so. Of course, as a courteous business man, without the least grumbling, the storekeeper does up a large bill of goods for the customer. Now, business men do not at all depreciate these valuable orders whenever they come, should it be early or late. But I would propose that all country stores have a stated hour for closing. That would imply that all people would do their shopping earlier, thereby giving customer,storekeeper and clerk an opportunity of keeping the body in health and the mind in ease."

The subject touched upon by our correspondent is not a new one by any means. It has been more or less agitated in this country, and at the moment it is agitating the minds of English merchants and clerks, the interest being so great that public meetings are being held to discuss the matter. But long business hours is an evil, and it will bear being threshed and re-threshed just as long as it exists. Somebody has yet to arise who will champion the cause of long hours. Even those who are the most persistent in keeping their stores open till far into the night acknowledge that it does not pay. Their reason for doing so is that others do so. This is evidence of the power of influence. And if one keeps open because another does, why not turn things around, and see if one would not close because the other did ? It seems logical, but there are few that have the courage to attempt it. Those who have taken the bold step have not as a rule gone without their reward.

There is no sound reason why stores should be kept open later than 7 o'clock at the outside, even on Saturday night. The present late hour system was not born of necessity ; it is the offspring of long years of habit on the part of customers. And before the desideratum of early closing can be enjoyed to its full this habit will have to be cured. The task of doing this devolves largely upon the storekeeper himself. Clergymen may preach, speakers harangue, and newspapers write till doomsday, unless the merchant does his part. And that part is to educate his customers to the necessity of making their purchases early in the day. The public is not an exacting autocrat. It only wants to be educated to the fact that the habit into which it has fallen is burdensome to the merchant, to his clerk, and to his family, and the millenium of early closing will have arrived. The merchant who then keeps his store open till late at night will do so because he loveth slavery better than freedom or long hours better than short.

Fortunately for its advocates, the people are already in the first book on the principles of early closing. During the summer months stores here and there are closed at stated hours in the evening and others one afternoon during each week. In the country where, if anything, the necessity for long hours is less, the early closing movement seems to be making slower progress than in the cities, and larger towns. Legislative enactments will never bring about the desired state of affairs. It has been tried and failed. Neither merchant nor customer will be coerced. But either is open to pursuasion and can, by the exercise of tact, be even led. What is wanted as the first step in the direction of early closing is a mutual understanding between storekeepers. This secured, the greatest obstacle in the way of early closing has been surmounted.

The period when the discussion of this topic may be said to be seasonable is approaching, and HARDWARE invites pointed and short letters from its readers on the subject.

MONTREAL'S BIG DEBT.

Montreal's debt now reaches the big total of $20,000,000, and the fact was the most interesting matter discussed by the newly elect Mayor Desjardins in his inaugural address to the city council in that city the other day. In fact, its funded debt now represents the full limit of the city's borrowing power under the 15 per cent. limit. This does not include the $1,000,000 which the city is authorized to contribute towards harbor improvements and which may be issued in addition thereto when required. This position of affairs is a matter of deep concern to the citizens, and it is engaging the attention of members of the Board of Trade as well as all thinking people. The city has been passing through an era of heavy expenditure which, while it had a temporary effect in increasing business, has also its depressing side which is apparent in the above mentioned heavy debt which the city has to carry. The interest charge on the above takes a third of the regular revenue, which last year reached a total of $2,500,000. Besides the debt is very likely to be added to before the works and street improvements actually under way or in contemplation are completed. There is besides the large obligation on account of the harbor improvements, which adds another million to the city's indebtedness. It is quite evident, therefore, that if unpleasant consequences are to be avoided the new council will have to keep a firmer hand on the expenditure, for the danger line has been passed.

STARTING A HARDWARE STORE.

"There is a tide in the affairs of men
Which taken at the flood, leads on to fortune;
Omitted, all the voyage of their life
Is bound in shallows and in miseries."

First take a mental inventory, and ask yourself a few pertinent questions.

"Am I sufficiently acquainted with the details to ensure success?"

"Does my taste lean strongly towards storekeeping?"

"Is my capital or credit sufficient to warrant my starting?"

"Am I willing to work harder as an employer than I have as a clerk?"

Having answered these and a few other similar queries to your own satisfaction, there is no apparent reason, other things being favorable, why you should longer hesitate about attempting to engage in the retail hardware business, since it is capable of being made as profitable and pleasant as any other like pursuit.

Having decided to start it only remains to arrange the preliminaries.

We will suppose, to bring the consideration to a practical focus that you possess $5,000 cash with which to stock the store.

The maximum amount you can afford to pay for rent will be $1,000 per year, and less if possible; but it is of first importance that you locate on a leading street and in a fair-sized and growing city, to catch the "drop in" trade, which is the most profitable in a retail store.

You will limit your clerk hire at first to $500 per year, which should provide a young man of some experience at say $7 per week and an errand boy at $3 per week. Your other expenses should not exceed $500 in the total, making your entire yearly expense at $2,000, or less, or 40 per cent. of your entire capital.

This seems like a large per cent., and it is, but if you are well located, and your goods are well selected, with a view to profit, it need not cause you any uneasiness.

Your capital being $5,000, you will be safe in owing all the time from 20 to 40 per cent. beyond your actual capital, and also to extend credit to a like amount.

You will therefore have in reality a capital composed of cash or credit equal to say $7,000. Of this cash capital you will need at least $500 to provide neat and convenient store fixtures. Don't be afraid to put this amount into useful fixtures, even if it does appear to be "dead capital"; it is not in reality, for it is a safeguard for your stock in keeping it in convenient shape, and is besides, a source of attraction to the public, which will repay you for the outlay.

If your store is narrow, have good shelving—adjustable shelves are preferable—on one entire side, commencing three feet from the floor, and running up the ceiling. Under this shelving have three rows of drawers down to the baseboard—open spaces are of little real use in a store, and should be avoided.

On the other side of the store have a wall show case three feet from the floor and six feet high, and as long as possible. Above this case run shelving up to the ceiling. Under the wall showcase put a line of drawwers three feet deep, as on the opposite side.

Have card plates on all these drawers to indicate their contents.

Down the centre of the store on the side nearest the shelving place two or three counters, each eight or ten feet long, and on top of one or more place a halfround show case of ample capacity to exactly fit the counters. Have the counters fitted with drawers of various sizes clear down to the floor and all labeled like the others.

At the rear of the store have a double faced nail and hinge counter to hold all the sizes of broken nails, hinges, bolts, etc., you propose to keep. Have this class of goods in the background, as they will be called for and need not be conspicuous. Over this rear counter suspend a small iron gas pipe, on which to hang spring balances and other similar goods.

On top of the nail counter keep your line of scales, meat cutters, fruit presses, coffee mills, etc.

After you have painted the ceiling a pure white, to reflect the light, and arranged your gas fixtures to best advantage, and bought, say 500 wood sample boxes, you are ready to purchase your stock. You should, in buying, go on the principle of variety, rather than quantity, and not let an extra five per cent. tempt you into buying more than a very moderate quantity of each article selected in each line, as your capital is rather limited.

Do not buy goods which are cheap simply because they are for some reason offered at a cut price; rather, in starting, buy the goods which are quickly and easily sold, even at a higher price. You might, if disposed, divide up your purchases as follows: Say $1,000 for shelf hardware; $200 for table cutlery; $300 for pocket cutlery, razors, scissors, etc.; $400 for general housefurnishing hardware; $100 for dog collars or sundry sporting goods; $1,000 for carpenters' machinists' and masons' tools, etc.; $500 for heavy hardware, like nails, etc., and $500 for various sundries, including in the latter some staple electrical goods.

You will now, on the above supposition, have spent $500 for fixtures and $4,000 for stock, all paid for, and a balance still of $500 in the bank, subject to check, to tide you over until you begin to receive returns from daily sales. Now hang up your brand new sign and boldly throw open your doors and work—not wait—for trade.

Take $200 from your slender bank reserve, and spend it in advertising to the local public during the following three months, that you are open for business, and state some substantial reason why it will be to their interest to patronize you.

Make no comparative allusions in your advertising, or your conversation, to your competitors—forget that you have competitors—but bear strongly on the fact that your stock is new and fresh, well selected, latest styles, and a full unbroken assortment to choose from.

Don't harp too much on the cheapness of your prices; the public will soon decide that for themselves.

Don't try to be the "cheapest priced store in town"; try rather to be the most satisfactory store in town; that is, aim rather to please your customer's fancy and convenience than to save him a few pennies on the cost.

People forget the price, but they remember a convenience; and good qualits gets in its silent work long after the price is forgotten.

Make frequent changes in your window display, and station yourself near, not outside, the door, to cordially and with friendly politeness greet each incoming customer, and learn to quickly comprehend his need.

Never uselessly argue with customers; let them enjoy their own harmless delusions; keep your mental faculties fixed solely on the sale, not its incidents.

Study carefully human nature—which should commence with self-study—and acquire that art which comprehends a person's thoughts and actions. Remember faces and facts of personal interest, and turn them to business account.

Be anxious to please, and fully satisfy, but do not forget that your prices and methods are, if just, dependent upon you for support—and you on them.

Make a change often in the display of your stock. Put the carpenters' tools, such as saws, levels, squares, hammers, planes, and the table cutlery and other suitable goods in the wall show case, and have them all tagged with the price in plain figures; they will often thus sell themselves.

In your counter show cases arrange with taste your pocket cutlery, razors, scissors, dog collars, and small tools and various fancy articles. Dispense with the pasteboard boxes in which they were packed by the manufacturer—display goods, not packages. Have all your stock in full sight, if possible, and the articles you have in the drawers will be such as are not attractive in appearance for display.

Sample your shelf hardware with fine copper wire on the wood sample boxes, which should be made only one row to a shelf, and have your counters far enough apart so that customers will feel no hesitancy about "coming behind the counter" to see closely the samples. In short, have your whole store arrangement so fixed that a person on entering will see nothing but goods; the fixtures, like a well dressed man, are there, but not seen at first glance—they serve a secondary purpose.

Improve your leisure moments—if you have any—by looking over the trade papers and manufacturers' catalogues to increase your business knowledge, and as fast as new and desirable goods are brought to your notice—or, rather, bring your "notice" to them—buy a few, thus anticipating the public demand. After your trade is beginning to be established be a little more enterprising, and use your credit to at least 20 per cent. of your assets and add such new lines as you think feasible, but buy lightly, so that if you are stuck on any article the amount of capital lost will be very small. Cultivate candid relations with the parties of whom you purchase, and do not leave one house for another without due consideration. You are now establishing your credit, and what a neighbor, who has been in business for ten years might do with impunity, would in your first year be regarded with suspicion.

Try to keep a complete variety of each line of goods, rather than many different lines, as it makes a better impression on the public mind to find you stocked with what you are supposed to carry, and looks like, and is, better business judgment.

If there are—and no doubt there are many—articles which are in often demand of a certain high grade of quality, do not for the sake of profit, substitute cheaper goods, but rather keep both, and thus hold the regular trade, while catering to the indifferent class of trade also.

Be sure to have your signs attractive and distinct. Don't be afraid to spend either "printers' ink" or "sign paint,"

H. S. HOWLAND, SONS & CO.,

WHOLESALE HARDWARE

37 FRONT ST. WEST, TORONTO.

"Samson" Solid Steel Spades and Shovels.

Carriage Paints . . .
Superfine Coach Colors
Varnishes . . . . .
Linseed Oil . . . .
Turpentine . . . . .

Our Pure Prepared Paints
Are the
STANDARD CANADIAN MAKE
EVERY PACKAGE GUARANTEED
SPECIAL ATTENTION AND PROMPT SHIPMENT.
THE TORONTO LEAD & COLOR CO. LTD
14 16 18 & 20 PEARL ST
TORONTO.

White Lead . . . .
Colors in Oil . . . .
Oil Stains . . . . .
Harness Oil . . . .
Carriage Top Dressing
Etc., Etc. . . . . .

as they are both absolutely necessary to modern success.

However, do not over-do the matter, but rather determine on how much you will spend each year on advertising and then ascertain where you can get the most for the amount you have decided to spend. Put about four-fifths of your advertising expenditure in the local newspapers, and the rest you can use to advantage by mailing neat and short circular letters to prospective customers. Take pains that the little details of your store management, like wrapping paper, stationery, the clerk's appearance and manners, etc, are calculated to please the public. First suit the public, and next make them pay for the service. If people dispute your prices and claim they are exorbitant, either reduce your prices to everybody, or maintain your own dignity by refusing to make concession without good reason.

Don't let a few local cranks run your store, and you pay the expenses. Be the master of the situation or shut up your shop, and hire out by the week to a more capable man.

There is a good deal of advice given "other people by some people" who are running a store which is just as well not to heed. Don't believe it, always, when your customers say they can buy cheaper of your competitor. If your prices are as low as you think proper—30 per cent. on the cost is as low as you can afford to sell on the average—maintain them, even if you lose your customer you are better off without his trade. Don't be too ambitious as regards prices, either up or down, maintain an even temperature and you will find it pays best in the long run.

For an advertisement you can make "leaders" of a few insignificant articles, but don't carry it too far, or you will get in beyond your depth.

Keep yourself posted on local events, and awaken a personal interest in your "chance customers"—they make walking advertisements. A pleased customer is said to be the best possible advertisement, and it is straight up and down truth, and to secure such you can afford to spend much time and thought. The natural way to gain people's confidence is to treat them squarely and consult their interests as well as your own. No merchant that I ever knew of reached a point in his business education where he could consider himself a "graduate." The more you know so much wider seems the field of knowledge, and it is the merchant who is awake to the modern necessities of business improvement that is fitting himself for a step higher in mercantile life.

Above all, don't sacrifice your health to promote business. Health is the only legacy a man can claim as a birthright and don't cheat your posterity or yourself of what is, after all, the foundation of a happy and successful life.

Treat your employees as friends and fellow workers, but do not allow overfamiliarity to breed contempt.

If at the end of the year you have accumulated 10 per cent. on your investment, above your total expenditure, you may consider yourself a decided success, but don't let it lead you to relax your hold on the steering wheel. You are the pilot; look out for rocks ahead.—Ideas for Hardware Merchants by D. T.Mallett.

"See thou thy credit keep; 'tis quickly gone;
'Tis gained by many actions, but 'tis lost by one."

CANADA AND THE CLYDE.

During the past year there was a considerable extension in the shipping trade between Canada and the Clyde. From Montreal 74 steamers arrived with cargoes of grain, cattle and provisions, an increase of 10 vessels, as compared with 1891, and 11 as compared with the arrivals in 1890. From Quebec there arrived 43 timber laden ships, as against 30 in 1891, and 38 in 1890. From Nova Scotia, New Brunswick and Prince Edward Island, with timber, there arrived 44 vessels, as compared with 37 in 1891, and 22 in 1890. From Newfoundland there arrived during last year 13 vessels, as against 12 in 1891, and 10 in 1890.—London Transcript.

SMOKELESS POWDER AND MAGAZINE RIFLES.

Report of a lecture delivered before the Toronto Military Institute, Feb. 3, 1893, by L. G. Duff Grant, F. I. S., Secretary of the Smokeless Powder Co. of London.

(Continued from last week.)

Remarkable results were also stated to have been obtained in France with a powder of the ammonium nitrate class for use with the magazine rifle, the Lebel, which was being adapted to military service in that country. It is now well known, however, that more than one smokeless explosive has succeeded the original powder, and that the material now adopted for use in the Lebel rifle bears, at any rate, great similarity to preparations which have been made the subject of patents in England, Germany and elsewhere. If there is still ammonium nitrate left in the French smokeless powder adopted for use in the Lebel magazine rifle, the longer they put off their next "brush" with their Germanic neighbor the better for them.

Their original powder also, I believe, contained picric acid (the basis of "melinite"), a substance extensively used as a dye, and obtained by the action of nitric acid at a low temperature upon carbolic acid and cresylic acid, constituents of coal tar, one of the earliest known explosives of organic origin, and one of the most dangerous to deal with. With a powder in which picric acid forms a part I think I would almost as soon stand in front of the guns when fired as behind. If picric acid was not present in the French powder for rifle purposes, it certainly was in the powder they adopted for filling shells, and commonly known as "melinite," invented by M. Turpin.

Of the violence with which picric acid will explode an example was given on the occasion of a fire at some chemical works near Manchester a few years ago. The shock was felt over a distance of two miles from the seat of the explosion and the sound was heard for a distance of twenty miles.

Soon after the discovery of gun-cotton by Schonbein and Bottger in 1846 endeavors were made to apply gun-cotton wool rammed into cases as a charge for small arms, but with disastrous results. Subsequently Von Lenk, who made the first practical approach to the regulation of the explosive power of gun-cotton, produced small-arm cartridges by superposing layers of gun-cotton thread, these being closely plaited round a core of wood. So far as more smokelessness is concerned no material can surpass gun-cotton, pure and simple, but, even if its rate of combustion in a fire arm could be controlled with certainty and uniformity, although only used in very small charges, such as are required for military rifles, its application as a safe and reliable propulsive agent for military and naval use is attended by so many difficulties that the nonsuccess of the numerous attempts made to apply it in this direction is not surprising. Various substitutes can be used, and as each has its own advocate it is only necessary to state that they must consist of some pure vegetable fibre.

Sir Frederick Abel invented a system of preparing gun-cotton, which was no sooner elaborated than its application to the production of smokeless cartridges for sporting purposes was achieved with a fair amount of success by Messrs. Prentice, of Stowmarket. The first gun-cotton cartridge which found considerable favor with sportsmen consisted of a roll of felt-like paper, composed of gun-cotton and ordinary cotton, and produced from a mixture of the pulped materials. Afterwards a cylindrical pellet of slightly compressed gun-cotton pulp was used, the rapidity of explosion of which was retarded by its impregnation with small proportion of India rubber. Neither of these cartridges possessed sufficient uniformity of action to fulfil military requirements, but after a series of experiments which Sir Frederick Abel made with compressed gun-cotton arranged in various ways, very promising results were attained, and ended in the production of what is now known as "E.C." sporting powder, one of the best sporting powders now in the market, and later still to the production of what was called the Johnson and Borland powder. The latter, however, was short lived, as it did not come up to the expectations of the inventors, and was found to be far inferior to "E.C." Of both "E.C." and the Johnson and Borland powders, gun-cotton or nitro-cotton is the basis, and in these I believe both camphor and liquid solvents are used to harden the powder granules, with a view to render them non-porous. I believe Rabelais the well-known satirist and humorist, with probably practical knowledge and serious purpose ,was the first to suggest camphor as an ingredient.

Another inventor of the name of Hengst made a powder from straw prepared and chemically treated, and finally manufactured into a gunpowder granular in form, but it seems to have died a natural death, the difficulty being to get uniformity with a basis such as straw, which in itself varies so much, the joints requiring very different nitrification from the rest of the stalk.

In Germany the subject of smokeless powder for small arms and artillery was steadily pursued in secret, and a small arms powder giving excellent results in regard to ballistic properties and uniformity, was elaborated at the government powder works, and appears to have been adopted into the German service for a time, but its first great promise of success seems to have failed of fulfillment through defects in stability.

Experiments were also carried out on a large scale with various nitro-glycerine powders produced at Woolwich, in England, and the Western Powder Company in Belgium also manufactured so-called paper powders of the same kind, and their efforts have been attended with considerable success.

Nobel's smokeless powder, made up of nitro-glycering, nitro-cotton and camphor, also gave good results, but it was feared that the presence of so volatine an ingredient as camphor would surely set up a chemical change, and that the powder would not be reliable in all climates. Sir Frederick Abel's cordite or string powder, if such a term can be used, was exposed to a very high and a very low temperature without being injuriously affected either as regards pressure or velocity, and the accuracy from the machine rest at 1000 yards was nearly equal to that given by Nobel's, the deviation being a little over one foot; but the excessive heat generated caused metallic fouling, and frequently the covering of the bullet was stripped off and remained in the barrel, rendering the rifle unserviceable. It was seen that some change was necessary, either in the explosive or the bullet to overcome these serious defects.

Various descriptions of bullets, including one of solid copper, lubricated in different ways, were tried, but the results have not been wholly satisfactory; soft steel and wrought iron were tried as coverings for the bullet instead of nickel, and some slight change was made in the powder. It was found possible to get over the metallic fouling, but the shooting fell off, and was not up to that obtained either with the original black powder pellets or with Nobel's powder.

Further changes have since been made in its composition, but it is an open secret that it is not giving the satisfaction anticipated. Probably its greatest fault is the enormous amount of heat generated, so much so that I believe that after firing 50 shots in rapid succession from the magazine rifle the barrel becomes so hot that the sights melt and drop off, about the most serious defect a powder for general purposes could have, and a defect I believe which is impossible to remedy as long as gun-cotton and nitro-glycerine form the basis.

It is called "cordite" from its string looking form being made by dissolving gun-cotton in a solvent and forcing the compound through perforated dies by which it is shaped into threads and strips. Notwithstanding all its defects, this is the powder which is being adopted in England by the British Goverument for use in their new magazine rifle which is destined to replace sooner or later the Martini-Henry, with which the troops are now armed. This has been entirely brought about by the influence of Sir Frederick Abel, who, like many another inventor, speaking of his own baby, says: "With all thy faults I love thee most."

Had I time I would go on to mention the names of a host of other inventors and other products,such as Engel, Glasei, Turpin, Nobel, Prof. Dewar, Emmens, Maxim, Mayer, Smerling, and many others, but those I have already mentioned are the most important, best known, and, on the whole, have been attended with a fair amount of success.

Much misconception has been created by classing nitro-compound gun-powders for fire-arms with high explosives. They are the very reverse, and should be called low explosives if any qualifying term be applied to them at all. Their whole purpose and action are comparative slowness and mildness in use, as I shall show you by and bye, in accordance with the requirements of modern fire arms, while, if kindled otherwise than when confined in a gun and ignited by a percussion cap, they do not explode at all, but merely deflagrate. "Deflagration" differs from "explosion" in that while there is a rapid combustion there is no such sudden or violent outbursts as follow the ignorion of most explosives, so that there is no injurious effect upon neighboring matter not in actual contact with the conflagration. For these reasons such explosives are remarkably safe in storage and transit, a fact which is gradually but certainly becoming apparent to all who have to use them. The manufacture is also remarkably free from danger, the whole process up to the final drying and packing dealing with wet substances. It is exceedingly improbable that any modification of really "high" explosives or of their principal ingredients can ever be utilized for fire-arms.

I have also often seen mention made in newspapers of nitro-powders being noiseless as well as smokeless. The thing is, of course, an impossibility, and it is hard-

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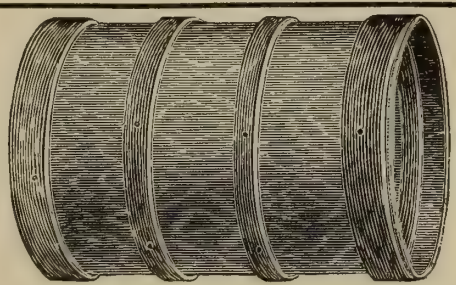
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'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

ly necessary for me to say so. The fact is that there is scarcely any difference between the report of the new smokeless and of black powder, except that the former is sharper and more ringing, but not of such long duration. Some four years ago, when Sir Augustus Harris, of Drury Lane fame, was performing a piece called "The Armada," there was great complaint of the theatre being rendered most uncomfortable by the fumes and smoke from the black powder which was being used on the state. His manager came to me and asked me if I could help him. I went with him to an underground cellar where we had a large quantity of ammunition and various rifles stores. After extracting the bullets and wads, I fired a few cartridges, but found, to his regret, there was no noise as well as no smoke. The bullets and wads which form the resistance to the gases being removed, the powder, though ignited by a cap, merely deflagrated without explosion. We worked for a considerable time to obtain a suitable cartridge for blank firing, and also applied to several cartridge makers, but without success. Quite recently our chemist invented a blank cartridge which gets over the difficulty, so that without either bullet or wad a sharp report is obtained for blank firing and royal salutes.

Another objection often raised to smokeless powders is the vile odors and fumes that sometimes arise from them. An amusing incident was told me some time ago by an eye-witness of a series of trials, which were carried out near St. Petersburg, where a review was held at which the Czar was present. When he appeared on the scene the usual volley was fired by a whole regiment, the result being that the men were so overcome by the fumes and smell that every man Jack along the line commenced to vomit. A pretty reception to his Imperial Majesty. This of course only applies to very few powders. Many of them, on the contrary, have a most pleasant odor, and among these are the manufactures of the Smokeless Powder Company, of London.

Thus far I have dealt with the subject of smokeless powder for sporting and military purposes, and now I must glance briefly at the various compounds that have recently been introduced for mining and blasting operations, most of them smokeless, or semi-smokeless, and some of them also flameless or practically flameless. Their name is legion, and I can only therefore touch upon a few of the most important. In this list is Dynamite Lithofracteur, Blasting Gelatine, Gelatine Dynamite, Gelignite, Roburite, Securite, Bellite, Carbo-dynamite, Von Dahmen's Safety Dynamite, Hengstite, Cotton Powder, Tonite, Potentite, and Melinite, and last, but not least, Smokeless S. B.

The dangers arising from the use of ordinary blasting powders in fiery coal mines no doubt gave rise to this endless list. Attempts had been made from time to time to provide a substitute for powder,as well as means of using such substitutes which would ensure immunity from the danger due to the presence of coal dust and fire damp, but until recently no such desirable blasting agent was forthcoming.

Some of those mentioned in the list, however, claim to answer the purpose, but I should think that it was only to a limited extent. Among these are Roburite, Carbonite, and Securite.

The inventors allow that a spark is given off on their explosion, but they say it is not a spark per se that will explode inflammable gases and dust. In any case they are safe explosives to use as compared with dynamite and others of the nitro-glycerine class, whose use is always attended with considerable danger. Miners will not understand that they cannot with impunity warm dynamite cartridges in frying pans over the kitchen fire, or put them to dry in the oven with all the insouciance with which they place their Sunday dinner in the same place. So much for blasting compounds.

I come now to the smokeless powders, in which I am most interested, namely, those of the Smokeless Powder Company of London, whose manufactures, "though I say it as shouldn't," are second to none. It is, I believe, the only company in Europe, and I rather think I may add this side of the water too, that has a complete series of smokeless powders for shotguns, for rifles of all sorts, and for mining purposes.

The company was formed early in the year 1888, but it was not until December, 1890, that their powders were first placed upon the market. The intervening time was spent in the erection of the necessary works, after a suitable site had been found for the purpose. To find a suitable sight in England and obtain the necessary licenses to manufacture explosives is not an easy matter. Of 182 offered, only one was found suitable, but that one seemed specially made for us. I know of one explosive concern which took 18 months to find a site which the inspector of explosives would pass.

This will give you some idea of the difficulties to be overcome. In the erection of the works we were fortunate in having as our engineer, a man who was well known in England as an expert in explosives, Mr. Ernest Spon, a man who had, I might say, devoted his whole life to the subject.

Under his superintendence the works made rapid progress, and by July, 1890, were reported ready for occupation and for the manufacture of powder. No time was lost in setting to work, and in December of the same year the first powder smokeless S. S. was placed in the market.

Before I go on to speak of the company's various powders, I may state that they do not form the subject of any patent, and therefore I am unable to say anything as to the ingredients which are used in their manufacture. I can, however, tell you what they do not contain. There is no gun cotton, no nitro-glycerine, I am glad to say, in any of them, and I need hardly add, after what I have already stated, that there is no ammonium nitrate, no chlorate of potassium, no picric acid, in their composition. The ingredients we use are of a thoroughly stable nature. The manufacture is carried on by secret processes, which are only known to two men inside our factory. It is well for us we have no patents, which only reveal to all the world what you are doing, to say nothing of the fact that few, if any, chemical patents are really valid. It is so easy to add something and call it an improvement. As far as we are concerned we have no apprehension of those secrets ever being found out. We know chemists in different parts of the world have been at work on them for years, but they are as far from being able to make them today as when they first started. As for the work people, nothing is to be feared from them. They see certain processes and certain ingredients used in these processes, but they have no idea what they are or what their composition is. Our works manager and our chemist, who alone know the secret, are part and parcel of ourselves, and of them I can only say, "They are beyond suspicion."

One important thing which has conduced as much as anything to the uninterrupted success which has attended the company's progress, has been the fact of the board being composed of practical business men, who knew what they were about before taking the matter in hand, and that cannot be said of all companies.

First and foremost is our managing director and chairman, Mr. J. D. Dougall, of the firm of J. D. Dougall & Sons, well known as gun and rifle manufacturers in London and Glasgow. I always held that the people of this generation are wiser than their fathers (at any rate they ought to be), in so far that they have all the experience of their fathers before them to guide them, as well as all extra knowledge which they themselves may acquire, and so it was in this case. Mr. Dougall is the son of Mr. J. D. Dougall, whom I have already mentioned as having been the first to bring Schultze powder to public notice.

(To be Continued)

MEETINGS OF BOARDS OF TRADE.

A Board of Trade has been organized at Palmerston with these officers: A. Moyor, president; E. K. Scott, vice-president; W. Falconer, secretary, and C. R. Knight, treasurer, together with a council of eight as an advisory board.

At the annual meeting of the Collingwood Board of Trade these were elected officers for the ensuing year: President, J. J. Long; vice-president, George Moberly; treasurer, E. R. Carpenter; secretary, F. W. Churchill; councillors, Chas. Cameron, H. Y. Telfer, W. A. Copeland, J. Wilson, W. J. Frame, James Guilfoyle, W. T. Toner. The president in his annual address referred to the proposition for the creation of a new county; to the necessity for improvements to the harbor, and to the desirability of lessening restrictions regarding fishing nets.

The Sherbrooke Board of Trade has elected the following officers: President, R. W. Heneker; vice-president A. W. Olivier; secretary-treasurer, H. E. MacFarlane; council, N. T. Dussault, H. Samuel, W. Blue, L. H. Guay, D. McManamay, S. W. Jenckes, W. S. Dresser, J. S. Mitchell, J. A. le Baron and W. E. Paton. On motion of G. A. le Baron, seconded by E. G. Farwell, the secretary was instructed to correspond with the McCormack Harvesting Machine Company, of Chicago, in regard to the establishment of their proposed Canadian works at Sherbrooke.

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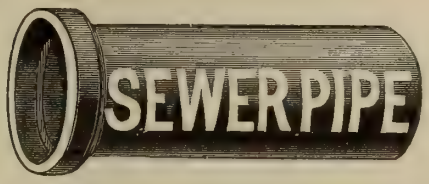
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TRADE CHAT

[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Wednesday.]

There is a scarcity of soft coal in London.

A co-operative coal company is being organized at Victoria, B.C.

The output of anthracite coal in January increased 218,092 tons.

An agitation is on foot in California for the repeal of the import duty on coal.

Upon nearly every railroad bridge that Uis built can be found the date of its erection.

Hard coal loses eight per cent. in bulk per annum when exposed to the weather. Soft coal loses 12 per cent.

The plan of using separate tires for car wheels is regarded by many railroad men as representing the correct principle of construction.

The new basket factory in the old Shickluna saw mill, at St. Catharines, has commenced sawing up logs, and will shortly be in full operation.

All the small iron mines in the Ishpheming district, Michigan, are shutting down, being "driven to the wall" by the larger and richer ones.

Mr. E. G. Gooderham, manager, and Mr. J. C. Copp, sec.-treas. of the Toronto Silver Plate Company, are spending the week in New York in the interests of their company.

The Hamilton Natural Gas and Mining Company intends to ask the Board of Works to reconsider its application for the exclusive privilege for five years of laying pipes in the city.

Following the shipments of anthracite coal to Berlin last autumn, the Reading Railroad Company have just sent 50 tons to Genoa, hoping to open a market for the product both in Germany and Italy.

A Kingston despatch says that Mr. G. Booth is preparing a map that will show the outcropping of iron ore in Frontenac and Leeds counties. It will be exhibited at the mining convention in Montreal.

Since the moulders' strike commenced a year ago in Hamilton, Ont., the International Union has spent $30,000 there for the support of the strikers. There are only 28 non-union men on the payroll now.

It is said that the best handles of small tools are made from wood of the apple tree, which is extremely hard when dry, and possesses a fine grain. Moreover, it does not crack easily after it has been dressed.

Representatives of the Standard Oil Company, the Indiana Company, which owns the pipe line to Chicago, and the Columbus Construction Company are endeavoring to avert a natural gas war. A strong combine will probably be effected.

The south, according to the Chattanooga Tradesman, now produces about one-fifth of the pig iron made in this country, and at about 40 per cent. less cost than the rest of the Union. This is a marvellous record, but it will be surpassed more marvellously still within five years.

Twenty thousand mining companies in the United States are floating their stock by means of advertisements and prospectues, and the Journal of Finance says a large proportion of them are frauds, whose only object is to make money for their promoters by selling stock for more than its value.

Important purchases of oil territory and product at full prices were made in Pennsylvania last week by parties believed to be acting in the interests of the Standard people. The exports of crude, refined, etc., so far this year from Atlantic ports, show an increase of 10,000,000 gallons.

The use of the cold-saw cut-off machine for metal is becoming as common as that for wood. It is used not only in the form where the saw is a revolving disc, but also in the form of a band-saw, and it is expected that in this shape it will be possible to do work in iron of the same character as that done in wood by the scrollsaw.

Safe manufacturers in the United States have formed a combine, and an exchange says it is just a question whether it would not be good policy to take the probable sum required to meet the exactions of the safe trust, and with it bribe the burglars not to burgle, thus rendering safes superfluous.

A writer in The Manufacturers' Record says that the waste in turpentine manufacture is from 25 to 30 per cent., owing to the destruction of the residum after the resin and turpentine are extracted from the gum. He believes that this residum can be made into lampblack in sufficient quantity to yield at two cents per pound a return of $3,000,000.

The experiment of electrically lighting omnibuses in London has proved so generally satisfactory that all the vehicles of the two leading companies are to be so lighted. Two lamps are used in each omnibus, the power being supplied from a new storage battery. Portable electric lamps for the use of the ticket inspectors are also in successful use.

A return presented to the House shows that since March 4th, 1892, there has been paid by the Dominion Government $67,431 as bounty for the production of 39,928 tons of pig iron. The recipients were the Londonderry Iron Company, John McDougall & Co., the Can Iron Furnace Company, and the New Glasgow Iron and Coal Company. The Londonderry Company received two-thirds of the whole sum.

The quantity of gold coined in France in ninety-six years, ending with 1891, inclusive, was £348,915,000. The quantity of silver coined in France in the same period was £212,500,000. The aggregate gold and silver coined in ninety-six years was, accordingly, £561,451,000. Coinage operations appear to have been carried on with the greatest activity during the reign of Napoleon III., the quantity of gold coined in that period having been £246,078,464.—Engineering, London.

London Industries says: "An important concession has recently been granted to an American syndicate for the establishment of four extensive jute factories in different parts of Mexico. The concessionaires must invest at least £400,000 in the enterprise, work on the first factory to begin within nine months, and the building to be completed within three years. The construction materials and machinery for each factory will be admitted into the country free of duty. The capital invested, the buildings and the business will be exempt from taxation, except the stamp act, for ten years."

The new steamer contracted for by the Montreal Transportation Company, is to be built by Sir Railton Dixon at his yards at Middlesboro', Eng., and is to be completed by the end of May. The craft will be 253 feet long, 40 feet beam, and 23 foot hold. She will be brought to Kingston in sections from Montreal. She will be fitted with water tanks to carry 750 tons, so when going westward light she will draw sufficient to be easily handled.

Representatives of the McCormack Harvest Machine Manufacturing Co., of Chicago, have been in Hamilton looking for a desirable location for starting a branch factory there. They went before the reception Committee of the city council, and explained that if sufficient inducements were offered them to locate there they would employ 300 to 500 hands. It is thought they will probably be offered exemption from taxes and free water for a term of years.

The discovery of a fine oil well on Henry Elnor's lot, Second line, about 5 miles from Sarnia, has created, as might naturally be expected, not only great interest, but great excitement in the neighborhood. The pump was put in last Monday, and poured out oil at the rate of twenty-four barrels a day, until an accident happened which stopped pumping operations. The flow of gas in the well is very strong. The Sarnia pipe line passes close to the well. Mr. Elnor will put down another well immediately.—Petrolea Advertiser.

The first pegging machine was invented by Samuel Preston, of Denvers, Mass. His patent, issued March 8, 1833, was signed by Andrew Jackson, President of the United States. Previous to the invention of a machine for making pegs (1820), shoemakers cut their own pegs. A. C. Gallahue patented a pegging machine in 1851. Elmer Townsend, of Boston, invented one, and at the same time B. F. Sturtevant patented a machine to cut, or make, peg wood, and one to drive them. In America, very few boots are pegged by hand now.

The Guide is happy to announce that the difficulties which have surrounded Mr. Charles Stark for some months past, have now been removed, and that he has once more assumed control of the business. The arrangement was a very satisfactory one to the creditors, and reflects the highest credit on Mr. Stark. The firm of Charles Stark & Co. will again blossom forth with new vigor, and continue to spread the light of the jewelry trade through Canada. The Guide wishes Mr. Stark a career of uninterrupted prosperity.—Jeweler's Guide, Feb. 15.

NON-DRINKING EMPLOYEES.

Twenty years ago it was often true that a young man who drank beer, or wine, or even whiskey in moderation, might be advanced to places of greater trust and responsibility. It is now scarcely possible. The habit is simply fatal to success. I do not believe there is a single reputable business house in Chicago where an employe who drinks intoxicants of any kind has anything like an even chance for promotion. The taking of a single glass of beer may, and often does, mean losing the chance of a lifetime. Brainy boys and young men, teetotalers from principle, are plenty enough to fill all the places in the line of promotion.—Chicago Interior.



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. . . TORONTO . . . .

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below, and in our Prices Current, necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL Feb. 24, 1893.

HARDWARE.

The hardware houses fail to report any special activity and the backwardness in the report is causing some complaint from the grumblers. The reason attributed for this is not that the goods are not wanted but simply that buyers in the country are taking only what they actually can't do without and putting off other purchases until later on when freights are lower. The result of this is a smaller volume of business than the trade anticipated and the matter of high freights is engaging considerable thought. In the city proper a better demand is noted for building material especially roofing supplies and there have been enquires for some round quantities of material in this respect which may mean something interesting later on. In shelf goods etc. the demand is moderate and in fact outside of this demand from city buyers, the general hardware situation is a distinctly quiet one. The importers here are doing nothing either in the way of spring delivery as there is nothing in the situation to urge them forward.

PIG IRON.

There is very little moving in pig iron and none of the foundries here appear to be purchasing any supplies, while the excessively high freights seriously interfere with business on country account. The only sale of importance that we hear of is a round lot of Nova Scotia Siemens at $19 There is nothing doing whatever in Scotch pig iron and quotations are unchanged. We quote $19 to $21 according to grade. Advices from across the water do not indicate any changes in the regular market, makers iron being no dearer than it was. There has been considerable speculations in Scotch warrants, however, with the usual fluctuations in prices, but the figures in this case afford no reliable criterion to work on.

BAR IRON.

Bar iron in the market is quiet and steady. Makers report matters dull, but we hear of occasional round lots being placed at a shading on $2 50 standard price.

SCRAP IRON.

Scrap iron is quiet and unchanged on the basis of $15.50 for wrought. which is nominal in the absence of transactions.

SHEET IRON.

There has been a little business doing locally in this line on city account footing up to a fair average. No. 28 black sheet has changed hands at $2.50 in lots and No. 26 at $2.40.

NAILS.

The nail market is quiet and unchanged. Jobbers here have been moving some small quantites, but the aggregate is unimportant. Makers report matters quiet in the way of contracting for future supplies, as buyers see no inducement to order ahead at present.

TIN PLATES.

Tin plates are quiet, steady and unchanged at former quotations. Cokes are worth $3.25 and charcoal $4 to $4.25. There is nothing doing in the way of spring delivery, but it is understood that they could be bought for less money in this connection, $3.15 being mentioned as a possible price.

CANADA PLATES.

There has been some demand from roofers for Canada plate, but prices are the same, $2.50 in lots of 50 in boxes and upwards.

TERNE PLATES.

Terne plates remain featureless as before, on the basis of $7.25 to $7.75, according to grades.

GALVANIZED IRON.

Galvanized iron has been one of the features of the week, and there have been some enquiries for large lots, but we cannot learn that any sales have been actually made.

OTHER METALS

Copper is quiet at 13 to 14c. ; ingot tin the same at 23 to 23½c., whilst spelter and antimony are unchanged.

GLASS.

There is nothing doing in glass, and although prices remain nominally the same at $1.35, buyers are holding off for everything with the exception of what they actually want, in the belief that prices may be easier but not dearer.

OILS AND PAINTS.

The oil market is firm for all kinds, especially grease oils. Lard oil has sold as high as a $1 for extra, while No. 1 has changed hands at 80 to 90c. Linseed is firmer also, at 62c. for raw and 65c. for boiled, while turpentine continues strong to higher tendency at 55c. There is no change in leads, business being only fairly active.

NAVAL STORES.

Spirits of turpentine has again advanced, sales being reported at 55c. for jobbing lots and still higher prices are looked for. We quote : Turpentine, 51 to 53c. as to quality; in cases 55 to 56c.; rosins, $2.40 to $4.50 as to quality ; coal tar, $3.50 per brl.; pine pitch $2.50; pine tar $3.50 to $3 75; cotton waste, colored, 5¾ to 5½c.; white 8 to 10c.; oakum, 5½ to 7c.; cotton oakum, 10 to 12½c.

CEMENT.

Cement is not very active for present deliveries, but a good trade is expected in the spring, every indication pointing to a very fair trade after the opening of navigation. We quote English brands $2.35 to $2.55 and Belgium $2.20 to $2.35. Firebricks are in fair demand at $18 to $24 per 1000.

PETROLEUM

The petroleum business is slow as usual for the season. There is no change in Canadian and American remains much the same, but it is said that sales are being made on a 19c. basis at the yards. The effect of the change in the tariff will not be felt here for some weeks yet. We quote: Canadian 12¼c. to 12½c. at shed in Montreal for round lots and 13½ for small quantities. American petroleum; 19¾c. in car lots, 20c in 10-barrel lots, 20¼c. in 5barrel lots, and 20¾c for single barrels, 2 per cent. off for cash ; American benzine, 23 to 25c. ; Canadian benzine, 10¾c Petrola ; 12¾c. Montreal.

MONTREAL TRADE NOTES.

A lot of the Safford radiators are going into the St. Johns infantry barracks.

H. McLaren, the Montreal agent of the Aluminum Bearing Metal Co, report some good orders this week.

Quite a lot of corrugated roofing is going into use here on outbuildings to some of the terraces in the suburbs.

Messrs. W. H. Cottingham & Co.. of Notre Dame street, are offering some special lines of Painters Art Materials.

The Windsor hotel is putting in a lot of Booth's steel clad baths, and at the Balmoral, which is being hauled over by the plumbers, the same is the case.

Messrs. Wm. Darling & Sons, the well-known wholesale hardware merchants of St. Sulpice street, have been appointed the Can-



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FOR TWO MONTHS ONLY

A First-class Stove in every respect, with all Modern Improvements. Handsome, suitable for any family. Guaranteed to give perfect satisfaction.

We have an overstock of these Stoves, which we propose to offer our customers for two months, at the following prices and terms, subject to being unsold when orders are received.

No. 8 Square, $7.75 No. 9 Square, $8.20

Size of Oven, 17½ x 18 inches. Length of Fire Box, 23 inches. Shipping Weight, 200 lbs. Terms Cash.—F.O.B. at London.

McCLARY MFG. CO. LONDON, TORONTO, MONTREAL and WINNIPEG

adian agents of the Smokeless Powder Co., of London, Eng.

Messrs. Drummond, McCall & Co., of the Canada Iron Furnace Co., are making special arrangements for the reception of the American Association of Mining Engineers at their works at Radnor, where they turn out their well known brand of C. I. F. charcoal iron.

The demand for cutlery is not exceptionally fresh at the moment, but the goods with the well known Rogers brand find the usual call according to the agents, Messrs. Simpson, Hall, Miller & Co.

The Messrs. McNally, cement importers of McGill street, have just secured a big contract for supplying 15,000 casks of the article to the contractor for the canal on the Canadian side of "the sod." A portion is for delivery early in May.

TORONTO MARKETS.

TORONTO, Feb. 24, 1893.

HARDWARE.

Trade in general shelf, heavy hardware and tinware is improving, although there is no particular change in any of these lines to note, and complaints are still heard regarding the small margin of profits consequent upon the keenness of competition. In plumbers' supplies there is nothing of any consequence being done, but this, in view of the quietness in the building trade, is not to be wondered at. Prospects for the spring trade are fair, although things are very quiet in some of the larger cities and towns of the country.

METALS.

There has been quite a little business done during the week in metals, and the market seems to be steadying up somewhat. Some dealers are, however, still holding off in the hope that the anticipated change in the tariff will lead to lower prices. The metal market is devoid of any special feature.

PIG IRON—The season for this article is just opening and light sales are reported, but dealers are as a rule holding off to see the effect of the proposed tariff changes.

Rogers, Brown & Co., Buffalo, N. Y., report the Toronto pig iron market as follows: An interesting and changed condition is all that can be said of this market. Prices have not shown any more strength and demand has been light. We quote on the cash basis f. o. b. cars, Toronto, in bond: IX Foundry Strong Coke Iron, Lake Superior ore, $15.70; 2X Foundry Strong Coke Iron Lake Superior ore, $14.95; 2 Foundry Strong Coke Iron Lake Superior ore, $14.70; Jackson County Silvery 1, $18.00 to $18.30; Jackson County Silvery 2, $17.30 to $17.80; Lake Superior Charcoal, $18 20; Southern Soft 1, $14.10 to $14.35; Southern Soft 2, $13.85.

BAR IRON—Actual demand only is at the moment being filled; business is naturally quiet at this time.

ANTIMONY—Stocks are very low, but at the same time there is not a great deal being done, but larger sales are anticipated on the opening of navigation, when stocks will arrive.

CANADA PLATES—Nothing new to note in this line, business being quiet and prices unchanged.

COPPER—Frequent sales of ingot copper have been put through at firm prices. Sheet copper in large sizes is in good demand.

GALVANIZED IRON—Orders for shipment from stock are small; most roofers and large dealers have placed imports for themselves and they are now arriving.

INGOT TIN—Lamb, flag and strip are moving freely. No particularly large quantities are going through however, although the sales are steady and at firm prices.

LEAD—The market is rather dull on this article and what is going out is at low figures.

TIN PLATES—The demand is good especially for the better grades, although for some purposes good orders are being booked for the cheaper grades. There have been no changes in prices, those generally being based according to quality.

ZINC AND SPELTER—There is very little doing in either of those articles, and no change is anticipated for sometime, the demand for sheet being principally in the fall.

PAINTS AND OILS.

Prevailing conditions are much about the same as a week ago. Country trade generally is good, and dealers report it beyond anticipations, and better than is usual at this season. City trade, on the other hand, is quiet. Spring orders are as a rule larger than usual. The principal demand is for oil. Payments are scarcely as satisfactory as a week ago. Demand is good for mixed paints. A fairly good business is being done in varnishes, and higher prices are anticipated in sympathy with linseed oil and turpentine. The combination prices on white lead has not been fixed yet. There is no demand for this article and none is offering. Dealers are all buying largely of linseed oil, evidently anticipating a further advance in prices. Turpentine is in good demand at steady and unchanged prices.

PETROLEUM.

Petrolea crude is quoted at $1.18 per brl.

Following are the latest quotations at Toronto:—Canada refined oil, 14½c.; carbon safety, 17½ to 18c.; Canada water white, 20c.; American water white, 25c.; photogene 27c.

OLD MATERIAL.

We quote the following: No. 1 heavy cast scrap 65 to 70c. per 100; stove cast scrap 40 to 45c.; No. 1 wrought scrap 50 to 60c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c.; new light scrap copper, 8 1-2c.; heavy scrap copper 9½c.; old copper bottoms, 8c; light scrap brass 5½c.; heavy yellow scrap brass 7½c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1¾ to 2c.; scrap zinc, 2½ to 2¾c.; scrap rubber, 2¼ to 2½c.; country mixed rags, 80 to 85c. per 100 lbs; clean dry bones, 50 to 60c. per 100 lbs.; plough shares, 60 to 65c; burnt cast scrap, 15 to 20c.; railroad iron, 65 to 75c.; malleable scrap, 25c.

GLASS.

Orders for shipment are not large. Most of the dealers throughout the country have booked their orders, and consignments are expected to arrive about June. In the meantime they are only purchasing for immediate wants. Stocks are not heavy.

HIDES, SKINS, WOOL, TALLOW.

SKINS—Sheepskins are coming in more freely, but prices are higher at $1.25 to $1.50. Calfskins unchanged at 5 to 7c.

HIDES—Demand continues good and prices firm. Carloads of cured are selling at 5¼c.; No. 1 green cows' is quoted at 4½c. and cured at 5¼ to 5½c.

TALLOW—Scarce and higher, dealers paying 7c. and selling at 7½c.

WOOL—The market is pretty well cleaned out of fleece, which is quoted at 18 to 19c.; pulled is selling moderately well at 22 to 23c. for supers and 26 to 27c. for extra. There are no blanket wools on the market.



TRADE NOTES.

Stewart & Wood have issued a new paying price list on window glass.

The Imperial Stained Glass Co., which took over the Dominion Co., will remove from 130 Richmond west to 28 Temperance street.

The Daily Metal Market Report's English advices regarding copper say: The statistical position is calculated to inspire more confidence, inasmuch as notwithstanding the inclusion in the figures for January of about 3,300 tons returned to public stores in Havre after having been hidden away in the interior of France since the days of the syndicate, total visible supplies on the 31st ult. only show an increase for the month of 2.762 tons. If, therefore, we have no serious falling off in deliveries during the next few months it seems probable that stocks will diminish, as it is fairly certain that only small shipments of matte from America may be expected for some time to come.

AMERICAN MARKETS

New York, Feb. 24.

Pig Tin.—London sent rather lower cables, quoting £91 15s. for prompts and £92 5s. for futures. Two local operators whose moves are believed to be nicely timed for mutual welfare, played boldly on the bull side, and, either misunderstanding or feeling skeptical about the trades between those two, nearly all other operators quietly looked on and indulged in such expressions as Washington and Ching Lung sales. However, the bull tin of the Metal Exchange recorded transactions representing 420 tons, including 25 tons for February delivery at 20.15c.; 52 tons for March at 20.17 1-2c.; 70 tons for March at 20.20c.; and 100 tons each April, May and June at an average price of 20 3-8c. General trade and consumptive demand proceeds in about the usual manner, and out of town orders are filled very close to the official quotations.

Copper.—All reports were indicative of quiet but steady market here. Spot offering was again confined almost wholly to small parcels at prices that have ruled for several days, and the demand showed no sign of improvement. Not as much as a rumor of anything in the nature of large dealings between producers and consumers had circulation, although the time for something of that kind to come out is near at hand. The prices quoted

MARKETS—Continued

were 12 to 12 1-4c. for Lake Superior ingot and 11 1-8 to 11 3-8c. for common casting brands, according to quantity and delivery. London latest cables quoted merchant bars at £45 5s. for prompt and £45 15s. for future delivery, with sales for the day at 200 tons and 400 tons respectively.

Pig Lead.—From first hands little if any lead was offered at less than 4c. delivered, for either prompt or near future delivery, but a shade less would have been accepted at second hands for some parcels purchased previous to the late advance in prices. While fairly strong in tone, the market continues quiet, and bids higher than 3.95c. are the exception.

Advices from Joplin, Mo., under date of Feb. 18, state that prices for lead ore advanced 25c. during the week, and reached $21.75 per 1,000 pounds. Under same date the following is reported from Carthage, Mo.: "As the weather improves many improvements will be made at the old shafts, including new and heavier machinery, which will enable the operators to handle the output with ease, and as the price is upward in tendency they are encouraged to make all necessary expenditure at once. New capital is coming into the field."

Spelter.—Western is quoted at 4.32 1-2c to 4.35c. on the spot, but some smelters are offering at 4c. in East St. Louis, for future shipment, and appear anxious for business at that rate. At present rate of freight that price is equivalent to 4.27 1-2c., and at ordinary lake and rail freights about 4.25c. delivered. London cables quoted £17 for good merchant brands.

Antimony—Outside of ordinary jobbing business there is little doing, and prices remain without radical change. Current quotations are 10c. to 10 1-4c. for Hallett's, 10 3-8c. to 10 1-2 for "L.X.," and 10 3-4c. for Cookson's.

Tin Plate—Fair sales have been made of coke plates for future delivery, chiefly at last week's prices. Interest in other varieties continues spiritless, however, and for spot goods there is merely a routing jobbing demand.

Pig Iron.—Eastern movement in foundry and mill grades is still of routine character, fair in the aggregate amount, and at practically the range of prices that have ruled since the beginning of the year. There is no distinctly new feature in the market. In the instance of not a few brands, both northern and southern concessions of 25c. to 50c. from the "nominal" prices are frequently made, but bottom figures at present are little, if anything under those that have been reached previously during the past six or eight weeks.

Scotch pig is moving in small quantities only, and to about the same extent as for some time past. Prices here remain steady in the absence of any radical change in the primary markets. Prices there have remained almost stationary, although the squeeze in warrants has caused private settlements at as high as 54s. to 55s.

Old Material—There has been rather more improvement in wrought scrap iron; about 300 tons changed hands the past few days at $15.50 on dock and $16 f.o.b. Jersey City. Machinery cast scrap has also met with better sale, 700 to 800 tons going at $13 delivered, or equal to about $12 to $12.50 here. No important sales of old rails are reported, but enquiries have become more numerous, and hardened prices somewhat. Current quotations are $17 to $17.50 for iron tees and $14 to $14.50 for steel f.o.b. Jersey City.

Steel Rails—The only sales reported by local agents were a few small ones involving 3,000 to 4,000 tons all told, and one of 3,000 tons to a southern railroad company. It was rumored that a larger business had been effected, however, and that information is withheld for reasons probably known to the sales agents. The mill price for standard sections is still quoted at 629, but relatively lower rates are made on light sections, over which the combine has no control.

Iron Ore—A Cleveland, Ohio, report of recent date says: "Parties interested in the ores of the Mesaba mine are making large efforts to get out all the ores they can, and will endeavor to get down as much as possible to lower lake ports. The chief obstacle in the way of getting down larger amounts are the shipping facilities, docks, etc., at Duluth. A large contract has been made recently with the American Steel Barge Company, by which they are to bring all the ores of the best Masaba mines, and the barge company is making a big effort to increase their tonnage for this purpose. When all is ready it is estimated that these ores can be delivered at lower lake ports for a very low figure. For lack of facilities it is hardly expected, however, that large amounts will reach lake Erie ports this year."

TIS ALONG THE LINE OF PROGRESS.

The march of progress in business methods tends at the present time more strongly than ever towards a consolidation of interests between the wholesaler and the retailer. What is good for one is good for the other, and this fact is more fully realized by the city dealers than those of the country. The present movement of jobbers all over the country in the matter of refusing to sell country dealers who neglect to carry insurance on their stocks is widespread, and the sooner it is made absolutely necessary for the country merchant to insure, the better it will be for the latter and the safer it will be for the people who hitherto have sold him valuable stocks of goods, and depended on his luck to escape loss by a conflagration.

In nine cases out of ten, when a country store burns down the stock is a total loss, for there is seldom adequate facilities for fighting fire. If a proper amount of insurance is carried the burned out merchant finds himself able to pay his debts, and with sufficient money and undamaged credit to re-establish himself in business. If, on the other hand, he carries no insurance, he wakes up some fine morning to find his house and stock in ashes and himself a ruined man. His debts stare him in the face, and he has no means of meeting his obligations. This is not an imaginary case. It has occurred in dozens of cases.

There has long been a sentiment among the wholesalers against dealing with country merchants who refuse to protect at once their creditors and themselves, from a mistaken sense of security. The prevailing impression seems to be that the country dealer should insure for at least two-thirds of his valuation, and that his failure to provide against disaster both to himself and the man who sells him goods, should furnish sufficient grounds for a refusal to supply him.—Commercial Tribune.

A NEW WALL-COATING.

We call the attention of our readers to the advertisment in another column of the HARDWARE MERCHANT of Church's Cold Water Alabastine.

Alabastine has been known to the trade as a wall-coating for several years, but the new preparation to mix with cold water seems to be sweeping the field of all competitors in the wall-coating line. Its only similarity to the old Alabastine is in its name and its being permanent as was also the old Alabastine. Last season the new preparation met with unprecedented sale, and Alabastine decorations have been taken up by painters everywhere. Some very beautiful work in this line has been done in Toronto, Hamilton, London and other large places. The fact that it is getting the trade, and that there is a large profit in it must make it a drawing card with the dealers.

SUBSTITUTE FOR HARD COAL.

President Miller, of the London and Port Stanley syndicate, says that his company had arranged to supply the citizens of London with a good substitute for the hard coal, which the people were led to believe would be brought in here at a considerable reduction in freight rates. Connellsville coke is the substitute spoken of. It is secured in the extreme western part of Pennsylvania, and consequently the haul to the lake shore is very much less than the distance which would necessarily have to be covered in bringing hard coal to the lake. The coke is claimed to be much better than the variety commonly used here, and for house, furnace, or base-burner purposes it is said to equal 1 1-5 tons of coal. The price of it will be 20 per cent. less than the cost of hard coal.

CURIOS IN GLASSWARE.

Some Tyrian glassware, supposed to belong to the period of 300 years before Christ, has come to New York, Some of the pieces still bear the stains of a rust which they held when buried with the Tyrian kings, and others show the scratches made by knives of copper and bronze. It is even asserted that some show traces of the perfumes with which the Tyrians were accustomed to enrich their wines, but as to this there is room for skepticism. The glass is marvellously light, and some of the vessels are beautiful in form, but the presence of air bubbles in even the finest specimens seems to show that the Tyrians had not fully conquered the art of glass-blowing. A skuled glass-blower who saw the collection says, however, that some of the effects obtained are beyond the power of his craft to-day.

You can lose more than we do by not subscribing for this paper.

CHAS. STARK CO.

BICYCLES AND HARDWAREMEN

We would call the attention of all Hardware Dealers to the fact that we handle the best makes of English Bicycles sold in Canada and will allow all dealers a liberal discount on all sales. Write us for our lists and discounts. Bicycle Sundries a Specialty.

Chas. Stark Co. 56, 58 & 60 Church St., Toronto

WIRE —

Coppered Steel Wire, Tinned Mattress Wire, Broom and Brush Wire, Hay Bailing Wire, Flat Wires, Soft Coppered Wires.

Write for Catalogue.
We guarantee the quality of all our Wires.
MANUFACTURED BY

THE B. GREENING WIRE CO., Ltd., HAMILTON, ONTARIO.

Plate Glass

ALL SIZES IN STOCK.

MANUFACTURERS OF

STAINED GLASS FOR EVERY PURPOSE.

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Best Crucible Cast Steel.

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MONTREAL AND TORONTO.

ESTABLISHED 1839.

William Darling & Co.,

WHOLESALE HARDWARE
MONTREAL.

Have been appointed Sole Agents for the

Smokeless Powder Co.

Of London, England.

A stock will be kept near Montreal, and orders promptly executed. Full information by letter.

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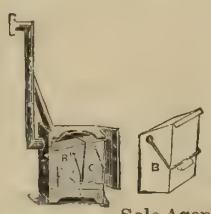
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All Dealers who are in the trade for money should handle the best Wall Coating on earth—Cold Water Alabastine.

Ready for use by mixing in cold water.
Nothing like it on the market.
The only goods in this line extensively advertised.
Our special advertising sells the goods without talk.
Country dealers should keep it as it sells to the general public as well as to painters.
No goods sold in Ontario by jobbers, but full stocks kept on sale in Winnipeg, Man., Montreal, Que., St. John, N.B., and Halifax, N.S.
If our travellers have not called on you, write us for tint card and prices.

ALABASTINE COMPANY, SOLE MANUFACTURERS,

PARIS, ONT.



PATENT VENTILATED CLOSET. — Absolutely odorless No earth or ashes required. Endorsed by the Medical Profession. Can be placed in any room in the house having a chimney or stove pipe. Send for price list and testimonials.

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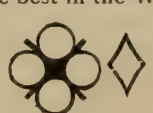
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Are the best in the World.

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TRY US AND BE CONVINCED

54 YONGE ST., TORONTO

THE IRON TARIFF.

The special committee appointed by the Council of the Toronto Board of Trade to wait upon the Government in regard to the duty on iron, did not go to Ottawa the other night as intended. This was in compliance with a request of Hon. Mr. Foster, Minister of Finance, who wrote a strong letter stating that the Government would positively make no more changes in the tariff this season beyond those already announced, and that therefore the Board of Trade would confer a favor upon himself and his colleagues if it would defer the visit till a more convenient season and when better attention could be given to the consideration of the matters in question.

THE CANADA PAINT COMPANY.

The annual meeting of the Canada Paint Company was held at its offices, No. 572 William street, on Saturday afternoon at half-past one. President S. F. McKinnon occupied the chair, and there were also present Messrs. W. H. Howland, vice-president; R. Munro, managing director; H. M. Pellatt, secretary, and Messrs. W. Bell, Thos. Walmsley and Samuel Tees. The annual report was considered a very satisfactory one. Although the company had only been in existence seven months the profits were sufficient to declare a dividend at the rate of six per cent. per annum and to admit of carrying $1,800 to the reserve fund. The old board of directors was re-elected, and at a subsequent meeting of the board Mr. S. F. McKinnon was elected president, Mr. W. H. Howland vice-president, and Mr. R. Munro managing director.

THE PROCESS OF REFINING STEEL.

The Pennsylvania Steel Refining Co. has secured the exclusive right to use in all the Middle states, where three-quarters of all the steel in the United States is made, the patents on a new process of refining steel. The process takes Bessemer or open-hearth low grade steel and converts it into high grade tool steel suitable for making chisels, shears, drill, lathe, planer and all kinds of machinery tools. It also makes a very superior article for cutlery purposes, being easily worked, taking a strong temper, and holding its edge when other steel fails. A complete physical change takes place in the steel under the refining process. It is claimed that the molecular changes are permanent, and the qualities of tensile strength and elastic limit are possessed to a greater degree than any now manufactured. The company does not claim to refine iron or convert iron into steel, but confines its work to the refining of Bessemer or open-hearth steel, and this is done as fast as the little billets can be heated. The tools made from this steel have been and are being worked in competition with tools made from the highest grade of steel. Considering the price at which it can be manufactured, it must of necessity become a very important commercial competitor in the market, as against the higher priced tool steel, both American and imported, now in general use. This steel being of such a high grade, it must be worked at a low heat and tempered at dark cherry.—Railroad Gazette.

AN INGENIOUS BORING MACHINE.

Some ingenious mechanisms for the working of hardwood have recently been introduced. One of these is a boring machine adapted to making holes for blind nailing in hardwood floors, which works automatically, and accomplishes the object in view most perfectly; that is, the stock is carried forward by a fluted roll, and is stopped by a cam at proper distances for the boring of the hole by a bit which operates horizontally, the board being carried on an angle. Another efficient mechanism in this field is a hardwood flooring apparatus, which takes the rough stock, planes it on both sides and matches it, and has five cutting cylinders, the first having a flexible bar, which allows of the free passage of irregularities in stock and insures the presentation to the second cylinder of a uniform surface, and this is followed by top, side and bottom finishing cylinders. The side finishing cylinders are equipped with a weighted chip-breaker bar, which prevents splintering the stock. The six feed rolls are 9½ inches in diameter, being all geared, and the back rolls are placed beyond the last cylinder, thus carrying all stock clear through the machine—the largest size taking stock of some 18 inches in width by 6 inches in thickness.—San Francisco Morning Call.

ELECTRICITY AND WATER PIPES.

Not long ago we referred to trouble that has been experienced abroad by the corrosion of lead pipe, due, it was assumed, to the nearness of electrical cables. The second instance of the kind we noted was in this country, but no systematic investigation had been made, and it was difficult to determine exactly in what way the corrosion was promoted by the electrical current in a neighboring wire. Quite recently a correspondent of Fire and Water, writing from Memphis, Tenn., calls attention to the same thing. We quote from his letter below:

"About 12 or 15 months ago our street railway system was changed from mule power to that of electricity, since which time we are having so many leaks in service pipes under the electric railway track that I am led to believe that the electricity has something to do with these numerous leaks, though the wires under the tracks do not come in contact with the pipes. We use iron and lead pipes for service, galvanized iron principally, and many of these give out inside of one year, and some have given out inside of three months, and in every instance under the railway track, which fact leads me to believe that the electricity is responsible for the trouble, though I am not able to explain why."

It would seem that with the greater application of electricity to motor and lighting purposes this trouble of corroded water pipes is likely to increase. It would be well, therefore, for the electrical companies or water companies to discover the exact cause of the trouble with a view to applying a remedy.

According to the Gazette de la Bourse, of St. Petersburg, a new syndicate was formed in December last to control the Russian petroleum business. The new syndicate, at the head of which is the house of Rothschild, includes 135 producers of oil; the contract will extend for five years beginning January 1st, 1893.

The largest casting ever made in India was the anvil block for a new steam hammer, which was recently cast at the Jamalpur shops of the East Indian railway. The block was cast close to the spot where it will be used, and weighs about 38 tons. The iron used was a mixture of Indian iron and imported (English) pig.

The International Mining Convention opened in Montreal Tuesday with a reception. It is composed of representatives of the different branches of mining in Canada and the United States, and each branch holds its separate meeting. The delegates are combining business with pleasure.

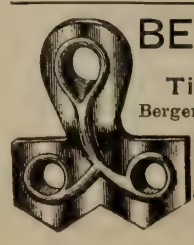
The postoffice department has issued a large postal card (one cent) and a three-cent letter card, perforated and gummed, both most useful. There is also an issue of 20-cent and 50-cent stamps, which bear the Queen's head in her widowhood. The first supply was sent out this week.

The Imperial Oil Co. will hereafter sell their best quality of coal oil at 12 1-2 cents per gallon. If retail dealers will not sell the oil at this price the company will deliver it in tin cans holding four gallons for fifty cents.

Hardware Traveller Wanted

For our Winnipeg Branch. A thoroughly experienced man. Application by letter only. State age and salary expected.

The JAMES ROBERTSON CO., Ltd., TORONTO.



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

WESTERN BRANCH :

Corner Front and Yonge Streets, TORONTO.

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The Best in the Market.

BALDWIN'S



THICK FELT. GREASE-PROOF. OVERSHOT.

GUN WADDING,

For SPORTING and other CARTRIDGES. Best Hair, and Brown Felt of uniform thickness ; also Best Cloth, Field, Grey Felt, Black Grease-proof and Card Wads. Overshot Wads, printed name and number. Indented Wadding, suitable for muzzle loading guns.

To be had of all Jobbers and Dealers in Sporting Goods.

JAMES BALDWIN & SONS,

ORIGINAL MANUFACTURERS,

Morville Street, Birmingham, Eng.

Agent:--W. H. JAGGER,

24 Front Street West, TORONTO

Price Lists and Samples to the Trade Only.

EUREKA SAP SPILES.

SAP BUCKETS 10 and 14 qt.

MILK CAN TRIMMINGS.

CREAMERY CAN FIXTURES.

POULTRY NETTING GALVANIZED.

GREEN WIRE CLOTH.

SCREEN DOORS AND WINDOWS.

Enquiries for Quotations Solicited.

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, Toronto.

ENGLISH HOUSE: SAMUEL, SONS & BENJAMIN,
164 Fenchurch St., London, E.C

FOREIGN AND AMERICAN PRICES.

The extraordinary decline in prices of iron and steel during the last year in this country has suggested an enquiry into the relative position of values here and in the principal producing districts abroad in some of the leading lines.

Beginning with pig iron, we find that in the Cleveland district, in the north of England, forge pig has been selling lately at $8.37, while in Birmingham, Ala., material equivalent in quality has been quoted at $8.50. Apparently there is therefore little difference, but our cheap southern iron must carry freights to the consuming markets, which would make it $12 at St. Louis, $12.50 at Chicago and $11.25 at Cincinnati. Lehigh Valley grey forge is $12.25 at furnace, and Pittsburgh metal of the same grade is selling at about the same figure. Delivered to home consumers, therefore, mill iron is about $3 to $4 cheaper in England.

Scotch No. 1, good makers' brands, sells at Glasgow at $10.63. With us, standard foundry brands sell at $14.50 to $14.75 at tidewater markets, while what is termed American Scotch commands $14 to $14.25 in Chicago. Here, then, is again approximately the same difference. Bessemer pig at Barrow, in the English Cumberland district, was lately quoted at $11.30. In Pittsburg the same grade of metal fetches $13.15 and in Chicago $14, while in Eastern Pennsylvania $15 to $15.50 at furnace, is a very close quotation. Ores are cheaper in England, local hematite at Barrow selling at $2,07, while $4 to $4.25 is the quotation for richer ores at Cleveland, Ohio. Coke, however, is much dearer, fetching $3.10 for Durham, delivered at Middlesborough, England, while furnaces in Western Pennsylvania probably pay $2.52, delivered.

In soft steel the lowest figures made are those which were recently current in the Rhenish Westphalian district in western Germany, where 72 marks, or $17.88, has been done with basic pig at $10.91. Pittsburg thus far has no record lower than $21.25, with $13.15 as the cost of the raw material. In steel rails, $18.22 has been done in the Cleveland district and in Wales. The American mills are asking $29 at tidewater, or say $28.50 at works.

Staffordshire marked bars figure out 1.52 cents per pound, which compares with a range of 1.50 and 1.75 cents for the best grades of puddled iron at our own rolling mills, east and west. Common bars are quoted at 1.09 cents at Middlesborough, against 1.40 cents in the Mahoning Valley in eastern Pennsylvania, a difference of nearly $7 per gross ton.

Iron plates fetch 1.03 cents at Middlesborough, while they bring say, 1.70 cents in eastern Pennsylvania. Scotch soft steel, boiler plate, costs 1.27 cents per pound at Glasgow, which compares with, say, 2 cents at Eastern mill for shell steel, or nearly $8.25 per ton more.

The Germans are the most vigorous competitors on steel beams, the open quotation being 85 marks at Burbach, or 0.94 cents per pound, which contrasts sharply with our 1.85 rate at mill. German makers quote wire nails at 125 marks per metric ton, which figures out 1.38 cents per pound. Our price at mill has been as low as $1.32 1-2 per keg.

The figures which we have quoted pretty clearly show that while prices on both sides of the Atlantic unquestionably have approached one another, in consequence of the unprecedented decline here; they are still very far apart. An additional quarter of a dollar on pig iron or soft steel, or a further tenth of a cent on most lines of manufactured shapes would put a tremendous strain upon our manufacturers. When a certain low level of cost has been reached, every further small reduction is as difficult and as significant as is the reduction of the record of a trotting horse by a further fraction of a second. It will require revolutionary changes in the rates of wages paid, in the cost of transportation, and in furnace and mill practice before we can reach European selling prices.—Iron Age.

A NEW DESIGN FOR RAILROAD TRAINS.

Frederick U. Adams, a Chicago inventor, has patented a number of improvements in the construction of railroad trains which he claims will revolutionize the present method of operating railroads. These improvements consist of providing locomotives with a wedge-like front which will present less resistance to the atmosphere, closing up the passages between cars so that the entire train will present a perfectly unbroken surface to the force of the wind, and removing from other portions of the train any flat surfaces usually placed so as to catch the full force of wind pressure. He makes the following claims, based solely on the changes made by him in the designs of the cars :

The heavy engine is not a necessity. A locomotive weighing sixty tons can haul a train of ten cars constructed after my designs up ordinary grades and around moderate curves at speeds of 60, 70, and 80 miles an hour. I can take one of the little old-fashioned engines—which were rejected twenty years ago—attach it to a train constructed on scientific principles, and beat the time of any limited express or fast mail train in the country. The locomotive of the future will be designed to haul a train constructed to minimize atmospheric resistance, and will not be compelled to force a series of flat perpendicular surfaces against the dense medium through which it is passing. Locomotives will probably have 8 or 9 foot driving wheels, and will run over 100 pound rails laid on a solid roadbed. Then ,and not until then, will be realized the "engineer's dream of 100 miles an hour."

He says that, elated by the discovery of the availability of steam as a motor in land transportation, "the architect of the first railroad train designed it so that it offered the greatest possible resistance to the medium through which it had to pass. Nearly a century has rolled by, and great minds have elaborated his design. Atrain has been evolved which stands as an embodiment of unscientific form in railroad construction. What is that construction? Every schoolboy knows that a flat surface offers the greatest resistance to the wind, and that this resistance decreases in proportion as the angle decreases from the right angle. This, one of the simplest and best understood of all philosophical facts, has been ignored by railroad engineers and car builders. The train of to-day is a succession of planes, held perpendicularly to the line of resistance."

It is impossible to deny that Mr. Adas' reasoning is sound, and that great advantage would be derived from such changes in construction as he recommends. A radical departure, however, is not likely to be made at once by builders of locomotives and cars, even if they were thoroughly convinced that much was to be gained in operating economy and efficiency by adopting the new form of construction. Conservatism stands in the way, and only a series of successful exhaustive experiments by a railroad company would bring about such an innovation.—Iron Age.

CURRENT TOPICS.

To anyone who carefully will read the daily papers
There must come a great amazement at the very funny capers
Cut by various men in public life, from cranks to politicians,
And men of high and low and intermediate positions.
There's Goldwin Smith who's raving, tearing mad for annexation
And wants to make Canadians mingle with the Yankee nation,
And Uncle Sam has just envolved a similar kind of fool, who
Advises him to go and lay his hands on Honolulu.
The Orangemen throughout the land are howling at the follies
Alleged to be committed by their master, N. Clarke Wallace ;
And 'tis said that Irish Protestants and Catholics have decided
That once a year (on Patrick's day) they'll be no more divided,
Which is very gratifying, but how can they be quite happy
While the schools of Manitoba question's still upon the tapis.
Ben Harrison has hump'd himself to make a final rattle.
Before he shuts up shop and tries to stop Canadian cattle
Being exported through his territory, but judging from the figures
Of the trade returns, 'twill hurt him most ; and so, of course, we sniggers.
There's the question of the tariff which is ever young and blooming,
And societies of all denominations are assuming
That something should be done at once, and shoals of resolutions
Are daily passed by twenty different kinds of institutions.
As usual, politicians mix up private animosity
With "Ways and Means" and "Budgets' and "Commercial Reciprocity,"
Till readers get bewildered with the many interests various
Which are jumbled all together in a manner so precarious.
'Midst all this hubble-bubble it's a great relief to meditate
That on one point at least we have no cause our minds to agitate,
For we know that spite of politics and international coups d'etat
The Mammoth works at Hull are running smoothly as they always are :
And notwithstanding all th' above enumerated capers
Eddy still is turning out his tons of matches, pails and papers.

W. E. L.

THE E. B. EDDY CO., Ltd.

WANT THE HARDWARE TRADE
OF CANADA TO KNOW THAT
THEY MANUFACTURE A . . .

Manilla and Brown . . .

WRAPPING PAPER . . .

Especially adapted to their requirements, in Reams and Rolls, all sizes and weights. If you desire any paper in rolls, we can furnish the most perfect cutter in the world. If your Paper Jobbers have not our lines, write us direct.

•

Factories: - - Hull, Can.

TORONTO BRANCH:
29 Front Street West

MONTREAL BRANCH:
318 St. James Street

BUSINESS CHANGES.

SALES MADE OR PENDING.

G. Carter & Co., stoves, Montreal, have dissolved.

The general stock of R. J. Harrison, Fleeteville, has been sold.

The general stock of Begg & Co., of Collingwood, is to be sold.

McDonald & McCracken, builders, St. John, N. B., have dissnlved.

Wm. Morrill, jr., foundry, River John, N. S., has removed to New Glasgow.

The general stock of D. A. McLean, of McIntyre, has been sold at 56c. on the dollar.

Miss Elizabeth Kerr, general store, Drumbo, has been succeeded by J. J. Pickard.

The general stock of D. Paguette of St. Elphege, Que., has been sold at 35c. on the dollar.

MacKintosh & McInnes, lumber and builders, Halifax, have been succeeded by John McInnes & Son.

H. E. Thomas, general store, Vaneesa, has been succeeded by George Howey. Mr. Thomas has gone to Feeterville.

FIRES.

The estate of O. Bissonette, carriage maker, Montreal, is advertised for sale by bailiff.

M. and J. Hickey, general store and liquors, Chatham, N.B., have been burned out.

The two-story frame store and dwelling, occupied by William Nightingale, Brussels, was burned Saturday night. Loss on furniture $2,000, and stock $11,000. The insurance is divided between the Norwich Union, Western, Northern, Mercantile, Waterloo, Commercial Union and Royal.

DEATHS.

H. D. Prince, of the firm of H. B. & T R. Prince, general merchants, Mount Uniacke, N. S.

John Wishart, one of the oldest residents of St. John, N.B., and the oldest merchant and business man, died Sunday. Mr. Wishart was in his 94th year, having been born at Montrose, Scotland, in 1799.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

E. B. Tree, pump-maker, Woodstock, has assigned to Charles G. Clark.

L. S. Lewis, general store, Newboro, has assigned. The creditors will meet 24th inst.

J. R. Elliott, general merchant, of Lawrencetown, N S., is offering to compromise.

George Halliday, general merchant, Armprior, is offering to compromise at 40c on the dollar.

Nathan Markson, general merchant, Glen Almond, Que., is in luck. He has secured a compromise.

Michael Pigott, dealer in implements, Guelph, has made an assignment to Michael J. Dingman.

Noble & Davidson, woodworkers, Toronto, have assigned to W. H. Dupee, and the creditors have ordered the estate to be wound up.

Furniture and undertaking was not enough to prevent J. B. Bambridge of Watford from being buried financially, he having assigned.

E. Purland, carrying on business under the name of the Canada Furniture Company 437 Queen st. west, has made an assignment to F. H. Every-Pratt.

John McDonald, general merchant, of Carleton Place, has assigned. His liabilities are about $3,600 and assets nominally the same.

General storekeeping has not proved profitable to Thomas MacNicol, of Oak Lake, and he has assigned.

W. F. Beck & Co, wholesale wines, Montreal, are in difficulties, and a demand of assignment has been made.

Edward Snell, merchant at Jamestown, has had to assign. C. B. Armstrong, of London, is in charge of the stock.

W. J. Kirk, general merchant, Webbwood, has assigned to J. W. Lawrence, and a meeting of creditors has been called for 28th inst.

A general storekeeper at St. John, N.B., named John Calder, has been unable to make financial ends meet, and so he has assigned.

W. A. P. McPherson, general merchant, Little Grace Bay, N.S., has assigned. So has Jacob S. Hart, who is in the same line of business at Whycocomagh, N.S.

W. & R. Bryne, run a general store in Cupids, Nfd, but they could not woo enough customers and so woe has come upon them they having applied to be declared insolvents.

The wholesale harness business of Wm. Johnson & Co. of Winnipeg, is in the hands of the Sheriff and there is confessed judgment for $17,000 due the Bank of Ottawa. Several Toronto leather houses are interested.

A meeting of the creditors of Fred Johnson, of Walkerville, was held in Windsor, Friday afternoon. It was agreed to extend the time for three, six and nine months. Mr. Johnson's total indebtedness is $1,900. and his assets are about $2,400, which includes book accounts to the amount of $1,100. R. F. Sutherland was appointed trustee to take an assignment of the accounts and a mortgage on the chattels for security.

Shipley & Co., private bankers, Ailsa Craig, have suspended payment. Liabilities are estimated at $66,000. The bank was largely taken advantage of by stock dealers and farmers, aud the deposits were large. One farmer in the neighborhood is said to have had $12,000 on deposit. At a meeting of the creditors, held Saturday, an offer of 40c. on the dollar was refused and the estate was ordered to be wound up.

G. W. Bell, general storekeeper, of Vars, Ont., has assigned to Alexander Mutchmore.

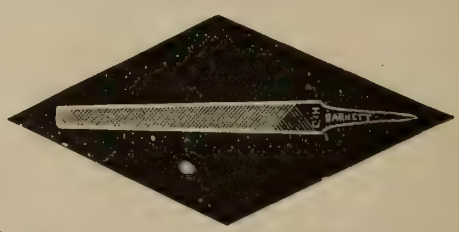
William Gamble, plumber and tinsmith, Port Hope, has assigned to J. A. Woodhouse.

William A. McRae, hardware merchant, Kurkfield, has assigned to W. A. Campbell, of this city, with estimated liabilities of $5,000. The estate is reported to be in bad shape, and there is said to be a good deal of discontent among the creditors. Mr. McRae has been in business some years.


"BUILD TO-DAY THEN, STRONG AND SURE, WITH A FIRM AND AMPLE BASE." —Longfellow.

DO YOU?

WISH THUS TO BUILD, an advertisement in the CONTRACT-RECORD, TORONTO will bring you tenders from the best contractors.

BLACK DIAMOND  FILE WORKS,

21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

—MANUFACTURERS OF—

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES.
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
CLIMAX SAWFILES. LIGHTNING SAWFILES.

—AND—

EVERY OTHER DESCRIPTION OF SAW FILES.

OFFICES: 100-102 Reade St., New York, U.S.A.

KEARNEY & FOOT CO

WORKS: Paterson, New Jersey, U.S.A.

Manufacturers of FILES AND RASPS.
Superior quality fully guaranteed.

CAPACITY OF WORKS: 1,200 doz. per day.



Illustrated Catalogue Price Lists mailed on application.

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Canada Iron Furnace Co., Ltd.
Manufacturers of
CHARCOAL PIG IRON
MONTREAL.
BRAND "C.I.F." THREE RIVERS
PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.
GEO. E. DRUMMOND,
Managing Director and Treasurer



ELECTRICAL
HOUSE -:- FURNISHINGS.
Bells,
Batteries,
Push Buttons.
The largest and best assorted stock in Canada.
Send business cards for discounts.
T. W. NESS,
749 Craig St., MONTREAL.

THE BEST
English Sporting Gunpowder
USE THE
"ALLIANCE"
PRIZE POWDER
—Made only by—
Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.
Always obtainable from
Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.

Wm. Clendinneng & Son.

Iron Founders and Stove Manufacturers

Makers of the "Etna" Hot Water Boilers, Soil Pipe and Fittings, Stable Fixtures, Machinery, Builders and Special Castings

WRITE FOR ESTIMATES

WORKS: Cor. William and Inspector Sts.,
OFFICE and WAREHOUSE: 145 to 179 William Street
MONTREAL

..WIRE..

GALVANIZED, ANNELEAD, OILED AND FENCING

Best quality, even weights, prompt delivery of import orders, lowest prices, write for quotations.

A. C. LESLIE & CO.

MONTREAL and TORONTO

"Burham"

PORTLAND CEMENT.

BEST ENGLISH BRAND MADE.

Canadian Consignees:

McRAE & Co.,

Ottawa and Toronto.

MUNN'S LIQUID GLUE

IS THE BEST.

Kennedy Bros., Agents

101 Bay Street, TORONTO.

Established 1864.

CLARKSON & CROSS,

CHARTERED ACCOUNTANTS

NO 26 WELLINGTON ST. EAST

E.R.C.Clarkson, F.C.A.
W. H. Cross, F. C. A.
Edward Still.
John F. Helliwell.

TORONTO, ONT.

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.

CALVANIZED SHEET IRON. SP

FOREIGN CORRESPONDENCE.

Letters translated from or written in any foreign language.

J. H. CAMERON, 10 Front St. E

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—		
56 and 28 lb ingots, per lb	23,	23½
Strip "	24½,	25½

Tin Plates—*Charcoal Plates, Bright.*

M.L.S. equal to Bradley	Per box	
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 75	5 00
I.X., "	5 75	6 00
I.X.X., "	6 75	7 00
I.XXX., "	8 75	9 00
D.C., 12½ x 17	4 25	4 50
D.X.,	25	5 25
D.X.X. "	6 25	6 50

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be purchased of 10c. per box less.

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

Cookley Grade—	Per lb.
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65,	

Tinned Plates

72x30 up to 24 gauge	6½	6½
26 "	6¾	7
28 "	7¼	7¼

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$2 05	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
2-inch	13½

Steel Boiler Plate.

¼inch	$2 45
16 "	2 35
¼ " and thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2⅞, 2¾
26 "	2¾, 3
28 "	3, 3¼

Canada Plates.

Blaina	½ bright	2 75
Abercarne		2 75
Lion		

Iron Pipe.

Wrought 62½ p. c. to 62½ p. c. and 5 p.c. Galvanized, 37½ to 40 per cent.

Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4½ 4⅝
" ⅜ " "	4⅜ 4⅜
" 7-16 " "	4¼ 4⅜
" ½ " "	3⅞ 4
" ⅝ " "	3⅝ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 14	0 14½
Lake Superior	0 13	0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in	$0 22	$0 25
" round & square 1 to 2 in	0 20	0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16	0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17	0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26	0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20	0 22
" 35 to 45 " "	0 19	0 20
" 50 lb and above per lb	0 18	0 19

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21	
Spun " "	0 25	

Wire.

Pure, in coils—		
From 1 to 20 gauge	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20	0 21
" " 27 to 30 "	0 23	0 25
" " 30 and up	0 26	0 28
Sheets, hard-rolled 2x4 ft.	0 21	0 23

Zinc Spelter.

Foreign, per lb	0 05	0 05½
Domestic "	0 04¾	0 05

Zinc Sheet.

5 cwt casks	0 06	0 06½
Part casks	0 06½	0 06¾

Imported Pig, per lb	0 03½	0 30¾
Domestic "		0 03½
Bar, 1 pound		0 05
Sheets, 2½ lbs, per square ft, by roll	0 04¾	0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¾	0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

Half-and-half (guar.) per lb	0 17	0 19
Standard	0 16	0 18

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½	0 14
Other makes "	0 13	0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per lb		
No. 1 Do "		
No. 2 Do "		
No. 3 Do "		

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 20	
2nd qualities "	1 00	

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
Venetian Red (R.C.2) " "	1 50
Venetian Red, (best) "	1 80 1 90
English Oxides per cwt	3 25
American " " "	2 25
Canadian " " "	1 75
Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure,	
8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 65
Extra "	1 00
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 90
No. 1 Carriage "	1 50
Gold Size Japan "	1 40
Pure Orange Shellac "	2 00
Hard Oil Finish "	1 50

Linseed Oil (in bbls)

Raw, per gal	0 59 0 61
Boiled "	0 62 0 64

Turpentine (in bbls)

Selected Packages, per gal	0 53 0 55

Castor Oil.

Best, per lb	0 07½ 0 08½

Cod Oil.

Cod Oil, per gal	0 48

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet makers	0 17 0 18
White	0 16 0 17
London Town	0 7½ 0 08½
Gelatine	0 22 0 27
Stripped	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer-
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 90
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50, 50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 37½, 40 per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 25

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 5 to 65 & 5 pc.,
Loose Pins, " 65 to 65 & 5 pc.,
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 40 to 45 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.40	2.70	2.00	
26 to 40	1.50	2.90	2.25	
41 to 56		3.30		5.00
57 to 60		3.60		5.50
61 to 70		3.90		6.00
71 to 80		4.50		6.75
81 to 85		5.20		7.50
86 to 90		5.90		8.50
91 to 95				9.50
96 to 100				10.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]

Ordinary.

st break	$3 65
2nd "	3 90
3rd "	4 60
4th "	4 95
5th "	5 40
6th "	5 90
7th "	6 50

Picture Glass.

Pilkington's ordinary.

1st break	4 0
2nd "	4 70
3rd "	5 40
4th "	5 90
5th "	6 50
6th "	6 90
7th "	7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs..... 0 40 2 50

Chisel.

Firmer per gross..... 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05
Screw and Strap, per lb .. 0 03½ 0 04½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mortar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

BOWMAN, KENNEDY & CO., London, Ont.

WRITE US FOR PRICES ON THE FOLLOWING SPRING GOODS:

Spades and Shovels. Mixed Colors. Cut Nails.
Harvest Tools. Dry Colors. Wire Nails.
Linseed Oil. Paris Green. Fence Wire.
White Lead. Windsor Green. Wire Cloth.

And We will give you Closest Prices and Best Terms.

Wrought Hooks and Staples, Amer dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am. per gross 1 60 4 75

Knobs.

Door, japanned, and N.P, Can. list dis, 50 p.c.
Bronze, Berlin, per doz .. 2 75 3 25
" ronze, Gem, " 6 00 9 00
" ss " 8 75 10 00
" hutter, porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent. 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   Basis—50 to 60 dy..... 2 30
   40dy..... 2 35
   30 dy..... 2 40
   20, 16 & 12 dy..... 2 45
   10 dy..... 2 50
   8 & 9 dy..... 2 55
   6 & 7 dy..... 2 70
2. American Pattern Only
   from 4 to 5 dy 2 90
   3 dy. (lath)..... 3 30
3. Canada Pattern Only
   from 4 to 5 dy 2 80
   3 dy. (lath)..... 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross
Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz..... ... 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3¼ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10	11½
¼, 5-16, ⅜ in.....	10½	10¾ 11½ 11¾
Cotton, per lb.....	22	25
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 0 75 0 85
" N P. " 1 00 1 10

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.

Hack, complete, each.... 1 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, p. gro. 1 65 5 50
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia ½ gross boxes..... 3 25
" ¼ and ⅛ gross boxes per gross net cash 12 00

Soldering Irons.

Per lb..... ..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Snaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2, " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 57½ per cent.

Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pc cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Washers "Iron," 40 per cent., 4 mos., or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Iron and Steel, bright, annealed, oiled, coppered, galvanized, spring, nail, bolt, rivet, etc.
15 per cent. f.o.b Montreal, off revised list, Dec. 1, '92.
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6½c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4½ 4¾
" 4 " 4 & 6 " "
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 80 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS.

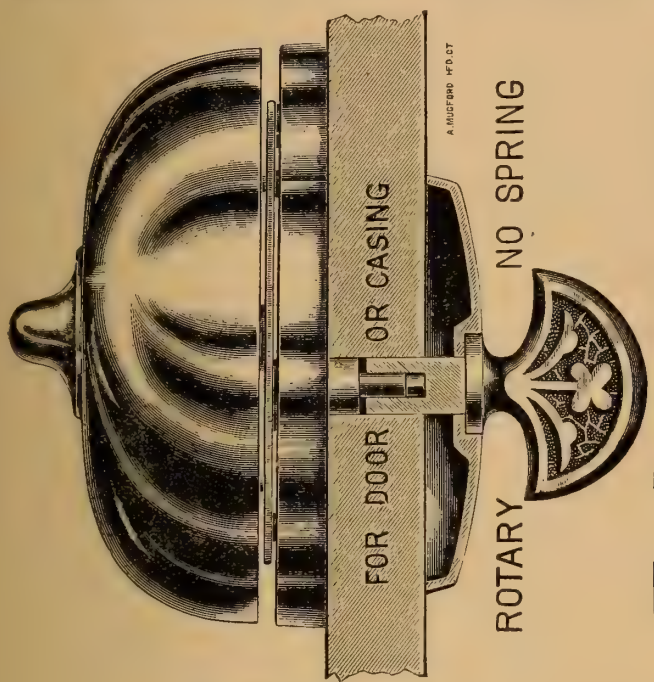
MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

NEW DEPARTURE "ROTARY" DOOR BELLS.



Incomparable!

NO SPRING!

Best Tone, (Sure)

Superior Finish!

Bronze Trimmings!

COMPACT!

CHEAP!

For Circulars, address

THE NEW Departure Bell Co.,

BRISTOL, CONN.



SILVER . .
WARE . . .
STAMPED

Toronto Silver Plate Co. . . .

IS GUARANTEED

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Factories and Salesrooms.

570 KING ST. WEST,

TORONTO, CAN.

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E. G. GOODERHAM, Manager. JNO. C. COPP, Sec-Treas.

"IDEAS FOR HARDWARE MERCHANTS,"

JUST PUBLISHED

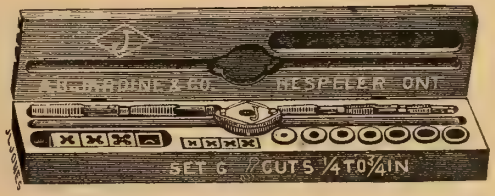
PRICE $1.00 POSTPAID.

This novel book is the only book ever written especially for Hardware men, and every Hardware Merchant will find it of decided help and of intrinsic value. It tells HOW TO ADVERTISE a Hardware Store. HOW TO DRESS a Hardware Store Window. HOW TO SELECT Seasonable Goods and HOW TO DISPLAY them to best Advantage. HOW TO MAKE a success with Hardware. HOW TO COMPETE with "Department Stores." HOW TO TURN a Credit Business into a Cash Business. HOW TO AVOID Bad Debts and Increase Trade. HOW TO SECURE Low Quotations from Jobbers and Manufacturers. HOW TO ARRANGE the Fixtures in a Hardware Store. HOW TO TREAT and Manage Clerks. HOW TO KEEP your Accounts with the Least Labor. HOW TO SYSTEMATIZE your Business and Arrange its Details. HOW TO ARRANGE Price Lists. HOW TO MEET close Competitors and HOW TO BE ENTERPRISING. HOW TO PROPERLY proportion Store Expenses, and thousands of practical hints for Hardware Merchants

"Ideas for Hardware Merchants" sent postpaid upon receipt of price.

J. B. McLEAN PUB. CO.,

10 Front St. East, Toronto.



A. B. JARDINE & CO.

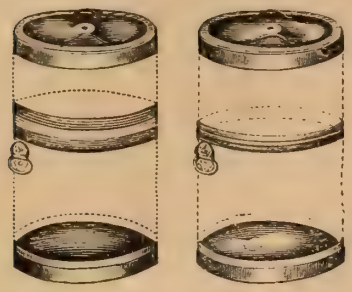
HESPLER, ONT.

- Blacksmiths' Tools
- AND
- Tube Expanders

Send for Catalogue and Price List

. . . . MILK CAN TRIMMINGS . . . .

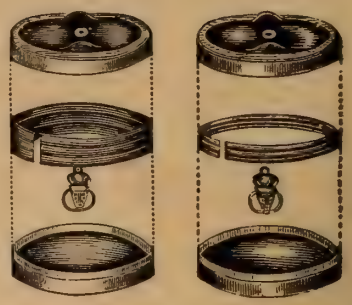
Right Cut. Wrong Cut.



TO THE TRADE:

Please notice that the wrong wood cuts of Can Trimmings have been used in our advertisement of this season. We have both in this issue so that they may be noticed. All orders for Trimmings this year will be filled with **BROAD CENTRE HOOPS.**

Right Cut. Wrong Cut.



SEND IN YOUR ORDERS

Thos. Davidson & Co., Montreal

Why don't you sell . . LAMPS



You sell Chimneys!
You sell Burners!
You sell Wicks!
You sell Coal Oil!
Why don't you sell Lamps?
We mean Nice Lamps!
They are just as staple and a good profit!

We have some nice Job Lots just now.

The very thing to make a trial with. Write for particulars.

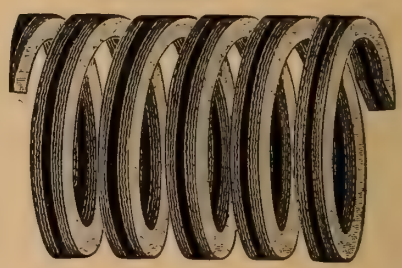
GOWANS, KENT & CO. TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7 16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.
OF TORONTO, LIMITED.

61-63 FRONT STREET W., Toronto.

The best of steel, rolled to special section and properly tempered, is used in the knives.

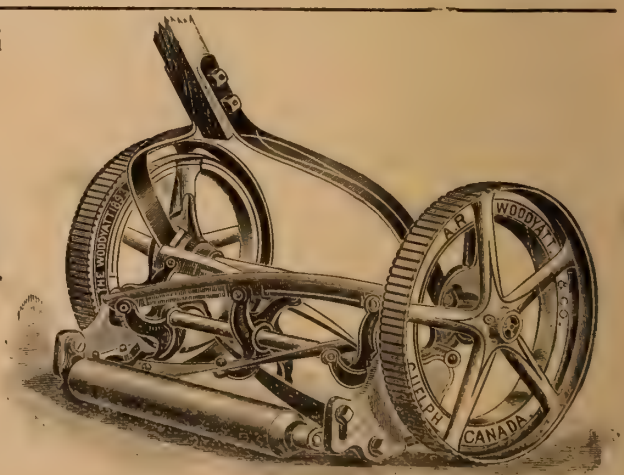
. . 1893 . .

THE "WOODYATT" LAWN MOWER

Light, Durable, and Efficient.

Now On Sale by all Wholesalers.

A. R. WOODYATT & CO. GUELPH, ONT.



CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, MARCH 4, 1893. No. 9.

NEW YORK ALUMINUM BEARING METAL CO.

NEW YORK OFFICE, N. E. Cor. Washington and Cortlandt Sts. CHICAGO OFFICE, 12 Pacific Avenue.
MONTREAL OFFICE, H. McLaren & Co., Agents.

MANUFACTURERS OF

ALU

TRADE MARK.

"Genuine Babbit," - -	Price 30c. per lb. f.o.b. New York
"Champion Metal," - -	25c. " " " "
"Aluminum Bearing Metal,"	18c. " " " "
"Big 4 Babbitt," - -	14c. " " " "
"Pyramid Metal," - -	10c. " " " "
"Mystic Metal," - - -	8c. " " " "

CLOSE FIGURES MADE ON LARGE ORDERS OR CONTRACTS.

Our metals are superior to any like Babbitt Metals in the market. We Solicit Your Orders.

Green Seal White Lead

STANDS AT . . . THE . . TOP . .

It should be borne in mind that absolute purity is not always a guarantee of good quality. The products of different corroders vary in certain important respects, as does WHEAT grown in different localities. They all possess their own peculiar advantages and disadvantages. We were very careful at the commencement of our career to select and arrange for our continued supply, what is considered the most reliable and perfect Lead made, and the greatest care is observed in the grinding of it, and we know that we have a superior article. In this we are encouraged year by year, for our sales of Green Seal Lead have largely increased each season, and we have received many expressions of satisfaction from the consumers. The chief points of superiority of Green Seal Lead are as follows :—

It is more opaque. It is more finely ground. It is more tenacious and tough. It is well combined with oil. It has a greater covering power. The Green Seal Lead once used will not be replaced. **Try It.**

Sole Proprietors of the Green Seal White Lead

WALTER H. COTTINGHAM & CO., Montreal.

RICE LEWIS & SON, LTD.

FINE MECHANICS' TOOLS - -

Lathes, Bench Vises, Screw Plates, Chucks, Drills, Reamers, Etc.

HOUSE FURNISHINGS - -

Success Water Filters, Agate Ware, Puritan Cookers, Iron and Brass - Bedsteads, Etc.

RICE LEWIS & SON, LIMITED,
TORONTO.

Were You Ever Struck With

. . the fact that . .

A "Steel-Clad" Bath

Is the cheapest and best bath on the market ? ? ? ?

If not write to us.

Toronto Steel-Clad Bath and Metal Co., Ltd.

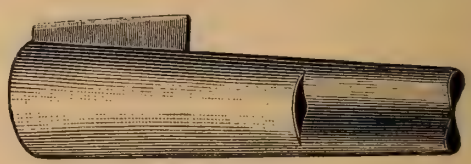
123 Queen Street E.

TORONTO, - - CANADA.

40% More Sap Obtained

BY USING THE

Maple Leaf Sap Spout.



The Maple Leaf Sap Spout is made of Tinned Steel and will supply a long-felt want for a first-class article at a low price. It is a combined Sap Spout and Bucket Support.

It is guaranteed to obtain the most sap with the least injury to the tree; it only has a small bearing on the inside surface of the hole; it is made in one piece, consequently cannot be broken; the bucket may be covered if desired when using this Spout.

SAP BUCKETS.
SYRUP CANS.

KEMP MANUFACTURING CO.
TORONTO, ONT.

HARDWARE

ORGAN OF THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

PUBLISHED WEEKLY—SUBSCRIPTION $2.00 A YEAR.

Vol. V. TORONTO, MARCH 4, 1893 No. 9

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

HEAD OFFICE: - - 10 Front St. E.
MONTREAL OFFICE: - 146 St. James St.
E. Desbarats, Manager.
NEW YORK OFFICE: Room 41, Times Building.
Roy V. Somerville, Manager.
EUROPEAN BRANCH:
Canadian Government Offices,
17 Victoria St., London, S.W.
R. Hargreaves, Manager.

The local wholesale hardware men appear to have a good cause for grievance against the customs regulations. The trade was given to understand some time ago that no duty would be imposed on catalogues coming in the country. One firm at least discovered a few days ago that it had been laboring under a delusion, it being notified by the local authorities that there were some catalogues for it lying at the Custom house which could be obtained on the payment of a duty ranging from 11c. up to 80c. This was practically more than the catalogues were worth to the firm in question, and it politely informed the Customs authorities that they could keep the catalogues, as it intended to keep its money. That such a regulations is an anomaly there is no doubt, and that it is the result of a wrong misinterpretation of the local customs officials is probable. The dry goods men are allowed the privileges that have just been denied the hardware house referred to, and it seems reasonable to suppose that the Comptroller of Customs will not knowingly deny to one branch of trade that which is granted another. Then it must be remembered that the traveler for an American house would be given free entry into the country with probably one of the very catalogues upon which the Government wants to exact the payment of duty under his arm. This is surely discriminating against instead of protecting home industries.

* * *

In spite of a duty of fifty cents per ton the importation of coke into this country has steadily increased during the last few years. In 1890, for instance, the aggregate amount taken from the United States and Great Britain was 36,528 tons valued at $133,638, while last year the respective totals had reached 43,178 and $193,782. About nine-tenths of the imports came from the United States and the province of Ontario consumes about three-fourths of the total, while Nova Scotia and Prince Edward Island is not credited with taking any last year. Should the Standard Coal and Coke Co., of Williamsport, Pa., succeed in persuading the Minister of Finance to remove the duty, the imports of coke would undoubtedly enormously increase. As coke is used both for domestic and manufacturing purposes consumers generally would no doubt like to see it come in free, if for no other purpose than as a competitor with the powerful coal combine.

* * *

The possibilities of aluminum are gradually being revealed to the manufacturers. One of the latest uses to which it has been applied is to the manufacture of files. It has been found by mixing aluminum with steel that the latter is rendered softer, thus making it possible to cut it cleaner and with finer teeth than hitherto, while the file afterwards obtains a toughness and hardness unknown before. In a word it is found that the file that has in it a little aluminum does better work and clogs less than that made wholly of steel. An enterprising firm of Yankee file makers has already copyrighted the process.

* * *

The indications are somewhat favorable for the success of the movement in the United States for abolishing the duty of four cents per pound on block tin, which goes into effect July 1 under the terms of the McKinley Act. The committee of Ways and Means had it under consideration the other day and all but one member voted for abolishment. A prominent Baltimore canner who was present explained the embarrassment which business had suffered by the duty on tin plate and he held that by putting a duty on tin matters would be still more aggrevated.

* * *

It seems as if there are but few commodities that are not affected with a tendency to advance in price Rubber goods are among the latest to develop this tendency. The causes seem to be both an increased demand and light receipts at Para. The shortage is estimated at thirty-three and one-third per cent. The cause of the falling off in supplies is doubtful. Low water on the tributaries of the Amazon is advanced by some as the reason, but as that portion of the world has also had a liberal supply of snow this winter this obstacle will probably soon be removed. The ever increasing demand for rubber for clothing, boots, and bicycles would of itself naturally tend to enhance values.

* * *

Excessive taxation seems to be the bane of Montreal merchants. The Province of Quebec is in the position of a stock company whose finances have become so depleted that repeated calls have to be made on the shareholders in order to keep the concern afloat. The Quebec Government finds itself at the moment with a $300,000 shortage staring it in the face, and in order to provide for this it recently made a further call upon the business men of the Province in the shape of what is commonly termed a new tax. Under the prevailing condition of small margins the increased tax was bad enough, but when it is imagined that there is not an equal distribution of the burden it is made still more irksome. This is just how it is with the Montreal merchants. And it is their Quebec confreres who they claim are not bearing an equal share. If there is one thing more than

another against which the ordinary every-day man revolts it is the carrying of more than his share of a burden. Of course if his partner in the undertaking happens to be decrepit or—well, his girl—it may be different. But that is an exception. It is the rule that is now being considered. And then the specific gravity of a financial burden is greater than that of any other kind. The Montreal men have held meetings, and some of them have affirmed by all that was earthly that they would not pay the tax. But inexorable governments in search of money are not put off in this way; and so the better plan of sending a deputation to interview the Government at Quebec was decided upon. This deputation visited the provincial capital last week and urged Premier Taillon and Treasurer Hall to put them on an equal footing with the merchants of Quebec city as regards the new taxes. As far as the alledged anomaly between the merchants of the two cities was concerned Mr. Hall inferred that its presence was not apparent to him, and as for the taxes there was no alternative but for the Government to impose them, as the shortage of $300,000 must be provided for. These taxes would consequently have to be paid, under protest if necessary. About all the solace that the deputation could get was an acknowledgement from the premier that the tax was too high, and that an effort would be made to lighten it another year.

* * *

A number of Halifax business men are asking the Dominion Government for an appropriation of $10,000 for the development of the Canada-West India trade. In pursuance of this they have sent a copy of a pamphet to each member of the House. If their desire is granted they promise as a result an increased trade between the two countries within the next two and a half years equal to $2,500,000 annually, presuming that freight and the fiscal policy of Canada are favorable to a development of the trade. To secure the West India market has long been the ambition of Canada, but it has not been until during the last few year that anything really practical in the way of attempting to acquire it has been done. It will be remembered that the Minister of Finance made a trip to that part of the world two or three years ago with that end in view. Much fruit is yet to be seen as a result of this trip. The Jamaica exhibition did a good deal towards bringing about the desired state of affairs. The Canadian food products opened the eyes of the people of Jamaica, many of them, they confessed, were superior to what they were in the habit of getting from other sources. And the fact that Canada and the West Indies owed allegiance to the same flag was a further incentive for the two peoples to trade with each other. Unfortunately for Canada the United States got into the West Indian market to all intents and purposes before we had much more than thought of it. In addition to this Uncle Sam is not only a larger customer, but, and what is even more advantageous, he has better facilities for carrying on the trade. Between the boats running out of the ports of the respective countries there has heretofore been practically no comparisons. So bad has the Canadian service been that but few even of our own people patronized it either when they wanted to visit the West Indies themselves or desired to send freight. Then the inadequacy of the postal and telegraphic services between Canada and the islands was another serious drawback. Notwithstanding these untoward circumstances, however, Canadians are not disheartened, as is evidenced at the moment by the action of the Halifax merchants. As a result of the agitation the prospects are brightening. A better class of steamers are getting into the trade, and the volume of business is enlarging. Mauufacturers, canners, lumbermen, millers are particularly interested in the matter, and all that is wanted in order to secure a larger share of the West India market is perseverance and care in selecting goods and in shipping them. Last year there was an appreciable increase in the sale of flour to the islands, but unfortunately, through the carelessness of our own millers, who probably forgot that they were not shipping to a lot of savages, neglected to follow the instructions that Commissioner Brown was so particular to give them. As a result a cloud has been cast upon the good name that Canadian flour earned at the exhibition. Climatic influences and how to cope with them are among the chief things that exporters to tropical countries should always consider.

* * *

When tinware begins to move you can depend upon it, as a rule, that spring is not far distant. During the past week this harbinger to the hardware trade has made its appearance, sap utensils and dairy appliances having been much enquired after.

THAT WHITE LEAD COMBINE.

The component parts of the lead and color combine consist of elements that do not readily weld together.

The demoralized condition of trade consequent upon the reckless cutting of prices ultimately made all the manufacturers in the country anxious to form an association for the regulation of prices. Seven or eight meetings have been held in Montreal, the manufacturers of this city being represented at every gathering. As stated last week, a serious obstacle had been found regarding the pooling of profits. At the meeting held some days ago this difficulty seems to have been overcome. At any rate the agreement was signed. But during the last few days complaints have arisen that promise to smash the combine into its original fragments. Scarcely had the parties to the agreement returned to their respective cities when it began to be whispered abroad that some of them were not keeping faith, but were making contracts below the scheduled price. As a result there is discontent loud and deep. "We blame the Montreal men," said a western man to HARDWARE, "but probably they will blame us." Some of those who were most active in forming the association now openly boast that it will fall through. In fact, some of those who at least profess to be anxious for the formation of an association seem to be the most eager to see the present effort collapse. This may seem paradoxical, but it is so. And they qualify themselves by explaining that a little more of the experience of the past few months will bring the stubborn ones more easily into line.

In addition to the difficulties referred to, there is what may be termed natural barriers that tend to militate against the formation of a combine at present. By this time of the year the greater part of the orders for white lead have been contracted for. Some of the grinders, anticipating that the combine would be formed and values enhanced as a result, withdrew their quotations from the market. Others, on the other hand, went ahead as usual booking orders at old figures. Those who pursued the former course now find themselves handicapped; and herein is probably to be found the principal reason why some of the grinders are breaking the promises so recently made. Had the association been formed earlier, this particular difficulty would probably not have arisen. The negotiations, it is claimed, began soon enough, but they have been so long in suspension that it now looks as if the combine it it was purposed to call into existence has been strangled at its birth.

Although the agreement was signed last week there has not yet been any official announcement regarding quotations, all it is believed on account of present complications. They are suppos-

ed to be on the basis of 5 1-4c. Jobbers are getting tired of waiting for the official mandate, and some of them are making up their price lists on the 5 1-4c. basis. Trade in white lead promises to be quiet for some time, a good many orders having been placed when prices were low and when it was first mooted that a combination was likely to be formed. Numbers have six months' supplies on hand, while one man is reported to have enough to keep him going for two years.

AT RADNOR FORGE.

VISIT OF THE MINING ENGINEERS LAST WEEK.

It was a pleasant and jolly crowd of over 200 excursionists who gathered at the Dalhousie Square depot in Montreal last Saturday morning for a trip to Radnor Forges, the works of the Canada Iron Furnace Co. The occasion was the visit of the members of the International Mining Convention at the request of the Company, and Messrs. George E. Drummond, managing director; J. J. Drummond, Thomas J. Drummond, Jos. T. McColl and McNaughton and Soden ably represented it in their efforts to see that its guests on the excursion lacked nothing essential to their comfort. The party who were accommodated in a special train consisting of four first-class cars a parlor car and two commissarat cars, left the Dalhousie Square depot at eight o'clock, and among the more prominent present were the following: Hon. T. Guilford Smith, of Buffalo, representative of the Carnegie Steel Company, who is also interested in the Canada Iron Furnace Company, and who represented the president of the latter company, Mr. P. H. Griffin, of Buffalo, who was prevented from attending by illness; Messrs. Raymond, of Cooper, Hewitt & Co., of New York; Dr. Howe, the well-known writer on steel, and now president of the American institute; Dr. H. B. Nason, professor of chemistry in the Renssalaer Polytechnic Institute, of Troy, and chemist of the Standard Oil Company; Dr. Torrey, chief assayer to the United States Assay Office, New York; Israel Pardee, of Stanhope furnace, Dover, N.J.; Dr. Kerschoff, editor of the Iron Age; James Archibald, consulting engineer to the D.L. & W. railway; James MacNaughton, of Albany; August J. Rossi, New York; Captain R. C. Adams, Messrs. James Crathern, G. F. C. Smith, John Macfarlane, Richard White, M. Parker, F. W. Evans, Wm. Clendinneng, Jas. Wilson, jr., John T. Harar, Farquhar Robertson, W. J. White, solcitor of the company; Messrs. Ducharme, McLeod, John Higginson, W. B. Bulling, W. H. Kelson, W. A. Cooper, James Williamson, all of Montreal; Arch. Blue, director of mines of Ontario; B. T. A. Bell, Chas. Magee, Drs. Ells and Roger, of Ottawa, and many others, including a number of ladies. As the hour of departure was an early one breakfast was served on the train and lunch before the party reached Radnor at one o'clock. After a complete inspection of the works which it is our intention to describe more amply on a future occasion, the party adjourned to the handsome little church erected by the Canada Iron Furnace Co. for its employees, and speeches were in order.

Capt. R. C. Adams, vice-president of the General Mining Association of Quebec, occupied the chair, and made a few pleasant remarks. He read letters of regret from U.S. Consul-General Knapp,the Lieutenant-Governor, Hon. Mr. Flynn, Minister of Crown Lands, and other Ottawa and Quebec ministers, all of whom expressed their regret that their legislative duties deprived them of the pleasure of being present.

Dr. Howe, the newly elected president of the American Institute of Mining Engineers, was the first speaker. He referred to the forges as a great benefit in furnishing employment to a large number of hands. He wished the Canada Iron Furnace Company every success in their good work.

Dr. Raymond, the ex-president and secretary of the American Institute, spoke next, and pointed out that neither mining nor agriculture could subsist well alone. Here he was glad to see they worked together. Mining came to the rescue of agriculture. It was another illustration of the principle of the fact that to overlook the progress of mining was to overlook the interests of all industry. As in biblical history they found one tribe annihilated and turning up very much alive a few chapters further on, so they often heard of some new discovery which was going to annihilate some established industry. There was no annihilated industry; one product simply took the place of another. He referred to the present union of church and state, and went on to point out that the young men of McGill, whose new college buildings they had assisted in opening, and the young men of Canada, had the greatest privilege man ever had, to stand by and see and assist a young empire grow to lusty strength and power. There never could nor never would be a greater privilege. It was the heritage of young Canada.

Mr. Blue, director of mines of Ontario, expressed his interest in the progress of mining in Quebec, and referred to the conditions in Ontario. There as here they found their young men going elsewhere to seek employment, but the development of such industries, as the forges would check this movement, and he expressed the hope that both the Dominion and the provinces would do their utmost to assist such enterprises.

Mr. James Crathern pointed out that at one time the late Hon. Mr. Ferrier worked the forges, he thought about 40 years ago. At that time he was a clerk in his employ. As it was so long ago, it might be out of place to ask any of the ladies if they remembered the qualities of the old Three Rivers stoves; but there was no National Policy then, and the concern went under for a time. The first discovery made of the great value of the mines was by a company in Troy, N.Y., who used the iron for car wheels, and found that it made the best railway car wheels. The iron is still used largely for that purpose.

After the party had run up to the Piles and inspected the charcoal kilns of the company the return journey was commences. During the course of it Mr. Obolaski spoke as follows: I am not representing officially the province of Quebec, but in my quality as chief of the mining branch I am pleased to reply to your call. I am always glad to see such distinguished people choose our province to meet in in the interest of the mining community. Then, gentlemen, I welcome you, and hope we will have the pleasure of meeting you here again, as a society or individually. Our province is young ,our population is small. We want help and capital for developing our resources. A very small portion of our province is prospected, and our mines are not progressing very rapidly. In our eastern townships copper and asbestos mines are worked on a very good basis, as well as those of the phosphate and mica in the Ottawa district. Our gold fields want enterprising people. Natural gas and oil will be found some day in the central part of the province. Graphite is also abundant. Building and ornamental stone, like slate, granite, marble, etc., are plentiful, and worked to a certain extent, besides other minerals of minor importance. I can myself say what considerable progress has been made in the iron industry. We have three charcoal iron furnaces in the province, two being at Drummondville, of which only one is in operation. For many years we have had at Radnor one furnace, producing wth difficulty five tons of pig iron a day. Now we have one producing twenty-five tons a day and having a capacity of forty tons. I take here the opportunity of congratulating the Canada Iron Furnace Company, whose works are carried on in a very business-like way. It has given our province this industry, which gives employment to 600 to 800 men. I congratulate the able manager of the works, Mr. J. Drummond, who, by his activity and ability, has so well succeeded in erecting the furnace and securing a sufficient supply of iron and charcoal. For although bog ore is extremely abundant here the problem is to find it and obtain it at a fair figure. Gentlemen, I am proud of this industry for our province ,and I hope that the company will develope it more extensively by building another furnace before long.

Montreal was reached about 10 o'clock, and everyone separated, tired but happy, and thoroughly satisfied with the enjoyment afforded them by their hosts of the day.

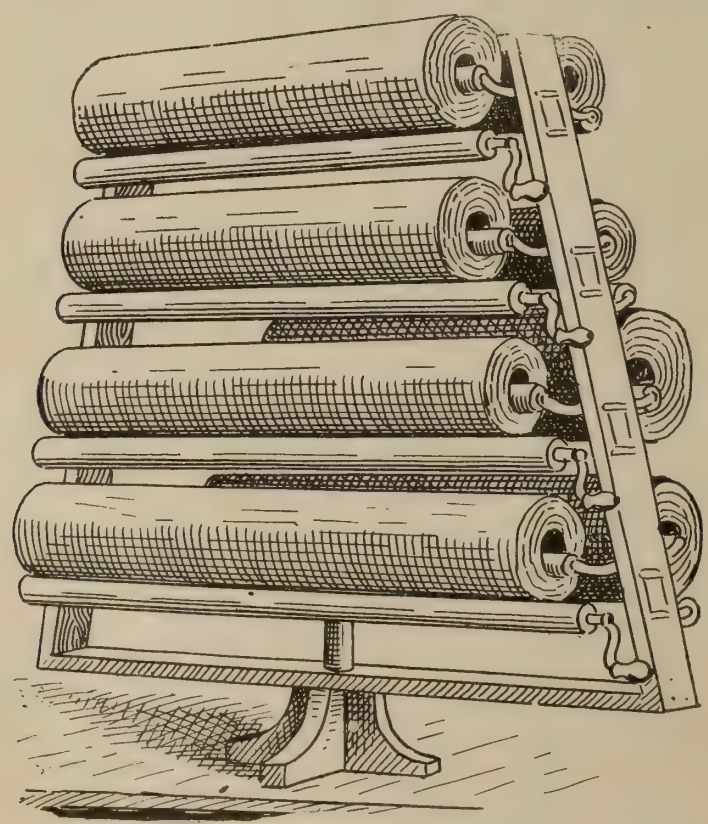
THE MEN WHO MOVE THINGS.

In a talk to young men on the subject of courage, a gentleman once said : "The men who have moved the world have been the men whom the world couldn't move. The men who have turned the world upside down have been the men whom the world could not turn upside down. The men who move things are the men whom nothing can move.

The men whose names shine brightest on the pages of history are the men who absolutely refused to conform to the thoughts and habits of the age in which they lived. The men who have conformed to the world have been deformed by the world, while the men who have sought to reform the world have transformed the world, and have been themselves transformed.

NEW WIRE SCREEN CLOTH.

Invention is gradually devising ways and means for enabling hardware merchants to display that portion of their stock with which difficulty is experienced in handling. One of the latest improvements in this respect is in regard to green cloth, which has heretofore been one of the most difficult stocks to keep tidy in a hardware store. Necessity is



the mother of invention, and the various requests that have been sent in to the Greening Wire Co. (Ltd.), of Hamilton, for information relative to the best method of keeping the cloth has resulted in the firm getting up the holder which is represented above. It holds eight rolls from 20 to 36 inches. Seven reasons are advanced why every furnishing and hardware house should have one.

Its cost is small and will pay for itself in one season. It keeps the wire cloth in perfect condition, doing away with damaged cloth which accumulates when kept on shelves or counter. It holds any thickness of roll, either 50 foot or 100 foot, and will keep the cloth in shape until the last foot is taken from the roll. The salesman can wait on a customer in less than one-half the time it requires in the old way. It occupies very little room. Can be placed on counter or floor. Weight about 40 pounds. It increases the sale of cloth by the attractive manner in which the cloth is displayed. It is easily operated and the cloth quickly adjusted.

SETTING WARM AIR FURNACES.

A furnace should be placed in as central a position of the rooms to be heated as possible, slightly favoring the north and west, as the prevailing winds are from that direction, says a contemporary. Registers should be placed in such positions in the rooms as will make the heat pipes short and evenly distributed around the furnace, and be as near a length as possible. Many people have an idea that a register should be placed in the coldest part of the room, not taking into consideration that this may require so long a pipe that much heat is lost by friction, radiation, etc. Warm air will pass into and circulate round a room with more rapidity where short pipes are used. It is important that warm air pipes have a good elevation from the furnace to registers, as the natural tendency of warm air is to rise. Hot air can be forced only through mechanical devices or agents.

In heating a residence little difficulty will be experienced in heating the upper floors if wall pipes are of sufficient capacity and properly placed. Wall pipes should not be placed in outside walls. Cold currents of air through a cellar should be avoided, as it chills the warm air pipes and stops the circulation of air within them.

It is quite important that an excavation be made and bricked up under the ash pit base from 10 to 13 inches, in order that the cold air may circulate freely around and up on all sides of the furnace equally.

The cold air duct should be built from the west or north if possible, and should be in size equal to two-thirds of the combined area of heat pipes.

For further air supply, many times it is desirable to take the cold air from a large register in the hall to use on very cold days and during unfavorable winds. This is especially the case where the halls are large and the ventilation insufficient. This box should be even larger than the one from outside. All cold-air boxes should have tight-fitting dampers to regulate draught.

We would advise placing registers in the floor for first story, as the air will pass into the rooms with more ease and less friction than with side registers; the latter can be used, but it is not advisable, as they require the partitions to be made especially thick. Side registers can be used on second floor, as that does not require as large pipes as the first floor.

THE SMALL ARMS OF THE GREAT POWERS.

The newest small arms of the Great Powers are of the following calibres: Austrian Mannlicher, 0.315 inch; French Lebel, 0.315 inch; German Mannlicher, 0.311 inch; British Lee-Metford, 0.303 inch; Russian Mouzin, 0.300 inch, and Italian Carcano, 0.256 inch. The weights of the rifles without bayonets are: Austrian, 9.6 pounds; French, 9.2 pounds; German, 8.3 pounds; British, 9.2 pounds; Russian, 9.5 pounds; and Italian, 8.2 pounds. Several of the powers now supply to each man 150 cartridges. Assuming this to be the number all round, the weight is: Austrian, 9.8 pounds; French, 8.1 pounds; German, 8.9 pounds; British (black powder), 9.2 pounds; Russian, 7.7 pounds, and Italian, 7.1 pounds. Thus the calibre of the rifle, as a rule, regulates to an important extent the toal weights to be carried by the men in action. Putting aside bayonets, cartridge boxes, magazines and other equipment, the Austrian soldier, whose rifle is of the largest calibre, carries in rifle and 150 cartridges a weight of 19.4 pounds, while the Italian soldier, whose rifle is of the smallest calibre, carries in rifle and 150 cartridges a weight of only 15.3 pounds. The British rifle and ammunition are, however, too heavy in proportion to the calibre, and the result is that, although the British soldier uses a bullet of less calibre than the Austrian, the French or German soldier, he carries a greater proportionate weight in rifle and ammunition than any soldier except the Austrian. It may be added that Belgium has adopted a calibre of 0.301 inch, Roumania, one of 0.258 inch; Spain, one of 2.295 inch; Turkey one of 0.301 inch, and Switzerland, one of 0.295 inch. Belgium, Spain and Turkey use the Mauser principle; Roumania uses the Mannlicher, and Switzerland uses the Schmidt.

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Etc., Etc. . . . . .

BOARDS OF TRADE.

The London Board of Trade will tender a banquet to C. P. R. officials on the completion of the new passenger station there.

The following were the officers elected at the sixth annual meeting of the Lindsay Board of Trade: President Mr. John Kennedy; Vice President, Mr. F. C. Taylor; Sec'y Treas., Mr. J. D. McMurchy; council—Messrs E. Flood, R. Sylvester, A. F. D. MacGachen, G. W. Beall, J. H. Sootheran, D. Ray, J. B. Knowlson and Col. Deacon. Messrs. Kennedy, Taylor, Deacon, MacGachen, and Sam Hughes M. P., were appointed a railway committee.

Kaslo is attempting to form a Board of Trade to aid in developing local industries.

The Owen Sound Board of Trade has elected these officers: President, Jas. McLauchlan, of the firm of James McLauchlan & Sons, by acclamation; vice-president, B. Allen; secretary-treasurer, James H. Rutherford; council, S. J. Parker, C. Eaton, J. C. Patterson, M. Kennedy, W. B. Stephens, John Wright, S. Lloyd, William Kough. After the appointment of arbitrators the question of the new fishery regulations were introduced and after some little discussion was referred to the council to take action.

BACK AT THE LUMBER CAMPS.

Mr. John D. Hay of Davidson & Hay has just returned from a three weeks' tour of the lumber camps north. "The outlook," said he to HARDWARE "is bright, and a good deal of lumber is being got out notwithstanding that the unusual deepness of the snow is interfering considerably with operations. There is a good deal of sickness in the camps this winter, partly owing, I presume, to the severe weather. One of the most common complaints is what they call German measles, while what seems to be a sort of catarrh is giving them a good deal of trouble," concluded the gallant major as he whirled around on his chair and resumed his neglected correspondence.

A SALESMAN OF GOOD ADDRESS.

The carefully prepared and timely advertisement has been aptly described as an all-accomplished salesman, who goes about his business with unlimited patience, and with a stock and variety of information that charms by its freshness and extent; one who is welcomed in the banker's office, the merchant's store and the study of the student, and is moreover welcomed by the cultivated woman at the family fireside. Very naturally the value of this very valuable agency depends on the number whom he addresses who have ready money and are willing to spend it to satisfy their wants, and, perhaps, gratify their tastes. The sole office of this most useful of all missionaries is to do his master's will, and both introduce him and commend him and his wares to as wide an audience as possible. Sometimes he describes his master's wares, their quality, and names their prices, or tells you the mark by which they are distinguished from all others of their class; all these are very valuable services. He is, moreover the herald of new inventions, the latest fads in fashions, and invariably the first to notify you of where you can get special bargains in almost everything you need. Multiply this office a hundred thousand-fold, and ask yourself whether, as manufacturer of any article, with trade-mark, or a retail seller of anything required by the people at large, you can dispense with his services, or make money without them. Remember, he has made the fortunes of thousands, he has taken men and women from obscurity and endowned them, as it were, with his magical virtues, making them rich, popular and respected ornaments of society.—B. C. Commercial Journal.

SMOKELESS POWDER AND MAGAZINE RIFLES.

Report of a lecture delivered before the Toronto Military Institute, Feb. 3, 1893, by L. G. Duff Grant, F. I. S., Secretary of the Smokeless Powder Co. of London.

(Continued from last week.)

The son who had, with his father, for many years, devoted himself to the patient and laborious investigation of all subjects connected with gunpowder, on which he is an acknowledged authority, seeing that the new powders belonging to this company were a distinct advance on anything that had hitherto existed, after submitting them to the severest possible practical tests, expressed himself willing to join the board and act as technical and managing director, and to him is mainly owing the success that has attended the company. Cautious to the extreme, he never allowed a new powder to be offered to the trade until after it had undergone the most stringent tests and been found in every way up to the required standard. The fact of his being connected with the company was the best of all guarantees to the gun trade that the company's powder would be found up to the mark. The other directors are Colonel Henderson, a well-known Indian officer, than whom no one could be more competent to guide and advise the board on military matters, and Mr. M. S. Vanderbyl, a well-known merchant in London,and a man both able and willing to direct the ship in all commercial transactions.

So much for the board. Now, as regards the factory itself. It is situated about 25 miles north of London, at a place known as Barwick, in the county of Herts, just an hour's run by train from London. It is within 2 1-4 miles from the railway station or five miles from the river Lee and canal, both of which communicate with the Thames, so that transport is easy either by rail or water. It comprises 126 acres, and we have it on a 99 year lease. The factory itself consists of some forty different blocks of buildings, erected at the proper regulation distances. The area within which the manufacture is carried on is about 33 acres, and has been thoroughly fenced in with a six foot ring fence. A more suitable site it would be impossible to find. Both steam and electric power are in use for driving the machinery in all the buildings.

The first powder placed on the market was the company's Smokeless S. S. sporting powder for use in shot guns. Thanks to the energy of Mr. Sampson, our agent in New York, and Boston, it is now almost as well known in the United States as in England, and I trust that under the management of Messrs. W. Darling & Co., of Montreal, who have now been appointed sole agents for the Dominion of Canada, it will soon be as well known in this country as in England or the States.

S. S. having been fairly started, our next venture was Smokeless S. R., intended for use in the existing military rifles, such as the Martini-Henry and Snyder, and for sporting Express rifles of any bore from .360 to .57 and for machine guns of the same calibre.

The advantages obtained are absence of smoke, remarkable reduction in recoil, abolition of fouling, reduction of heating of the barrel, increased accuracy of shooting, reduction in the weight of the cartridge.

It is the only smokeless powder, I believe, which armies who have not the magazine rifles can use, and many governments I know have no intention of adopting a magazine rifle, because they cost too much money. Experiments of an exhaustive nature have been carried out with a large number of weapons, and the results obtained are superior to any hitherto reached, increasing the effectiveness of each rifle. We have shot it in the .577, .500, .450, and .400 bore Express rifles.

Martini-Henry .450.
U. S. Government .45.
French Gras, .434.
German Mauser .434.
Spanish and Egyptian Rem .433.
Italian Vetterli .420.
Sweedish Jarmann.
Winchester .50 (300 gr. bullet).
Winchester .45 (300 gr. bullet).
Winchester .45 (405 gr. bullet).
Winchester .45 (500 gr. bullet).
Winchester .45 (350 gr. bullet).
Turkish Martini Peabody .450.
The Springfield.
The Marlin.
Belgian Comblain.
Japanese Murata .433.
Dutch Beaumont .430.
Russian Berden .420.

The great trouble experienced with recruits in their being "gun shy," i.e., afraid of the recoil and jump of their rifles—is removed by the use of this powder. It is also an enormous advantage to a cavalry force, as it enables the soldier to fire with one hand.

In order not to interfere with the sights already on existing rifles, and which are marked to agree with the muzzle velocity obtained by ordinary black gunpowder the Smokeless S. R. has been made to produce the same muzzle velocity, or, at the most, not more than 1 per cent. increase, so that existing rifles can be used with the regulation ammunition charged with S. R.

An important feature in connection with this powder, and which equally applies to all the company's products, is that it has no injurious effects upon and does not corrode the barrel of the rifle.

Not being affected by heat or damp it is invaluable for heat in any climate.

One ton (2,000 lbs.) of Smokeless S. R. will load as many cartridges as two to two and a half tons of black powder. For example, one ton of black powder will load 164,700 Martini Henry cartridges, whereas one ton of Smokeless S.R. will load 360,000. Or 1,000,000 Martini Henry cartridges loaded with Smokeless S. R. will weigh three tons less than if loaded with black powder.

In the other rifles, Remington, U. S. Government .45, Gras, etc., etc., the difference is still greater.

There is thus a very important saving in transport.

This powder being slow in combustion, is particularly suited for use in punt or duck guns, from the greatly lessened report, the reduction of recoil, and the absence of smoke. For punt guns the load is about one-third the weight of the ordinary black powder charge.

The charge of S. R., to obtain the highest results, varies in different rifles, as much depends upon the particular cartridge used, the strength of the cap, the size of the flash hole, the weight of the bullet, and the nature of the rifling. Approximately it runs from 35 to 50 per cent. of the weight of black powder.

Good cartridges, good caps, and proper bullets are all very important points in connection with the use of nitro-powders. At first we had considerable trouble in getting the cartridge makers to understand that the occasional hang fires which resulted with nitro-powder were the fault not of the powder or any particular batch of powder, but of their bad caps with weak ignition. The caps of one firm only we found to be always the same, the result being that for a time we had to throw all our orders for S. R. cartridges into their hands. This, however, did not last long, and now there is practically no difference whether Messrs. Eley, Kyndoch, or Joyce's cases and caps are used.

The next point is size of flash hole, also very important. In some cartridges one flash hole of fair size will be found sufficient. In others, such as the Martini Henry, two are absolutely necessary, but this is only a matter of experiment with each particular weapon. The powder will suit any rifle of .360 to .577 bore, if these points are attended to. It is also absolutely essential that the bullet fits the rifle—that is that it takes the rifling and is sufficiently tight to prevent the escape of gas. If there is any escape of gas between the rifling and the lead, the bullet will probably drop at the muzzle of the gun. Cromwell used to say to his men, "say your prayers and keep your powder dry." If he had lived now I think he would add, say your prayers and look to your caps and bullets.

S. R. powder has become a universal favorite in England for express rifle shooting, and it is also being adopted by the Indian Government, with whom we have at present a contract for the supply of a million rounds of ammunition. In regard to S. R., Messrs. Eley Bros. reported as far back as November, 1890: "We are obliged for yours of the 5th of November, and we take note of the charge of S. R. powder that you recommend for the various military rifles. We took a target at 500 yards with the sample of powder you left with us with the Martini-Henry rifle, and the result was very good indeed, the mean deviation being 5.75 inches. When you have any powder suitable for the 0.303 magazine rifle, we should be glad of a sample." General Arbuthnot, proofmaster to Kynoch & Co., also wrote us about the same time: "I have to inform you that I have tried the S. R. powder in the Martini-Henry solid drawn case, and also the 'Rifleite' powder in the 0.303 case, in both cases with very satisfactory results. I find that I get the best results with 40 grains of S. R. powder. The velocities and shooting were good with both rifles, and we are now prepared to make up M. H. or 0.303 ammunition with your smokeless powder whenever we may be asked to do so."

The next powder our chemist took in hand was smokeless S. K., specially constituted for the small bore central fire rifles of a calibre from .230 to .380 used for rook and rabbit shooting, and for gallery shooting in America, the advantages obtained, in addition to practically no smoke, being reduction of noise and absence of fouling.

Improved shooting is obtained by this powder in the Morris Tube .297 and .230. It is not suitable for revolvers, for large bore rifles or for shot guns.

As regards loading, the charge is about

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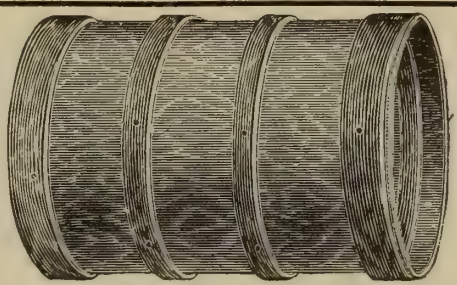
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BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

onephalf by weight of the load of ordinary black powder.

A wad must always be used and the cases properly "nipped."

To obtain good and accurate shooting these points must be carefully attended to.

I come now to probably the most important powder of all as far as military circles are concerned, namely Smokeless "Rifleite," for the new magazine rifles of .303 to .315 bore, such as the Lee, Mannlicher, Lebel, Mauser Berthin, etc. In England, as I have already mentioned, Cordite has, owing to the influence of Sir Frederick Abel, for the time being, been taken up by the Government, but from military men who know what is going on we understand that it has in many respects proved so unsatisfactory and so unreliable that it is only a matter of time for it to be discarded and "Rifleite" adopted. At present it is not an uncommon thing for the men of several different regiments when they are going to shoot in any important competition to apply to us for a supply of Rifleite ammunition, which they use instead of the Cordite cartridges issued to them by the government. Of course they keep that to themselves, but it proves that the shooting obtained with Rifleite is much more accurate than that from Cordite, or the men would have no occasion to alter.

I shall now read you the summary of a report of trials with both Rifleite and S. R. carried out at one of the Government ranges in England. It runs :

200 yards range (Melford rest).—Rifleite in magazine rifle, 10 shots. Mean deviation, .69 feet ; S. R. in Martini-Henry, .64 feet.

500 yards range (Metford rest).—Mark II., .303 magazine rifle. In lovely weather. Perfect shooting. We found the sighting 50 yards lower than given by Cordite, therefore lower trajectory. The result was a mean deviation of .59 feet. The same result was found by a table rest with both rifleite in the .303 and the S. with both Rifleite in the .303 and the S. feet respectively.

700 yards range (Metford rest).—Rifleite, in magazine rifle, mean deviation of three diagrams, .89 feet ; S. R. in Martini-Henry, about the same, namely, .87, .99, .91. Gusty wind.

1,000 yards range (from shoulder).—The shooting was extremely good. We took no diagrams, but excellent shots were employed who were extremely pleased with their performance.

1,000 yards range.—Maxim gun, fusee spring at about 10 lbs., gave excellent practice, both in regularity and accuracy. The fire was as rapid as with black powder but with greater accuracy and uniformity. The advantages derived from absence of smoke and absence of fouling were very apparent.

2,000 yards range.—Maxim gun. The results were equally good at this range, and the beaten zone was densely covered with bullets. The ammunition particularly suits the Maxim gun.

2,500 yards range.—Some excellent collective fire was done. The bullets hit with great energy even at this range, and with great regularity.

There was no fouling or smoke to compete with, and both rifles were easily cleaned.

The recoil was very much less in the Martini-Henry, and practically nil in the Mark II. .303 magazine rifle.

200 rounds were fired rapidly from both rifles without the rifle becoming too hot to use. In this test both the powders were greatly superior to cordite, and, of course, to black powder.

There is no doubt whatever about the regularity of both, and also of the absence of unpleasant smell as found in some compounds.

We have carried out numerous water tests with both powders, and find that after the water evaporates the strength is in no way diminished. We put a few packets in water for fifteen days, then took them (undried) to the range, and only one went short out of thirty rounds.

There is a deposit left behind when firing with Cordite powder, and in case of a wind from the front, this deposit can be easily collected from the men's clothing. This is a great disadvantage to the men as it gets into their eyes and face. There is absolutely no such discharge in using either S. R. or Rifleite, which are both most pleasant powders for the firer to use.

Cordite does not appear to burn properly, and at long distances you frequently find the projectile falling a long way short. Now this has not occurred in a single instance during these trials with either S. R. or Rifleite. Only one round went short of thirty rounds which had been fifteen days in a bucket of water and were taken straight to the range.

There is no flash at all from either powder by day or night, so there is nothing but the report to guide an enemy in his fire if he cannot see his assailant.

The water tests leave no doubt as to the keeping properties of both powders. We have definitely found Rifleite and S. R. superior in every way to any others that have been tried.

A very important point referred to in this report is that there is no flash or flame from either S. R. or Rifleite.

During the experiments made at night by a certain government at 2.500 yards the following incident occurred. The markers were in the custom of inspecting the targets with lanterns and marking off the shots, after which they waited to see the flash to which they were accustomed, and then made a rush under cover before the bullets came up. But on this occasion, when the fire began with Rifleite and S. R. neither the firers nor the markers being aware that these powders gave no flash, the latter found the bullets pattering around them, resulting in their making a retreat for the mantlets with greater haste than usual. In fact, they had a narrow escape. The importance of this feature in these powders will be readily recognized.

The annual report for 1891 of the National Rifle Association shows that the shooting at Bisley with the smokeless S. R. powder in the Martini-Henry at 600 yards was superior to the shooting for the "Martin's" and "St. George's" cups, also at that distance (600 yards) with black powder, although the "crack shots" did not to any extent take part in the company's competition, being engaged in the "Queen's" and other important events. The average in the smokeless S. R. was 22.37. Black powder in the "Martin's," 22.22, and in the "St. George's" 22.01. This experience again exemplifies the regularity of this powder, and the influence it has and will have in the further development of rifle shooting.

From Rifleite will, in due course,be developed the powder for use in artillery and large guns. It will, I expect, be a somewhat expensive matter, but it is not one of very great difficulty. The only point to be settled is the size of the cubes or whatever shape is decided upon for each particular size of cannon.

I come now to the last of our powders for small arms, namely, smokeless S. V., for use in revolvers. Of all the powders I have mentioned, it was the most difficult to hit off, and was only arrived at by our chemist after eighteen months' laborious and careful experimenting. The difficulty was owing to the shortness of the barrel to obtain the necessary amount of explosive force to propel the bullet without unduly increasing the pressures. Our own army have adopted a revolver of .455 bore, from which excellent shooting is obtained.

Last of all comes our smokeless S. B. for blasting and mining purposes.

Of S. B. there are two varieties, S. B. 1 for hard rock and S. B. 2 for softer rock, such as coal, slate or chalk. In their effects they are more like dynamite than gunpowder, S. B. 1 being equal in strength to No. 1 dynamite, while S. B.2 is more gentle in its action.

They are supplied in cartridges, which are packed, along with the necessary primers, in cardboard boxes, each weighing 5 pounds.

The primers are small cartridges about two inches long. They have an extra waterproof wrapper or envelope around the upper part, to enable them to be firmly tied round the fuse, and prevent the fuse and detonator slipping from their position.

The advantages gained by use of these powders are :

They are absolutely safe to carry and handle.

They emit little flame, and produce neither noxious fumes nor smoke, so that the miner can immediately return to examite the effect of his shot, and continue work, without having to wait for any fumes or smoke to pass away, thus saving time, and preserving the health of the workmen.

There is a great saving in drilling, smaller and fewer holes being required.

In holes of the same diameter, one inch in length of S. B. is equal in effect to from three to four inches of gunpowder.

But a more important saving is effected by the reduction of the diameter of the bore holes. Thus, a one-inch hole charged with S. B. is much more effective than a two-inch hold charged with gunpowder.

Smokeless S. B. burns very slowly, so that if accidentally fired without being detonated, it would only burn, much as a flare-light, without danger.

It is not affected by heat, and does not freeze, which renders it particularly suitable for export to warm or cold climates.

For both S. B. 1 and S. B. 2 No.6 detonators should be used. Good results

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton, Ontario.
SP

SITUATIONS VACANT.

WANTED—HARDWARE TRAVELLERS with good connections in Lower Provinces and in Ontario. None but first-class men need apply. H. S., GAZETTE Office, Montreal.

BUSINESS CHANCES.

Advertisements inserted under this heading one cent per word each insertion.

WANTED AS PARTNER IN HARDWARE, an energetic young man of large experience. Must invest one thousand dollars. References exchanged. E. Highet, Cobourg. 10

FOR SALE—STOCK OF GENERAL HARDware, paints, oils, stoves, &c. Business established 25 years. Value about $3,500. Address, Estate J. Cameron, Beaverton tf.

A FIRST-CLASS HARDWARE BUSINESS For Sale. Stock about $3500. Last year's turn-over between $17000 and $18000. A splendid chance. Business can be increased. Address A.B., care HARDWARE OFFICE. 9

FOR SALE—GOOD PAYING HARDWARE Stove and Tin business. Last year's turn over $12,000. Stock, etc, under $3,000. Smart town, brick store, modern improvements. Satisfactory reasons for selling. Would prefer to sell out for two or three years. Don't write unless you mean business. Address T., HARDWARE OFFICE.

COUNTRY BUSINESS FOR SALE.—A FIRST-class general store business. Good locality, old established stand. No other store within eight miles. Is now doing an excellent business. Open for sale for one month from date only. Only responsible parties need apply. A splendid opening. Applications to be made by letter addressed to COUNTRY STORE, Drawer C, Picton, Post Office.

Hardware Traveller Wanted

For our Winnipeg Branch. A thoroughly experienced man. Application by letter only. State age and salary expected.

The JAMES ROBERTSON CO., Ltd.,
TORONTO

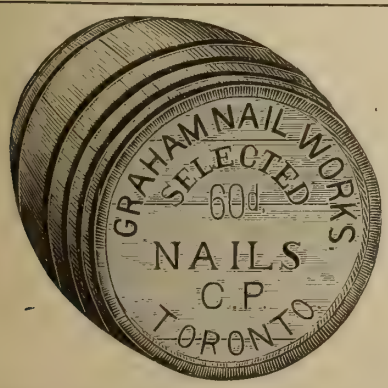
W. J. REID & CO.

IMPORTERS AND DECORATORS OF

Crockery China and Glass.

LAMPS A SPECIALTY.

All glass, Vase, and Library Lamps, in every hue and design.
Our travellers will call upon you shortly with samples.
LONDON AND BELLEVILLE.



ASK FOR THE GRAHAM NAILS.

Hamilton and Toronto



—AND—



CO.

HEAD OFFICE : HAMILTON, CANADA

¼ the PRICE of Iron. Write for Discounts

READY MIXED PAINTS

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Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

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When You . . .
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Robertson's Ready . . . Mixed . . .

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The Whitman & Barnes Mfg. Co.



Canadian Branch :
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MANUFACTURERS OF

Extra Quality Machine Knives, etc.

OUR SPECIALTIES :

KNIVES FOR Mowers, Reapers, and Binders, Root Pulpers and Straw Cutters.
" " All kinds Wood Working Machinery.
" " Paper Mills.
" " Leather Splitting Machinery.



W. & B. Diamond Twist Drills.



Spring Keys, and Cotters.

Goods the best. Prices moderate
Quality Warranted.

can also be obtained with S. B. 1 using Nos. 3, 4, or 5 detonators, but they are not recommended where No. 6 are available.

For use under water the fuse must be tied tightly into the primer so as to prevent the possibility of water reaching the powder or the fulminate in the detonator. At the same time care should be taken in tying the fuse not to cut or tear the wrapper of the primer.

In wet or damp ground waterproof fuse must also be used.

S. B. Completes the list of the Smokeless Powder Company's products.

I may add that during the whole of the time we have been at work, we have never had a single accident from explosion. The process is absolutely safe, in fact, an explosion is simply impossible until the powder gets into the drying house, the manufacture being carried on in the wet state up to that point, and even then it is highly unlikely as we use only heated air for drying. With regard to the safety of the completed article, I had very good proof of that some little time ago; I had undertaken to revise an article for the editor of a well-known English magazine, and one morning he came in to discuss some points with me. I was showing him the difference in rates of combustion of the different powders to suit different bores, and I stupidly, without noticing it, laid down a tin containing a pound of powder close beside the glass on which I was burning the powders. The result was the powder in the tin, which had no lid on, caught fire, and after it had burned for a few seconds, and the gas in the tin was developed sufficiently, it burst with a loud noise, scattering the rest of the unburnt black powder, I fear it would have been all up with us, and I should have missed this pleasant trip across the Atlantic and the world would have been one editor less.

(To be Continued)

THE EPOCH OF ECONOMICS.

The age in which we live is characterized by its utilization of what has been known as waste material. Debris and refuse are being reclaimed from their supposed worthlessness, while wealth and comfort are now deduced from what has hitherto been without commercial value or public service. With epoch-making discoveries we are tolerably familiar, their magnitude giving them dramatic interest, and their coincidence with our own time-table of life adding not a little to our conceit and boasting. While our progress, however, is a fact, and our big-headedness a misfortune, the smaller economics of the age are of the unobserved, yet the veritable potentials of our prosperity. Everything has specific value, be it great or small, the difference being in gradation but not in essentials. The pebble is but the microcosm of the rock and the mole-hill of a mountain, the difference being one of magnitude but not of substance. In the matter of our industrial waste or refuse this law has generally been neglected till science exposed the folly of waste and the stress of industrial competition compelled its utilization. Necessity has always been the mother of economics, and in this instance when the margins of profits were attenuating into consumptive decimals, applied science came to the rescue and gave commercial value to what had hitherto been a nuisance. Examples are numerous, and by way of emphasis we collate a few of the most conspicuous.

For many years the slag from iron furnaces was but useless refuse. It was dumped on waste land, in convenient ravines, and in unsightly masses wherever possible. It is now manufactured into asbestos, cement, glassware, pottery, fire-brick, fertilizers, and into the paint which now embellishes the Pullman palace car. Sawdust, so long the nuisance of saw mills, once dumped into swamps, of saw mills, once dumped into swamps and pits, can now be made into sheeting for buildings, and when mixed with paper pulp supplies an excellent article. It is also serviceable in anniline dyes, wood alcohol and certain acids. Cotton seed, once left to rot at the cotton gin and used for fuel, now furnishes oil, lint, food for cattle and hulls for fertilizers; the product of the oil industry amounting to $16,000,000 per annum, with the sale of lint and hulls realizing over $1,500,000 each in the same period. The refuse of silk factories or warehouses, once a nauseating and uncleanly compound of leaves, imperfect cocoons and dead worms, is now utilized, being sorted by machinery, and the short threads incorporated in valuable commercial fabrics. Coal tar was once but an olfactory nuisance, and sometimes got rid of by burning it under gas retorts, now aniline dyes are obtained from the benzole it contains. Other by-products of coal, such as sulphate of Ammonia, etc., are now sources of industry and wealth. The refuse of woollen mills, once a sanitary sinner in the pollution of creeks and rivers, has come in the range of chemical science, while in many large chemical works the saving of gases, once a menace to public health, have by condensation been transferred into valuable commercial articles.

Other examples might be quoted, but the catalogue as so far given is ample evidence of the fact that these modern economics of waste play no insignificant part in the general make-up of our industrial products and prosperity.—Age of Steel.

REMARKABLE COAL.

Some time ago the Argentine government forwarded to the assayer of the Buenos Ayres mint, for analysis, a small sample of coal from a seam discovered in the province of Mendoza. The mineral is lustrous black, of a non-fibrous structure, and very brittle. On being heated it burned with a smoky flame, yielding a light, spongy coke, which after combustion left a singularly small amount of a greenish-colored ash. This ash, it was ascertained, contained a large portion of the valuable metal vanadium. In view of this statement the coal is a mineral of great interest. It is not only of fair quality as a combustible, but it is also available as a source of vanadic acid for industrial purposes, seeing that each ton of the fuel, presuming it to be equal to the sample will produce over 14 pounds of pure ash, containing 4 1-4 pounds of the vanadic pentoxide, of which 3 1-2 pounds may be extracted by simple treatment of the ash with an alkaline liquor, the remainder being susceptible of extraction from the insoluble part. In short, the ash from this coal is believed to be the richest known material utilizable as a source of vanadium compounds. The seam where explored is about three feet in thickness.

CHEAPENING PRODUCTION.

Mechanical talent at this time seems to be turning in a totally different direction. The capabilities of machinery having been very thoroughly developed and opportunities for new applications being discouragingly rare, the most notable achievements making seem to be in the direction of cheapening the production of staple articles. This is the keynote of the manufacturers who are now most successful. The search for specialties is not alluring, as specialty competes with specialty, and consumption is perforce limited. In staple articles, however, there is a constant trade. The manufacturer, therefore, who surpasses his fellows in the cheapness with which he can turn out staple articles of equal quality surpasses them also in securing a large share of the trade and better profits. Never before has mechanical genius so applied itself in this country as now to the solution of the question, how shall the cost of production be further decreased by the introduction of more efficient machinery?

TROUBLE WITH A ROOF.

A new store had been built in town, and there was considerable rivalry between the two tinshop proprietors regarding who should secure the contract for putting on the tin roof. At last it was decided that Jim's boss should have the job, and great was the rejoicing in the shop over the decision. Jim had never worked on a tin roof, and at last the opportunity was to be presented to show people what he could do in the roofing line. The tin was laid, and the seams pounded down with the greatest care, and when it came to the soldering then the science came in. Jim resolved that if there ever was a tight roof, it would be the one he was to solder. After the roof was soldered it was swept off clean, and each and every seam examined to see that there were no leaks, for if the roof was to leak, Jim would lose his reputation as a solderer. After the building had been finished there was a light fall of snow, and almost every one knows there is nothing that will demonstrate a roof's tightness like snow. On this account Jim welcomed the fall of snow, as it would be the means of showing that the roof was perfectly tight. An examination of the plastering under the roof revealed a number of dark spots, and as these spots were produced by water, it did look as if the roof leaked, otherwise what caused the water? Jim cleaned off the snow and gave the entire roof a very careful examination, but not a leak could be found. The rival tinner—the one who did not get the job—was of opinion that the work had been improperly done, and that the roof would leak as long as rain or snow fell. Jim was sorely perplexed regarding the strange manner in which the roof behaved, as he was certain the roof did not leak, yet there were the wet spots on the plastering. It came about one day that the school teacher came in the shop, and as the subject of the leaky roof was mentioned, the teacher informed Jim that probably the roof was really tight, and that the spots on the plastering were caused by the moisture from below coming in contact with the cold tin. This would cause the moisture to condense and drip through the roof boards on to the plastering. This theory was adopted as correct, and a dark cloud was removed from Jim's horizon.—Tin Chips.



Reduced Reproduction from Accepted Design, to be Lithographed in Five Colors

Old Trade Revived . . .

New Trade ade . . . . .

By Advertising in the Spring Trade Number of

THE HARDWARE MERCHANT

THIS issue will penetrate to many places seldom or never visited by your travellers, as well as to every centre of commerce where orders for goods are likely to be forthcoming.

Special—We will make a specialty of binding in price lists, lithographs, circulars, etc., on any colored paper, thereby enabling this large number of circulars or lists to be sent out incorporated in a journal of high reputation, at a minimum price. To send the same out by post in the ordinary way would cost more than double our charge, and with infinitely less probability of being read or preserved for reference.

We would ask as a favor that you let us know at once if you can take space. We will therefore be able to give you better position and general attention. Respectfully yours,

THE J. B. McLEAN PUB. CO. LTD.

. . . TORONTO . . . .

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below, and in our Prices Current, necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, March 3, 1893.

HARDWARE.

There may possibly have been a little widening in the movement of general and lines of shelf hardware during the week, but if such is the case the change has been so small as to be inappreciable, for all the houses generally continue to report business quiet. In builders' supplies there has been some demand on city account, which has led to some movement in roofing material, locks, bolts, etc., but aside from this there is nothing calling for special comment. In fact dealers seem to expect but little expansion to business while the present high freight is exacted by the railway companies. In lines of heavier and crude material the same quiet feeling prevails. There is nothing doing in the way of ordering for importation in the spring, as the condition of affairs at primary markets do not seem to call for any urgency on the part of buyers and they are not showing it. Makers here of nails, etc., also report business rather backward in so far as contracts for future delivery are concerned. In fact all round trade in iron and hardware circles is very quiet here.

PIG IRON.

Beyond a few car lots ex store there is very little doing in pig iron which rules dull and unchanged. In the above connection we hear of some sales of Carnbroe and Gartsherrie at $19 to $20.50 according to quality. The Scotch warrant market has been excelled in a speculative sense, but the fact has no effect at all on the regular market for makers brands and a change in this only, would exercise any influence on our markets. In fact the general expectation of importers here is that the opening of navigation will see pig iron prices lower and although some offers are reported we do not hear of any business transpiring in this connection.

BAR IRON.

Makers report business quiet and jobbers have the same story to tell. Some sales of car lots are reported however at less than $2.05, but in a jobbing way that figure would have to be paid.

SCRAP IRON.

There is nothing much doing in scrap as there is very little offering while receipts run light. No. 1 wrought is quoted at $15 to $16.

SHEET IRON.

The jobbing houses' report some further sales to builders' of this material. No. 28 at $2.50 and No. 26 at $2.40.

GALVANIZED IRON.

There has been some demand for galvanized iron also in the same connection, and we understand that the enquiry for round lots mentioned last week has led to some fair turnovers since. Prices of the article are the same.

NAILS.

The nail market is quiet and unchanged.

TIN PLATES.

Although there is no change in the spot price of tin plate we understand further offers for spring delivery have been made at lower prices. Buyers however do not show any urgency, so that very little if anything is doing in this way. For jobbing business ex store we quote the same range as before, viz.: Cokes $3.20 to $3.25 and charcoal $3.75 to $4.25.

CANADA PLATES.

Builders and roofers have made some requisition in this line of material, but not marked enough to induce any material change. For what business has been done the old range of $3.50 to $3.60 is quite applicable.

TERNE PLATES.

Terne plates are dull, nominal and unchanged at $7.25 to $7.75 according to grade.

OTHER METALS

Copper is quiet at 13 to 14c., ingot tin 23 to 23½c., and spelter, antimony, etc., are unchanged.

GLASS.

There has been no change in glass. A small jobbing business has been doing on the basis of $1.35, but aside from this the market is entirely featureless. Buyers show no inclination whatever to stock ahead, as it is their impression that if there is any change in price it will be in a lower direction.

LEADS AND PAINTS.

The lead combination have still a few details to settle, but matters are practically concluded. In the meantime however business rules quiet, and no further change in prices is announced, although some are anticipated. What jobbing business has been done in leads has been on the basis of $5.25 for Government standard and so on in proportion.

Oils maintain all the firmness commented on last week, grease oils especially showing a higher tendency. Straight lots of lard oil have changed hands at $1 to $1.10 for extra, with No. 1 at 80 to 90c. The price of linseed is firmly held at 62 to 65c. for raw and boiled respectively, and further purchases of seal oil on American account has intensified the firmness of holders of that article. Two car loads sold on Friday last at 50c., and now 53 to 55c. is the idea here for business. Fish oils of all kinds share in the firmness of the others.

NAVAL STORES.

The advance in the price of spirits of turpentine has been well maintained, small jobbing lots selling at 54 to 55c., and our prices are advanced in consequence. We quote: Turpentine, 54 to 55c. as to quality; in cases 55 to 56c.; rosins, $2.40 to $4.50 as to quality; coal tar, $3.50 per brl.; pine pitch $2.50; pine tar $3.50 to $3.75; cotton waste, colored, 5¾ to 5½c.; white 8 to 10c.; oakum, 5½ to 7c.; cotton oakum, 10 to 12½c.

CEMENT ETC.,

The cement market does not show much activity, but indications point to a good spring trade. We quote English brands $2.35 to $2.55 and Belgium $2.20 to $2.35. Firebricks are in fair demand at $18 to $24 per 1000.

PETROLEUM

The movement in petroleum is slow, buyers holding off in the anticipation of lower prices, when the change is made in the tariff. We quote as follows: Canadian 12¼c. to 12½c. at shed in Montreal for round lots and 13½ for small quantities. American petroleum, 19c. in car lots, 20c in 10-barrel lots, 20¼c. in 5 barrel lots, and 20¾c for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c,; Canadian benzine, 10½c Petrola; 12½c. Montreal.

MONTREAL TRADE NOTES.

Painchand, Squire & Co. report some improvement in the orders on spring account for their special lines of cutlery, also some enquiries about sporting goods.

The demand for maple sugar apparatus will soon be on, and the jobbing houses are beginning to look the matter up.

The indefatigable way in which "Green Seal" white lead is being pushed by Messrs.



VICTORIA—Wood Cook.

A SPECIAL BARGAIN

FOR TWO MONTHS ONLY

A First-class Stove in every respect, with all Modern Improvements. Handsome, suitable for any family. Guaranteed to give perfect satisfaction.

We have an overstock of these Stoves, which we propose to offer our customers for two months, at the following prices and terms, subject to being unsold when orders are received.

No. 8 Square, $7.75 No. 9 Square, $8.20

Size of Oven, 17½ x 18 inches. Length of Fire Box, 23 inches. Shipping Weight, 200 lbs. Terms Cash.—F.O.B. at London.

McCLARY MFG. CO. LONDON, TORONTO, MONTREAL and WINNIPEG

W. H. Cottingham & Co., and their travelers ought to bear good fruit once the uncertainty about the combine is fixed.

Managing Director MacMaster, of the Montreal Rolling Mill Co., is away on a tour of the American iron centres. When last heard from he was coming home via New York.

A. Ramsay & Son are prepared to handle all spring orders for their old and well known brands of paints and varnishes.

The Canada Iron Furnace Co., got out a very handsome and artistic souvenier for distribution on the occassion of the visit of the Institute of Mining Engineers to their works at Radnor.

There has been a lot of electric appliances called into requisition recently and Mr. T. W. Ness' line of enunciators buttons, etc. have received their full share of attention.

The firm of Wm. Clendenning & Son have been doing a lot of contract work in special castings, etc., recently.

Offers of tin plate for May delivery have been made as low as $3 10 it is said, but the lowest sale that we can hear of Is a lot of I C coke at $3.15.

Cables to importers here advise an advance in linseed oil in England to a price equivalent to 60c. laid down here for strictly wholesale quantities.

TORONTO MARKETS.

TORONTO, March 3, 1893.

HARDWARE.

Some improvement has developed during the week in the general hardware trade. Manufacturers throughout the country are becoming busier, and the general outlook shows signs of improving. Tinware is beginning to attract more attention, and the same may be said, only in a lesser degree, in regard to wire. In fact in shelf hardware generally a fair trade is being done.

TINWARE—A good business has been done in this line. Dealers in the country are laying in their stocks for the spring trade. Sap buckets especially are in good demand at the moment. An active trade is being done in milk cans, can trimmings, creamery can fixtures, dairy pail bottoms, etc.

WIRE—This being the season for this line of goods, business in it is reported good. Barbed wire is now being forwarded as well as ordinary fence wire.

NAILS—In this line there is not much that is new to note. Business is not brisk, the margins being so small buyers throughout the country are only ordering such as is necessary to supply immediate wants. Quantity orders will likely be sent in when navigation opens.

ROPE—Prices remain firm, with business quiet and featureless.

METALS.

A fair trade at unchanged prices has been done in metals during the past week. Bar iron has developed a little more activity, and tin plates are reported to be moving freely. Canada plates on the other hand continue quiet. Galvanized iron has been exceedingly brisk and a good demand is announced for copper. The movement in zinc and spelter is still light. In antimony business has been fair.

PIG IRON—Requirements are light and business in consequence is quiet.

Rogers, Brown & Co., Buffalo, N. Y., report the Toronto pig iron market as follows: The market continues slow with a large supply of iron offering but no noticeable pressure to sell. Reductions in freight from the west and southwest coupled with a return to last fall's prices have opened the way for an increased sale of southern iron and a re instatement of that trade which was largely cut off by the advance at that time. We quote below on the cash basis f. o. b. cars, Toronto, in bond: IX Foundry Strong Coke Iron, Lake Superior ore, $15.70; 2X Foundry Strong Coke Iron Lake Superior ore, $14.95; 2 Foundry Strong Coke Iron Lake Superior ore, $14.70; Jackson County Silvery 1, $18.00 to $18.30; Jackson County Silvery 2, $17.30 to $17.80; Lake Superior Charcoal, $18 20; Southern Soft 1, $14.10 to $14.35; Southern Soft 2, $13.85.

BAR IRON—There is considerable being done at regular current rates, but trade in this line will not be active till the opening of navigation, when lower freights will be obtainable. There appears to be increasing satisfaction regarding the prices fixed by the combination.

TIN PLATES—Moving freely, and while a good trade is being done in the better qualities the bulk of the business is in the cheaper article.

SHEET IRON—Demand in this line has also been good. Stocks are somewhat light, especially in the heavier gauges. Prices remain as before.

CANADA PLATES—There is not much doing in this line at present, quantities ordered being only for immediate wants.

GALVANIZED IRON—Trade has been exceedingly brisk in this line. Import lots are arriving at different points throughout the country and orders for shipment from stock have been satisfactory; "Gordon Crown" and "Queen's Head" brands are the most enquired after.

CHAIN—Logging business has pretty far advanced, and although the smaller sizes are being called for for agricultural purposes, there is no particular rush in this line.

COPPER—Ingot copper has been in good demand at unchanged prices. Sheet copper on the other hand has been quiet, but an improvement is looked for in the course of the next month.

ZINC SPELTER—There has not been a great deal doing in this line, although a few good sales have been reported, but at prices easier than those of a few weeks ago.

ZINC SHEET—Shipments from stock in this line are very small, but a number of large orders have been placed for import; prices remain as before.

LEAD—Demand has been steady for this article, although the volume of business has not been altogether such as dealers desire.

ANTIMONY—Trade only fair; no large sales have been reported for some time, but prices are still firm, both for Cookson's and ordinary qualities.

PAINTS AND OILS.

Country trade during February was heavier than usual, while city tradewas quiet and continues so. Demand is generally fair, but linseed oil and turpentine continue to absorb the most attention, and both are stronger although quotably unchanged. Payments



are scarcely so satisfactory as a week ago. The market for white lead is still unsettled. There is very little doing, most of the big buyers having laid in stocks before the advance took place. There has not yet been any official notification made regarding the prices fixed by the combinations, but some of the jobbers are making up their lists on the basis of 5¼c. A good demand is reported for prepared paints at the old figures, and although we quote the price decided upon by the combination, jobbers have not yet received any official notification and they are booking orders at former prices. In colors in oil a steady trade is being done. Trade in dry colors is becoming smaller as mixed paints become more prominent. Varnishes generally are in fair demand and shellac is firmer. Linseed oil is in active demand. It is 3 or 4c. higher in England and could not be laid down here at prevailing prices. An advance is expected to take place here shortly. Castor oil is in good demand at unchanged prices. Turpentine is firm and an advance in it does not seem at all improbable. There are no changes in quotations.

GLASS.

Stocks in hands of most dealers are light and they will remain so until June, as further shipments will scarcely arrive from manufacturers till that time.

PETROLEUM.

The Petrolea Advertiser in its weekly report says: Reports of development from all parts of the territory the past month show marked changes in comparison with previous months. There has been a large decrease in the number of wells completed, and consequently of new production. There are several reasons that have caused the above, the most prominent one, of course, being the unsettled state of the oil business throughout Canada in consequence of anticipated tariff changes, which, of course, has made a difference in the amount of new work under way and projected by parties holding leases of land here and outside property owners. And then again, the extremely cold weather has affected operations to a a larger extent. Crude remains firm at $1.18½ for Petrolia oil, with a shade better for Oil Springs. Activity in refined oil continues, and the manufacturer to-day is really put on his metal if ever he was. The market to-day may be said to be very sympathetic, each refiner watching the other and manifesting, as a rule, a disposition to await the course of events rather than make any rash contracts ahead for future delivery. It is believed here among those who should be posted in these matters that there are not very heavy stocks of refined oil in the Eastern markets, and hence the manufacturer is not as eager, taking the general view of the situation into consideration, to grant the dealer any the best of it for the future. We hear that there has been some cutting in prices lately. Just exactly what were the causes operating to induce offerings of small lots of oil at prices lower than those generally demanded in a fairly firm market is of course more or less a matter of conjecture.

Following are the latest quotations at Toronto: —Canada refined oil, 13½ to

MARKETS—Continued

14c ; carbon safety, 17½ to 18c ; Canada water white, 19c ; American water white, 21 to 22c ; photogene, 25c.

HIDES, SKINS, WOOL, TALLOW.

SKINS—There are not a great many coming in and prices are unchanged at $1.25 to $1.40 for shipskins, and at 5 to 7c. for calfskins.

HIDES—Demand continues fair and prices steady, car lots of cured are moving at 5¼c. We quote No. 1 green cows' 4½c., cured 5¼ to 5½c.

TALLOW—Continues in active demand, with offerings light. Prices are ½c. higher, dealers paying 7 to 7½c. and selling at 7¾ to 8c.

WOOL—Not much to note, very little moving and prices are unchanged. There will be no blanket wools on this market till the new clip comes in. Fleece is nominal at 18 to 19c. Pulled is selling moderately well at 22 to 23c. for supers and at 26 to 27 for extra.

OLD MATERIAL.

On account of the snow offerings have fallen off considerably, while demand is good. Scrap rubber is quoted a fraction higher, railroad iron is 5c. lower. We quote the following quotation :—No. 1 heavy cast scrap 65 to 70c. per 100 ; stove cast scrap 40 to 45c. ; No. 1 wrought scrap 50 to 60c. ; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c. ; new light scrap copper, 8 1-2c. ; heavy scrap copper 9½c. ; old copper bottoms, 8c; light scrap brass 5½c. ; heavy yellow scrap brass 7½c. ; heavy red scrap brass 8¼ to 8½c. ; scrap lead 1¾ to 2c. ; scrap zinc, 2½ to 2¾c. ; scrap rubber, 2½ to 2¾c. ; country mixed rags, 80 to 85c. per 100 lbs ; clean dry bones, 50 to 60c. per 100 lbs. ; plough shares, 60 to 65c ; burnt cast scrap, 15 to 20c. ; railroad iron, 60 to 70c. ; malleable scrap, 25c.

TRADE NOTES.

Ship chandlery is picking up on the local market.

Linseed oil is higher in England, and has an upward tendency here.

Stewart & Wood expect the arrival of a large shipment of window glass, mostly small sizes, in the course of the next few weeks.

Local dealers report that orders are being freely booked for green wire cloth, screen doors and windows.

Samuel, Benjamin & Co. are in a position o supply wire solder for canning purposes as well as for plumbers. By using this solder t is said that much time is saved. The demand for it is quite active.

The Metallic Roofing Co., of Toronto, are now also manufacturing in Montreal. They are busy turning out a contract for 50,000 yards, to go into the new seminary building on Sherbrooke street west, Montreal.

The Bostwick Metal Lath Co., whose works in Montreal are now in running order report some good contracts on hand. Among them are 30,000 yards for the C. P. R. hotel in Quebec, 30,000 for the Theological College, Montreal, 25,000 for the Monument National, also smaller quantities for the St. James Club, the Board of Trade, etc.

Frankel Bros., who have taken over the Toronto Smelting Works, purpose extending the plant. A feature of the concern under its new proprietorship will be the smelting of metal dross, said not to have been hitherto done in Canada.

We draw your attention this week to several cuts in this paper with a moral (use the "Pittsburgh"), all people who use lamps will quickly perceive what is meant, and those who have their own interests at heart, will do well to call on Gowans, Kent & Co., Toronto or Winnipeg, who are sole agents in Canada for this celebrated lamp, the "Pittsburgh."

Mr. E. K. Watson, western representative of Messrs. Painchand, Squire & Co., Montreal, has just returned from the Pacific coast. He reports a successful trip. Mr. Watson leaves again shortly to call on his Ontario friends.

H. S. Howland, Sons & Co. advise their customers that they have received a large consignment of the famous "Bengal" razors in all sizes—¼, ⅝, ¾, ⅞ and 1 inch. They also have a complete stock of the "Fish" brand of jack-knives, one and two blades.

H. S. Howland, Sons & Co. have a most attractive line of auger-bits in boxes, done up in sets of six, nine and thirteen bits, which they are offering at right prices.

The Dominion Wire Manufacturing Co., of Montreal and Toronto, have issued a new and attractive price list of spring cotters. A fac-simile of the spring cotter label, in blue and silver, adorns the cover.

The Gutta Percha & Rubber Mfg. Co. of Toronto (Ltd.) has issued an attractive calendar in the form of a maltese cross, the well-known trade mark of the firm.

AMERICAN MARKETS

New York, March 3.

Pig Tin—The flurry in the market Monday caused by sensational rumors regarding legislation to make inoperative the pig tin section of the McKinley tariff law, gave place to ordinary routine on Tuesday. It was a remarkable fact that the leading holders have as tight a grip upon the market at the present time as they had prior to the miniature "bear" raid. In any event, stiff prices had to be paid for spot stock, whether required for ordinary trade wants or for covering short sales. Another interesting feature is that futures are at a discount here while at premium in London. This is directly the reverse of conditions that prevailed a short time ago, and in connection with the events of the past 48 hours would appear strong evidence that the recognized leaders are still leading on both sides of the Atlantic. On this market 20.35c. was paid for 25 tons, ex steamer Massachusetts, now in port, and 20.40c. for five tons out of store. The former price was bid for a round lot ex store, while March and April contracts were offered at 20.35c. Early London cables quoted down to £92 for prompt and £92 7s. 6d. for futures, but closing quotations showed five shillings advance. The London sales for the day were 70 tons spot and 150 tons futures. Private advices stated that a considerable short interest in futures had accumulated this week, presumably on the rumors regarding legislation on the tariff.

Copper—Orders for ingot still run light and afford no indication of tendency on the part of consumers to take more than they may need to tide over current wants pending developments after the opening of navigation. The demand for wire bars is almost rather backward, while casting stock is taken in moderate quantities only. Some of the smaller producers who are not in proper shape to carry a great deal of stock are parting with moderate quantities of lake ingot at 12c., and a little is dealt out from second hands at the same price. The large consumers offer indifferently, and generally ask 12 1-4 cents. On casting brands the range is 11c. to 11 1-4c. On the Metal Exchange a 25,000-pound lot of Lake ingot was offered at 11.95c. for March, April and May, 11.85c. for June, and 11 3-4c. for July delivery. Cable advices quoted the London market for merchant bars as steady at £45 10s. for prompt and £46 for future delivery, with sales for the day of 250 tons and 50 tons respectively.

Pig Lead—The market looked rather softer. Offerings at 3.95c. for prompt and near future deliveries are more numerous, while bids, besides reflecting indifference on the part of large consumers, were generally limited at $3.90c. A few hundred tons have been sold during the past few days at an intermediate price.

London cable to the Metal Exchange quoted £9 10s. for soft Spanish.

Spelter—The situation is practically the same as it was a week ago. Spot supply of western is in few hands and hald at 4.40c. upward, but round lots for future shipment from the west are secured easily at 4 1-4c. to 4.27 1-2c. delivered here or at common point. London cable to the Metal Exchange quoted £17 7s 6d for good merchant brands.

Reports from the western producing points indicate a heavy output of lead and zinc ores. Thus advices from Joplin, Mo., date of February 25th, state that the shipments of ore during that week were greater than ever before made in one week in the history of the district, which amounts practically to a cleaning up at all the camps in Southwest Missouri and Southeast Kansas. From Carthage, Mo., it is advised that the "prospects are bright for increased development. As the weather is now breaking up and the roads more passable great outputs will be made."

Antimony—Demand is of merely routine character, and prices are without change. About 9.90c. to 10c. for Hallett's and 10 3-4c. for Cookson's is quoted.

Tin Plate—Business has been moderate the past few days, and the market is bare of distinctly new feature, prices being quite steady in the face of light demand.

Pig Iron—Business in both foundry and and mill grades proceeds in strictly routine manner in this market. The demand is strictly commonplace as well, and the offering practically the same as it has been since the beginning of the year, while movements in values are extremely narrow. The prices quoted are as follows : Northern brands, $14.50 to $15 for No. 1 X foundry, $13.50 to $14 for No. 2 X foundry, $13 to $13.50 for gray forge. Southern brands, $14.50 to $15 for No. 1, $13.50 to $14 for No. 2 foundry and No. 1 soft, $12.50 to $13 for gray forge, all at tidewater.

Scotch pig is selling in small quantities to about the usual extent, and prices remain steady. Lots to arrive are quoted as follows : $21.50 to $22 for Coltness, $21 to $21.50 for Summerlee, $20 to $20.50 for Carbroe, and $19.50 to $20 for Eglinton.

Old Material—Business has been on a rather small scale, but enquiries are fair and prices remain quite steady. Iron tee rails are quoted at $17 to $17.50, steel rails at $14 to $14.50, No. 1 wrought scrap iron at $16, and machinery cast scrap at $12.50 to $13, all f.o.b. Jersey City.

Steel Rails, etc.—Small orders aggregating about 4,000 tons of rails have been taken by local agents during the past three or four days. Outside of that no business is reported but the quotation of $29 at mill is kept in force. Track supplies are quiet, and supplies throughout continue rather weak.

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We would call the attention of all Hardware Dealers to the fact that we handle the best makes of English Bicycles sold in Canada and will allow all dealers a liberal discount on all sales. Write us for our lists and discounts. Bicycle Sundries a Specialty.

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WIRE CLOTH

Green Painted Screen Cloth, Special Lath Cloth, Hardware Grade Cloth, Milk Strainer Cloth, Sand Screen Cloth, Honey Extractor Cloth, Fanning Mill and Threshing Machine Cloth, Etc., Etc.

Write for Catalogue and Prices.

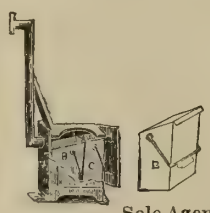
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DEVELOPMENTS IN STEEL MAKING

The London Times gives a long account of a number of experiments lately made with a new description of steel, the success of which appears to point to a revolution in the steel trade. It says, in part:

"An important advance in the manufacture of what is technically known as tool steel has recently been developed into practical shape in England. It is a new process, the invention of Mr. Francis G. Bates, of Philadelphia, which has been under trial in this country for the past twelve months. It consists in converting a low-grade steel by a remarkably economical process into a high-class steel, suitable for making turning tools for iron and steel, punches, chisels and similar articles. The system is carried out by placing bars of Bessemer or other steel containing a low percentage of carbon, in a specially designed furnace and subjecting them to a high temperature. The steel to be converted is embedded in a carbonaceous compound of special character, and placed in a chamber in the furnace, which has three fire grates, with flues and passages so constructed that a surprising economy of fuel is secured by reason of the perfect character of the combustion that there is no escape of any visible products in the form of smoke after the furnace has been started, and although a very high temperature is maintained, equal to melting cast iron, the temperature of the escaping gases is remarkably low, so thoroughly is every atom of heat utilized. Many tons of steel have been so converted, and a number of tools have been made from it. In all cases the tools thus made have turned out exceedingly well, some of them doing work comparable with that done by Mushet steel, which is the most costly steel made. Various brands of low-grade steel, including Bessemer, Glengarnock basic, Brown, Bayley and Brymbo steel, costing on the average £7 per ton, have been tried. From these bars, when converted, turning tools, punches and chisels were made and successfully tested in actual work. The process is, in fact, a commercial success, and constitutes a new departure in the manufacture of high-class steel from steel of a low-grade. Many well-known users of steel have, after due trial, certified to its value, and have expressed their readiness to adopt it. Should the apparently reasonable expectations entertained respecting this steel be realized a revolution in the steel trade should practically result. Moreover, by the Bates system, not only can steel be successfully treated, but wrought and cast iron can be converted. Its application, in fact, appears to be very far reaching, and capable of meeting the requirements of war as well as those of peace."—N.Y. Bulletin,

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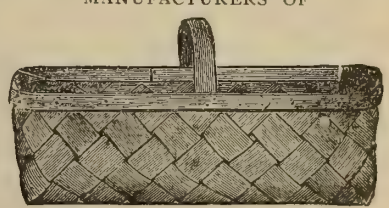
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TRADE CHAT

Natural gas is to be piped from Kingsville to Windsor.

Another proposition is up for the establishment of a binder twine factory in Winnipeg.

The Farmers' binder twine factory at Brantford is now in full operation and numbers of farmers are visiting it daily. Already there is talk of triplicating the machinery.

Natural gas and petroleum seem to be intimately connected in the bowels of the earth. A gas well near Elwood, Ind., recently ceased flowing, and in a short time oil began to flow at a great rate from the well.

At the annual meeting of the Canadian Iron Founders' Association, held at the Royal Hotel, Hamilton, Mr. W. M. Gartshore, of London, was elected president, vice Mr. Adam Laidlaw, retired, and Mr. John H. Tilden was elected treasurer.

The United States boasts of 48,096 business concerns interested in shoes and leather. Of these 5,239 are tanners, 2,734 shoe manufacturers and jobbers, 34,090 are retailers of shoes, and 6,033 are connected with miscellaneous branches of the trade.

The pig iron production of Germany in 1892 was, according to the figures of the German Iron and Steel Trade Association, 4,793,003 tons, against 4,452,019 tons in 1891, an increase of 340,984 tons or 7.6 per cent. The greatest increase was in Thomas pig, comparing 2,006,400 tons against 1,704,279 tons.

It is a curious fact that notwithstanding the depression of trade in the iron districts of South Staffordshire, applications are on the increase for mills and forges. It is stated that an offer of £10,000 has been received for the Gospel Oak Works, which were sold under the hammer for about half that sum rather more than a year ago, but the owners, Mr. Job Evans and Mr. John Harris, decline to sell.

The attempt to form a combination of whip manufacturers does not promise to end successfully, says the N. Y. Bulletin. The stockholders of the Bay State Whip Company have decided not to enter the combination, and stockholders in other companies whose officers have given options to the syndicate, are preparing to ask for injunctions against turning over the plants to unknown parties.

Mr. Adams, of Queen street, Parkdale, who was formerly connected with the rolling mills at Swansea, proposes to establish a similar manufactory in the locality of the Lake Shore Road, and capable of employing seventy to one hundred men. He has written to the Mayor and he says the capital will be forthcoming if a site is granted, and exemption for a time allowed.

A sensation has been created in the shoe and leather trade by the completion of a combine between New York and Boston capitalists with $45,000,000 behind them. There are ninety firms in the trust, thirty-five being in Boston. They are to decide upon the tanneries to be kept open, regulating them according to their desires. The tanners now hold the key to the situation and with plenty of stock in hand expect to reap a harvest. This action is the outcome of a combine last May which lasted till June, when sole leather went up three cents a pound, but the present combination is on a much more colossal scale.

THE BUSINESS MAN'S MEMORY.

Such are the demands on the business man's memory that an easy way of cultivating it is a good thing to know, and if one tried and not found wanting, so much the better, says a contemporary. This description answers exactly to a mode of assisting the memory adopted by a good many railway postal clerks, who are engaged in a capacity rendering it highly desirable that they should know perfectly the routes on which post offices are located. The way they accomplish this apparently irksome and arduous task is probably as simple and as good a way as can be. It proceeds on the principle of the relation of ideas. But by means that, unlike some systems of mnemonics, are sufficient in themselves, without the intrusion of a medium foreign to the matter to be remembered.

A few words will make the plan plain enough. The clerk provides himself with cards, on each of which he writes on one side the name of an office, and on the other side of the same card, the name of the route by which that office is reached. Having accomplished this in as many instances as may be necessary, the clerk reads the back and front of each card with care. The next time he proceeds to do the same thing, he finds out to his great satisfaction, that the name of the office suggests the route in probably the majority of cases, if he is dealing with say fifty or sixty. It is not long before he knows all that he is wanting to know of places and connections concerning the entire area of the territory he is interested in serving with mail. Surprising examples are cited of the proficient use of this easy mode of assisting the memory, which commends itself to the judgment promptly, and without particular examination. Proofs of its great value are easily citable, and will become numerous as its efficiency shall be better known and more extensively tested, as surely will be the case. A postal railroad clerk learned the whole State of Ohio in four days, separating the mail without an error the fourth day after his adoption of the use of the cards, in the manner described, as an assistant to his memory. The mention of the railroad suggests that much might be done in training the memory, while travelling on the cars; and this, we submit, might be a better way of spending the time than looking out of the window, or reading the blinding type of the average newspaper, a continuous strain to which at least a partial let up would be a real advantage. Large writing on both sides of a supply of cards, that on the one side indicating the subject, and that on the other what is sought to be remembered relating to the subject, which make no serious demand on the strength of the eyesight, would, we feel sure, prove to be an intersting occupation, and would infallibly yield results not only gratifying in a high dregre, but of substantial and permanent value.

DECOMPOSITION OF TIN SLAGS.

Some time ago Mr. H. N. Warren, of Liverpool, England, recommended the addition of borax as a flux to the mixture of carbonates of potash and soda, used in decomposing silicious slags containing the oxides of tin and antimony. As this addition made the previous tedious operation become rapid and complete, it has been adopted very generally. Mr. Warren now writes to The Chemical News that it has been lately found that the oxides of tin and antimony thus prepared are by no means fixed when subjected to high temperatures in contact with alkalies, and states that in numerous instances the fumes collected by volatilization from the crucibles containing the substances, have been found to contain notable percentages of both tin and antimony. Mr. Warren has another, or "flouride," method, of which we give a short description herewith:

A convenient portion of the slag in a fine state of division is placed in a platinum dish. Equal quantities of hydrochloric and hydroflouric acids are added while the dish is exposed to gentle heat on a sandbath for a few moments. The slag almost immediately dissolves, and the solution thus obtained is diluted to a known volume.

This solution is divided into two halves. One half is preciptiated by the addition of sulphuretted hydrogen. The precipitated sulphides of tin and antimony thus obtained are, if necessary, purified by re-solution, and are then lighted and weighed as oxides.

The second half is rendered alkaline by the addition of ammonia, and a large excess of oxalic acid is added. On the introduction of sulphuretted hydrogen, as before, antimony sulphide alone falls down. This is ignited and weighed as oxide. From the weight of the mixed oxides already obtained, the antimony oxide is subtracted to obtain the amount of tin oxide.

By this method a complete separation and estimation of both metals can be performed in less than an hour. Over 300 samples of a like nature have been treated by Mr. Warren during the last year, and have been proved accurate within 0.2 per cent.

A report recently published shows that for a period of seven years, 1884-1890 inclusive, the average number of fractures of steel tires on the German railroads was 0.28 per 100. On locomotive wheels the average was 0.50 per 100; tender wheels, 0.65 per 100; passenger carriage wheels, 0.38 per 100. In 1890 there were 30 accidents resulting from the breakage of tires on the German lines. It is believed that many of the fractures are due to the fact that tires are kept in service too long, after they are worn down too thin for safety.

WHAT IS ELECTRICITY?

Mr. S. F. Walker, in discussing this question in an article in the London Electrical Engineer, says: "As far as the writer is able to understand the matter now, electricity is simply the motion of the molecules of the different substances which are the subjects of electrical action, just as heat, light, and sound are, and the only difference between these forces is the rate of motion. The motion of sound, as we all know, is comparatively slow, that of heat and light is very rapid. That of electricity would appear to be somewhere between the slow motion of sound and the rapid motion of the heat waves, whose motion is slowest (that is, slower than that of light.) And it would appear that the wonderful adaptability which electricity shows for every kind of work is due entirely to the position which its rate of motion occupies in the scale of the energies. It would also appear that the reason this wonderful agent lay dormant for so many ages, and is even now only patially developed, is very largely, at any rate, because we have no sense which responds to the particular periods of vibration comprised within the electric range."

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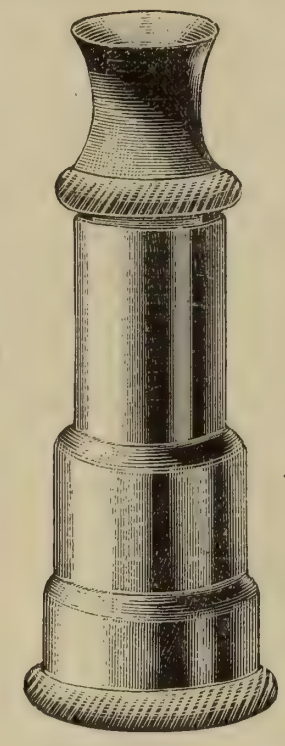
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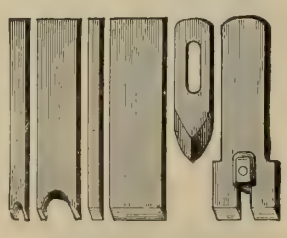
The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it

It is impossible for this pipe to get out of order.

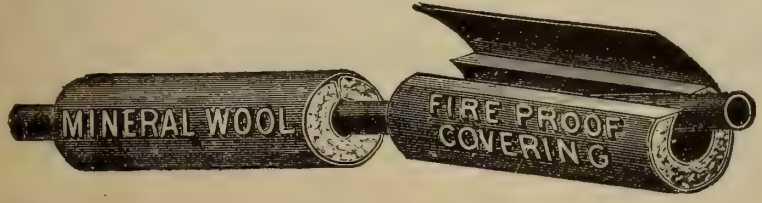
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If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss. The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

EFFECT OF TIME ON STEEL.

Very few can be found who have to deal with forging steel or with casting it who do not believe that by long standing its quality is more or less affected. In the seasoning of timber the changes produced are easily traceable to the extraction of water and the solidification of albumen in the wood cells; but in steel no chemical change occurs that analysis can detect, except upon the surface, which may be more or less oxidized.

Certain phenomena in the physical condition of steel will not be disputed by any one. Bars of steel standing upon the ground in a vertical or inclined position become magnetic after a time. Cracking of steel sometimes occurs while standing, no visible external cause being assignable, except, perhaps, a slight shock of some sort entirely inadequate in and of itself to produce such a result. Steel bars and plates that have remained sound under heavy strain are known to fracture subseqeuntly under conditions of much smaller stress. How shall these undisputed facts be accounted for?

Only by the admission that molecular changes in steel may take place without external mechanical or chemical action can the peculiar deportment of steel under such circumstances be explained. It is a matter of common belief that edged tools after much use deteriorate in their cutting qualities, and that after being allowed to stand idle a sufficient length of time they recover this power. Generally when any belief of this kind exists among practical men it is not safe to deny its truth merely on theoretical grounds. For the most part, careful observation will discover a basis for the belief in facts, but the facts are sometimes not easily accounted for.

In the case of steel, however, there are many physical properties that indicate extreme molecular sensitiveness. The effect of sudden changes of temperature upon it in hardening and tempering, the refinement of quality obtained by judicious hammering at a proper heat, its susceptibility to magnetic changes, as in the magnetization of steel bars by the use of natural or artificial magnets, its demagnetization by subsequent heating, the permanent springing of steel castings and forgings when operated upon by machine tools that not unfrequently occur upon removal of scale, all indicate that notwithstanding the rigidity, hardness, and tensile strength of steel, its molecular condition within certain limits is that of great mobility. That is to say, within molecular distances its molecules are capable of much greater activity than the molecules of very much softer and weaker metal—lead, for example.

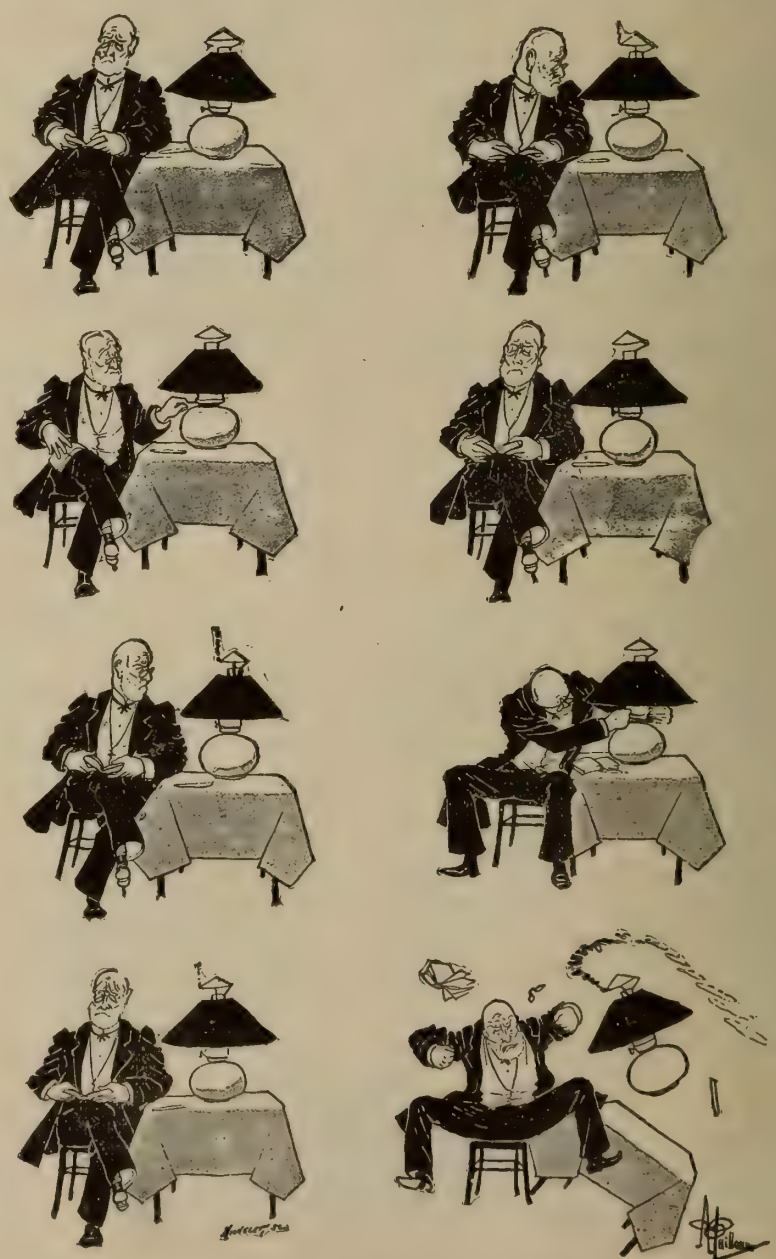
Analogous changes are observed in other solid materials, of which glass may be cited. It is a well-known fact that thermometer tubes when first blown and filled, do not retain exactly their original form. Molecular changes take place in time that require to be allowed for, to secure accurate determination of temperature. Most thermometers thus in time tend to register 1 to 2 degrees C. higher than the actual temperature. This is caused by a contraction of the glass. When glass is heated it never contracts to quite its original volume again on cooling. Glass also is found to expand unequally.

This sensitiveness of molecules under changes of temperature is so pronounced in steel that heating and subsequent cooling almost invariably produce a greater or less change of form in anything made of steel. In tempering tools this difficulty often becomes very perplexing where accurate form is essential. Of course, to produce changes of form that can be measured temperature changes of considerable magnitude are necessary; but the effect of lesser changes must be the same except in degree. We must, therefore, look upon steel as a metal in which the molecules are in a highly active state and capable of assuming different physical relations to each other, such changes being more or less permanent, according as they affect the homogeneity of the mass. In the case of the cracking of bar or plate steel, the activity of the molecules has pulled apart some of them beyond the limit of their normal cohesive attraction. Such cracking frequently occurs in glass. The writer once witnessed the spontaneous shivering into pieces of a wineglass standing entirely untouched upon a table where a party was seated at dinner. This final shattering was undoubtedly the effect of molecular strains gradually accumulating in the material.

It would seem that some systematic investigation of spontaneous changes liable to occur in steel in the lapse of time without external cause might be profitable. At least it is desirable that the belief in such changes now based principally upon shop lore, may be brought to the test of scientific methods, and its truth or falsity thoroughly demonstrated.—Iron Age.

Colorado is coming to rank high as a coal producing state, and it is probable that her coal resources will eventually prove a more important and valuable factor in the progress and prosperity of the state than her famous silver wealth. The coal output last year was 3,770,000 tons, worth over $15,000,000, and the number of miners now employed in the coal mines throughout the state exceeds 8,000.

The Pittsburgh Lamp.



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Write for a sample assortment of styles. They will only cost you $3.55 and will save you this sum many times over. All our own make.

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Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

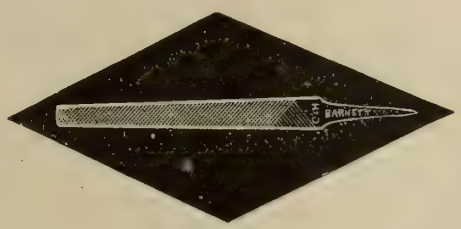
H. D. SIMMONS

MANUFACTURERS' AGENT,
85 York St., Rossin House Block, Toronto

REPRESENTING:
Peck, Benny & Co., Montreal,
Alex. McArthur & Co., Montreal.
J. L. Goodhue & Co., Danville, Que.,
Shepard Hardware Co., Buffalo,
Etc.

Orders and correspondence promptly attended to. - - -

BLACK DIAMOND FILE WORKS,



21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

—MANUFACTURERS OF—

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES.
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
CLIMAX SAWFILES. LIGHTNING SAWFILES.

—AND—

EVERY OTHER DESCRIPTION OF SAW FILES.

GORDON CROWN GALVANIZED IRON,

(2nd to none in the market.)

CRESCENT GALVANIZED IRON,

(Cheap, but good quality.)

M.L.S. CHARCOAL TIN PLATE,

(Superior to Bradley.)

BAR AND WIRE SOLDER,

In Strictly and Standard half-and-half. . . . . .

WRITE FOR PRICES AND GIVE THE ABOVE A TRIAL

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, Toronto.

ENGLISH HOUSE: SAMUEL, SONS & BENJAMIN,
164 Fenchurch St., London, E.C

BUSINESS CHANGES.

SALES MADE OR PENDING.

Dixon & McLean, dentists' supplies, Montreal, have dissolved.

W. J. Bigelow, tins and stoves, Marmora, has sold out to Albert Green.

W. Hudson, carriage maker, Roslin, is out of business and has gone to Belleville.

The Canada Crockery Importing Co. of Montreal is applying for incorporation.

Webster Bros., cement, etc., Montreal, has dissolved.

Bunston & Torell, blacksmiths, Walkerton, have dissolved, H. Torell continuing.

E. L. Smith & Co., hardware, Banff, have dissolved. J. J. Fergusson continues.

Neelin & Storey, blacksmith, Deloraine, have dissolved, J. W. C. Neelin continuing.

The general stock of Ducharme & Noel, Capeton, Que., has been sold at 52 cents on the dollar.

J. A. McClellan, sewing machines, etc., Orangeville, has sold out to Oliver McClellan.

Adams & Ashley, general merchants, Walkerton, have dissolved, E. A. Adams continuing.

Jones & Redmond, agricultural implements, Deloraine, have dissolved, E. Jones continuing.

The store of Wright & Co., manufacturers mantels and art wood-work, is advertised for sale by tender.

The hardware stock of McMahon Bros., of Kingston, has been sold to Finlay & Rysdon at 75c. on the dollar.

The style of the C. J. Smith Co., of Toronto (Ltd.), has been changed to the Standard Fuel Co. of Toronto (Ltd.)

A. Guertin and Henriette A. Lemoine have been registered proprietors of Guertin & Cie., manufacturers of wire fencing Montreal.

Mr. John Ackert, of Ingersoll, who has carried on a large and successful business as pumpmaker for over twenty-five years, has disposed of his business to his son, F. A. Ackert, of London.

FIRES.

G. Stevens, general merchant, Enniskellen, has been burned out.

The Rathbun Company's saw mill at Campbellford has been destroyed by fire; loss $6,000.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

Peter A. Kelly, lumberman, Cambridge, has assigned.

John Winton, dealer in oil, Petrolea, has assigned to Charles Egan.

N. A. Madsfield, general storekeeper, Cowansville, Que., has assigned.

Charles Duke, contractor, Montreal, has been asked to make an assignment.

J. P. Binbridge, carriage maker, Walton, Ont, has assigned to Robert Broddy.

H. Burton, furniture dealer, of Ottawa, has compromised at 45c. on the dollar.

S. S. Edsall, hardware dealer, Bowmanville, is offering to compromise with his creditors.

H. Lindop, proprietor of a pianing mill at St. Thomas, is offering to compromise with his creditors.

R. W. Wright, general storekeeper, Palmerston, is offering to compromise at 25c. on the dollar.

George Hutchinson & Sons, general storekeepers, Alliston, have called a meeting of their creditors.

George Hutchinson & Son, general storekeepers, Alliston, are offering to compromise at 80c., secured.

R. W. Wright, general storekeeper, Panerston, has made his creditors an offer of 50c. on the dollar.

J. & N. Dow, general storekeepers, Port Daniel, Que., are offering to compromise with their creditors.

Charron & Raceiot, general storekeepers, Windsor Mills, Que., have been asked to make an assignment.

David Favre, coal dealer, Montreal, has been asked to make an assignment for the benefit of his creditors.

The assignment of W. McKenzie, general dealer, Port Rowan, has been transferred to C. B. Armstrong, London.

Frank H. White, tinware manufacturer, Souris, P. E. I., has made an assignment of the machinery, fittings, etc.

J. W. McDonald, of Carleton Place; Alex. Gibson, of Kilwaui; G. W. Bell, of Vars, Ont., all general merchants, have assigned.

The firm of Burpee, Thorne & Co., wholesale and retail hardware, St. John, N.B., have suspended payment. The liabilities are large.

George Hutchinson & Sons, general merchants, of Alliston, are said to be financially embarrassed and they are conferring with their creditors.

G. L. Lemiere & Frere, general merchants of Drummondville, Que., have persuaded their creditors to accept 40c. on the dollar in lieu of 100c.

Pierre Drapeau, a general storekeeper at Sherbrooke, has assigned, and Joseph Fortier a Magog grocer has been compelled to follow his example.

General storekeeping has not proved profitable to Robert McIntyre, of Courtright, and he has handed over his stock to the care of M. A. Saunders.

R. Douglass a St. John, N. B., grocer, has been asked to assign, and D. S. Duplisir, general storekeeper, Fracey Station, N. B., has already done so.

A. O. Belodean, general merchant, Kingsey Falls, Que., has compromised at 50c. on the dollar; and D. Thibault, in the same line of business at St. Phillippe de Very, has got 60 cents on the dollar knocked off his account

J. O. Brunet, general dealer, of St. Come, Que., is offering to compromise at 40c. on the dollar; Lebee & Co., in the same line of business at Ste. Flavier, want their creditors to accept 5c. less than this sum; while W. Hyman & Sons, of St. Grene, are merely reported to be asking for a composition.

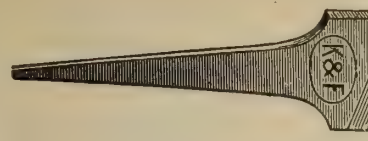
The creditors of Wm. McDowall, sportsmans, supplies, King street west, this city, have ordered the estate to be wound up and the stock will be sold by auction March 7th, Mr. McDowall has been in business some years. Liabilities—Ordinary, $6,658.68; preferential claims, $285.12. Total, $6,943.80. Assets—Real estate, $700; stock, $3,489 51; shelf furniture, etc., $655; other, $501.10. Total, $5,345.61.

THE U. S. CUTLERY TRADE.

A large Philadelphia hardware firm recently made this deliverance regarding the cutlery trade:

"It is safe to say that the present tariff on cutlery has at least eighteen months of life from present date. Further, it is a well-known fact that many styles of German pocket cutlery are placed before the consumer at the present time at no higher rate than before the passage of the present bill, and a further number of styles are not over an advance of 5 per cent. As an illustration we are to-day selling pocket knives at $1.25 to $1.50 per dozen; other knives that come within the limit of the tariff, from $4 to $4.50, and others which we sell at from $8 to $8.50, on which there has been no advance. There are certain pocket-knives which come between these rates, on which there is variously 5 per cent., 7 1-2 per cent. or 10 per cent. advance per dozen, making from 3c. to 6c. a pocket-knife advance. This is owing to the reduction of wages in Germany. As a further illustration we would state that we ourselves have imported a two-blade pocket-knife which, prior to the present tariff, cost in Germany 85c., at a reduction of 20c., making the former cost there 25 per cent. advance over present cost; also a knife formerly costing in Germany $1.85, to which add 50 per cent., making $2.75 net in this country; since the existence of the present tariff these have been bought in Germany at $1.50, to which add the present tariff of 50 per cent., making 75c. and 50c. for the export price per dozen for two blades, the three amounting to $2.75, being the same cost exactly in this country as the old price in Germany made them cost in this country. The advance on higher grades of American pocket cutlery anticipated by the American manufacturers in most cases has not taken place owing to foreign competition. Some of the American manufacturers, who have made cheaper quality of cutlery to compete with Germans, have on some styles of goods advanced materially, but the better class of manufacturers (one of whom is represented by ourselves) show only an average advance of 5 to 7 1-2 per cent. In this connection we feel safe in making the prediction that when the change in the tariff is effected by legislation, the English and Germans will advance their price in England and Germany to the price that existed before the present tariff went into effect. They will be quite unwilling to work at the starvation wages at which they have recently been compelled to eke out a miserable existence. Therefore, it can be seen that no sensible dealer will indulge in the erroneous views of reducing his stock of pocket cutlery at the expense of his business. The orders placed by ourselves for foreign cutlery are equally as large as any orders ever placed by us in previous years, and were placed in view of the facts of the case as given above."

OFFICES: 100-102 Reade St., New York, U.S.A.



KEARNEY & FOOT CO

WORKS: Paterson, New Jersey, U.S.A.

Manufacturers of FILES AND RASPS.
Superior quality fully guaranteed.

CAPACITY OF WORKS: 1,200 doz. per day.



Illustrated Catalogue Price Lists mailed on application.

PLEASE MENTION THIS PAPER WHEN WRITING US. Agents, M. & L. Samuel, Benjamin & Co, Toronto.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C.I.F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer



ELECTRICAL
HOUSE -:- FURNISHINGS.

Bells,
Batteries,
Push Buttons.

The largest and best assorted stock in Canada.
Send business cards for discounts.

T. W. NESS,
749 Craig St., MONTREAL.

THE BEST
English Sporting Gunpowder
USE THE
"ALLIANCE"
PRIZE POWDER
—Made only by—
Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.

Always obtainable from
Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.

Wm. Clendinneng & Son.

Iron Founders and Stove Manufacturers

Makers of the "Etna" Hot Water Boilers, Soil Pipe and Fittings, Stable Fixtures, Machinery, Builders and Special Castings

WRITE FOR ESTIMATES

WORKS: Cor. William and Inspector Sts., . OFFICE and WAREHOUSE: 145 to 179 William Street .

MONTREAL

..WIRE..

GALVANIZED, ANNEALED, OILED AND FENCING

Best quality, even weights, prompt delivery of import orders, lowest prices, write for quotations.

A. C. LESLIE & CO.

MONTREAL and TORONTO

OUR SALES FOR

"BURHAM" Portland Cement

For the past 8 months has been

25,499 CASKS.

"BURHAM" Brand outranks all others Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA

MUNN'S LIQUID GLUE

IS THE BEST.

Kennedy Bros., Agents

101 Bay Street, TORONTO.

Established 1864.

CLARKSON & CROSS,

CHARTERED ACCOUNTANTS

NO 26 WELLINGTON ST. EAST

E.R.C.Clarkson,F.C.A.
W. H. Cross, F. C. A.
Edward Still.
John F. Helliwell.

TORONTO, ONT.

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.

CALVANIZED SHEET IRON. SP

FOREIGN CORRESPONDENCE.

Letters translated from or written in any foreign language.

I. H. CAMERON, 10 Front St. E

CURRENT MARKET QUOTATIONS.

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	23, 23½
Strip "	24½, 25½

Tin Plates—*Charcoal Plates, Bright.*

	Per box
M.L.S. equal to Bradley	
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 75 5 00
I.X., "	5 75 6 00
I.X.X., "	6 75 7 00
I.XXX., "	8 75 9 00
D.C., 12½ x 17	4 25 4 50
D.X.,	5 25 5 25
D.X.X. "	6 25 6 50

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be urchased of 25c. box.

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65,	

Tinned Plates

72x30 up to 24 gauge	6¼ 6¾
26 "	6¾ 7
28 "	7¼ 7¾

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$2 05	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
-inch	13½

Steel Boiler Plate.

¼inch	$2 45
16 "	2 35
¾ " and thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2¾, 2¾
26 "	2¾, 3
28 "	3 , 3¼

Canada Plates.

Blaina	½ bright	2 75
Abercarne		2 75
Lion		

Iron Pipe.

Wrought 62½ p. c. to 62½ p. c. and 5 p.c. Galvanized, 37½ to 40 per cent.

Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4¼ 4⅜
" ⅜ " "	4⅜ 4⅝
" 7-16 " "	4¼ 4½
" ½ " "	3¾ 4
" ⅝ " "	3¼ 3⅜
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 14 0 14½
Lake Superior	0 13 0 13¼

Bolt or Bar.

Cut lengths, round, ¼ to ¾ in	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20 0 22
" 35 to 45 " "	0 19 0 20
" 50 lb and above per lb	0 18 0 19

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 05 0 05½
Domestic "	0 04½ 0 05

Zinc Sheet.

5 cwt casks	0 06 0 06½
Part casks	0 06¼ 0 06½

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03½
Bar, 1 pound	0 05
Sheets, 2½ lbs, per square ft, by roll	0 04⅜ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04⅜ 0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 17 0 19
Standard	0 16 0 18
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½ 0 14
Other makes "	0 13 0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per lb	
No. 1 Do "	
No. 2 Do "	
No. 3 Do "	

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.c cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
Venetian Red (R.C.2) " "	1 50
Venetian Red, (best) "	1 80 1 90
English Oxides per cwt	3 25
American " " "	2 25
Canadian " " "	1 75
Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure,	
8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 65
Extra "	1 00
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 90
No. 1 Carriage "	1 50
Gold Size Japan "	1 40
Pure Orange Shellac "	2 00
Hard Oil Finish "	1 50

Linseed Oil (in bbls)

Raw, per gal	0 59 0 61
Boiled "	0 62 0 64

Turpentine (in bbls)

Selected Packages, per gal	0 53 0 55

Castor Oil.

Best, per lb	0 07½ 0 08½

Cod Oil.

Cod Oil, per gal	0 48

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet makers	0 17 0 18
White	0 16 0 17
London Town	0 7½ 0 08½
Gelatine	0 22 0 27
Stripped	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer-
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ¼ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50, 50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, eaca 2 00 5 00

House

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 30 to 35 per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 5 to 65 & 5 pc.,
Loose Pins, " 65 to 65 & 5 pc.,
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c:

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 40 to 45 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c:

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.40	2.70	2.00	
26 to 40	1.50	2.90	2.25	
41 to 50		3.30		5.00
57 to 60		3.60		5.50
61 to 70		3.90		6.00
71 to 80		4.50		6.75
81 to 85		5.20		7.50
86 to 90		5.90		8.50
91 to 95				9.50
96 to 100				10.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb . 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05
Screw and Strap, per lb .. 0 03¼ 0 04½
Per doz. sets
Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.
Per doz. pairs
Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

BOWMAN, KENNEDY & CO., London, Ont.

WRITE US FOR PRICES ON THE FOLLOWING SPRING GOODS:

Spades and Shovels. Mixed Colors. Cut Nails.
Harvest Tools. Dry Colors. Wire Nails.
Linseed Oil. Paris Green. Fence Wire.
White Lead. Windsor Green. Wire Cloth.

And We will give you Closest Prices and Best Terms.

Wrought Hooks and Staples, Amer dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padock, Am. per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
ronze, Berlin, per doz .. 2 75 3 25
ronze, Gem, " 6 00 9 00
ava " 8 75 10 00
hutter, porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Finsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   - Basis—50 to 60 dy 2 30
   - 40dy 2 35
   - 30 dy 2 40
   - 20, 15 & 12 dy 2 45
   - 10 dy 2 50
   - 8 & 9 dy 2 55
   - 6 & 7 dy 2 70
2. American Pattern Only
   - from 4 to 5 dy 2 90
   - 3 dy. (lath) 3 30
3. Canada Pattern Only
   - from 4 to 5 dy 2 80
   - 3 dy. (lath) 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz..... ... 2 25 .3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Star R & L Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... .... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 65½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	22	25
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 0 75 0 85
" N P. " 1 00 1 10

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.
Hack, complete, each.... 1 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P,, 70 per cent.

Sheaves

Sliding Door, per set 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, p. gro. 1 65 5 50
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia ½ gross boxes..... 3 25
" ¼ and ⅛ gross boxes per gross net cash 12 00

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross	7 50	12 00
Dessert " ..... "	21 00	.....
Table " ..... "	30 00	30 00
Dessert Forks.... "	24 00	.....
Medium " .... "	27 00	.....
Table " ... "	36 00	.....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2, " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers'' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 57½ per cent.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz 1 25 2 50

Tinner's Shears and Snips

P. S. & W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ per cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application,
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Washers "Iron," 40 per cent., 4 mos., or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Iron and Steel, bright, annealed, oiled, coppered, galvanized, spring, nail, bolt, rivet, etc.
15 per cent. f.o.b Montreal, off revised list, Dec. 1, '92.
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4½ 4¾
" 4 " 4 & 6 " "
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... .... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 80 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 0
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR HOLLOW WARE

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR KNIVES, FORKS, SPOONS.

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

---

Electro Silver Plate:--



No. 34. NUT BOWL, With Ball Handle.

We are manufacturing thoroughly good, artistic, and beautiful Silver Plated Ware.

The designs are new and sightly, popular and fast selling, and, quality for quality, you will find our prices Lowest.

Test our statements on a Trial Order. - - - -

Toronto Silver Plate Co. . . .

Factories and Salesrooms.

570 KING ST. WEST,

TORONTO, CAN.

E. G. GOODERHAM, Manager. JNO. C. COPP, Sec-Treas.

Why Handle Kalsomines?

Fifty per cent. Profit to the Dealer on . . **ALABASTINE**

All Dealers who are in the trade for money should handle the best Wall Coating on earth—Cold Water Alabastine.

Ready for use by mixing in cold water.
Nothing like it on the market.
The only goods in this line extensively advertised.
Our special advertising sells the goods without talk.
Country dealers should keep it as it sells to the general public as well as to painters.
No goods sold in Ontario by jobbers, but full stocks kept on sale in Winnipeg, Man., Montreal, Que., St. John, N.B., and Halifax, N.S.
If our travellers have not called on you, write us for tint card and prices.

ALABASTINE COMPANY, SOLE MANUFACTURERS,

PARIS, ONT.

IDEAS FOR

Hardware Merchants.

By D. T MALLETT.

CONTENTS: Starting a Hardware Store; What Hardware Dealers may Sell; Hints about Inventory; Behind the Desk; Ratio of Expenses to Sales; Retail Advertising; System in the Store; The Use of a Store Window; The Holiday Trade in Hardware; John Jones, Jr.; The Successful Merchant; Parable of a Foolish Trader; Cordiality Between Competitors; Commercial Value of a Smile; More about Advertising; Business Education; Fable of the Magnet; Why One Merchant Failed; The Other Half; Cash or Credit; Don't Get Into a Rut; The Value of Price Lists; A Store Library; Books for Hardware Men; Advertisements of Leading Manufacturers.

PAPER BOUND, - - $1.00.

Sent, post-paid, on receipt of price by

J. B. McLEAN PUB., CO'Y,

10 Front St. E., Toronto.



A. B. JARDINE & CO.

HESPLER, ONT.

- Blacksmiths' Tools
- AND
- Tube Expanders

Send for Catalogue and Price List

. . . . MILK CAN TRIMMINGS . . . .

Right Cut. Wrong Cut.





TO THE TRADE:

Please notice that the wrong wood cuts of Can Trimmings have been used in our advertisement of this season. We have both in this issue so that they may be noticed. All orders for Trimmings this year will be filled with BROAD CENTRE HOOPS.

Right Cut. Wrong Cut.





SEND IN YOUR ORDERS

Thos. Davidson & Co., Montreal

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; J. J. McGILL, Man.

WESTERN BRANCH:

Corner Front and Yonge Streets, TORONTO.

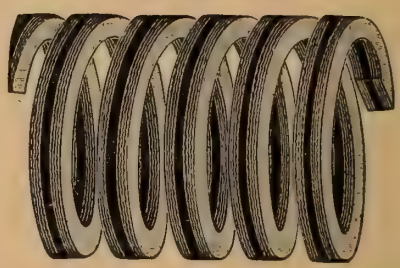
J. H. WALKER, Manager.

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical Piston Packing. Stock sizes 3-16, 1-4, 5-16, 3-8, 7 16, 1-2, 9 16, 5 8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., **Toronto.**

The cylinder centre and ends are of best malleable iron.

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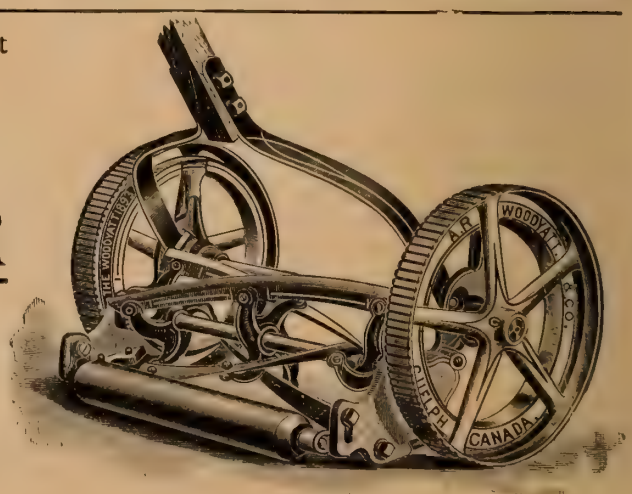
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THE "WOODYATT" LAWN MOWER

Light, Durable, and Efficient.

Now On Sale by all Wholesalers.

A. R. WOODYATT & CO. GUELPH, ONT.



CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, MARCH 11, 1893. No. 10.

NEW YORK ALUMINUM BEARING METAL CO.

NEW YORK OFFICE, N. E. Cor. Washington and Cortlandt Sts. CHICAGO OFFICE, 12 Pacific Avenue.
MONTREAL OFFICE, H. McLaren & Co., Agents.

MANUFACTURERS OF

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TRADE MARK.

"Genuine Babbit," - -	Price	30c.	per lb.	f.o.b.	New York
"Champion Metal," - -		25c.	"	"	" "
"Aluminum Bearing Metal,"		18c.	"	"	" "
"Big 4 Babbitt," - -		14c.	"	"	" "
"Pyramid Metal," - -		10c.	"	"	" "
"Mystic Metal," - - -		8c.	"	"	" "

CLOSE FIGURES MADE ON LARGE ORDERS OR CONTRACTS.

Our metals are superior to any like Babbitt Metals in the market. We Solicit Your Orders.

At Last — A Mixed Paint that can be depended upon. . . .

WE are putting upon the market our **Green Seal Brand of Liquid Colors.** We have been very slow in going into the Mixed Paint Business for the reason we were not willing to put our Green seal to any mixed paint until we were well satisfied we had a paint that would be sure to give complete satisfaction, one that could be at all times depended upon. We believe we have now hit upon such a paint and offer it to our patrons with greatest confidence.

WRITE FOR SAMPLE BOOK OF COLORS

And you will agree with us we think when you see it, that the shades are the most dainty, tasteful and suitable of any yet put up in this manner.

WALTER H. COTTINGHAM & CO., Fine Paints and Varnishes Montreal.

RICE LEWIS & SON, LTD.

FINE MECHANICS' TOOLS - -

Lathes, Bench Vises, Screw Plates, Chucks, Drills, Reamers, Etc.

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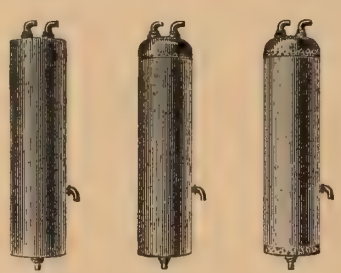
Success Water Filters, Agate Ware, Puritan Cookers, Iron and Brass - Bedsteads, Etc.

RICE LEWIS & SON, LIMITED,

TORONTO.

BOOTH'S COPPER RANGE BOILERS

Best Workmanship.



Test Guaranteed.

26. 27. 27½.

IMPORTANT NOTICE.

Consequent upon the ordinary Range Boiler failing to fill the demands of the Trade, we are making a special Copper Range Boiler, Extra Heavy, of the best Lake Superior Copper, flat bottom, top and bottom Double Riveted, with a guaranteed Hydraulic Test of 200 pounds.

This Boiler is known as

"Booth's 27½ Copper Range Boiler,"

and meets the requirements as called for in the specifications of our leading Architects.

Correspondence solicited and Price Lists on application.

THE BOOTH COPPER CO.,

Coppersmiths, 165 York St., TORONTO, ONT.

GEO. BOOTH, Proprietor, formerly Booth & Son.

40% More Sap Obtained

BY USING THE

Maple Leaf Sap Spout.



The Maple Leaf Sap Spout is made of Tinned Steel and will supply a long-felt want for a first-class article at a low price. It is a combined Sap Spout and Bucket Support.

It is guaranteed to obtain the most sap with the least injury to the tree; it only has a small bearing on the inside surface of the hole; it is made in one piece, consequently cannot be broken; the bucket may be covered if desired when using this Spout.

SAP BUCKETS.
SYRUP CANS.

KEMP MANUFACTURING CO.
TORONTO, ONT.

HARDWARE

ORGAN OF THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

PUBLISHED WEEKLY—SUBSCRIPTION $2.00 A YEAR.

Vol. V. TORONTO, MARCH 11, 1893 No. 10

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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It is currently reported that most of the principal plate glass merchants of Toronto have again reorganized their combine. Under the new order of things 35c. per cent. off will be the rule. The cause of the collapse of the original combination was the launching into the plate glass business of a new firm that would not join issue with its confreres, and if rumor is true this same firm is still occupying an independent position. At one time the combine practically had the field to itself, the two or three houses that remained outside not being large enough to materially effect it. When however the firm referred to became a competitor it was not long before its influence began to be felt. Eventually the parties to the agreement held a meeting and talked the thing over, and as a result it was decided to adopt this modus operandi: If it was thought that a customer who asked for quotations was likely to make the same request of one of the dealers in the combine the stipulated price was quoted, while, on the other hand, if it was surmised that he would go to one of the houses outside the circle a what might be termed fighting figure would be quoted.

* * *

The plate glass trade of this city has become an important one, having grown rapidly during the last few years. There are now about half a dozen houses in the trade, but out of this number some three or four practically control the business. Owing to the keenness of the competition it is generally conceded that the margin of profit is not as wide as it should be. The business is a risky one, and when a loss does take place it is usually of a heavy nature. Then in the figuring of prices there is not only a liability to make mistakes in regard to number of number of feet and freightage, but a good deal of clerical work is sometimes necessary in computing prices.

* * *

The outlook for the spring trade in hardware is favorable. A boom is not expected. What the auguries foretell is a fairly good movement, marked more by its healthy character than its volume. The farmers of the country have experienced a couple of fairly good seasons, and while the price of grain has ruled low, taking the products of the field, farm, and dairy as a whole, there is not much cause for complaint. The large number of mortgages—the fruit of previous lean years—that have been lifted is an evidence of this. If the farmers are the backbone of the country the merchants and manufacturers are the limbs. And if the spinal column is in fair condition not much fear need be entertained regarding the rest of the body. Stocks in the hardware stores are reported to be in a generally satisfactory condition and the steadiness with which the sorting up trade has been maintained, is an evidence that these reports are authentic. And while the market for heavy goods has been somewhat unsettled, owing to the uncertainty with regard to the tariff, it is now gradually recovering itself and with the opening of navigation is likely to be fairly brisk. The on the whole steady outlook for prices is another favorable feature. Merchants would do well, however, to continue to pursue the same careful policy that the exigencies of the situation during the last few years compelled them to, at the same time keeping the weather eye open for the approach of every favorable breeze in order that the best advantage may be taken of it.

* * *

Toronto city fathers have been spending much time over the awarding of a tender for a small supply of iron piping. The city some time ago asked for tenders for a given quantity of iron pipes. Among the tenderers were the St. Lawrence Foundry Co., of this city, and Gartshore, of Hamilton. The Hamilton firm's tender being the lowest was accepted by the Board of Works. When it came before the Council, however, it was sent back. And at Wednesday's meeting of the Works Committee it was again wrestled with. The result in this instance was that the plum fell to the lot of the Toronto firm. The encouragement of home industries was the plea advanced for awarding the tender to the local manufacturer. Notwithstanding the old proviso that is usually tacked on to the advertisement calling for tenders, "The lowest or any tender will not necessarily be accepted," the man who offered to undertake the required work at the lowest figure usually, all things being equal, received the award. This city has always professed to be governed by this principle, and it professes to be now, only in a slightly different way. The age is progressive, and so some of our city fathers, in keeping with the spirit of the times, must of necessity revise the article of faith relating to the awarding of tenders so as to make it read: "We believe in awarding the tender to the lowest tenderer, providing said lowest tenderer is a Toronto firm." This is at least implied by the recent action of the Board of Works. Our right to give our work to none but local manufacturers and contractors none will dispute, but if we are going to adopt the revised principle by all means let it be understood when tenders are asked for, and not put outsiders to the trouble and expense of tendering for

work which they stand no chance of getting, whether or no their figures are the lowest.

* * *

Some of the English journals devoted to the interests of the iron and hardware trade are beginning to view seriously the proposal of the Americans to send soft coal and stoves adapted to consuming it into European countries. "If the closed, or American pattern, stove will sell where our open grates and stoves find no purchasers, it is obvious that our manufacturers should meet the requirements of the would-be buyers by producing stoves in the American style, remarks one journal. "To do so might possibly be flattering to our friends on the other side of the Atlantic, but 'business is business,' and we must produce what will sell rather than what we ourselves may happen to prefer. It is important to remember, in this connection, that most other European countries have much severer winters than we have in the United Kingdom, and particularly that almost everywhere on the Continent closed stoves of porcelain or metal are in general use. With our facilities for producing and shipping and our nearness to the continental markets, we certainly ought to be able to compete with the American makers."

* * *

It is understood that Berlin and Vienna are to be the centres where the American manufacturers propose to first try the experiment. Experiment however this movement for sending American stoves to Europe can hardly be called. Several years ago a consignment was shipped to France where they found a good market. The effect was to induce France to do what British manufacturers are now being urged to do, manufacture similar stoves, and some 30,000 are estimated to have been sold.

* * *

The barbed wire manufacturers have arrived at an understanding whereby a reduction of a quarter of a cent a pound in price is to be made to the Ontario and Quebec trade. The matter has been under consideration for for some time and the original intention was to extend the privileges to a western portion of this province to be defined by certain parallelistic and longitudinal lines. In fact it had been decided so to do, and some at least of the wholesale houses had gone so far as to prepare price lists for the guidance of their travellers. The early part of this week, however, the matter was reconsidered, with the result that its application has been extended to the two provinces, as already intimated. The original agreement was a very complicated affair. The little experience the trade had with it convinced it that a list governed by geographical lines would not only be impracticable, but would be the breeder of much discontent.

* * *

Every spring and fall the wheels of commerce are more or less clogged owing to the bad condition of the country roads. The question of how best to remedy the evil has been a burning one, particularly during the past few years, in both Canada and in the United States. As yet, however, there does not appear to be any appreciable benefit. In the cities modern methods of laying permanent pavements have done much towards facilitating vehicular traffic, while in country districts much the same conditions prevail as did ten years ago. And so it will be to the end of the chapter so long as present methods are adhered to. The farmer, in performing his allotted statute labor, merely has in view the completion of his task. Much literature has been circulated regarding the matter, particularly during the last year or so. This has now been supplemented by a special bulletin issued by James A. Bell, C. E., under instructions from the Minister of Agriculture for the Province of Ontario. It looks at the question from a practical standpoint, as its title, "The Making of Roads," indicates. In its opening remarks it refers to the excellent railway facilities possessed for shipping farm produce and urges the necessity of the roads leading to these railways being placed in first-class condition. "Good roads," it says, "enable the farmer to market his produce at all times, to take advantage of changes in market prices, and to utilize time that cannot be given to other farm work; they enable him to market his produce and secure his supplies at less expense for hauling, with less wear and tear to vehicles, and with less injury to animals. The improvement of roads results in bringing more closely together the members of the agricultural community, and thereby increases the social intercourse of farmers." The writer then dives into the more practical side of the question, such as grades, foundations, width of road bed, material for surfaces, etc., adducing diagrams to illustrate how by carrying out his suggestions better roads can be secured. The bulletin is a valuable addition to the literature on this important subject, and it is to be hoped it will in time bear fruit. But much really cannot be expected in the way of better roads until either the Provincial Government or at least the county councils adopt more radical and aggressive measures. It is to the interest of country merchants to keep this idea ever before their agricultural customers as well as their own representatives in the county and provincial parliaments.

* * *

American money has never found grace in the eyes of Canadian bankers. Those in this city take the American bills over their counters on consideration of a small discount to cover cost of transporting them to the land of their nativity, it being the custom for each bank to send to the United States all the bills it has on hand when a certain amount has been reached. Silver they will have nothing whatever to do with. The entry wicket is closed against it. In the border towns and cities and in the western and newer provinces the antipathy has not been so pronounced. In fact in some places business men took it as readily as they did the legal tender of the country. Since the drop in the silver market and the attending unsettled condition of the American financial situation, not only have the Canadian banks exercised a closer scrutiny regarding the currency from across the border circulating here, but merchants who hitherto were not much concerned in the matter have developed a decided aversion to it. Some of them went to the extreme of refusing to have anything to do with it. This anti-American silverware has now reached the Pacific coast. In Vancouver, B.C., it seems that the chartered banks have not heretofore made any discrimination between Canadian and American silver, now they impose a discount of 20 per cent. on the American coin. The new regulations went into force March 1, and the bankers at Westminster will charge a similar discount after to-day. The merchants out there do not, however, seem to be in sympathy with the attitude taken by the banks. In fact they have taken a position practically in direct opposition to the banks, having, according to a despatch, decided to continue to take American silver at par and ship it to the United States. If the banks persevere in the position they have taken it seems little likely that the merchants will for long persevere in theirs. People soon get tired of doing unnecessary

work. Not only is American silver not legal tender in Canada, but there is 2½ per cent. more alloy in its composition than has the Canadian coin.

* * *

Statisticians, qualified and unqualified, occasionally turn their attention to figures regarding the proportion of successes to failures in business. One learned in the lore has just given the world the result of his investigations in the city of New York. Of every one hundred attempts in that city he says ninety-five fail absolutely. Of the other five three are so so, one excellent, and one exceptionally fine.

ADVANCE IN WROUGHT BUTTS.

An advance of about equal to 20 per cent has been ordered by the manufacturers of wrought butts. The Stanley Hinge Co., the McKinney Mfg. Co., of the United States and the Canadian Manufacturers are the parties to the agreement, and those who have subscribed to it practically control the trade of the two countries. The new list is as follows :

Narrow Fast.—1, 18c.; 1¼, 20c.; 1½, 25c.; 1¾, 28c.; 2, 31c.; 2¼, 36c.; 2½, 38c.; 3, 48c.; 3½, 22c.; 4, $1.05.

Narrow Loose Pin.—1½, 31c.; 1¾, 36c.; 2, 40c.; 2¼, 45c.; 2½, 50c.; 3, 64c.

Broad Loose Pin.—2x2, 50c.; 2½x2½, 65c.; 3x2½, 85c.; 3x3, 95c.; 3x3½, $1.05; 3½x3, $1.25; 3½x3½, $1.35; 4x3½, $1.55; 4x4, $1.65; 4½x4½, $2.15; 5x5, $2.75: 6x6, $3.80.

Broad Loose Pin,Steeple Tip.—3x3, $1.85; 3½x3½, $2.15; 4x4, $2.65; 4½x4½, $3.20; 5x5, $4.00; 6x6, $5.85.

Light Inside Blind Fast.—1, 21c.; 1⅛, 24c.; 1¼, 26c.; 1⅜, 28c.; 1½, 31c.

Light Inside Blind Loose Pin.—1, 32c.; 1⅛, 34c.; 1¼, 36c.; 1⅜, 38c.; 1½, 40c.

Back Flaps.—1, 28c.; 1⅛, 31c.; 1¼, 36c.; 1⅜, 38c.; 1½, 43c.; 1¾, 52c.; 2, 57c.

Table Hinges.—1, 26c.; 1⅛, 28c.; 1¼, 31c.; 1⅜, 36c.; 1½, 38c.; 1¾, 47c.; 2, 52c.

THE PIG IRON MARKET.

The absolute unreliability of the price of Scotch warrants as affording any guide for the actual market value of Scotch pig iron is receiving forcible illustration this spring. Owing to speculation warrants have been selling at all sorts of figures, but in the face of this offers on Scotch pig for spring delivery in Montreal are fully $1 per ton lower this year than last. This is what everyone expected from the continued depression which has characterized the British iron market for a long time now, but the question is will prices go any lower. Opinions differ on this point, and it is worthy of note that some conservative and shrewd dealers in Montreal think they will not. But although they think so no anxiety or urgency is manifested about ordering for importation, and in this connection the iron market in Montreal is more backward than last year. The generality of buyers see no reason for any hurry, and this retards business. It is possible however that the actual spot position in Montreal may lead to a change in sentiment shortly. Within the past week the founders in that city have been purchasing freely from the small stocks in store there, reducing them materially. In fact it is a question with some whether they will not be entirely ran out before the first arrivals of new importations in the spring. This fact may possible have some influence on buyers and it would not be surprising to expect more activity in pig in the matter of business for importation during the next week or so. With regard to the statistical position on the other side, it continues favorable to buyers. Stocks in public stores last week increased somewhat, the latest returns showing a total of 337,000 tons Scotch, and 33,000 tons Cleveland.

BINDER TWINE SITUATION.

HARDWARE a couple of weeks ago intimated that the National Cordage Company, in withdrawing prices, had in view the control of the market and better prices. The Cordage Trade Journal takes the same view. It says : "The withdrawal of prices by the National Cordage Company is looked upon by the majority of the trade—manufacturers, jobbers and dealers—as indicating that that corporation hopes to realize a better profit upon its binder twine business this year than the quotations made by it at the commencement of the present season would permit ; but, while the jobbers and dealers who have purchased twine hope that higher prices may be firmly established, the general opinion of the best informed men in the trade is that there is but little hope that the National Cordage Company can secure higher prices for the remainder of its product than it has obtained for the portion which has already been disposed of. The attitude of the independent manufacturers continues to be one of waiting for something to turn up to decide the present uncertainty. As the days pass by there seems to be a more confident opinion among these manufacturers that they will lose nothing by holding their product to be sold later in the season. Holding this opinion they are not seeking orders to any extent, and in reply to inquiries for prices they offer twine in a very firm way. For these reasons the independent manufacturers are almost as effectually out of the market as are their formidable competitor, the National Cordage Company, which has distinguished itself by withdrawing its quotations. In the way of quotations we hear of 8⅜c., 8½c., 8⅝c. and 8¾c. a pound being named for white Sisal twine in carload lots by independent manufacturers."

FIGURES FOR McKINLEYITES.

The British iron and steel reports to the United States for January, 1893, are given in the following table, made from the recent returns sent out by the British Board of Trade, with comparisons for the corresponding month last year :

	Tons.	
	1892.	1893.
Pig iron	3,561	3,592
Bar, angle and bolt	345	119
Railroad iron and steel	7	702
Hoops, sheets, boiler plates	395	2,805
Tinplates and tinned sheets	17,534	23,498
Old iron	697	1,326
Steel unwrought	1,823	1,487
Wire, iron and steel	157	290
Total	24,539	33,819

This shows that despite the restrictions of the McKinley tariff the exports of British iron and steel into the United States during January last were much larger than those of January, 1892, about 38 per cent. The gain was largely in tinplate and sheet iron, so that it would seem that the boasts of the tinplate men have not been carried out to their full extent. They still have to get some plate and a big percentage of their block sheets from old England. Exports of hoops and sheet iron, mainly the latter, were more than 700 per cent. larger than those of the same lines in January of last year.

PAPER BARRELS.

Among the many uses to which paper has been put in later years none seem more curious than the vessels made to hold fluids. And just as one as grown accustomed to paper pails and basins, a new industry started up, in the construction of paper barrels. By means of ingenious machinery the pulp is carried along on an endless blanket which allows the water to drain off. As it thus goes on its way the pulp is deposited upon cylinders. In about four minutes there is enough collected upon one cylinder to make one barrel, upon which being the case, the cylinder is removed and the barrel body set away in a drying room, where it remains for one day. It is then dampened again, and, under hydraulic pressure, is shaped into the regular form. Again it is dried and receives the finishing touches.—Ex.

CHEMICAL-COATED WIRE NAILS.

One of the great merits that was claimed for the wire nail at its introduction was its holding power, says Age of Steel. This has been accentuated lately by the advent of what is known as the chemical-coated wire-nail. The nail is made of somewhat lighter gauge than the average standard wire-nail, but has the same number of nails to the pound, and is sold by the count instead of by the weight. Thus a certain number of nails is guaranteed to the keg, and this number is branded on the keg, so that the user gets just as many nails as of the regular standard nails. The nail itself is coated wth a preparation which gives it extraordinary holding powers, in fact, when the nail is once driven in it is almost impossible to pull it out again. For box makers' use and for other purposes it seems to be a most excellent article.

PEAT AS FUEL.

The recent attemps to use peat in smelting iron and under locomotive boilers have been naturally looked upon with great interest in Ireland, which country has practically no coal, while one-seventh of its whole surface, or 3,000,000 acres, consists of peat bog. Dr. Emerson Reynolds, who has given much time to the study of the subject, states that peat compares very unfavorably with coal in many ways. It is five times as bulky as coal, it contains from 15 to 25 per cent of water, and seldom less than 10 per cent of ash, and, bulk for bulk, its thermal value is only one-thirteenth of that of coal. The fresh peat, moreover, contains 35 or 40 per cent of moisture, making necessary considerable expense for drying. During a coal famine some twenty years ago, Dr. Reynolds proposed converting the undried peat into gas, and this was successfully done in the shops of an Irish railway, the efficiency of a ton of peat used in this way for working up scrap iron being 60 per cent of that of a ton of coal used as gas by the same method. Since then the extraction of ammonia from gasified peat makes this process more practicable. A new suggestion is that peat shall be used in making water gas, which can be conveniently supplied for domestic and industrial purposes.

END OF THE PIG IRON CORNER.

The London Iron and Steel Trades' Journal, of Feb. 25, says: "The corner in Scotch pig iron warrants has ended, and cash warrants, after being held at 51s., have suddenly dropped again to 41s. One outcome of the movement has been an increase in the stocks held by Messrs. Connal, the cheaper kinds of makers' iron having been bought up at advanced prices, and turned into store to provide over-sold warrants. Connal's stock to-day is 351,000 tons, an increase of 9,000 tons since last week. Another effect of the action of speculators has been to double the imports of Cleveland iron for local consumption and to reduce by one-half the exports of Scotch pig iron. This is not the first occasion on which "bears" have been taught a sharp lesson, and though 350,000 tons of iron should mean a wide market, it is quite evident that the leaders of the movement have control of the whole stock. They let out small quantities to encourage outside dealings, and whenever the "bear" account is sufficiently large, they shut up the warrants and take differences in the latest instance amounting to 10s. per ton. Evidently if outsiders must speculate in warrants, the only way to avoid serious loss is to buy when the "corner" lets the market down, and share the profits when the squeezing process is resorted to. Messrs. Baird's quotations for Gartsherrie and Eglinton iron were yesterday reduced 2s. per ton.

THE A. R. WOODYATT CO., GUELPH, ONTARIO.

The history of the A. R. Woodyatt Co., manufacturers of Lawn Mowers and General Hardware, whose advertisement appears on another page is one of progress and enterprise. Starting six years ago in the premises of the old Guelph Novelty Co, with the determination to build up their business by the excellency of their goods, and by straight business methods-their succes has been phenomenal until now their goods occupy the first place in the markets of the world, both for excellency of design, finished workmanship, and quality of material. This is particularly the case with their Lawn Mowers which have already attained a world wide reputation, and which find their way into every corner of the Globe.

Of course like every successful concern they have many imitators, but as they bring out some new improvement each year, we would advise intending purchasers to be sure and get the current-years machine.

This year they are building two Mowers,



THE WOODYATT, LAWN MOWER.

This is a high class machine with 10½ in. wheel, encased gear, long compression bearings, cold rolled steel shafting, and crucible cast steel knives, rolled to special section, and properly tempered thus enabling the knives to hold a keen cutting edge much longer than any other mower on the market, in fact a machine that for durability efficiency and ease of working cannot be surpassed,—and their last years Improved Philadelphia, which was such an extraordinary success that it has been determined to keep it on the market, to meet the demand for a mower, which shall be cheap in price, and yet thoroughly reliable, and guaranteed to give good satisfaction.

This firm also manufacture Sad Irons, Saw Sets, Sliding Door Hangers, Hinges and Latches, Tree Pruners, etc. basides doing large quantities of contract work.

Their works are replete with the very latest machinery, and their hands are all skilled workmen thus placing them in a position to turn out all work promptly, and of the very best quality.

Their goods are handled by all the leading wholesalers.

GROWTH OF THE GLASS INDUSTRY.

The Boston "Commercial Bulletin," in a review of the growth of the glass industry in this country, says: "The American glass industry is comparatively young. Shortly after the Civil War the window-glass manufacture started, and has been increasing rapidly ever since. The growth of plate-glass production has been even more astounding. Not more than a dozen years ago we imported almost our total consumption from Europe, but now we do not import anything in that line except mirror plates, and that business will probably cease within a few years. When our manufacturers take more care in the mixture they use in making this glass and produce a whiter and purer material and give it the necessary finish, foreign importations will stop. There is no doubt about our manufacturers being able to do this. As for plate glass for ordinary purposes which eight or ten years ago was imported to the extent of about 6,000,000 square feet per year. American glass is of such quality and can be sold comparatively so low that it has entire possession of the market. Statistics best show this wonderful growth. Eight or ten years ago the consumption of plate glass was the amount imported, that is about 6,000,000 square feet. This year the factories of this country will turn out about 15,000,000 square feet. This branch of the business is cutting heavily into the common window glass trade. The growth of the common window glass industry has, like the plate glass industry, been phenomenal, yet it has not reached that point where the foreign product is excluded. Large amounts are imported yearly along our Atlantic seaboard, despite the fact that there is a heavy duty on imported glass. These importations are possible because of the fact that freight rates from Europe are so low and New England is such a distance by rail from the domestic glass factories, which are in the natural gas belt. Imports into Boston run quite heavy, probably heavier comparatively speaking than they do in most Atlantic coast cities, as the latter are nearer the producing centres. In 1890 the imports of cylinder, crown and window glass at this port were 15,116,789 pounds, valued at $322,481, against 17,293,154 pounds last year, valued at $349,139. For the twelve months of 1892, the imports amounted to 19,339,326 pounds, valued at $387,178. With the improved machinery that American manufacturers are continually introducing, these imports will be very materially reduced in but a few years. Greater pains should be taken in producing the fine qualities of window glass, because of the fact that considerable labor has to be expended on their finish, and this labor is cheap in France and Germany."

"Have you any more of those genuine antiques?" asked Mrs. De Porkue. "No'm," replied the dealer. "These strikes has kep' us away behind with our orders."—Washington Star.

H. S. HOWLAND, SONS & CO.,

WHOLESALE HARDWARE

37 FRONT ST. WEST, TORONTO.

"Samson" Solid Steel Spades and Shovels.

Carriage Paints . . .
Superfine Coach Colors
Varnishes . . . . .
Linseed Oil . . . .
Turpentine . . . . .

Our Pure Prepared Paints
Are the
STANDARD CANADIAN MAKE
EVERY PACKAGE GUARANTEED
SPECIAL ATTENTION AND PROMPT SHIPMENT.
THE TORONTO LEAD & COLOR CO. LTD
14 16 18 & 20 PEARL ST
TORONTO.

White Lead . . . .
Colors in Oil . . . .
Oil Stains . . . . .
Harness Oil . . . .
Carriage Top Dressing
Etc., Etc. . . . . .

MATCHES.

If the worthy gentlemen who control a monopoly of the trade in matches in the United States will give ear to reason they will improve the quality of their product, even if in so doing they have to sacrifice a tithe of their present profits. Some of the matches now sold are a nuisance because of their unreliability, while others are a constant source of danger to property, if not to life, even in the hands of careful people. A portion of these latter drop a portion of the inflammable composition invariably, and if it happens to light on combustible material a fire is pretty sure to result. Much clothing has been ruined in this way, and no end of profanity provoked. Another class of dangerous matches is the kind so highly charged with explosives that when struck a part of it flies through the air to a considerable distance, and is likely to do harm to whatever it happens to reach in its flight. At least one instance is known where the sight of eyes was lost through material from one of these percussion matches, to say nothing of less serious hurts and annoyances following their use.—Insurance World.

MANUFACTURING SPECIALTIES.

A manufacturer of a line of standard goods had been complaining of the total lack of profits in his business to a sympathizing friend, when the latter was struck with a brilliant thought, and asked, "Why don't you take up a specialty, and drop staple articles that everybody is making? The unexpected reply "There is too much competition in specialties themselves." We venture to say that this idea is as new to a majority of our readers as it was to the man who asked the question. But, with comparatively few exceptions, it is too true. The mechanical genius who can at this time devise some novelty which does not come in direct competition with something else capable of doing the same thing or answering the same purpose is a genius indeed. Take small wares, for instance, such as are used in the kitchen. The ingenuity of inventors has been racked to get up numberless devices for beating eggs, for sifting flour, for grinding coffee, etc. Appeals are mutely made by every form or apparatus to the housewife's neatness, celerity, mechanical taste or curiosity, but there are so many articles of such totally different kinds warranted to do the same thing precisely in the most satisfactory way that she is bewildered, and is as likely to select the least efficient as the best. The same remarks would apply to mechanics' tools, to personal furnishings, to waggon and carriage supplies, to so-called railway specialties, etc. There was a time when labor-saving automatic machinery began to take the place of toilsome hand labor, when a man of acute perception and mechanical knowledge could easily see an opportunity for the invention of a device which would save labor, economize time, cheapen production, and perhaps improve the quality and appearance of an article in quite common use, and the practical development of the thought brought him into prominence as a manufacturer of specialties, and perhaps in time made him wealthy, but today such opportunities are few. The ground has been pretty thoroughly covered.—Metal Worker.

At the annual meeting of the Montreal Warehousing Company held the other day the old board of directors was re-elected as follows:—Mr. L. J. Sargent, president; Mr. W. M. Ramsay, vice-president; Thomas Davidson and Roberr Wright, directors; George H. Hanna, manager and secretary.

POWDER AND MAGAZINE RIFLES.

Report of a lecture delivered before the Toronto Military Institute, Feb. 3, 1893, by L. G. Duff Grant, F. I. S., Secretary of the Smokeless Powder Co. of London.

(Concluded from last week.)

I come now to the subject of magazine rifles. The choice of a repeating rifle is a matter of as vital importance as the selection of a smokeless powder for it.

The gain of a magazine rifle, whether it be of large or small calibre, over a single loader, apart from the confidence it inspires, consists in the number of rounds that can be fired continuously through the magazine. The soldier has not at a critical moment to fumble about his pouch for a cartridge. The magazine rifle has no advantage over the single loader as regards rapidity of fire, if the firing be continued for one minute, owing to the time necessary to fill the magazine after its contents have been expended. It is stated that between fifty and sixty rounds have been fired from the single loading Soper rifle in one minute, and it is very doubtful whether any magazine rifle could attain that rate of fire. Moreover, unless special precautions were taken, the barrel would become terribly heated after one minute of such firing. Naturally, no aim could be taken under such conditions of rapidity.

The advantage of the magazine rifle is that a soldier, when the enemy are about to charge, can fire eight shots in rapid succession—or with deliberation without removing his rifle from the shoulder or seeking for cartridges, which in the excitement, he may be clumsy about seizing and placing in the breech. The magazine loader is also invaluable to a sentry against a superior body of men who attempted to rush him, and would enable a couple of men under cover to hold a bridge or any other similar short narrow defile against a company.

At the same time, in the hands of ill-disciplined, badly-commanded troops a magazine rifle "might prove a curse instead of a blessing."

It may, however, be taken for granted that the single breech-loader will soon be as obsolete a weapon for military purposes, as the old muzzle-loader now is.

Repeating rifles were first used by soldiers in the American Civil War of 1861-64, the cavalry on both sides being provided with the Winchester and Spencer repeaters. In the Russo-Turkish war of 1877 the Turkish cavalry possessed large quantities of Winchester repeaters. In 1878 the French supplied their navy with the Kropatschek repeater. In 1885 some French battalions in Tonquin were three times repulsed by a body of Chinese who were provided with a Lee detachable magazine rifle, In the same year, at the conquest of Tunis, and again in 1885-6, in Madagascar, the French used magazine rifles.

In 1886 the Austrians adopted the Mannlicher magazine rifle, and some 80,000 were manufactured and issued to the troops. The magazine holds one packet of five cartridges.

In Denmark trials have been taking place since 1883, and it is believed that the American Lee rifle, with a calibre of 0.315, or the Krag-Jorgensen will be adopted.

The French, till lately, possessed two descriptions of magazine rifles, the Kropatschek and the Gras. These being found unsatisfactory, the Lebel has finally been adopted, bored to 315, and some 350,000 have been issued.

The rifles adopted by the Germans are the Mauser, .310 bore, and also a slightly altered form of the Mannlicher.

Italy and Switzerland have taken to the Vetterli, with a bore of .409, while Turkey and China favor a calibre .433. Switzerland also has a magazine rifle known as the Schmidt.

Sweden has adopted a Remington small bore instead of the Jarmann. In the United States I understand the authorities have finally decided upon a modified form of the Krag-Jorgensen.

In the English army the reduction of calibre has been carried to an extreme point, the Lee-Metford of .303 bore having been adopted. At first it was not looked upon with favor, as it was considered too complicated a weapon for practical use, but it has now been greatly altered and improved, and in every point comes up to the standard laid down by the committee of selection, that standard being (1) strength to stand the rough usage of service in the field, (2) non-liability to get out of order, (3) easy extraction of Cartridge case after firing, (4) lowness of trajectory, (5) accuracy, (6) ease of manufacture and repair.

The following are its chief points : The breech action is on the "bolt" system and the cocking piece is so arranged that the rifle can be carried at half-cock. The barrel and rifling is as follows : Length of barrel, 30.2 in.; calibre, .303; rifling, Metford system with seven grooves ; depth, .004 in.; left hand spiral, one turn in ten inches. The magazine consists of a sheet steel box, inserted from under the body in front of the triger guard, through an opening in the body and secured from loss by a steel chain. It is held in position by a spring in the body engaging a notch on the magazine. It contains eight cartridges, and may be filled when in position in the rifle, or when detached, by inserting the cartridges one by one. A spring at the bottom of the magazine presses upwards a movable platform, forcing the column of cartridges also upwards. A "cut off" is fitted to the right side of the body which, when pressed inwards, stops the supply of cartridges from the magazine, so that the rifle may then be used as a single loader. The magazine can be removed by pressing a small lever inside the trigger guard. The rifle is provided with two sets of sights, one set graduated up to 1,900 yards, and the other from 1,800 to 3,500 yards for extreme range firing. The bayonet is a two edged sword bayonet. The weight of the rifle with the magazine empty is 9 lb. 8 oz., weight of sword bayonet, 15 1-2 oz., scabbard 4 3-4 ounces.

While reducing the bore, the committee likewise decided to shorten the sword bayonet to 12 inches.

In this they probably followed the example of Frederick the Great, who, when a minister once proposed to lengthen by two inches the sabres of his cavalry, in order that they might be equal to those of the enemy, replied : " Let my soldiers approach by two inches instead, and re-establish the equilibrium in that way." All the same experiments and combats between men with bayonets of various lengths and shapes have established the superiority of a short over a long side arm.

The bullet has a lead core, with an envelope of some other metal, a purely leaden bullet being found unsuitable as, owing to the increased velocity and the rapid twist, the barrel becomes leaded after a few rounds. For the envelope, copper, nickel and steel were tried, and the latter finally adopted. The objection to copper is that the "first shot" fired out of a clean barrel is very erratic, and the copper flies off from the lead on striking. It is possible, too, that if this bullet was used in civilized war, it would be considered as an infraction of the Geneva convention.

There can be no dispute about the numerous advantages possessed by a small bore rifle over one of a comparatively large calibre. They are these. Reduction in size and weight of cartridges, 115 rounds of the new ammunition weigh no more than 70 of the Martini-Henry: Increased accuracy and penetration. Practical absence of recoil. Higher muzzle velocity, giving a lower trajectory ; using the fixed sight a man can be struck up to 470 yards. Saving in transport of ammunition ; a greater number of cartridges can be carried in the magazine of the rifle without increasing the weight of the former.

The introduction of magazine rifles, and a smokeless explosive agent, must be followed speedily by a revolution in tactics. For were contending forces approaching each other under the tactical conditions now in vogue, one dependent on gunpowder would suffer tremendous blows from batteries whose position and distance they would be quite unable to determine except by the sound and report, and their outposts would be completely demoralized by being harassed and picked off by an unseen enemy. Their attacking line would suffer severe losses without being able to adequately inflict them on the advancing enemy. and lastly, when at close quarters enveloped in dense smoke from the rapid use of their own magazine rifles, their enemy, provided with the smokeless explosive, would have a perfectly clear front.

From what I have said, I am sure you will all agree with me that the days of black powder are numbered, and that the adoption of smokeless or nitro-powders and magazine rifles for all military purposes is only a matter of time. No doubt there are occasions during naval and military operations when the shroud of smoke produced by musketry or artillery fire has proved of important adventage to one or other or to both of the belligerents, but this smoke will have to be found from other sources.

Invention begets invention. The latest is that Colonel Crease has invented a sort of fuse or rocket case which, on ignition, gives forth dense volumes of smoke, with the idea of affecting a screen for the attack. Also, from Berlin, we learn that Professor Scheiller has improved upon Colonel Crease's fuses by inventing a machine for producing artificial smoke on a battlefield to counteract the introduction of smokeless powder, and the French have a new invention in the shape of a smoke bomb intended to be fired into the ranks of the enemy who use smokeless powder, and so obscure their view.

With the adoption of smokeless powder the duties of the guard and patrol will be made immeasurably more difficult by the absence of smoke and noise which, in the case of the employment of ordinary

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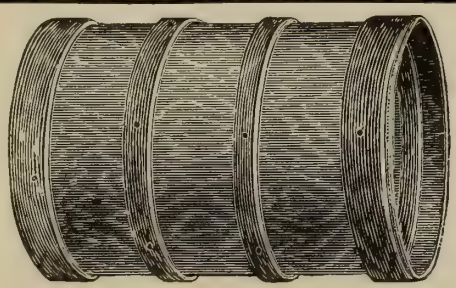
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Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

powder attracted their attention to and pointed out the position of the enemy. On the other hand it will render capital service to the franctireurs whose object is to escape from and confuse the guard.

Sudden attacks and surprises will become matters of such daily occurrence, that outposts and patrols will have to be immensely strengthened and kept at the utmost tension of watchfulness. Firing drill and discipline must necessarily be made much stricter than at present. The most important fault of the smokeless powder is, however, the terrible clearness, the overwhelming distinctness with which, when it is used in battle, every men will be able to see the carnage and slaughter around him. Hitherto, the heavy roll of the firing has mercifully smothered the cries and shrieks of the wounded, the cloud of powder smoke has veiled the horrible sight of men piled in heaps dying and dead, their dreadul sufferings, their agonized end. Each man fighting behind a thick fog of smoke, which was only wafted aside now and then by a gust of wind, or lightened by a pause in the firing, felt a certain sense of screened security, mistaken indeed, but none the less reassuring, until he himself was struck by the fatal bullet. How will it be in the future? The fall of each man who is shot down will be clearly seen by his comrades, every cry of anguish will be heard by half the company, the least hesitation, the least vacillation, which, through the rapid change of commander, that a death or a severe wound often renders necessary, will be immediately observed by the men and rob them of that feeling of perfect confidence they ought to have in their officers. On the other hand, the advantages of smokeless powder may be summed up. The demoralizing and bewildering effect on the corps exposed to infantry fire, and the difficulty experienced by the enemy in determining the distance and direction whence the fire comes, the increased certainty of aim arising from the absence of smoke from their own fire, especially in the case of artillery, where it enables at least three times as much to be fired as with the old powder. For the defence, it is an inestimable boon; for the attack, it means certain death.

A BIG INSURANCE CASE.

An important insurance case that has been interesting a number of companies very closely was settled in this city Monday. The action arose over a fire which took place in the wholesale crockery warehouse of James A. Skinner & Co., 58 Wellington street west, Toronto, on May 19,1892. There were sixteen companies involved in the loss, which, shortly after the fire, was appraised by Messrs. Lewers and McMahon at $26,610. The companies regarded this amount as excessive, and Messrs. E. R. C. Clarkson and Cross, accountants, were called in, and, on going through the books, reduced the previous amount to some $23,200. Seven out of the 16 companies settled on this basis, viz: Western, Imperial, Manchester, City of London, Connecticut, Commercial Union, Guardian. The nine other companies decided to contest the claim, and an action resulted between the Skinners and the contesting companies, which were: North British and Mercantile, Quebec, Mercantile, Lancashire, Hartford, Scottish Union and National, Fire Association, Aetna, Caledonian, the plaintiffs claiming the amount of the first appraisement, the total of which was $26,610. On the matter coming for trial before Judge Rose in January last an order in accordance with agreement between the parties was made practically setting aside the first appraisement and referring the differences to three arbitrators, Judge Morgan, J. H. Flock, Q. C., London, and S. G. Beatty, Toronto. The arbitrators commenced on the 15th inst., Mr. Wallace Nesbitt representing the plaintiffs, and Mr. E. B. Osler, Q.C., the insurance Companies. Monday morning the case was settled, it being agreed that the companies should pay 60 per cent. of their share in the amount of the first appraisement of $26,610, each party paying their own costs. The result is that the contesting companies pay about $1,000 less of the claim than the companies who settled without going into court.

ROADS AND GOOD GOVERNMENT.

The following from Merchants' Review is intended for American readers, but in its application it can be made to reach Canadians:

The question of the improvement of the condition of country roads is certainly receiving the attention it deserves, says our contemporary, important as it is to farmers, country merchants,and receivers of country produce. One can hardly take up a paper or magazine which does not contain either an account of a meeting of some organization for the improvement of the roads or an article emphasizing the importance of the movement. But the question of good roads is not of greater moment than the question of good municipal, or town, or county government, and yet, although good roads, like good, clean streets, may be expected to follow good government—the proper care of the public thoroughfare being one of the duties of the authorities in our cities and towns—there seems to be a great deal of indifference among those chiefly concerned, that is to say, the business men, as to the kind of government which is furnished. In most of the larger cities good paving is conspicuously absent, while street cleaning appears to be one of the lost arts. The result is that trucking or carting is made more expensive than it ought to be, while the goods of retail merchants are often injured by the clouds of dust and dirt which arise in the streets during dry weather, and enter through every crevice in the store windows and door to the greater or less detriment of the stock. The conditions of the streets of the leading cities ought to receive greater attention than usual this summer, because there is a probability of cholera making its appearance here, but how can the public expect to have clean streets with such governments as those of New York, Brooklyn, Philadelphia, Boston and other large cities. Immense sums of money may be spent in spasmodic attempts to avoid the threatened danger, but if they are misspent, as they probably will be if they are allowed to pass through the hands of incompetent and corrupt office-holders, the work will almost certainly be badly done.

Municipal government, with hardly an exception, is excessively costly in this country, and is as inefficient as it is expensive. The consequence of the waste of money in this manner is a heavy tax rate, which in turn affects the cost of living of urban communities. Rents are enormously high in most eastern cities,as many retail merchants know from sad experience, and one of the reasons is the high tax rate, for which the squandering of municipal funds in excessive salaries and other directions is responsible.

Good, yet economical government, whether in towns or cities, is certainly a great desideratum, but it will seldom be seen unless the public bestirs itself in that direction as vigorously as it seems to be doing in the endeavor to better the condition of the country thoroughfares. The trouble is no doubt that partisan feelings are allowed to interfere with movements for reform in municipal and town governments. The Democrat will not sacrifice what he deems his party principles by voting for a good candidate of Republican proclivities, and the Republican voter will have nothing to do with the Democrat who runs on a reform ticket for a city or town office. State and national elections are held at the same time as the local elections, and the issues are mixed by crafty politicians and partisan newspapers, whereas local issues should not and need not be involved in those upon which the more momentous elections are decided. Instead of local governments being adminsitered in a business-like manner by men who under stand how to transact business, and therefore in an economical and efficient way, they are placed in the hands of political machines, the managers of which are only interested in extracting as much money as possible from the taxpayers' pockets for the benefit of themselves and their hordes of followers. The system is so bad that it is wonderful the results are not worse than they really are. Good municipal and town government ought to be as dear to the hearts of the public as good roads, but the Greater desideratum is in danger of being neglected in the agitation for the lesser although still important object.

SMOKELESS COMBUSTION.

The latest mechanical novelty from Germany is an ingenious apparatus which is intended to solve the ever green problem, the smokeless combustion of coal. The coal is in the first place reduced to a powder by means of the ordinary centrifugal mills. After undergoing a certain process the dust and the air in the zone of combustion are intimately and thoroughly mixed, while the speed of the current which introduces the coal dust is diminished, so that "not even a trace of smoke is perceptible." A patent to work the contrivance has been taken out by a company, who is said to have already made contracts with a number of large commercial and industrial concerns for the introduction of its new system of firing. The invention is, it is said, "causing immense sensation" in the manufacturing community of Berlin.

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Advertisements inserted under this heading one cent per word each insertion.

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COUNTRY BUSINESS FOR SALE.—A FIRST-class general store business. Good locality, old established stand. No other store within eight miles. Is now doing an excellent business. Open for sale for one month from date only. Only responsible parties need apply. A splendid opening. Applications to be made by letter addressed to COUNTRY STORE, Drawer C, Picton, Post Office.

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W. & B. Diamond Twist Drills.



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TRADE CHAT

The Montreal new Board of Trade building will cost $570,000.

The Stratton Carriage Company of Buffalo will establish a branch factory in Toronto if sufficient encouragement is offered.

E. F. Keating, of New York, has issued a writ against the secured creditors of the Polson works for $540. It is for goods delivered after they took possession.

Fifteen and a half tons of copper, silver and nickel ore were shipped Tuesday from Sadbury to the World's Fair. Thirty tons will go altogether from that district.

Mr. Dalzell, of the firm of Folely & Dalzell, on behalf of the Paris Board of Trade, has presented a petition to the Postmaster-General, praying that better mail accommodation be granted to Paris.

Mr. Edwin H. Johnson, hardware merchant, Brandon, Man., was married at Brantford, last week, to Miss Ettie Preston, daughter of Mr. James Preston, and sister of Mr. T. H. Preston of the Expositor.

The Board of Trade of Kingsville has decided to offer the McCormick Manufacturing Company, of Chicago, such great inducements to locate there that it is expected that Kingsville will secure the coveted plum.

The Hamilton Board of Trade is in correspondence with the Richelieu & Ontario Navigation Company, with a view to getting the company to rearrange its summer programme so as to allow their boats to come to that city.

Of the 11,665 miles of street railroads in the United States, 5,939 miles, more than one-half, are operated by electricity. The balance is devided between steam,horse and cable cars. So far as electric propulsion is concerned New York is away behind the times.

At the request of the London Board of Trade, the old arrangements between the Michigan Central and the Grand Trunk will be continued for 60 days. Meantime, the Board of Trade committee will endeavor to bring about, if possible, a mutually satisfactory understanding.

The roof of the Machinery Hall at the World's Fair is one of the greatest engineering triumphs of the age. It has twenty-two spans, 368 feet in width and 206 feet in height. The roof is 1,286 feet long and it contains 13,000,000 pounds of iron. The entire roof was in place eight months after the contract was signed. The engineer, E. C. Shankland, is a young man, not yet 40 years of age.

SAD IRON MANUFACTURING.

Competition is invigorating as long as it does not pass a certain point. When it does that it becomes injurious. This latter condition has been characteristic of the Canadian manufacturers of sad irons for some time. There are but two of them, one being in Guelph and the other in Montreal, but they have been making it so hot for each other that neither have been able to glean any profits. They now seem to have reached a point where both are willing to make peace. At least rumor declares that an armistice has been signed and that the next few days will probably see an advance in prices. Mr. Jenkins, who is superintending the matter, acknowledges that negotiations were in progress, but their nature he said he could not divulge, the agreement not having been yet consummated.

NO CHANGE IN THE TIN DUTY.

A Washington despatch to the N. Y. Bulletin of Wednesday says: No change was made by Congress in the duty of four cents per pound on block tin, which takes effect July 1, 1893. Senator McPherson was allowed to report the bill favorably to the Senate with amendments early in Friday's session, and gave notice that he should ask consideration during the day. The pressure of Appropriation bills deprived him of the opportunity to bring the bill up, and it failed by the expiration of the session. The report sent out by a press association and printed in certain New York papers that the bill had became a law caused great surprise at the State Department, where no such bill has been received, and at the White House where there is no record of its presentation to the President for his approval. The duty on block tin will be four cents per pound on and after July 1.

STOVES WITHOUT FLUES.

The Popular Science Monthly for March, in the editor's table department, says in regard to this subject: There has receutly appeared a fresh illustration of "what knowledge is of most worth" in the dangers that come from the pitiful ignorance of the simplest facts of science still prevailing among presumably well-informed persons. Certain "patent fuels" have been put on sale, to be used in stoves without chimney connection, and are advertised as being entirely harmless. The natural result has followed. Gullible merchants, ministers, and even doctors have been buying them and nearly smothering themselves or their friends with the gases which must result from the combustion of any form of carbon. The makers of these fuels state that ventilation is required with their apparatus, but their customers reason: Why let in the cold air if the fuel is harmless, as stated? or they imagine that one opening from a room into a hallway secures "ventilation." Probably most of the victims of the patent fuels have read about the process of combustion, but they have not learned its nature from experiments that would make this knowledge real to them. Their education has been of the antiquated but not yet abandoned kind which substitudes the study of books for the study of things. As an explorer who tries to cross a deep river is drowned if he can not swim, so any one who lives in the present age, when natural forces are being put to service as never before, is badly off if he does not understand how to use these forces without letting them overwhelm him. Science is doing many wonderful things in these times, but its achievements always consist in employing the laws of nature, never in circumventing them.

THE EAST INDIAN JUTE TRADE.

Calcutta advices report the proceedings at a recent meeting of the Calcutta Baled Jute Association. The attention of the numerous shippers present was drawn to a proposal emanating from native balers to the effect that shippers, brokers and balers should undertake not to buy or sell jute for delivery more than two months beyond the date of sales. Also that transactions in new crop jute should not begin earlier than July 1 of each year. These proposals, which are based on the regulations of the old Balers' Association, were favorably received, and another meeting was called to discuss them. The jute season of 1892-3, it is added, will long be remembered for the severe losses suffered by all engaged in the trade, but the lesson seems to have been a beneficial one, to judge by the prosecution of remedial measures.

ENGLISH MACHINERY IN THE UNITED STATES.

The total value of exports to the United States from the Consular district of Manchester, England, for the calendar year 1892 was $12,991,998, which was an excess of more than $1,000,000 more over the value of the exports for 1891. In the one item of machinery the value of the exports amounted to $2,043,552, very largely for the textile industry. According to the statistical statement of the Treasury Department, Washington, for the calendar year 1892, the value of machinery imports for that year was $3,077,071. The Boston Journal of Commerce, in commenting on these figures says, "that it would thus appear that, taking the figures of these two distinct authorities, about two-thirds of the machinery imported by the United States in 1892 came from Manchester, England. Taking the United States statistics of machinery imports for the fiscal year ending June 30, 1892, and it appears that their value for that period amounted to $2,891,371. Over 53 per cent. of this value was represented in the machinery imports at Boston, the remaining 47 per cent. being scattered between New York, Philadelphia, and a number of other ports. In the matter of the amount of foreign machinery used in the United States, the machine shops of Manchester, England, occupy a conspicuous position toward our domestic industries. The export of card clothing to the value of $112,006.15 for 1892 to this country is also a matter of no little interest in showing the relation of the card-clothing factories of Manchester to our textile industries. This volume of exported card clothing gives to Manchester practically the control of this trade with the United States."

The Home of the Hustler

OTHERWISE the office of THE HARDWARE MERCHANT, is now the scene of great activity. The rush of trampling feet is heard the live-long day. The manager, the editors, the reporters, the advertising solicitors, the printers and typewriters have barely time to eat, so great is their desire to get out on time the Spring Trade Number of THE HARDWARE MERCHANT, and at the same time make it superior to anything ever published in America. They are going to succeed and make no mistake about it.

As this is the first Special Number of HARDWARE we are putting out, you have only our word for it when we claim something exceptionally good. We want you to place a little confidence in and believe us. It would not pay us to disappoint you, would it? It is pretty much as Longfellow says :—

"We judge ourselves by what we feel capable of doing,
While others judge us by what we have already done."

We are sorry we cannot take advertising except on the basis of our first love—cash. But on this basis your investment will be doubled.

Don't take less than a page. It may not be just, but it is nevertheless true, that the world judges a man by his appearance, and a business by its outward signs. Send in your copy at once and secure good position.

Respectfully yours,

THE J. B. McLEAN PUB. CO. LTD.

. . . TORONTO . . . .

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below, and in our Prices Current, necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, March 10, 1893.

HARDWARE.

There has been some improvement to note in the hardware trade during the past week, several small orders coming in for immediate delivery, the aggregate volume of which is fair, while other encouraging facts are the orders being placed for delivery after the usual fall of freights, which follows the opening of navigation. In the conversation several of the jobbing houses report that they are pretty busy in nearly everything. Shelf goods, such as cutlery, locks, bolts, etc., and such lines furnish a good deal of the orders, and dealers say that the indications are that supplies of these descriptions of goods in dealers hands throughout the country are not large. The movement toward city retailers is good also as they have been buying much more freely this week. In fact there is a fair opening trade doing in all lines of general hardware, and a somewhat better enquiry is also to note for the heavier lines.

The demand for pails and kettles is good also, and the call for tinware, etc., on country account is another favorable feature, it being evident that dealers are making preparations for the demand from farmers in this connection.

Builders supplies are showing more activity also, and pulley ropes, window ropes, etc. have entered a good deal in the orders that are being filled.

Nails continue quiet and there is nothing to note except a moderate jobbing call. Makers do not report any particular improvement in the matter of contracts for spring delivery.

Wire does not show any particular activity and there is very little doing in barbed wire as yet. Some small orders are being forwarded this week however on the old basis of $4.25.

On the whole the indications in hardware seem to point to a good average spring business.

PIG IRON.

There has been considerable change in the spot situation of pig iron during the week, as some of the city founders have been purchasing pretty freely of Scotch pig and the result is that the small stocks in store have been worked down to a still lower limit. One leading holder it is said has cleared out everything except his small stock of Carnbroe, and there have been other purchases. A round lot of Summerlee some 125 tons changed hands at $20 net cash, and there have been other sales of 50 ton lots of other brands at $19. In fact there is some speculation as to whether the supply of British pig on spot will be entirely worked off before any new supplies arrive. For spring delivery the feeling is easy, and offers in this connection have been made at a material shading on the above prices, the figures it is said being fully $1 per ton lower than the prices at which the first shipments were received last spring. We cannot learn however of any very important contracts being put through, for buyers are of the opinion that there is no occasion for hurry, as the position of affairs at primary markets does not warrant in their mind any urgency.

BAR IRON.

In bar iron business has not been important, but it is claimed that dispite reports to the contrary business has been done as low as $1.90 to $2.05 as to size of lot. Makers do not report much business, but frequently hope that it will pick up soon as the period for low freights comes nearer.

SCRAP IRON.

There is no change in scrap iron and prices remain nominally unchanged at $15 to $16.

SHEET IRON.

There have been some fair orders on city account for sheet iron, but the demand is not general in its character.

GALVANIZED IRON.

Builders have been filling some of their wants recently in this line, the result being the turnover of some round lots, but the movement was not sustained and trade is now quiet.

TIN PLATES.

There has been some small movement in tin plates from store on the basis of $3 20 for coke but to arrive in the spring, quotations now are $3.10 to $3.15 via the first steamer. Charcoal $3.75 to $4.25 ex store.

CANADA PLATES.

Canada plates are quiet with nothing special to note, the demand on builders account noted in our last having been satisfied for the time being. We quote $2.50 $2.60 according to quality.

TERNE PLATES.

Terne plates are featureless and unchanged with prices nominal at $7.25 to $7.75 in the absence of business.

COPPER.

There has been nothing doing in copper, which however is steady at 13 to 14c. for ingot. Sheet is unchanged.

ZINC AND SPELTER.

Business in spelter, etc., is a bagatelle and we do not note anything either in the way of business for forward delivery.

LEAD.

Lead is quiet and unchanged with very little demand to note.

ANTIMONY.

The same remarks apply to antimony, which is precisely the same as it was.

PAINTS AND OILS.

The combination between the lead and color makers has now arranged all details, and it is positively asserted that the ruin-cutting which has characterized the trade in the year past is over. Of course there are a lot of contracts to fill on a reduced basis which were booked some time ago, and the fact that they are being filled may be misleading to buyers. but the latter can gain nothing by holding off, for everyone in the trade here positively asserts that to do any new business the basis is on the price of $5.25 for Government standard, and that there may be an advance in this before long. During the week there has been some improvement in orders, and a good healthy trade is anticipated. The following is the present basis: Choice brands of paints, Government standard, $5.25; do. No. 1, $4.87½; do. No. 2, $4.50; do, No. 3, $4.00; dry white lead, 5¼c.; red lead, pure, 4½c.; do. No. 1, 4¼c., with 2½ per cent off these prices for ton lots.

Oils are steady. Linseed oil in round lots at 61c.for raw and 63c. to 64c. for boiled; smaller lots 1c. to 2c. higher. Lard, fish and other oils show a firm tone also on the whole.

GLASS.

There is no change in glass, nor is business especially active. A moderate jobbing



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FOR TWO MONTHS ONLY

A First-class Stove in every respect, with all Modern Improvements. Handsome, suitable for any family. Guaranteed to give perfect satisfaction.

We have an overstock of these Stoves, which we propose to offer our customers for two months, at the following prices and terms, subject to being unsold when orders are received.

No. 8 Square, $7.75 No. 9 Square, $8.20

Size of Oven, 17½ x 18 inches. Length of Fire Box, 23 inches. Shipping Weight, 200 lbs. Terms Cash.—F.O.B. at London.

McCLARY MFG. CO. LONDON, TORONTO, MONTREAL and WINNIPEG

MONTREAL Markets Continued.

movement is in progress at $1.35 for first break, etc., and that is all. Putty in bulk sells at $1.90.

NAVAL STORES.

A better enquiry is noted for turpentine, and an improvement is now looked for. Stocks here are light and the feeling so far is not in the least affected by the break in values in the south. Other lines of naval stores are dull and neglected. We quote: Turpentine, 54 to 55c. as to quality; in cases 55 to 56c.; rosins, $2.40 to $4.50 as to quality; coal tar, $3.50 per brl.; pine pitch $2.50; pine tar $3.50 to $3.75; cotton waste, colored, 5¾ to 5½c.; white 8 to 10c.; oakum, 5½ to 7c.; cotton oakum, 10 to 12½c.

CEMENT.

The cement market has shown some improvement in the way of a better demand from outside points for future delivery, and there seems to be every indication of a good early spring trade. For importation we do not hear of much doing, but we understand that some comparatively low offers have been made for delivery by the first steamers. Values on spot, however, are the same. We quote: English brands, $2.35 to $2.55, and Belgian $2.20 to $2.35. Fire bricks are moving out fairly well at $18 to $24 per 1000.

PETROLEUM

There is a little better demand reported for petroleum. No change is reported in the price of Canadian nor is any looked for before July, but a decline in the price of American is anticipated in the course of a week or so. We quote as follows: Canadian 12¼c. to 12½c. at shed in Montreal for round lots and 13½ for small quantities. American petroleum, 19c. in car lots, 20c in 10-barrel lots, 20¼c. in 5 barrel lots, and 20¾c for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c,; Canadian benzine, 10½c Petrola; 12½c. Montreal.

MONTREAL TRADE NOTES.

Messrs C. Leslie & Co. note an improvement in the demand for wire on account of fencing, etc.

Advices from England report continued firmness in Liverpool, the price having gone up to £22 10s.

Francis Hyde & Co. report indications of a good spring trade in cement, and drain pipe once freights are reduced.

The steel clad bath is finding more favor here with both builders and householders. Its portability is a great argument in its favor.

The founders here have been buying largely of Scotch pig during the week, and several round lots have been taken, seriously diminishing the store bed.

There have been fair enquiries for cutlery during the week, and the well known brands of Rogers & Co. have, according to Messrs. Jos. Halton & Co., met fully the usual sale.

Late advices say that the turpentine drop in the south will be fully one month late, and the fact has stiffened holders here. A meeting was held Wednesday, and although the outcome is not known, it is possible that an advance on 55c. may be decided upon.

TORONTO MARKETS.

TORONTO, March 10, 1893.

HARDWARE.

There has been a marked improvement in hardware and tinware during the week, and orders covering good assortments have been coming in freely. A better tone prevails among the dealers throughout the country regarding spring and summer trade, and the jobbers certainly anticipate a good season. Harvest tools, spades, shovels, etc, are moving quite freely for the regular summer trade. Large orders are also reported for churns, and the demand noted last week for milk can trimmings, sap buckets and creamery can fixtures continues. The manufacturers of barbed wire have reduced prices for Ontario and Quebec. Nails are in steady demand and unchanged. Certain kinds of chain are moving. Payments continue to improve, although only slightly.

WIRE—The price of barbed wire has been reduced for the whole of Ontario and Quebec by the Barb Wire Manufacturers' Association. Other fence wires remain unchanged. A good buisness is being done in this line, as the season is now approaching when this article will be used.

NAILS—There is the usual steady demand for cut nails, although the bulk of the business will not be done till after April 1, when freight rates will be lower and dealers throughout the country will purchase more in carload lots.

ROPE—There is not much doing in rope, but there is considerable cordage selling to lumbermen and vessel owners for spring work.

CHAIN—The season has opened for this line and considerable movement is reported. A good demand has developed for boom chain, but the chief enquiry seems to be for small sizes for agricultural purposes.

METALS

The metal market has been lively during the week, and the tendency of prices has been upward. In ingot tin there has been an actual advance and wrought butts are 20 per cent higher. Tin plates continue active and firmer. Bar iron is still moving fairly well and there is a little demand for the lower grades of pig iron. Galvanized iron continues in brisk demand.

PIG IRON.—There is a little demand for the lower grades. Prices are unchanged, but the tendency seems to be upward. Some of the local founders are in the market at the moment for pig to complete the work they have on hand.

Rogers, Brown & Co., Buffalo, N. Y., report the Toronto pig iron market as follows: Quite a large increase in inquiry has been noted during the week and a fair run of orders. Prices for northern irons are lower than ever before recorded, while southern iron, on account of the low prices at which they can be offered, are in considerable favor and are being largely used in this section as softeners and neutralizers with Lake Superior ore iron. We quote on the cash basis f. o. b. cars, Toronto, in bond: IX Foundry Strong Coke Iron, Lake Superior ore, $15.70; 2X Foundry Strong Coke Iron Lake Superior ore, $14.95; 2 Foundry Strong Coke Iron Lake Superior ore, $14.70; Jackson County Silvery 1, $18.00 to $18.30; Jackson County Silvery 2, $17.30 to $17.80;



Lake Superior Charcoal, $18 20; Southern Soft 1, $14.10 to $14.35; Southern Soft 2, $13.85.

TIN PLATES—Are in good demand. Manufacturers are busy and stocks held by jobbers are light. Import orders are now arriving. Prices remain firm.

SHEET IRON—A good deal of sheet iron has been moving during the week Founders, machine shops and boiler makers have been good purchasers. The most enquiry comes from the last named.

CANADA PLATES—Demand for this for shipment from stock is only limited, but a number of import orders have been taken for immediate shipment.

GALVANIZED IRON—Demand brisk, principally for Gordon Crown and Queen's Head brands. Competition among the jobbers has reduced prices somewhat, although manufacturers' figures are firm. Import orders in this line to dealers in the country are now in transit, and it is anticipated that the business will exceed that of former years, the use of galvanized iron for roofing purposes being on the increase.

BAR IRON—This line is coming out freely but the quantities are not very large, owing to the heavy freights existing at the present time.

INGOT TIN—Demand is good. An advance is announced and prices are likely to go still higher. But this will depend upon what action the U. S. Congress will take in regard to the tariff, which is due to go into force July 1.

INGOT COPPER—A good business has been done in this line during the week. The supply in jobbers' hands is limited, but supplies are expected next week. A better tone prevails on this article and the tendency appears to be towards higher prices.

ZINC AND SPELTER—Dulness is the characteristic of these articles, and prices are unchanged.

LEAD—A steady business is being done at unchanged prices, but the balance is small.

ANTIMONY—There is nothing special to note. Demand is steady at unchanged prices. The principal enquiry is for Cookson's.

PAINTS AND OILS.

Trade generally is good, although that with the city is still backward. Complaints are still heard with regard to payments. The activity and firmness of linseed oil has been the feature. There has not yet been any official notification of the association price of white lead and jobbers seem to be generally selling on the basis of 5½c. An active trade is being done in prepared paints at old figures. A steady business is being done in colors in oil at unchanged prices. Demand for dry colors continues small. A fairly brisk business is being done in varnishes at former quotations, although the market seems to have an advancing tendency. Linseed oil is still in good demand. Prices are 3c. higher, and firm. Demand for Paris green shows same improvement. Turpentine is 2c. per gallon higher, being quoted at 56c. to

MARKETS—Continued

58c. Demand has fallen off slightly, but prices are firm at the advance. Castor oil is higher in England, and present prices here are not expected to rule much longer.

PETROLEUM.

The Petrolia Advertiser in its weekly report says: "Crude remains about the same figure, $1.18½, with not very much business doing. As the spring and warmer weather approaches the drill will be at work, we are informed, perforating some of our oldest territory, and, as late developments have shown, the property owners have good reasons to warrant this policy. Drillers have very large contracts awaiting the advent of spring, and a very busy time is expected."

Following are the quotations here:—Canada refined oil, 13½ to 14c.; carbon safety, 17½ to 18c.; Canada water white, 19c.; American water white, 21 to 22c.; photogene, 25c.

GLASS.

Demand is not heavy, as most dealers throughout the country have placed their orders for import to arrive early part of June, and are only buying for immediate wants. Stocks held by jobbers are not heavy, nor is the assortment large. Spring shipments are beginning to arrive. Small advance consignments are already in stock, and larger ones are expected shortly. Quotations range from $1.25 to $1.35 for first break. This is a drop of about 10c. in new stock arriving.

HIDES, SKINS, WOOL, TALLOW.

HIDES—There is a good local demand for hides at from 40 to 60c. free of grubs, but a good many of those coming in are grubby and are of much less value than those taken off some weeks ago. We look for a decline of ½c. on this class of hides. Cured hides are quoted at 5 to 5½c. and No. 1 cows' at 5½c.

SKINS—Sheepskins are in good demand but dealers claim that the prices paid to butchers are from 15 to 20c. more than their value. In consequence of this there is a disposition to put them down by that amount; $1.25 to $1.40 is the ruling price. Calfskins are just beginning to come in and demand is brisk, and prices firm at 5 to 7c.

WOOL—The market has been cleaned out of combing fleece for the United States markets, and all white wools that can be sold at less than 20c., meet with a ready sale. South down is quoted at 28c. and selected clothing at 25 to 26c. In pulled wools, supers are quoted at 22 to 23c., extras at 26 to 27c. and No. 1 and black at 20 to 21c. There has been an active demand from the local mills for all medium-priced wools.

TALLOW—The price of rendered tallow is exceptionally high. It has however gone down in Chicago, and in the Western markets, fully ½c. a pound, and dealers are under the impression that there will be a further decline Dealers here are paying from 7½ to 7¾c. for first-class, and are selling at 8 to 8¼c. Rough tallow is readily taken up by soap makers, and the price is maintained at 3c. a pound. Caul and reeds are in good demand for making lard compound, and while the demand is maintained for this purpose prices will be kept up.

SEEDS

It is between seasons. Deliveries have been light during the last few days and the anticipated movement has not materialized. Dealers are paying $8.50 to $9 for scattered lots of red clover that are offering. In alsike the market remains unchanged, prices still ranging from $5.50 to $6.60. Some interior lots are selling below these figures, while fancy seed brings a little more. For the few lots of timothy offering $1.50 to $2.50 is being paid, while for an occasional lot of flail threshed 25c. extra is paid. From present outlook the crop of seed, especially red clover and alsike, is about marketed.

OLD MATERIAL.

We quote as follows:—No. 1 heavy cast scrap 65 to 70c. per 100; stove cast scrap 40 to 45c.; No. 1 wrought scrap 50 to 60c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c.; new light scrap copper, 8 1-2c.; heavy scrap copper 9½c.; old copper bottoms, 8c; light scrap brass 5½c.; heavy yellow scrap brass 7½c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1¾ to 2c.; scrap zinc, 2½ to 2¾c.; scrap rubber, 2½ to 2¾c.; country mixed rags, 80 to 85c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; plough shares, 60 to 65c; burnt cast scrap, 15 to 20c.; railroad iron, 60 to 70c.; malleable scrap, 25c.

TORONTO TRADE NOTES.

Ingot tin is dearer.

Barb wire is cheaper in Ontario and Quebec.

Turpentine is 1c. dearer and is firm at the advance.

The price of wrought butts has been advanced 20 per cent.

Samuel, Benjamin & Co. are sending out large numbers of daisy churns.

Some of the local dealers have been induced by the advances to import good round lots of bar iron lately.

Stewart & Wood report having got in a cheap line of yellow ochre, which sells in barrel lots at 1c. a pound.

The M. L. S. brand of charcoal tin is selling freely. It is guaranteed to be equal if not superior to the Braudley brand.

The cut nail manufacturers in the Western States have decided to adopt in future the wire nail schedule of extras in place of the list formerly in use.

The Gordon brand of galvanized iron is reported to be giving much satisfaction throughout the country, and Benjamin, Samuel & Co. report that the demand at the moment is quite active.

The English market is exceedingly strong for linseed oil, and Canadian manufacturers have advanced their prices 3c. a gallon within the last few days, raw now being worth 64c. and boiled 67c., freight allowed. Turpentine has advanced 2c. a gallon owing to a strong market in the south.

It is uuderstood that the contract for lathing the Theological College at Montreal was awarded to the Metallic Roofing Company of Toronto for Hayes patent steel lathing, and not the Bastwick Metal and Lath Co., as reported in last week's HARDWARE.

Mr. S. Buschlen's rake factory at Port Elgin is reported to have received large orders lately having necessited putting on a night force. The output per day is now 4,000 broom handles, 7,000 pails handles, hundreds of rakes and other woodenware, and gives employment to a large number of hands. The supply of hardwood logs is furnished by the farmers of the surrounding townships.

Messrs. James & Reid, is the name of a new firm of hardware merchants in Perth, and the outlook for their success is encouraging. Both are young men, with plenty of energy and experience. Mr. James was for eight or nine years with Messrs. Warren & McCarthy and Mr. Reid with John M. McMaster, all of Perth.

AMERICAN MARKETS.

New York, March 10.

Pig Tin—On the strength of reports from various sources to the effect that the measure to repeal the section of the McKinley tariff prescribing that a duty of four cents per pound on pig tin shall be levied July 1st has not become a law, prices for the metal were advanced sharply in this market and in London. Here sales were made at as high as 20.85c. for April and 20.90c. for May delivery during the forenoon. London opened with an advance of no less than 12s. 6d., while closing quotations from that centre noted a reaction to £93 10s. prompt and a rise to £93 10s. for future deliveries. Dealings there involved 20 tons prompts, and 230 tons futures, and it is the general impression that a large "short" interest has accumulated in London since the middle of last week. That New York operators have been trapped to any great extent by the misstatements regarding tariff legislation is doubtful, however, and surface appearances are that the large holders have a burden in the shape of several thousand tons of actual tin, that is more difficult to manage than are the few outstanding "short" contracts. In any event, the stock on the spot is abnormally large, the quantity due to arrive during the next thirty days is very heavy, and it would appear also that not a few large consumers and jobbers generally, have discounted future requirements to a considerable extent.

Copper—The demand continues to run along in a spiritless way, indicating that consumers not only adhere strictly to conservative policy in buying, but have little faith in the maintenance of present prices. Small parcels still come upon the market from outside sources at somewhat low and irregular prices, probably because of the peculiar conditions existing; but it is a noteworthy fact in this connection that spot stocks owned by producers have been cut down to very small proportions, and that some companies have been obliged to ship stock overland from their works in order to fulfill contracts. It is therefore a reasonable presumption that more copper has been consumed during the winter months than the reports as to business would indicate. Popular quotations at present are 12c. for Lake Superior ingot, and 11 cents for common casting brands, but small outside lots may be secured for a shade less. In the London market prices were almost stationary. Latest cables quoted merchant

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We would call the attention of all Hardware Dealers to the fact that we handle the best makes of English Bicycles sold in Canada and will allow all dealers a liberal discount on all sales. Write us for our lists and discounts. Bicycle Sundries a Specialty.

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Green Painted Screen Cloth Special Lath Cloth, Hardware Grade Cloth, Milk Strainer Cloth, Sand Screen Cloth, Honey Extractor Cloth, Fanning Mill and Threshing Machine Cloth, Etc., Etc.

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Manufacturers of
Tinners' Hardware.

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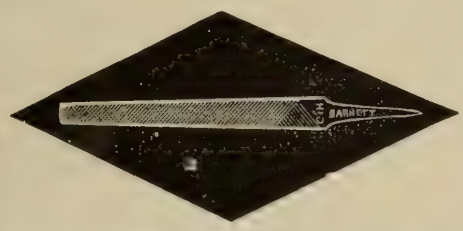
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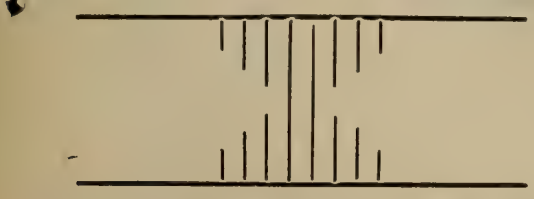
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We are just receiving the first consignment of Glass for Spring, embracing all sizes in:

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bars at £45 10s. for prompts,and £46 for future delivery, with sales for the day of 500 tons and 250 tons respectively.

Pig Lead—Somewhat more reserved offering operated to stiffen prices a trifle, and the market closed steady, although rather dull, at 3.85 to 3.90c. for common. A few single carload lots realized the top price. No change was quoted from Western or European markets.

Spelter—Demand in this quarter and from eastern consumers generally continues rather slow, but enough metal has been moved out latterly from the primary sources of supply to prompt rather more firmness on the part of smelters. For the present 4 1-4 to 4.30c. are considered close quotations on prime brands. No change quoted from the London market.

Antimony. Delay in the arrival of some steamships has caused a momentary scarcity of Hallet brand, and spot prices for the same advanced to 10 1-8 to 10 1-4 cents. Cookson's was quoted at 10 1-2 to 10 3-4c., as to size of lot, with sales moderate.

Tin Plate.—Spot goods have been selling in moderate quantities only, and slowly at that. Some orders have been placed for cokes for April to August delivery, but such transactions are of unimportant volume, and generally speaking the trade in futures is still rather backward.

Pig Iron—The past few days have witnessed no new developments in the market for foundry or mill grade pig iron in this quarter. Orders came along in about the usual way, involving a very fair amount of stock for prompt and near future delivery, yet no more than sales agents and jobbers could conveniently take care of. Prices remain about as they were last week, with the tone of the market fairly steady.

Scotch pig is selling in moderate quantities only, rather slow at that, and chiefly at former prices. Lots to arrive are quoted as follows :$21.50 to $22 for Coltness, $21 to $21.50 for Summerlee, $20 to $20.50 for Carnbroe, and $19.50 to $20 for Eglinton.

Foreign spiegeleisen and ferro manganese met with slow sale. The demand for the goods is moderate also, and, while showing no quotable change, prices lean somewhat in buyers' favor. Sellers' figures are about $25.50 to $26 for 20 per cent. spiegel and $56 for 80 per cent. ferro.

Old Material—Business has been very moderate the past few days, and the demand is at present extremely slow. Prices are without change. Iron tee rails are quoted at $17 to $17.50, steel rails at $14 to $14.50, No. 1 wrought scrap iron at $16, and machinery cast scrap at $12.50 to $13, all f.o.b. Jersey City.

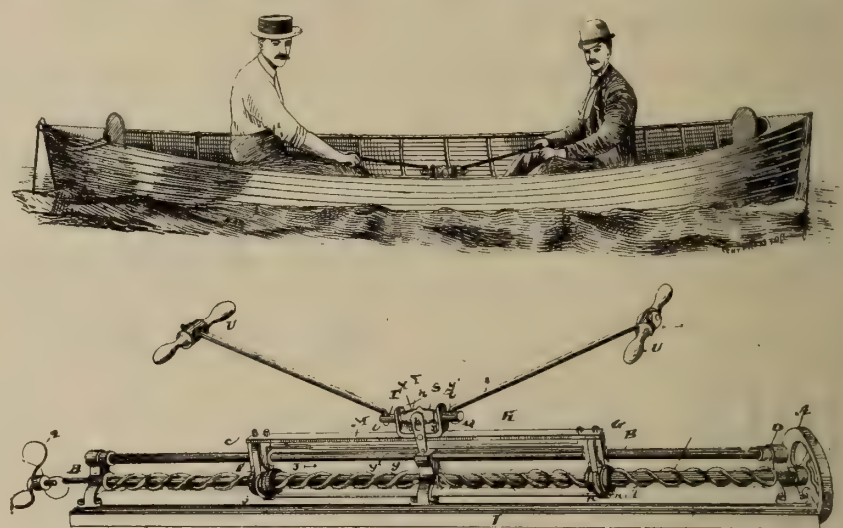
Steel Rails, Etc.—The largest sale reported in this market is one involving about 5,000 tons of 75-lb. section to the Long Island Railroad Company. The order went to the Bethlehem mill. Other business was referred to as having been confined to small lots, and moderate all told. The quotation of $29 f.o.b. mill for heavy sections is still in force. There is no change in the demand for track fastenings, and prices continue low and irregular.

Orders for architectural material are not particularly numerous at the moment, and for other heavy finished iron and steel the demand is only fair.

Iron Ore—A report of recent date from Cleveland, Ohio, says : Reports from outside sources,evidently set on foot by furnace men, has reached this market that quite large amounts of Bessemer ore have been sold for the season of 1893. But there are evidences in the report itself that it is untrue, to say nothing of the flat contradiction by parties in this market who are in a position to know if any such sales were made. It is safe to say, therefore, that no transactions in '93 ore have been closed, and, so far as can be learned, there is no immediate prospects of any—beyond the advance in the season no nearer prospects than heretofore. Whatever sales have been made have been of the unsold ores on Cleveland docks. The movement of ores towards furnaces has been quite satisfactory, and compares favorably with the movement at same time last year."

A UNIQUE PROPELLING POWER.

One of the disadvantages of rowing has been that the man at the oars has been compelled to sit with his back to the bow of the boat, necessitating his continually twisting his neck in order to avoid running someone down. The disadvantage has long been recognized and men with inventive minds have tried again and again to provide the remedy, but failure has heretofore marked each and every attempt.



After years of patient waiting the desideratum has at last been secured. And its construction is so simple that it seems strange that some inventive genius did not hit on it before. It is merely a little machine called the "Propelling Power," and its utility seems about as general as its name. A few days ago a representative of HARDWARE had an opportunity of inspecting the interesting piece in the sample room of Mr. W. W. Vardon, manufacturers' agent, 67 Yonge street, this city. The accompanying cut shows the propeller as placed in a boat. The machine occupies but little space, and can be placed in an ordinary skiff or in a yacht. It is a spirally threaded shaft journaled in suitable standards. The shaft has a right hand spiral secured to it from the centre to one end, and a left hand spiral secured to it from the centre to the other end. Then there are two internally and spirally threaded sleeves so arranged that when one sleeve is brought along its portion of the shaft so as to rotate it in one direction the other sleeve rotates with the shaft as it moves along it, but when this latter sleeve is brought along its portion of the shaft in the opposite direction it is held stationary, and continues to rotate the shaft in the same direction, while the other sleeve rotates with the shaft. The spiral is wound, while cold, in a groove on the rod that runs to the stern of the boat where is attached a small propeller. By glancing at the cut it will be observed that the machine is worked by means of two handles, which can be handled by one or half a dozen persons. The exertion required is much less than by the present method of rowing, but at the same time the rower goes through similar motions of the body. It has been put to a practical test, and was found to work most successfully, and puts considerable more speed into the boat.

No special machinery is required to construct any one part of the machine, and can be turned out by any shop that possesses a lathe. Not only is it a handy thing to have on board yachts or fishing boats becalmed, but it can be readily attached to a drilling or boring machine.

Mr. Vardon is open for negotiations regarding the sale of the English and United States patents, or for the privilege of manufacturing the machine in either of these countries.

SOMETHING NEW IN CATALOGUES.

It is the thing new that attracts the public. Walter H. Cottingham & Co., of Montreal, evidently realize this. At all events, the catalogue of Green Seal brand of mixed paints, which is ingenuity itself, is destined to demand attention. Arranged on the leaves of the catalogue, nine to a page, are some 35 tables, representing as many different colored prepared paints, thus enabling a customer to tell at a glance the paint that suits his fancy, while at the back of the catalogue is furnished a rule for estimating the amount of paint required. Messrs. Cottingham & Co. are to be congratulated upon their ingenuity and enterprise.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

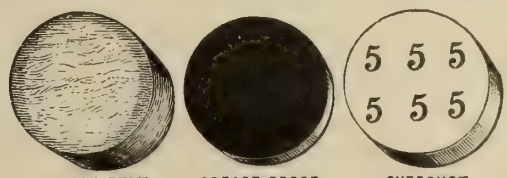
WESTERN BRANCH :

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

The Best in the Market.

BALDWIN'S



THICK FELT. GREASE-PROOF. OVERSHOT.

GUN WADDING,

For SPORTING and other CARTRIDGES. Best Hair, and Brown Felt of uniform thickness ; also Best Cloth, Field, Grey Felt, Black Grease-proof and Card Wads. Overshot Wads, printed name and number. Indented Wadding, suitable for muzzle loading guns.

To be had of all Jobbers and Dealers in Sporting Goods.

JAMES BALDWIN & SONS,

ORIGINAL MANUFACTURERS,

Morville Street, Birmingham, Eng.

Agent:--W. H. JAGGER,

24 Front Street West, TORONTO

Price Lists and Samples to the Trade Only.

GORDON CROWN GALVANIZED IRON,

(2nd to none in the market.)

CRESCENT GALVANIZED IRON,

(Cheap, but good quality.)

M.L.S. CHARCOAL TIN PLATE,

(Superior to Bradley.)

BAR AND WIRE SOLDER,

In Strictly and Standard half-and-half. . . . . .

WRITE FOR PRICES AND GIVE THE ABOVE A TRIAL

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, Toronto.

ENGLISH HOUSE: SAMUEL, SONS & BENJAMIN,
164 Fenchurch St., London, E.C

TO TRUST ON NOT TO TRUST.

We have not followed up the career of the Montana merchant who adopted the motto given below as his method of doing business; but if strictly adhered to we have no doubt the prophecy of his maxim has been verified. It might be followed with profit and peace of mind by some merchants in this section of the country.

To trust is to bust,
To bust is hell,
No trust, no bust,
No bust, no hell.

—Grocers' Monthly Review.

THE ELEPHANT SKATES.



"Ah, now watch me——



——do the outer edge——



——and that twirl——



——How does this strike you?——



——Catch on to that eight——



——Great Scott! I'm loosing my balance.—



——Confound it! I ought to have had better sense."——

A NEW NICKEL STEEL.

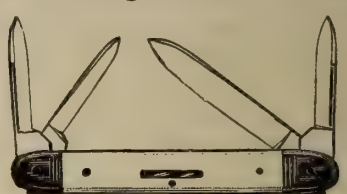
A new nickel steel, the secret of the manufacture of which has been secured by Herr Krupp, of Essen, has been experimented with at Meppen. Two 3-4 in. shells, each containing 6 oz. of picric acid, were placed, one in a gun of ordinary Krupp steel, and the other in a gun of the new nickle steel, at a distance of twelve inches from the muzzle. Upon the shells being exploded, the muzzle of the gun of ordinary steel was blown into a number of pieces, but the only effect produced upon the nickel steel gun was a local enlargement of the bore to the extent of a quarter of an inch. In the next experiment a 3-7 inch shell, containing 6.3 oz. of picric acid, was burst in a nickel steel gun at a point 19.5 in. from the bottom of the bore. The results were an enlargement to the extent of one-third of an inch and a fissure 3 in. in length. Trials of plates of this nickel steel have also been made, and have given satisfaction.

The trader who pays his way must sell at a profit, and cannot afford to cut below others in the same line.

TORONTO CUTLERY CO.,

M. MEYER, Propr.

65 and 67 Yonge Street, - TORONTO



Carry a most complete assortment of Cutlery in all branches of the Line. Our own Brands which we warrant:

Non-XLL Pocket Knives.
Imperial Razors.
T. C. Co. Scissors and Shears.

PRINTERS
Apted Bros.
TORONTO

WEDDING INVITATIONS
SOCIETY
AT HOME
VISITING CARDS
PROFESSIONAL
SOCIETY

Printed

Equal to Copper Plate or Lithography at less than one-half the cost

TRY US AND BE CONVINCED — 54 YONGE ST., TORONTO



Patented May 1892.

ROTARY BISCUIT AND CAKE CUTTER. — The most rapid Cutter made. It saves time and labour, and helps to make kitchen work a pleasure. Works easily and cuts clean. It is the fastest selling kitchen utensil on the market to-day. Trade supplied by **M. M. Vardon**, Sole Agent for Canada, 67 Yonge St., **Toronto.**

Bicycles and Sporting Goods

Enterprising Hardware Dealers throughout the country can make money taking orders for our Bicycles and Sporting Goods. We have issued a Catalogue, illustrating and describing our line of Bicycles, listing at $24.50 to $160.00. Send your bnsiness card for a copy with trade discount sheet.

T. W. BOYD & SON,

1183 Notre Dame St.,

Established 1845. MONTREAL

H. Boker & Co.

are famous for their fine quality

Razors, Scissors

—AND—

Pocket Cutlery

TRADE  MARK.

(TREE BRAND)

FOR SALE BY LEADING WHOLESALE HOUSES.

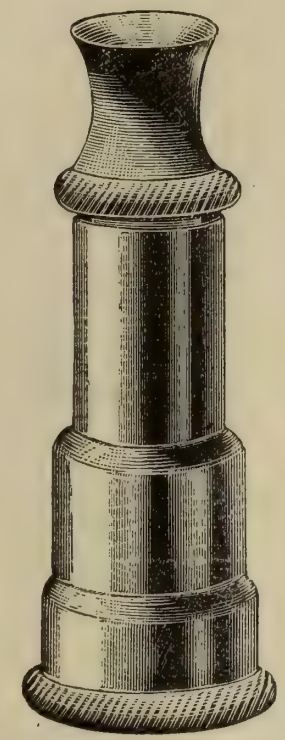


"Build to-day then, strong and sure, With a firm and ample base." — Longfellow.

DO YOU?

WISH THUS TO BUILD, an advertisement in the CONTRACT-RECORD, TORONTO will bring you tenders from the best contractors.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it

It is impossible for this pipe to get out of order.

Give it a trial and you will use no other.

Hamilton Brass Manufacturing Co.

HAMILTON, ONT.

Electro Silver Plate:--



No. 34. NUT BOWL, With Bail Handle.

We are manufacturing thoroughly good, artistic, and beautiful Silver Plated Ware.

The designs are new and sightly, popular and fast selling, and, quality for quality, you will find our prices Lowest.

Test our statements on a Trial Order. - - - -

Toronto Silver Plate Co. . . .

Factories and Salesrooms.

570 KING ST. WEST,

TORONTO, CAN.

E. G. Gooderham, Manager. Jno. C. Copp, Sec-Treas

BUSINESS CHANGES.

SALES MADE OR PENDING.

Robinson Bros., painters, Kingston, are retiring from business.

The Prince Albert Electric Light Co., Ltd., has been incorporated.

The stock of sportsmen's supplies of W. McDowall, of this city, has been sold.

James Dickson, general merchant, Austin, Man., has sold out to W. J. Stinson.

G. F. Spankway, general store, Blenheim, has sold out to Straith & Macdonald.

R. Hodson & Son, general store, Columbus, has sold out to Staback & Armour.

N. H. F. Despars, general merchants, St. Boniface, Man., has sold out to Mr. Guilbault.

The stock of Aug. Breux, general merchant, Chambly Canton, Que, is to be sold March 13.

The general store of G. W. Woodland, is to be soid by auction March 14. The grocery stock of Samuel Leggat, Nelles Corners, is advertised for sale the same day.

The general stock of Bean, Peltz & Bean, Harriston, is to be sold by auction March 10. The general stock of Malcolm McKenzie of Port Rowan, is advertised for sale the same day.

PARTNERSHIPS FORMED AND DISSOLVED.

Thomas & Mowat are opening a general store at Elkhorn, Man.

Heaman & Berley, general merchants, Alexander, Man., have dissolved.

Henderson, McRae & Co., general merchants, Acton, have been succeeded by Henderson & Co.

J. Snetsinger & Co., general merchants, Cornwall, have dissolved. G. S. Snetsinger & Co. is the name of the new firm.

REMOVALS.

C. H. Carbonneau, general merchant, Greenway, is moving to Marieapolis, Man. Flett & Baker are opening out a general store at Greenway.

FIRES.

The general store of L. J. Lambert, New Glasgow, Que., has been burned out, insured.

Taylor & Crow, hardware merchants, Welland, have been partially burned out ; insured.

A fire at Lakefield, Ont., Saturday night destroyed the Canoe factory of Strickland & Co., G. Fitzgerald's blacksmith shop, and the Lakefield Electric Light Co.'s works.

The general store at Melanchlon, owned and operated by the Patrons of Industry, has been destroyed by fire. The loss amounts to $13,000, on which there is an insurance of $7,000.

The St. John's (Que.) Stone Chinaware Company's works, owned and operated by Messrs. D. & A. MacDonald, covering a space of 300 feet square, built on the four sides, was destroyed by fire Saturday. Loss $100,000, on which there is $54,000 of insurance.

The general store of F. R. Edwards, and the G. N. W. telegraph offices and post office at Thurso, Que., has been destroyed by fire. The building was owned by George Edwards, whose loss is $3,000, partially insured. The stock was insured for $6,000, which is about covered by insurance.

Mr. J. E. Martineau's hardware store, St. Rochs, Quebec has been destroyed by fire. The fire was caused by the explosion of a lamp in the back store among oils and turpentines. The building, which was of stone two and a half storeys, was completely gutted. The loss is estimated at $25,000, on which thers is $20,000 insurance.

Fire broke out about 12 o'clock Monday night in the three storey brick building occupied as a factory by James Morrison the brass manufacturer, Mimico. The building is also used as a copper and chandelier works. There being no protection from fire the residents had to stand and watch the flame burn itself out. The loss is estimated at between $35,000 and $40,000 ; insured for $15,000. Thirty hands are out of employment.

DEATHS.

James C. Duncan, oil, Petrolia, is dead.

James M. Ferris, of J. M. Ferris & Co, general merchants, Cambleford, is dead.

From Newfoundland comes the news of the following deaths : Peter Dwyer, Harbor Grace, Bryan Mitchell, general store. St. Johns, J. B. Tobin, general store and fishing Twllingate.

Mr. Charles Gurney, one of the founders of the stove manufacturing concern now known as the E. & C. Gurney Co., died at his residence in Hamilton, after a long illness, Friday of last week. Mr. Gurney has been confined to his house since October last, suffering from organic troubles, and his recovery was not looked for. In December, 1842, he and his brother Edward settled in Hamilton, as young men, and in the following year—just half a century ago—they went into partnership in the stove business, the firm being known as E. & C. Gurney. Mr. Charles Gurney was highly esteemed for personal integrity and for those qualities which go to make a man. He took a deep interest in the welfare of the Ambitious City. Of late years he has lived quietly. He had reached the age of 74. A widow and two sons, Messrs. Charles and George Gurney, of Hamilton, survive him.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

W. D. Amble, general merchant, Avonmore, has assigned.

J. & N. Dow, general storekeepers, Port Daniel, Que., have assigned.

C. S. Ash, general storekeeper, Hastings, has assigned to J. T. Tennant.

D'Aust & McMullen, general merchants, Oak Lake, Man., have assigned.

E. A. Perrington, lumber dealers, 266 Euclid avenue, this city, has made an assignment to A. Bain.

John Burbridge, wagon maker, Malton, has assigned to the sheriff.

Charles Dube, builder, Montreal, is offering to compromise at 30c. on the dollar.

Charles Heckbert, general merchant, Commercial Cross, P.E.I., has assigned.

W. J. Kinney, general dealer, Kenilworth, Ont., has assigned to Richard, Tew, Toronto.

Stirling & McCaul, general dealers, Emerson, Man., have been granted an extension.

E. Blanchard, hardware dealer, Montreal, is offering to compromise with his creditors.

Demand of assignment has been made on J. B. Carriere, general merchant, Labaie, Que.

George Williams, general dealer, Manotick, Ont., has compromised at 50c. on the dollar.

P. Lallier, general dealer, St. Jerome, Que., is offering to compromise at 50c. on dollar.

Weldon & Ruyland, manufacturers of threshers, Mariposa, have assigned to C. W. Silver.

Henry & Co., general storekeepers, Uxbridge, have assigned to J. B. Laing, Toronto.

A meeting of the creditors of P. E. Caron, general dealers, Lennoxville, Que, has been called.

The stock of R. A. Troyer, general dealer, Oxbow, Man, has been sold at 65c. on the dollar.

Joseph Desilets, hardware dealer, Louisville, Que., is offering to compromise at 50c. on the dollar.

A demany of assignment has been made on Simeon Sevigny, general merchant, St. Flavien, Que.

Hetherington & Co., general dealers, Ayer's Flats, Que., have compromised at 60 conts on the dollar.

C. L. Heckbert, general storekeeper, Commercial Cross, P.E.I., has assigned to A. F. Bruce and P. Gordon.

William West, Yongs street, Toronto, boot and shoe dealer, has assigned. The liabilities are about $6,000 and assets are somewhat less.

John O'Donohue & Co., manufactcrers of agricultural implements, Winnipeg, have compromised at 50c. on the dollar cash.

Business is brightening up in the Prairie Province, but it has not saved W. H. Paulson & Co., hardware merchants of Winnipeg, they having found it necessary to assign.

Mr. Clarkson has been appointed liquidator to the estate of the Polson Iron Work Co. The total liabilities of the company amount to over $500,000, and the assets show a nominal surplus of $139,000. The banks interested are secured to the extent of $42,200. The assets consist of real estate in Toronto valued at $185,000, and in Owen Sound valued at $65,000. The company's plant at Toronto is valued at $85,000, and in Owen Sound at $41,500. The company's failure is chiefly due to unprofitable shipbuilding at Owen Sound.

OFFICES: 100-102 Reade St., New York, U.S.A.

KEARNEY & FOOT CO

WORKS: Paterson, New Jersey, U.S.A.

Manufacturers of FILES AND RASPS.
Superior quality fully guaranteed.

CAPACITY OF WORKS: 1,200 doz. per day.



Illustrated Catalogue Price Lists mailed on application.

PLEASE MENTION THIS PAPER WHEN WRITING US. Agents, M. & L. Samuel, Benjamin & Co., Toronto.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer



ELECTRICAL
HOUSE -:- FURNISHINGS.

Bells,
Batteries,
Push Buttons.

The largest and best assorted stock in Canada.
Send business cards for discounts.

T. W. NESS,
749 Craig St., MONTREAL.

THE BEST
English Sporting Gunpowder
USE THE
"ALLIANCE"
PRIZE POWDER
—Made only by—
Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.

Always obtainable from
Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.

Wm. Clendinneng & Son.

Iron Founders and Stove Manufacturers

Makers of the "Etna" Hot Water Boilers, Soil Pipe and Fittings, Stable Fixtures, Machinery, Builders and Special Castings

WRITE FOR ESTIMATES

WORKS: Cor. William and Inspector Sts.,

OFFICE and WAREHOUSE: 145 to 179 William Street

MONTREAL

..WIRE..

GALVANIZED, ANNEALED, OILED AND FENCING

Best quality, even weights, prompt delivery of import orders, lowest prices, write for quotations.

A. C. LESLIE & CO.

MONTREAL and TORONTO

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others Try it and be convinced. . . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA

MUNN'S LIQUID GLUE

IS THE BEST.

Kennedy Bros., Agents

101 Bay Street, TORONTO.

Established 1864.

CLARKSON & CROSS,

CHARTERED ACCOUNTANTS

NO 26 WELLINGTON ST. EAST

E.R.C.Clarkson,F.C.A.
W. H. Cross, F. C. A.
Edward Still.
John F. Helliwell.

TORONTO, ONT.

Excellent Quality! Reasonable Price!



AMS-MARS EST.

CALVANIZED SHEET IRON. SP

FOREIGN CORRESPONDENCE.

Letters translated from or written in any foreign language.

I. H. CAMERON, 10 Front St. E

CURRENT MARKET QUOTATIONS.

METALS.

Tin.

Lamb and Flag— 56 and 28 lb ingots, per lb	23½, 24
Strip "	24½, 25½

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
M.L.S. equal to Bradley		
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 25	4 50
I.X., "	5 25	5 50
I.X.X., "	6 25	6 50
I.XXX., "	7 25	7 50
D.C., 12½ x 17	3 75	4 00
D.X., "	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box.

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.	....	13 00
" " I.X.	....	16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65,	

Tinned Plates

72x30 up to 24 gauge	6½	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$2 05	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates-l-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
-inch	13½

Steel Boiler Plate.

¼inch	$2 45
16 "	2 35
¾ " and thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2⅝, 2¾
26 "	2⅝, 3
28 "	3 , 3½

Canada Plates.

Blaina	½ bright	2 75 ....
Abercarne		2 75 ....
Lion		....

Iron Pipe.

Wrought 62½ p. c. to 62½ p. c. and 5 p.c. Galvanized, 37½ to 40 per cent.

Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5¼, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4½ 4¾
" ⅜ " "	4⅜ 4⅝
" 7-16 " "	4¼ 4½
" ½ " "	3¾ 4
" ⅝ " "	3⅜ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 14	0 14½
Lake Superior	0 13	0 13½

Bolt or Bar.

Cut lengths, round, ½ to ⅞ in.	$0 22	$0 25
" round & square 1 to 2 in	0 20	0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16	0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17	0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26	0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20	0 22
" 35 to 45 " "	0 19	0 20
" 50 lb and above per lb	0 18	0 19

Boiler & T. K. Pitts.

Plain Tinned per lb	....	0 21
Spun " "	....	0 25

Wire.

Pure, in coils—		
From 1 to 20 gauge	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20	0 21
" " 27 to 30 "	0 23	0 25
" " 30 and up	0 26	0 28
Sheets, hard-rolled 2x4 ft	0 21	0 23

Zinc Spelter.

Foreign, per lb	0 05	0 05½
Domestic "	0 04½	0 05

Zinc Sheet.

5 cwt casks	0 06	0 06½
Part casks	0 06½	0 06¾

Lead.

Imported Pig, per lb	0 03½	0 03¾
Domestic "	....	0 03¾
Bar, 1 pound	.. .	0 05
Sheets, 2½ lbs, per square ft, by roll	0 04½	0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04⅝	0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)	0 17	0 19
Standard	0 16	0 18
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½	0 14
Other makes "	0 13	0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per lb	... ...
No. 1 Do "	... ...
No. 2 Do "	.. ...
No. 3 Do "	... ..

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	....	$1 20
2nd qualities "	....	1 00

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.c wt	1 35	1 40
" " (J.F.L.S.) " "	2 75	
Venetian Red (R.C.2) " "	1 50	
Venetian Red, (best) "	1 80	1 90
English Oxides per cwt	3 25	
American " " "	2 25	
Canadian " " "	1 75	
Paris Green, per lb	0 13	0 15
Burnt Sienna, per lb	0 08½	
Burnt Umber "	0 05	
do pure	0 08	
Drop Black "	0 09	
Chrome Yellows "	0 12	
" " Lemon pure, 8 lb. tins, per lb	0 19	
Chrome Greens "	0 12	
Golden Ochre	0 03½	

Varnishes (in bbls).

No. 1 Furniture, per gal	0 65	
Extra " "	1 00	
Brown Japan "	0 65	
Brown Japan, Turpentine p. gal.	0 90	
No. 1 Carriage "	1 50	
Gold Size Japan "	1 40	
Pure Orange Shellac "	2 00	
Hard Oil Finish "	1 50	

Linseed Oil (in bbls)

Raw, per gal	0 59	0 61
Boiled "	0 62	0 64

Turpentine (in bbls)

Selected Packages, per gal	0 54	0 56

Castor Oil.

Best, per lb	0 07½	0 08½

Cod Oil.

Cod Oil, per gal	....	0 48

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet makers	0 17	0 18
White	0 16	0 17
London Town	0 7½	0 08½
Gelatine	0 22	0 27
Stripped	0 16	0 17
Coopers	0 17	0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer-
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads. in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50, 50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross.....
" Sewing, " .... } 7 25 8 00

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 30 to 35 per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 5 to 65 & 5 pc.,
Loose Pins, " 65 to 65 & 5 pc.,
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c:

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 40 to 45 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb . 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05
Screw and Strap, per lb .. 0 03½ 0 04½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

BOWMAN, KENNEDY & CO., London, Ont.

WRITE US FOR PRICES ON THE FOLLOWING SPRING GOODS:

Spades and Shovels. Mixed Colors. Cut Nails.
Harvest Tools. Dry Colors. Wire Nails.
Linseed Oil. Paris Green. Fence Wire.
White Lead. Windsor Green. Wire Cloth.

And We will give you Closest Prices and Best Terms.

Wrought Hooks and Staples, Amer dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am. per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 30 per doz.
ronze, Berlin, per doz .. 2 75 3 25
ronze, Gem, " 6 00 9 00
axe " 8 75 10 00
hutter, porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   - Basis—50 to 60 dy..... 2 30
   - 40dy..... 2 35
   - 30 dy..... 2 40
   - 20, 16 & 12 dy..... 2 45
   - 10 dy..... 2 50
   - 8 & 9 dy..... 2 55
   - 6 & 7 dy..... 2 70
2. American Pattern Only
   - from 4 to 5 dy 2 90
   - 3 dy. (lath)..... 3 30
3. Canada Pattern Only
   - from 4 to 5 dy 2 80
   - 3 dy. (lath)..... 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz..... ... 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	22	25
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 0 75 0 85
" N P. " 1 00 1 10

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.

Hack, complete, each.... 1 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P,, 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, p. gro. 1 65 5 50
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia ¼ gross boxes..... 3 25
" ½ and ½ gross boxes per gross net cash..... 12 00

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 57½ per cent.

Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application,
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9

Twines.

Bag, per lb..... 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Washers "Iron," 40 per cent., 4 mos., or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Iron and Steel, bright, annealed, oiled, coppered, galvanized, spring, nail, bolt, rivet, etc.
15 per cent. f.o.b Montreal, off revised list, Dec. 1, '92.
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " " } 4¼ 4½
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4½ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 80 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 0
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS.

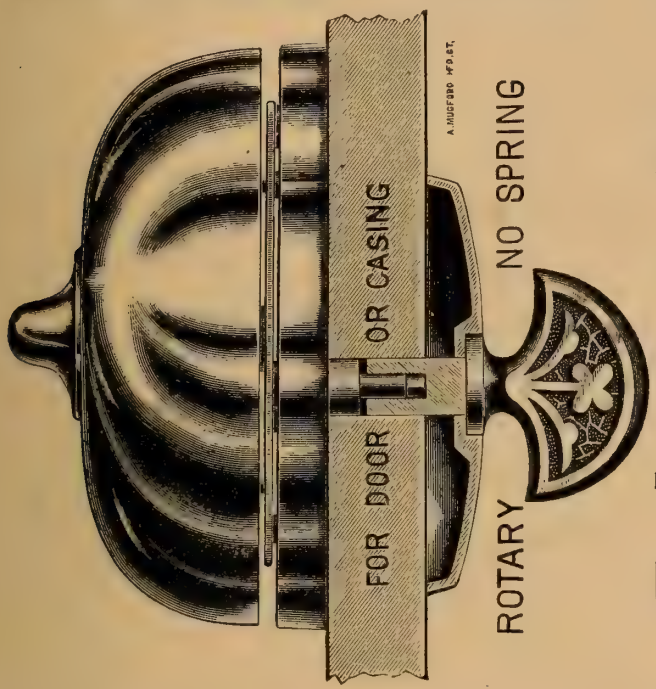
MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

NEW DEPARTURE "ROTARY" DOOR BELLS.



Incomparable!
NO SPRING!
Best Tone, (Sure)
Superior Finish!
Bronze Trimmings!
COMPACT!
CHEAP!

For Circulars, address
THE NEW
Departure Bell Co.,
BRISTOL, CONN.

Why Handle Kalsomines?

Fifty per cent. Profit to the Dealer on . . **ALABASTINE**

All Dealers who are in the trade for money should handle the best Wall Coating on earth—Cold Water Alabastine.

Ready for use by mixing in cold water.
Nothing like it on the market.
The only goods in this line extensively advertised.
Our special advertising sells the goods without talk.
Country dealers should keep it as it sells to the general public as well as to painters.
No goods sold in Ontario by jobbers, but full stocks kept on sale in Winnipeg, Man., Montreal, Que., St. John, N.B., and Halifax, N.S.
If our travellers have not called on you, write us for tint card and prices.

ALABASTINE COMPANY, SOLE MANUFACTURERS,

PARIS, ONT.

"IDEAS FOR HARDWARE MERCHANTS,"

JUST PUBLISHED

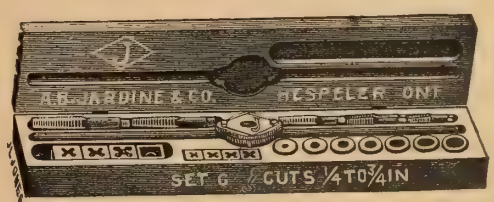
PRICE $1.00 POSTPAID.

This novel book is the only book ever written especially for Hardware men, and every Hardware Merchant will find it of decided help and of intrinsic value. It tells HOW TO ADVERTISE a Hardware Store. HOW TO DRESS a Hardware Store Window. HOW TO SELECT Seasonable Goods and HOW TO DISPLAY them to best Advantage. HOW TO MAKE a success with Hardware. HOW TO COMPETE with "Department Stores." HOW TO TURN a Credit Business into a Cash Business. HOW TO AVOID Bad Debts and Increase Trade. HOW TO SECURE Low Quotations from Jobbers and Manufacturers. HOW TO ARRANGE the Fixtures in a Hardware Store. HOW TO TREAT and Manage Clerks. HOW TO KEEP your Accounts with the Least Labor. HOW TO SYSTEMATIZE your Business and Arrange its Details. HOW TO ARRANGE Price Lists. HOW TO MEET close Competitors and HOW TO BE ENTERPRISING. HOW TO PROPERLY proportion Store Expenses, and thousands of practical hints for Hardware Merchants

"Ideas for Hardware Merchants" sent postpaid upon receipt of price.

J. B. McLEAN PUB. CO.,

10 Front St. East, Toronto.



A. B. JARDINE & CO.

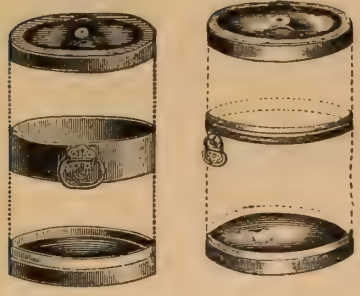
HESPLER, ONT.

- Blacksmiths' Tools
- AND
- Tube Expanders

Send for Catalogue and Price List

. . . . MILK CAN TRIMMINGS . . . .

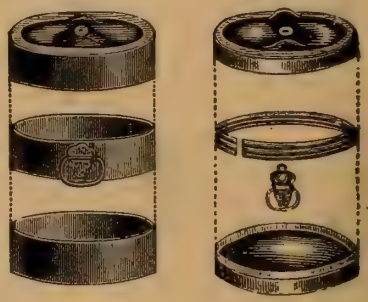
Right Cut. Wrong Cut.



TO THE TRADE:

Please notice that the wrong wood cuts of Can Trimmings have been used in our advertisement of this season. We have both in this issue so that they may be noticed. All orders for Trimmings this year will be filled with **BROAD CENTRE HOOPS.**

Right Cut. Wrong Cut.



SEND IN YOUR ORDERS

Thos. Davidson & Co., Montreal

Why don't you sell . . LAMPS



You sell Chimneys! You sell Burners! You sell Wicks! You sell Coal Oil! Why don't you sell Lamps? We mean nice Lamps? They are just as staple and a good profit!

WE HAVE SOME NICE JOB LOTS JUST NOW.

The very thing to make a trial with. Write for particulars.

Gowans, Kent & Co.

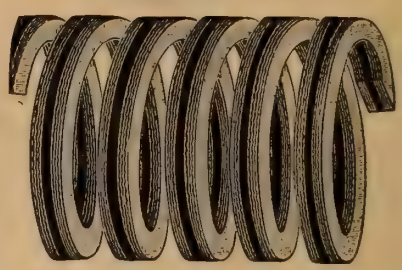
TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., Toronto.

The **shafts** are drawn steel.

. . **1893** . .

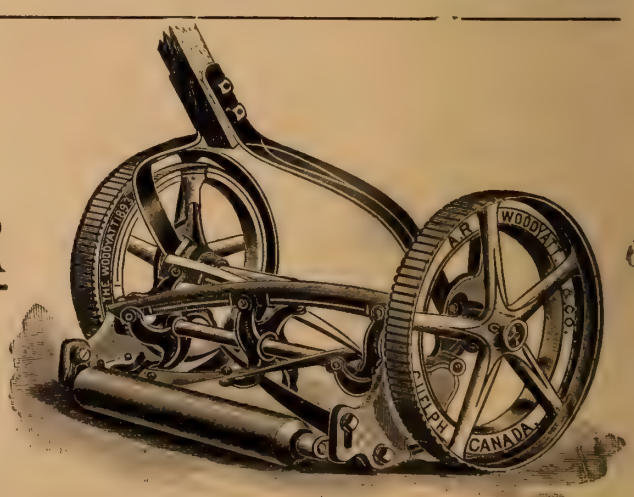
"WOODYATT" LAWN MOWER

THE

Light, Durable, and Efficient.

Now On Sale by all Wholesalers.

A. R. WOODYATT & CO. GUELPH, ONT.



CANADIAN
HARDWARE
AND METAL MERCHANT

VOL. V. TORONTO, MARCH 18, 1893. No. 11.

NEW YORK ALUMINUM BEARING METAL CO.

NEW YORK OFFICE, N. E. Cor. Washington and Cortlandt Sts. CHICAGO OFFICE, 12 Pacific Avenue.
MONTREAL OFFICE, H. McLaren & Co., Agents.

MANUFACTURERS OF

ALU

TRADE MARK.

"Genuine Babbit," - -	Price	30c.	per	lb.	f.o.b. New York
"Champion Metal," - -		25c.	"	"	" "
"Aluminum Bearing Metal,"		18c.	"	"	" "
"Big 4 Babbitt," - -		14c.	"	"	" "
"Pyramid Metal," - -		10c.	"	"	" "
"Mystic Metal," - - -		8c.	"	"	" "

CLOSE FIGURES MADE ON LARGE ORDERS OR CONTRACTS.

Our metals are superior to any like Babbitt Metals in the market. We Solicit Your Orders.

Green Seal . . Liquid Paints

If you are tired of the unsatisfactory results from handling poor Ready Mixed Paints try These . . . . .

WALTER H. COTTINGHAM & CO
GREEN SEAL BRAND
WHITE LEAD PAINTS
VARNISHES
WINDOW GLASS
ARTISTS MATERIAL
PAINTERS' SUPPLIES
MONTREAL
TRADE MARK REGISTERED

Green Seal Brand Mixed Paints . .

WE know that the prejudice existing against **Mixed Paints** is wholly on account of the majority of Brands on the market being Inferior Paints. **These Green Seal Brand Paints** are pure, old-fashioned oil, lead and color Paints, and we have spared no expense in the production of them. Therefore, they can be relied upon, and we **Guarantee** that they are just what we represent them to be.

Made to Give Satisfaction .

WALTER. H. COTTINGHAM & CO.,
MONTREAL

RICE LEWIS & SON, LTD.

FINE MECHANICS' TOOLS - -

Lathes, Bench Vises, Screw Plates, Chucks, Drills, Reamers, Etc.

HOUSE FURNISHINGS - -

Success Water Filters, Agate Ware, Puritan Cookers, Iron and Brass - Bedsteads, Etc.

RICE LEWIS & SON, LIMITED,

TORONTO.

THE CUT SHOWN BELOW IS

NOT A REFRIGERATOR



"Steel-Clad" Baths

Do Not Cool Off The Water As Do Iron and Porcelain Tubs. . . . .

Write for Price List. —— Correspondence Solicited.

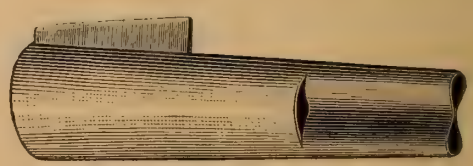
MANUFACTURED BY

THE TORONTO STEEL-CLAD BATH AND METAL CO., Ltd. 123 Queen Street East, TORONTO.

40% More Sap Obtained

BY USING THE

Maple Leaf Sap Spout.



The Maple Leaf Sap Spout is made of Tinned Steel and will supply a long-felt want for a first-class article at a low price. It is a combined Sap Spout and Bucket Support.

It is guaranteed to obtain the most sap with the least injury to the tree; it only has a small bearing on the inside surface of the hole; it is made in one piece, consequently cannot be broken; the bucket may be covered if desired when using this Spout.

SAP BUCKETS.
SYRUP CANS.

KEMP MANUFACTURING CO.
TORONTO, ONT.

HARDWARE

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, MARCH 18, 1893 No. 11

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

HEAD OFFICE: - - 10 Front St. E.
MONTREAL OFFICE: - 146 St. James St.
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NEW YORK OFFICE: Room 41, Times Building.
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EUROPEAN BRANCH:
Canadian Government Offices,
17 Victoria St., London, S.W.
R. Hargreaves, Manager.

Newspapers are prone to make mistakes as well as individuals, but it is seldom if ever that practically the whole press of a country do so at one and the same time, and on one particular subject. Yet that is about what the daily and trade papers of the United States did the other day, and now they are engaged with the same unanimity in setting themselves straight with their constituents. The stumbling block over which they all fell was the duty on tin. In the hurry and bustle consequent upon the closing of the U. S. Senate, the newspaper men, and, in fact, some of the Senators themselves, got the impression that the clause in the McKinley Act, which imposes a duty of four cents per pound on block tin after July 1, had been removed. Next morning it was published broadcast, and at the exchanges values began to drop in consequence. Stranger still, when the suspicious ones made an effort to set all doubts at rest it was some time before an authoritative statement denying that the clause had been revoked could be obtained. The bill to repeal the clause had the endorsation of the members of both parties in the Senate, but it was thought to be not politic to pass it at that time. And so the duty will go into force July 1 next.

* * *

The industry likely to be affected most by the duty on tin plate will be that of canning. The canning industry of the United States make, it is estimated, about 750,000,000 cans. To turn out this number requires some 12,000,000 pounds of tin, which, at the increased cost of four cents a pound would be $480,000. It requires on an average 2 1-2 pounds of solder to the one hundred cans, and putting the additional cost on this article to the tin the canners themselves estimate that they will be compelled to pay $1,000,000 more for their cans after July 1st than they are at present. It is said that fully one-fifth of the cost entailed in the canning of tomatoes or corn is consumed by the tin vessels enclosing them.

* * *

If there is any one thing that gives universal satisfaction to the great mass of the people it is the announcement of a drop in the price of coal. Be it manufacturer or private consumer, it is all the same. They all clap their hands and make a joyful noise. Prices have ruled abnormally high the past winter. In view of this the announcement that the anthracite coal companies have decided to reduce the price of grate ten cents a ton, egg and chestnut 50 cents a ton and stove 60 cents a ton is received with more than ordinary pleasure. The coal barons have, during the present season played the autocrat to the full. They issued their decrees at will and none were there to dispute them. They obtained control of all the ammunition, and all their victims could do was to gesticulate and threaten. But threats are not usually heavy enough to dislodge strongly entrenched foes. With the collapse of the Reading came the hope that lower prices would follow. And this hope is now to be realized.

* * *

There is a good deal of discussion going on in England at the present moment regarding the respective merits of hand-cut and machine cut files. Its immediate cause is a bill that has been introduced in the House of Commons calling for the marking of all machine-cut files. The object is to enable purchasers to learn what they are buying. The inference of course is that the promoters of the bill believe the machine-made article to be inferior to that turned out by hand. Among the manufacturers and in the trade there is a decided difference of opinion regarding the matter. During the discussion the opinion has also been ventured that the adoption of the proposed legislation will result in a good deal of the trade being driven to the Continent. The sharpest contention does not, however, seem to be so much over the merits of the bill as over the question of the respective merits of the two makes of files which the introduction of the bill has set in motion. A good many who are looking at the proposed legislation from an independent standpoint fancy that there can be no serious objection to people being allowed to know what they are buying.

* * *

Regarding the Reading. The announcement of a few weeks ago that receivers had been appointed scarcely created more surprise than did the statement that was issued the early part of this week. It fixes the floating debt at $10,000,000, in addition to which there are liabilities for wages, rentals, etc., making an aggregate of $18,472,828. The net current deficiency which compelled the company to go into bankruptcy amounted to $2,693,043. The amount due alone for wages was over $2,000,000. It is no wonder that the back of the monopoly was broken.

* * *

The tastes of fashion are often peculiar. In Germany the latest fad is a visiting card made of thin sheet iron. Forty of them piled one on top of another make only one-tenth of an inch and the name are engraved in letters of gold or silver on a black surface. Cards of iron are of course more convenient than those of white stone which the ancients are credited with using when visiting their frends or for a business call, but at the same time it is doubtful if they will come into such general use as did even these.

The cheapness of paper cards will preclude it. Among the few who do not mingle with the "maddening crowd" iron visiting cards may take, but among the great mass of everyday mortals, never.

* * *

It seems that two or three Canadian firms have lately begun to import certain classes of wire from the United States. The competition thus introduced has induced Canadian manufacturers to lower prices here; or, what is practically the same, raise the discounts to 20 per cent. This is an increase of 5 per cent. All lines, however, are not affected, annealed, annealed and oiled, and galvanized being the only ones to come under the change.

* * *

It's an ill wind that blows nobody good. The anticipated advent of the crinoline will benefit at least one class of manufacturers, even if it proves a bane to the rest of society—that is the male part of society. The manufacturers of thin steel is the particular class upon whom the breezes are to fall beneficently. When the crinoline was "the proper thing," now many years ago, numerous shekels fell into the pockets of the hoop iron men, and what it did in the years gone by it may do in the period to come during which the resurrected hoop skirt is again to reign and rule in the world of fashion.

* * *

Rich deposits of mica are said to have been discovered down in old Virginia, and visions of cheaper mica are seen by a good many dealers. The particular deposits are near Irwin Station, Goochland County. A company has been formed and mining has already been begun. Options have been taken on contiguous plantations, and the planters are looking for greater harvests than Indian corn can bring. Experts are surveying lands for miles about hoping to find still other deposits.

* * *

Rumors are rife in the Lower Provinces regarding a movement alleged to be on foot for the absorption, by an American and Canadian syndicate, of the mills and cut nail factories of the country. It is said, however, that the Montreal manufacturers deny that they are true. It seems that the report originated in St. John, N. B., where overtures had been made to some of the proprietors.

* * *

"A Record; not a Prospectus," is the title of an interesting little brochure just issued by the Bradstreet's Company. It deals with the business failures of 1892, and a perusal of its contents is rewarded in the large amount of useful information conveyed. Small as is the book referred to, it containing only some 17 pages, the work of compiling it must have been enormous. For instance, it involved taking cognizance of more than 1,331,246 names of individuals, firms and corporations holding a place in the business world in 1892, of which 1,129,808 were in business at the close of that year. The total number of failures in Canada and the United States last year is shown to have been 11,952, of which 1,682 were in this country. The total number in each of the two countries the previous year was 1,846 and 12,394 respectively, a decrease in each instance. In 1892 there were 33.543 more places of business in the United States than the previous year, and in Canada the increase was 271.

* * *

It is when one begins to dive into an analysis of the figures adduced that the interest becomes more awakened. In the process of this, one of the first things to strike one is the value of consulting reputable agency records in order to ascertain the standing of those with whom you are doing business; for 93 per cent. of the concerns that failed in the United States and Canada had either no credit rating, or their credit was designated as only very moderate. On the other hand only 5.9 per cent. of those rated "good" failed, while of those styled "very good" or higher only 1.09 became bankrupt. The proportion of those failing who possessed $5,000 capital or less was somewhat larger than the previous year, being 90.5 per cent. It is evident from this that ample capital is becoming more and more essential to success in business. But as the total of those failing with insufficient capital as the prime cause of failure was only 43 per cent. of the aggregate which failed with $5,000 capital or less, it may be concluded that even among concerns of limited capital general reputation and record for fair dealing have more to do in determining a credit rating than capital employed. The proportion who failed while credited with from $5,000 to $50,000 capital each was 8.4 per cent.; in the class rated from $50,000 to $500,000 it was only 1.1 per cent. There was only one firm in the United States and Canada last year which failed while credited with capital of $500,000 or more, against 21 in 1891, 13 in 1890 and 1889, 7 in 1888, and 11 in 1887.

* * *

Regarding the causes of failure, lack of capital is still the most prolific source, it heading the list with 32 per cent in the United States and 65 per cent. in Canada. In this country and in the United States disaster was the next largest cause, with 11.3 and 19.2 per cent. respectively. Incompetence ranks next, although in this particular Canada shows an improvement of over 1 per cent. compared with 1891. Fraudulent disposition ranks fourth, the percentages being 5.2 and 10.3 for Canada and the United States respectively. This is an increase in both instances, particularly in the United States, where this cause of failure was 3.3 per cent. larger than in 1891. In the matter of unwise credits, Canada exhibits a much more favorable condition than do our neighbors across the line, the percentage of failures from this cause being 0.8 in this country, and 4.0 in the United States. In Canada the decrease in this particular was nearly 1 per cent. compared with 1891, and over 2 per cent. compared with 1890. Outside speculation is also responsible for more failures in the United States than in Canada, and in the matter of extravagance the difference is exactly 1 per cent. in favor of Canada, the figures being 0.4 and 1.4 respectively. Canadians are also shown to be less negligent of business, and undue competition has caused 0.7 less failures here than across the border. In regard to proportion of assets to liabilities, the honors are with the United States, the percentage being 50 against Canada's 42. A grain of comfort can be be taken by us on this side of the line the fact that while the percentage was 3 lower in the United States than it was in 1891 this country was 1 higher. The failures in New York city were not included in those of the United States in regard to percentage of assets to liabilities. In that city the proportion was much less than in any State in the Union, it being only 34, although that was a gain of four over the previous year.

THE SITUATION IN TURPENTINE.

The price of turpentine seems to have been struck by a boom similar to that which carried it away up in the clouds a few years ago.

The cause is the unusually cold weather in the south. Turpentine is obtained from the tree in a manner somewhat similar to the way in which we Canadians get our much belived maple syrup. When the season is backward turpentine, like syrup, refuses to run. This is just what is at the moment the matter down South. And the present sudden cold spell is likely to further delay matters.

Owing to these circumstances it is expected that the crop will be at least a month later than usual. The new product usually arrives on the Toronto market about the third or fourth week in April, but judging from the present outlook it will be towards the latter part of May before it reaches here this season.

Some four or five years ago, owing much to the same conditions as are now influencing the market, prices in Toronto went as high as 90c. and $1 a gallon. Although prices now ruling are likely, judging from present outlook, to go higher, no one anticipates that those figures will be touched now. Then stocks of turpentine in both these countries were low. Now they are fairly good, although the quantity on hand on the local market is at the moment small. On Friday last the association met in this city and advanced prices two cents a gallon. Since then there has been an advance of one cent a gallon in the South, and the market here is stronger in consequence. The position of this market is further strengthened by the fact that the demand is heavy and stocks light, and consequently it quickly sympathizes with every upward turn taken by the primary market.

HARDWARE DISPLAY.

There has never been a time when so much expense and skill was devoted to the display of every kind of merchandise as now, says Stoves and Hardware Reporter. Less of attention in this respect has been given to the line of hardware, perhaps, than to others because it has been generally believed to be unnecessary or less adapted to the purpose. But such opinions are rapidly passing away and the desirability for such display, even in the coarser articles of the line is being urged more and more. Gazing at store windows is no longer an indication of rusticity. The most experienced of city shoppers find in them a fair indication of the general stock, and next to the advertising sheets, if not first, depend upon them for suggestions as to their purchases.

The hardware trade knows no exemption from the demands of competition that exist everywhere, and with the accession of artistic qualities which have so generally found their way into every line of manufacture, there is abundant material to afford ample scope to the tasteful invention of the hardware dealer. In fact, there is nothing in the hardware stock from an ordinary nail to the finest cutlery that does not gain an added attraction under the hands of the skillful window trimmer. But displays should not simply end at the window, and no master of this art will permit it. Everyone has felt the depressing influence of passing a tasteful window display to a slovenly or carelessly arranged interior. If the same painstaking efforts be not employed throughout, it were better to leave the window unadorned.

And this leads to the observation that too little care is manifested in the interior arrangement of the hardware store in general. The most ordinary box-like apartment, with as many shelves as possible, is usually considered sufficient,and any attempt to maintain the original freshness of surroundings is too often attributed to an excessive fastidiousness. This may be due in part to the fact that men constitute the greater part of the customers, but even the sterner sex is not wholly untouched by the blandishments of taste, and neatness and display is far more effective with men than might at first thought be supposed.

Nor is there any particular difficulty because of the lack of facilities for this purpose. Special contrivances for the convenient display of special lines are being multiplied upon every hand, and even the cost of these may be saved by the practical ingenuity of the dealer. Many of the jobbing houses find it to their advantage to offer such facilities free of cost to their customers. But the misfortune in such cases, too often, is the lack of appreciation of the customer. A stand costing considerable expenditure of thought and money is carelessly displayed for a few days and then retired out of sight to eventually meet its fate in the kindling bin.

All this is quite as pertinent to the country dealer as to those engaged in city trade. Everyone in this age of railroads has more or less acquaintance with city customs, and the country dealer gains a new prestige in the estimation of his patrons if he be found abreast of the progressive character of the town trade. And, moreover, the farmer and his family are no more insensible to the attractions of a neat display than their city cousins. At all events the movement toward this end has begun, and the dealer who earliest avails himself of its advantages will reap the largest results.

RETAILERS RIGHTS.

It is surprising that any question has been raised regarding retailers being justified in advancing prices to keep in line with market fluctuations the same as wholesalers do, caustically remarks Herald of Commerce. Why should they not have the same privilege? Why should they abandon any opportunity to secure a legitimate profit? By what law of trade or justice has the wholesaler such right above the retailer? If a retail dealer has had the keen foresight to purchase goods at an advantage and the same line of goods rises in market value, it is his good fortune and good business methods that he has to thank, and if he pays for his goods and gets no extortionate prices above market value it is nobody's business but his own at what rate he sells them. The retail dealer is but a wholesale dealer in embryo. He supplies the wholesaler the same as the wholesaler supplies him, and has just as much right to a corresponding margin of profit as anyone, and the more fool he if he does not secure it. In this case it is a poor rule that won't work both ways. Competition forces goods down, but does not force them up. When goods fall the retailer has to submit no matter what they cost him, and it is neither justice to himself or his neighbors in business to sell goods at less than market value, or without a fair and legitimate profit.

Leave throat cutting and price cutting to the pirates in trade, and gain respect by honest dealing.

ZINC IN ARCHITECTURE.

Copper plating sheet zinc for building purposes has recently been tried abroad with considerable success, the process being especially recommended where mechanical wear takes place. The zinc combines very well with the copper. The galvanic method of copper plating is advantageously used, but the zinc may also be coated with copper by ordinary means.

In the first place the sheet zinc is cleaned with soda from any adhering dirt or grease, and is also purified by a weak acid bath from the covering of zinc oxide. There are then dissolved in twenty-four parts of water one part of refined verdigris and twelve parts of tartar, being heated to boiling point, after which three or four pints of Spanish white are added. The Spanish white is here decomposed and is precipitated as lime tartrate. The dark blue liquid is poured off and filtered, and can be used either as a bath for the sheet zinc or for the production of copper-plating paste. The first mode of action is the more recommendatory, as the fluid forces its way into the corners and angles of the zinc articles and is uniformly distributed all over.

If it be desired to coat an immovable zinc object with copper, the article, after being cleaned, is painted with the copper solution and chalk compound, and, after drying, brushed. This very simple operation would likewise prove of value for architectural purposes where it is desired to remedy the generally unpleasing effect of zinc adornments.—American Artizan.

TRADE CHAT

James & Reid are starting a hardware store at Perth.

Steel barrels for the conveyance of petroleum have proved to be a success at Wakefield, England.

There are seventeen different railroad gauges in the United States, varying from two feet to five feet seven inches in width.

An industry to convert bone into ivory black, bone black, animal charcoal, assay for smelting, etc., is to be started at Victoria, B.C.

Iron Age recommends a layer composed of three inches of mortar and sawdust as deafening for floor the ceiling below which is of iron.

A sign at Waynesville, Ga., bears this inscription: "Axe handles, ink, pens and cheese." And one in Maine: "Hardware and coffins."

The Canadian General Electric Company has been awarded the street railway franchise of Peterboro, and that town is likely to have a street railway this summer.

Manchester Board of Trade returns for January show the imports of iron ore to have increased in weight by 112,865 tons, and in value by £63,466, as compared with the same month last year.

A bill has been read a second time in the British House of Commons prohibiting the use of barb wire fences along the side of public thoroughfares, and requiring that all now in such use shall be removed after a certain period.

F. G. Mitchell, formerly chief engineer at the oatmeal mills, London, and who is now in partnership with W. T. Gartley & Giddons, has recently invented an automatic regulator for governors, which no doubt is one of the most perfect regulator of steam engines yet invented.

A new metal, says Iron of London, has been discovered by Dr. Purcell Taylor. It possesses a beautiful violet color, having a brilliant appearance; is hard and crystalline, and has a high melting point. The specific gravity of the new metal is 8.2, and it is said that its cost will be high. Dr. Taylor has named the substance "farmanium."

A correspondent of Iron Age is agitating the question of the adoption of iron or steel for common roads instead of the ordinary macadam. His proposition is to lay wheel ways of 5 inch by ⅜ inch bar with a ½ inch flange turned up on one edge so as to prevent the wheels from sliding off.

A correspondent of Metal Worker recommends in order to prevent tin roofs from rusting advises the covering of the roof first with some kind of building paper, then putting on the tin on top of this. The paper prevents the dampness condensing on the under side of the tin and rusting it.

A Roman has offered King Humbert a novel instrument of warfare. This is a projectile which on being shot from a cannon and striking an object will produce a luminous disc of 100,000 candle power, and thereby expose to view an enemy's position by night at a distance of from three to four miles.

Statistics collected by the Locomotive give the number of boiler explosions in the United States in 1892 at 269, against 257 in 1891. The explosions last year killed 298 and injured 442 persons. The greater number occurred in the winter months, 35 in January, 32 in November and 34 in December, while there were only 11 in June, 20 in July and 16 in August.

The special committee appointed by the Toronto City Council to promote the manufacturing growth of the city has received a proposition from Adams & Co., to lease the old Parkdale waterworks station for a rolling mill. Mr. Stratton of the Stratton Carriage Works, Buffalo, offers to establish a branch here provided he obtains sufficient inducement.

Pender & Co., of St. John's N. B., are the sole manufacturers of a certain class of nails which they say are being duplicated by Parnementer & Bullock, of Gananoque. The court here on Tuesday was asked for an injunction to restrain the latter company from further manufacture of these nails, but the motion was shelved for two weeks.

The Brown Manufacturing Company of Belleville have seven contracts in hand for steel bridges, are manufacturing trucks for the Montreal electric railway, are making a large steel boiler for the contractors for the Morrisburg canal, and are turning out a lot of general contractors' plants.

A despatch from St. Louis says that President Euston, of the Crown Linseed Oil Company, John Neville and C. W. Blow have organized to fight the Lead Trust. A circular has been issued stating the company's position, and announcing that on April 18 the Granby White Lead Company will have works established at Granby Station, a mile and a half from East St. Louis.

The promoters of the School of Mining and Agriculture, to be established at Kingston, Ont., have asked the city council to grant $1,000 per year to assist in paying the running expenses. The total cost of maintaining the institution yearly will be $12,000. Stock to the amount of $33,000 has already been subscribed, and it is expected that this will be increased to $50,000.

Overtures have been made to the proprietors of the rolling mills and cut nail factories in St. John, N. B., looking to their purchase by a syndicate comprising Canadian and American capital. Harris & Co.'s rolling mills and those of Burpee & Co., at Coldbrook, and Moore's and Foster's nail factories are involved, and these are all there are in the lower provinces. The various owners are now considering the proposition.

A severe test of a nickel-steel gun was made recently at Meppen in Germany. Two 3·4-in. shells, each loaded with 6 oz. of picric acid, were placed, one in a gun of ordinary Krupp steel, the other in a gun of nickel-steel, at a distance of 12 in. from the muzzle. The shells were then exploded. The muzzle of the ordinary steel gun was blown into a number of pieces, but the only effect on the nickel-steel gun was a local enlargement of about ¼ in. in the bore.

The London Free Press says that Mr. John Milne, proprietor of the Essex Industrial Works building, has been negotiating with Mr. Jno. Gourlay, of Toronto, formerly of Cant, Gourlay & Co., of Galt, with a view to leasing the machine shop and foundry, which has been inoperative since January 1st. Mr. Courlay was so well pleased with the appearance of Essex that he has decided to come on at once and commence operations.

The Canadian General Electric Company evidently intend rushing business at London, Ont., at once. Their property is between the river and Thames street and Bathurst street and the Grand Trunk tracks, and will cost $1,400. The power house will be 82 by 130 feet and will have 1,000 or more horse-power boilers and engines with the necessary dynamos. The entire cost of the plant will be about $100,000. The price of light to customers will probably be the same as in Toronto—1 cent. per hour for each light with a discount of 20 per cent. for prompt payment.

It is now said that Walkerville is to be the town that will capture the Canadian branch of the McCormick Manufacturing Co., of Chicago. F. H. Walker and E. C. Walker have been in Toronto interviewing the Canadian representative, and it is claimed they have a cinch on the establishment. The Walkerville Council stand ready at any time to give a free site and exemption of taxation for any number of years to manufactories, and it is understood that the Walkers will erect a building and run a spur of their road right to their doors if the McCormicks concent to come.

It is reported that a chemist has invented a paint which is sensitive to changes of temperature. At ordinary temperature it is a bright yellow, but as it grows warmer it begins to assume an orange tinge, and at a temperature of 220 degrees it becomes a bright red. As it cools it assumes its original color, and it may be heated over and over again with the same effect. It is suggested that this paint may be used to great advantage on parts of machinery liable to become heated from friction, where it would at once report any abnormal rise of temperature by its change of color

H. S. HOWLAND, SONS & CO.,

WHOLESALE HARDWARE

37 FRONT ST. WEST, TORONTO.

"Samson" Solid Steel Spades and Shovels.

Carriage Paints . . .
Superfine Coach Colors
Varnishes . . . . .
Linseed Oil . . . .
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Our Pure Prepared Paints
Are the
STANDARD CANADIAN MAKE
EVERY PACKAGE GUARANTEED
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White Lead . . . .
Colors in Oil . . . .
Oil Stains . . . . .
Harness Oil . . . .
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Etc., Etc. . . . . .

THE COMING MOTOR POWER.

At the International Electro-Technical Exhibition, held at Frankfort, Germany, last year, an experiment in the transmission of electrical energy was made which promises great results in the future. The current was generated at Lauffen, on the Neckar river, one hundred and eight miles distant, and transmitted over a naked copper wire hung on ordinary telegraph poles with oil and porcelain insulators to a motor in the exhibition. The first estimate of the percentage of generated power delivered to the motor was placed at from 70 to 75 per cent., leaving the remaining 25 or 30 per cent. to be accounted for as having been lost in the processes of transmission. This was considered by experts as a remarkable performance, and as marking a distinct era in the application of electricity to the practical purposes of business. The matter did not rest here, however. A subsequent and more careful scrutiny of the whole experiment was made by the leading experts, and a much more favorable showing made. By a series of exhaustive tests and measurements along the whole line of transmission it was discovered that owing to the imperfect construction of the dynamo the data relied upon for the previous estimate was inaccurate, and that from 90 to 92 per cent. of the generated current was actually delivered to the condensing transformer at Lauffen. The net result of the experiment was, therefore, found to be that the loss of energy in the triple process of transforming a current of from two to three hundred horse-power into a current of small volume but high intensity, transmitting it a long distance in the commonest way, and retransforming it into a current of ordinary pressure, was only 18 or 20 per cent. of the generated current. It is reasonable to believe that with more skillfully adapted appliances and an extended experience in this line even better results may be attained.

As this experiment apparently demonstrates the entire practicability of the transmission of electrical energy to long dstances for either lighting or motor purposes, it would seem that the day is not far distant when most of the inland towns and villages may enjoy electric light and power for mechanical purposes. The great engineering enterprise now progressing at Niagara, as well as the projected electric railroad between St. Louis and Chicago, emphasize this suggestion, and the coming farmer may find his everyday employment revolutionized through the aid of this great agency which is only beginning to be partially understood.—Stoves and Hardware.

MINERAL EXPORTS OF NEWFOUNDLAND.

The Engineering and Mining Journal says that "according to official statistics just issued, the mineral exports of Newfoundland during 1891 were as follows: Copper ore, 7,060 tons, value $63,540; regulus, 3,626 tons, and ingots 1,139 tons, value of both, $502,510; iron pyrites, 19,150 tons, value, $57,900; antimony, $1,000. The total value of ores exported in 1891 was $624,750. From 1854 to 1891 the total value of copper ores exported was $9,193,790, the total value of all ores exported in that period being $9,594,717."

HAD NO MONEY BUT COULD WORK.

Nothing does more to rouse and deepen enthusiasm among the young than the story of the heroism and patience that make up the life history of some of the men of to-day. We have in mind says an exchange a tale of Vermont grit which recently came to our notice. The story begins with the reading of the will of the father of a tall, raw-boned youth: "I leave to my beloved son a heritage of poverty. May it be to him a higher gift than a mine of wealth. May he use it to the best advantage, so that when it comes his turn to give up his worldly possessions, he may go to the God of his fathers with clean hands and a clean heart." The young man rose to his feet, a new dignity in his bearing, his face set firm as a rock as he said, "I accept my heritage of poverty and hardship and will battle with it with clean hands." There was a contemptuous laugh from his uncle, followed by the question, "Have you got five cents to your name?" "I have what is better," he replied, holding up his ten fingers, "I can work." There was many a fierce battle for the penniless orphan, which sometimes showed itself in the hopeless droop of the shoulders, but with a long pull and a strong pull at such times, he worked on and has made a success of his life work. "Nothing wonderful in it," grunted an old neighbor who had watched him all the way, "take a level-headed boy with ten fingers and an honest heart aching to do his utmost wherever he is, and of course he's going to make a success no matter what he undertakes."

THE FAST ATLANTIC SERVICE.

The committee of the Montreal Board of Trade appointed to consider the question of a fast Atlantic mail service in response to a resolution of the Toronto Board have submitted a report signed by all but one member in favor of the project. The objector is Mr. Edgar Judge, the well-known flour merchant, who takes the ground that for all practical purposes a line of steamers making from two to three knots more than the Vancouver or Parisian would meet the requirements of Canada. He considers also that the cost of running a steamer similar to one of the New York greyhounds would be $75,000 per trip, and that the Government subsidy of $750,000 a year would give only $14,000 per trip, so that the steamer would have to earn $61,000, which he considered very unlikely, to make both ends meet. However, despite his objections, the following report submitted by the committee was adopted by the council by a vote of nine to three.

To the Council of the Montreal Board of Trade:

Gentlemen,—Your committee, appointed on the 28th ult., upon the question of a fast Atlantic mail service, beg to report in the shape of the following draft resolution, which it submits for adoption by you:

That it is of great importance to the commercial interests of the Dominion that a Canadian fast Atlantic steamship service should be established at the earliest possible date.

That this council hereby urges upon the Dominion Government the desirability of giving such substantial aid as may be found necessary to secure a first-class steamship service between Great Britain and Canada, with a speed of not less than eighteen knots an hour, the steamships to come during the season of navigation to the ports of Quebec and Montreal, and to the most convenient Canadian Atlantic port during the winter months, and

That the Government should, at the same time, make the necessary arrangements with the several railways to ensure rapid despatch of all mails, passengers and freight carried by the said steamship line.

The whole respectfully submitted,

JAS. A. CANTLIE,
Chairman.

JNO. B. McLEA,
J. D. ROLLAND,
JAS. WILLIAMSON.

WELDLESS TUBES.

A new method of making weldless, cold-drawn steel tubes, suitable for bicycle making and other machine work where strength, lightness and accuracy are required, is described by the London Engineer. The steel from which the new tubes are made is of special quality, and is received from the steel works in the form of sheets. Circular flat discs are then cut out of the sheets. These discs are pressed into the form of shallow cups which are then pressed successively through dies of decreasing diameter and increasing the length of the cups until the flat discs of steel have assumed the form of tubes of the required length, with one end closed. The closed end is cut off after the final drawing operation has been performed. The process, it is explained, is not unlike that used for cartridge drawing. The tubes are produced of any size from one and three-quarter inches diameter to one-sixteenth inch diameter, are absolutely parallel inside and outside, perfectly concentric and of any gauge down to No. 30.

CORK-CORE FLOATING ROPE.

A cork-core floating rope has been invented. The inventor claims that his floating rope of one-inch thickness will pounds. The rope consists of a core of stand a strain of more than 1,000 small round corks about three-quarters of an inch long, placed end to end, around which is braided a net-work of cotton twine braided in heavy strands, which is about a quarter of an inch thick. The rope is very soft and pliable, and even after being tied into a small knot will return to its original shape. It can be used in life lines, on light rafts, and as a heaving line to tie heavy hawsers to.—Ex.

CONSUMPTION OF WOOL.

The consumption of wool, per head of population in Europe and North America in 1892 was 5.32 pounds of raw wool, and 2.82 pounds of clean wool. This was the largest consumption of record that has ever occurred, being 2 1-2 per cent. larger than that of 1891, which was regarded as phenomenal. The per capita consumption in 1883 was 2.49 pounds of clean wool, and since then there has been an almost steady increase. Twenty-one per cent. of the raw wool consumed enters into the manufactures of Great Britain, 56 per cent. in those of Continental Europe, and 23 per cent. in those of North America. About 40 per cent. of the wool production is manufactured in the region where grown, leaving 60 per cent. to be obtained from foreign sources.—Boston Journal of Commerce.

MEASUREMENT OF ROOFS.

A new idea has occurred to a New Westminster, B.C., roofer, for measuring roofs of buildings, says an exchange, which he thinks of importance to those who estimate quantities, and which may prove of interest to many others engaged in the same line. It is this: Find the whole horizontal area of the roof by dividing it into quantities or sectons. To these quantities add the fractions thereof necessary to raise them to the required quantity, which is in a roof of square pitch, 5.12; in a roof of 9 inches rise to the foot, one-fourth, and so on, according to the varying pitches. This is equal to raising the quantity representing one of the sides from 12 to 17, or 12 to15,as in the pitches mentioned respectively. This will apply only to a roof in which all the pitches are equal, but can be made approximately correct by taking a mean between, or it may be made correct by considering the portions separately.

COATING ON SHEET IRON ROOFS.

Divers opinions prevail as to the durability of sheet iron roofs, but the weight of evidence tends to show that such a roof, if coated with tar, is quite lasting. The latest is a recipe published by an old roofer in the Deutsche Klempner Zeitung, to the effect that he has constructed both corrugated and plain sheet-iron roofs for the past 25 years, and yet never has a case occurred to him in which this coating has proved to be unsatisfactory; he therefore recommends the use of English tar, boiled together with a little washed chalk and resin. The roof surface is to be coated with this, after which it is to be strewn over with sand, like a paper roof, which will produce an excellent roof.—Tin and Terne.

The new building of the Montreal Board of Trade is rapidly approaching completion.

You can lose more than we do by not subscribing for this paper.

TORONTO PLATE GLASS IMPORTING CO.,

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WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

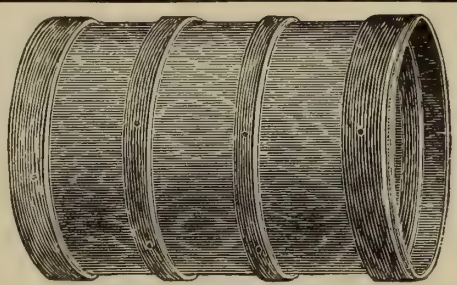
ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friends against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

ORDER YOUR **NAILS** Wire . . . Cut . . . Horse Shoe



IN **PATENT KEGS**

Cost no more than in Common Kegs. The strongest, handiest, cleanest, neatest, and best store package in use. Made in one solid piece, lined with strawboard. No staves to get loose or break, No shrinkage or falling out of heads.

- Supplied by Graham Nail Works, Toronto; and Peck, Benny & Co., Pillow & Hersey Co,, and Abbott & Co., Montreal -

BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

EXPORT DUTY OF LOGS.

The following interview with Mr. Eddy, the well-known manufacturer, of Hull, was published in The Toronto Star a few days ago :

Every boy and man, girl and woman in Canada, has heard of E. B. Eddy, of Hull. If you look over your shoulder you will see it on your package of matches, your washboard, tub, etc. Thus, so it was when I saw the bold Roman head of "E. B. Eddy, Hull," on the Queen's register this morning I started out to hunt him up. Mr. Eddy is a hale and hearty old man, as full of business energy as the Chaudiere falls are full of motive power. His hair is gray and clipped quite short, his shrewd face is clean shaven, and he spoke in a sharp ringing voice, which cracks like a whip when he gets excited. He was dressed in a plain grey tweed, and wore a soft Fedora hat on his head, which he kept shoving backwards and forwards as he warmed to his subject.

"Young man, you have caught me at the right time. I was just thinking of that. There never was a better opportunity of putting ourselves on equal terms with the United States than the present, and that opportunity is being let slip. Canada holds the key of the position on this continent. And that key is not a golden key, or a silver key, or a copper key, or an iron key—no sir, but it is a pine key, a spruce key, a poplar key, and a basswood key, and that basswood key alone can open the heaviest steel burglar proof vault in the United States capital.

"Listen to me. I'm no baby. At one time I was the biggest lumberman in America. One year I got out 70,000,000 feet, so I ought to understand what I'm talking about."

"I wouldn't have come to you if I thought you didn't," said I.

"Very well then,' said he, "let us go back a little—for fifteen years. So long ago as that there was an export duty on logs in this country, but it wasn't needed. The Americans had all the pine they needed in Michigan and Wisconsin, and they laughed at our export duty. They didn't want our logs. But the day came when Michigan and Wisconsin, the two geese that laid the golden eggs, were cooked for a Thanksgiving dinner, and they looked around them for something else to pluck. There was only one way to look and that was towards Canada. But there was the export duty. Men like Charlton and that ilk came over here and a combine was formed and influence used with the Government to take off the duty, just!" said Mr. Eddy, leaping to his feet and pacing the room, "just when the duty ought to be put on. What we want now to save the country from being depleted of timber and depopulated as well is a next-door-to-prohibitory duty on lumber.

"And now, young man," said Mr. Eddy, as he leaned back in his chair and pushed his hat back, "I'm going to astonish you. We have got a belt of wood—spruce, balsam, poplar and small basswood, hundreds of miles wide, stretching from St. John's, N.B., to the western extremity of the Lake of the Woods, arching this province, that is worth all the pine that ever grew, is growing now, or ever will grow in the Dominion of Canada. It will be needed for pulp. The biggest pulp mill in the world is being built at Niagara on the American side of the river, of course, which will be fed with Canadian raw stuff—no duty. There are 1,130 pulp mills in the United States, and all these will in a short time have to depend on Canadian material. Now run up the duty to a prohibitory one and they'll have to walk all their pup mills over into Canada or pay the duty, and in this case there won't be a question as to who pays the duty, the producer or the consumer. I'm not talking retaliation, but I don't see why our country should contribute its very life blood to build up towns and villages over the border.

"The Americans must have white pine and we are the only ones who can give it to them. If we put the duty up to $50 a thousand they would have to have it ; they must have it ; that settles it.

"The Americans must have pulp—no matter what the duty is they must have pulp and they are bound to pay our price for it. This big pulp mill on the other side of the Niagara river is pretty cheeky—it should be on the side of the river where the pulp trees grow. They've got them at Lockport and Rochester, and they all fatten on our pulp trees and they get them for nothing—nothing. Before you go I want to say this, that of the timber on the North American continent we have got 90 per cent. Try and grasp the significance of that.

DISPOSAL OF TIN SCRAP.

While working in different shops,writes a correspondent of Metal Worker, I have noticed quite a wasteage in scrap tin. When a small article was to be made it was more convenient to cut it from a new sheet than to hunt over the scraps for a piece of suitable size, and the scrap not being properly sorted and cared for, soon becomes damaged, so that its value for anything was very much deteriorated. Consequently, when I took charge of a shop I arranged three large boxes, into which I assorted the tin as follows: Into No. 1 I put all pieces of bright tin large enough to work into tinware. A good many bottoms for articles can thus be taken care of. Into No. 2 all large scraps of terne ; and the smaller scraps of all kinds into No. 3. The large pieces of terne make gutter heads, outlets and flashing. The scrap in the third box does for gutter stays and roofing cleats. When a rainy day comes I overhaul this box, first cutting all the strips 1 1-4x10 that I can get, next my stays, and lastly roofing cleats. With the strips I make my eave gutter hangers (this may be of interest to some) which I make as follows: First taking two strips, I rivet them together with one rivet about 1 1-4 inches from the end ; next I bend the two ends at right angles and form a T, which I rivet on to the centre of a gutter stay. My stays are double folded and folded 1-8 inch across the ends at right angles, which gives a better hold in soldering into the gutter.

To further stay the gutter and prevent it swinging, I solder some of the strips on the under side and nail them to the cornice. This holds the gutter perfectly rigid and out under the eaves where it belongs, whereas, with the old tin strap I frequently meet with gutters that barely catch the drip, and in heavy rains the water entirely overshoots them.

While I do not contend that my hangers are as serviceable as the patent ones on the market, I insist that they are much superior to the old strap ; and being made from the old scrap, are inexpensive. Thus my scrap is disposed of, and without much expense, as the shop boy need not have much experience to do all that is required.

ENGLISH MANUFACTURE OF ALUMINUM.

English exchange states that the annual report of the Aluminum Co., Limited, operating in England, is anything but a cheerful one, although the trading loss has not quite reached the figures of last year, which were £91,000. However, the directors hope that by persevering they will finally place the company on a paying basis. The Heeling Mills have been closed, and it is claimed that since the audit to December 31st, 1891, in the case of Oldbury there has been a profit of about £2,600. The directors have been confining themselves to the development of a new trade in sodium, and look to a good future in this respect.

WROUGHT SCRAP.

The price of wrought scrap in the leading iron markets of this country is about 50 per cent. of the base price of ordinary bar iron, says Iron Age. In England the relative value appears to be only about 35 per cent., according to the best available information. It would seem, therefore, that either wrought scrap is disproportionately high in this country or remarkably cheap in England. The inroads made by steel on the bar iron trade of the United States must sooner of later affect the price of wrought scrap. As it is not an article of staple production, but is a mere matter of salvage, the cause of its comparatively high price is difficult to comprehend. The law of supply and demand in this case seems to be inoperative. Stocks are understood to be heavy at various points, and there is certainly not a growing demand for the material from the bar-iron manufacturers. Another matter in this same connection which is difficult of explanation is the tendency of old iron rails to advance in the west. Consumers of old rails have had no improvement in the price of their product to warrant the payment of more money for materials.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton, Ontario.
SP

SITUATIONS VACANT.

WANTED—HARDWARE TRAVELLERS with good connections in Lower Provinces and in Ontario. None but first-class men need apply. H. S., GAZETTE Office, Montreal.

SITUATION WANTED.

CLERK—EXPERIENCED IN HARDWARE business desires situation. References. Address: Reliable, Hardware Office.

BUSINESS CHANCES.

Advertisements inserted under this heading one cent per word each insertion.

FOR SALE—STOCK OF GENERAL HARDware, paints, oils, stoves, &c. Business established 25 years. Value about $3,500. Address, Estate J. Cameron, Beaverton tf.

FOR SALE—GOOD PAYING HARDWARE Stove and Tin business. Last year's turn over $12,000. Stock, etc, under $3 000. Smart town, brick store, modern improvements. Satisfactory reasons for selling. Would prefer to sell out for two or three years. Don't write unless you mean business. Address T., HARDWARE OFFICE.

COUNTRY BUSINESS FOR SALE.—A FIRST-class general store business. Good locality, old established stand. No other store within eight miles. Is now doing an excellent business. Open for sale for one month from date only. Only responsible parties need apply. A splendid opening. Applications to be made by letter addressed to COUNTRY STORE, Drawer C, Picton, Post Office.

Hardware Traveller Wanted

For our Winnipeg Branch. A thoroughly experienced man. Application by letter only. State age and salary expected.

The JAMES ROBERTSON CO., Ltd.,
TORONTO

W. J. REID & CO.

IMPORTERS AND DECORATORS OF

Crockery China and Glass.

LAMPS A SPECIALTY.

All glass, Vase, and Library Lamps, in every hue and design.

Our travellers will call upon you shortly with samples.

LONDON AND BELLEVILLE.



ASK FOR THE GRAHAM NAILS.

Hamilton and Toronto



—AND—



HEAD OFFICE : HAMILTON, CANADA

¼ the PRICE of Iron. Write for Discounts

READY MIXED PAINTS

TRADE  MARK

Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

Manufactured by **A. RAMSAY & SON**
MONTREAL

**When You . . .
Purchase Paint
Buy the Best .**



Warranted Superior to any now on the Market . . . .

Robertson's Ready . . . Mixed . . .

MANUFACTURED BY

The James Robertson Co'y, L't'd

TORONTO

The Whitman & Barnes Mfg. Co.



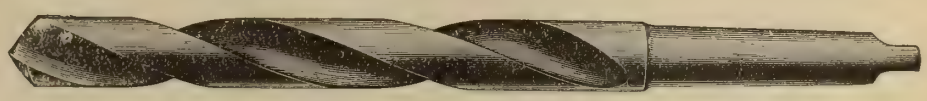
Canadian Branch :
ST. CATHARINES, ONT.

MANUFACTURERS OF

Extra Quality Machine Knives, etc.

OUR SPECIALTIES :

KNIVES FOR Mowers, Reapers, and Binders, Root Pulpers and Straw Cutters.
" " All kinds Wood Working Machinery.
" " Paper Mills.
" " Leather Splitting Machinery.



W. & B. Diamond Twist Drills.



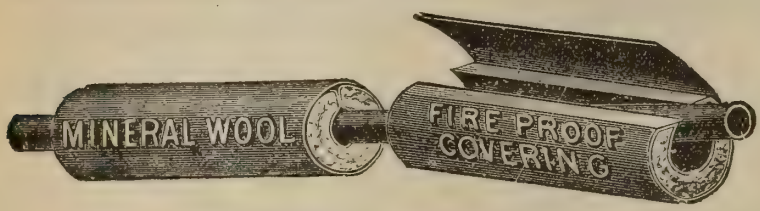
Spring Keys, and Cotters.

Goods the best. Prices moderate
Quality Warranted.

Razor Strops:

Write for a sample assortment of styles. They will only cost you $3.55 and will save you this sum many times over. All our own make.

THE HEMMING BROS. CO., LTD.,
76 YORK STREET, - - - TORONTO



A GREAT LOSS?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss. The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

ENGLISH AND AMERICAN PROFITS.

Perhaps no impression is wider spread than this, that American manufacturers receive much larger profits than English firms because of protective tariffs. An examination of the reports made by English manufacturers dispels this notion. An English paper recently gave the returns from about one hundred establishments engaged in the iron and coal business in that country. A number reported no dividends, but, in the entire list, only three reported the year's business at a loss. The profits, in some cases quite small, were applied in a number of instances to a reduction of a debit balance. The lowest dividend declared was one per cent. Quite a number of the concerns yielded large profits. The Brown Bayles Steel Works, Sheffield, paid a 25 per cent. dividend. The Tinsley Rolling Milling Company, of Sheffield, declared a dividend of 20 per cent., as did also the Birmingham Small Arms Co. Henry Briggs, Son & Co., Ltd., of Whitewood Colleries, for the year ending June 30, 1892, declared a dividend of 17 1-2 per cent. The Stavely Coal and Iron Company report a dividend of 15 per cent., as do Samuel Fox & Co., Deepcar, Sheffield. Quite a number of firms report 12 1-2 per cent. dividends, and a large number declared dividends of 10 per cent. The whole list bears out the impression of quite satisfactory returns. It is doubtful whether any iron or steel concern in this country paid 25 per cent. during 1892 or 1891. The Illinois Steel Company, whose report of $2,019,268 earned on a capital stock of $18,650,635, created considerable comment, had less than 11 per cent. to its capital stock although 1892 was a phenomenally good year. For 1891 earnings were less than 6 per cent. Nor can the difference be imputed to excessive capitalization in this country. If the railroad companies are an index the capitalization in England is two or three times greater than in this country. Capital in free trade England apparently fares better than here. But the same cannot be said of labor. It finds protection here but not abroad.—Ironmonger.

SOFT vs. HARD STEEL FOR BUILDING CONSTRUCTION.

According to the report of a committee appointed by the Bezirksvereines Deutscher Ingenieure, soft steel is to be preferred to hard for building purposes. For ordinary purposes the tensile strength should go between 23.45 and 28.60 tons per square inch, with a minimum elongation of 20 per cent. in test bars 8 inches long. For bridge work the tensile strength should go between 23.45 and 27.30 tons. It was not considered advisable to specify any chemical analysis, as the physical properties afford a sufficient index to the quality of the metal, but also upon the mechanical combination of the different constituents. In considering if it be necessary to specify not only the class of material, but also the manner of its manufacture, the committee decided that the specification should be limited to such normal conditions as could be certainly complied with, and that any minute limitations were technically impracticable and commercially injurious. The committee states, however, that except when unavoidable the material should not be worked at a blue heat. In regard to the increase of working load the committee states that it can profitably be increased to 6.35 tons for live loads and 7.62 tons for dead loads. As to the meaning of the term "Flusseisen" (ingot iron) it may be said that, strictly speaking, it is limited to the product of the basic open-hearth furnace and the Thomas or Basic Bessemer converter. Acid open-hearth metal cannot always be included.

REFINED STEEL BY NEW PROCESS.

According to Iron Age, a Philadelphia firm is placing upon the market a fine grade of steel manufactured by its new process for refining open-hearth steel into high-grade tool steel. The process is the invention of an instrument maker highly esteemed in this country. It is claimed that the steel is peculiarly adapted to lathe tools, planer tools, and all kinds of machine tools, and for drill bits used in boring artesian, gas and oil wells, its especial qualities being ductility, toughness and uniformity. We are informed that the reports on it received from the different railroads and manufacturers using it have been favorable,some of the lathe tools made from it having been in use constantly for three months without redressing, thereby proving it to be long lived. It is also adapted to all kinds of cutlery, particularly surgical instruments. The process of manufacture is known as the Damascus process, and is protected by letters patent owned and controlled by the company in the United States and principal foreign countries. The present capacity at the works is from 2,000 to 2,000 pounds per day, but this capacity, it is expected, will be increased very shortly.

A WAY TO TAKE UP BELT SLACK.

An engineer has become tired and sick of the constant rise and fall in one of the stretches in a driving belt that passes through his room, and has at last yielded to the temptation of nailing a piece of board across the face of one of the belt wheels that rotated in unison with the flapping belt. It worked like a charm, at least it took up about as much slack as the belt would naturally make in one of its slacking-up moods, and evened up matters much better for steady driving. Boston Journal of Commerce.

The London Iron and Steel Trades Journal says: "The shipments of refined petroleum oil from America and Russia to the United Kingdom amounted (according to the statistics prepared by Messrs. Henry Funck & Co.,London) to 2,518,689 brls. in 1892, being in excess of any previous year,and 40,053 barrels more than in 189.. From America the quantity export was 1,711,089 barrels, or 63,317 barrels over the shipments for 1891. The Russian exports, however, which totaled 307,600 barrels, show a decrease of 23,263 barrels in comparison with the preceding twelve months."

The Home of the Hustler

OTHERWISE the office of THE HARDWARE MERCHANT, is now the scene of great activity. The rush of trampling feet is heard the live-long day. The manager, the editors, the reporters, the advertising solicitors, the printers and typewriters have barely time to eat, so great is their desire to get out on time the Spring Trade Number of THE HARDWARE MERCHANT, and at the same time make it superior to anything ever published in America. They are going to succeed and make no mistake about it.

As this is the first Special Number of HARDWARE we are putting out, you have only our word for it when we claim something exceptionally good. We want you to place a little confidence in and believe us. It would not pay us to disappoint you, would it? It is pretty much as Longfellow says :—

"We judge ourselves by what we feel capable of doing,
While others judge us by what we have already done."

We are sorry we cannot take advertising except on the basis of our first love—cash. But on this basis your investment will be doubled.

Don't take less than a page. It may not be just, but it is nevertheless true, that the world judges a man by his appearance, and a business by its outward signs. Send in your copy at once and secure good position.

Respectfully yours,

THE J. B. McLEAN PUB. CO. LTD.

. . . TORONTO . . . .

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below, and in our Prices Current, necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, March 16, 1893.

HARDWARE.

The improved feeling noted last week in general hardware is fully maintained, and the houses are not only busy on a lot of small orders for immediate delivery on account of pressing wants, but are also engaged on a lot of good orders to be delivered later. The goods comprised in these extend all down the list, but lines more closely related to building supplies are in the most demand at present, locks, hinges, etc., etc. finding a pretty brisk enquiry both for prompt and forward delivery. In fact the week shows an increased activity in this respect, more especially for account of city orders and demand from the eastern districts of this Province, where there seems to be a lot of building operations prospected this spring. Other shelf goods also are not neglected, cutlery showing considerable activity, while demand on account of goods for farmers and agriculturists generally is fully up to the average. Nails are steady and unchanged, and neither jobbers nor makers report any particular accession to business in this connection. Horseshoes have been moving a little more freely, but there is nothing special to note except the movement of a few lots of pig iron and tin plate from store at unchanged prices. Very little is doing on account of spring importations.

PIG IRON.

The week has not shown the same activity in pig as last as the city founders here who were responsible for it have supplied their wants for the time being But as a matter of fact there is very little Scotch pig to do business in here and the only sales of importance that we note were small, Langloam at $20.50 to $21.50 and lower brands at $19. We do not hear of anything new in the way of importation.

BAR IRON.

Bar iron is unchanged in price, but there has been a little more doing this week, several good sized lots being placed on the regular basis.

SCRAP IRON.

There is nothing doing in scrap iron which rules the same. Receipts are small and the supply rather light than otherwise.

SHEET IRON.

Demand for sheet iron has furnished some moderate jobbing business but that is all.

GALVANIZED IRON.

Demand on builders account has led to some more fair sized sales of this line. Otherwise there is no special feature

TIN PLATES.

Some further small movements from stocks in store here on the basis of $3 is to note, but nothing is doing for spring delivery, offers in this connection still being reported at $3.10 to $3.15 with importers, and buyers generally showing no urgency.

CANADA PLATES.

Demand is limited and the article does not furnish anything worthy of special mention. We quote $2.50 to $2.60 according to size of lots.

TERNE PLATES.

Ternes are precisely the same, furnishing nothing of interest, with values nominal on the basis of $7.25 to $7.75.

COPPER.

Ingot copper is steady but quiet at 13 to 14c., and sheet is unchanged.

ZINC AND SPELTER.

There is very little doing in spelter except in a very small jobbing way. Prices are unchanged.

LEAD.

The demand for lead is nil and values are unchanged.

TIN ETC.

Tin is quiet and steady at 23 to 23½c. and the same remark applies to antimony which is quoted at firmer rates.

PAINTS, OILS AND COLORS.

The trade in paints and colors has been rather quieter this week and although shipments are going forward they are on account of orders placed some time ago. Choice brands of paints, Government standard, $5.25 ; do. No. 1. $4.87½ ; do. No. 2, $4.50 ; do. No. 3 $4. ; dry white lead, 5¼c. ; red lead, pure, 4½c. ; do. No. 1, 4¼c. with 2½ per cent off these prices for ton lots.

OILS.

Oils of all sorts are firm. Further advices from England report the market for linseed higher and likely to be more so. Here prices are firm as last quoted 61c. for round lots of raw and 64 to 65c. for boiled. Fish oils are steady with nothing special to mention, cod 40 to 41c. for Newfoundland and 38c. for Gaspe, cod liver steady at 65 to 75c. as to quality. Steam refined seal is firm and unchanged at 50 to 52½c. according to the size of lot.

GLASS, ETC.

Glass is quiet and unchanged, while stocks are not excessive. A jobbing trade is doing on the basis of $1.35 for first break. Putty in bulk sells steady at $1.90.

NAVAL STORES.

Naval stores are still dull on the main, although a slight improvement is noted in some lines. Turpentine is receiving more attention, and the market rules firmer under light stocks, 56 to 57c. being now the idea. We quote: Turpentine, 55 to 56c. as to quality; in cases 56 to 57c.; rosins, $2.40 to $4.50 as to quality ; coal tar, $3.50 per brl.; pine pitch $2.50; pine tar $3.50 to $3 75; cotton waste, colored, 5¾ to 5½c.; white 8 to 10c.; oakum, 5½ to 7c.; cotton oakum, 10 to 12½c.

CEMENT.

There is a better demand for cement for present shipment, the open weather we have had permitting a commencement on outside work and a good many medium sized lots are being picked up. Prices for good English brand are somewhat firmer at $2 40 to $2.60 and native Portland cement $2.10 to $2.20. There is a steady movement in firebricks in fair sized lots, and values are somewhat firmer, also at $19 to $23 per 1000 as to quality.

PETROLEUM

A small improvement is noted in the demand for this article. There is no change in the price of American, but sales of Canadian are reported lower at 12 to 12¼c. We quote as follows : Canadian 12c. to 12¼c. at shed in Montreal for round lots and 13½ for small quantities. American petroleum, 19c. in car lots, 20c in 10-barrel lots, 20¼c. in 5 barrel lots, and 20¾c for single barrels, 2 per cent. off for cash ; American benzine, 23 to 25c, ; Canadian benzine, 10½c Petrola ; 12½c. Montreal.

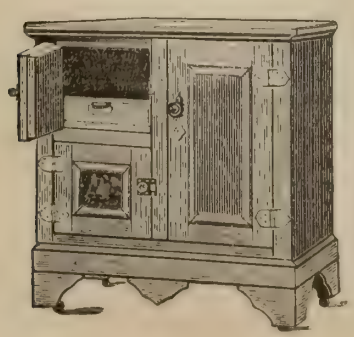
MONTREAL TRADE NOTES.

Canadian petroleum is 1-4c. lower, with sales at the decline.

Further advices on linseed from England quote advance, and the price has been advanced 1c. all round.

Tin plates for spring delivery are still

Refrigerators



Hardwood, Lined Galvanized Iron,
Patent Locks, Four Sizes

These are highly finished and each season has shown an increasing demand. This year we are also making a cheaper line in above style, so as to meet all requirements.

Milk, delivery and Creamery Can Trimmings. All Sizes Body Stock for Cans and Cheese Vats. Galvanized Iron Eave Trough in 8 foot lengths. Lithographed Tea Caddies and Signs. Advertising Glass Signs. We make and supply everything used in the Stove and Tinware Trade.

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

MONTREAL Markets continued

offered here at 5 to 10c. less than the spot quotation from stocks in store.

The new basis of prices on leads and colors acted rather as a check upon the demand, but the houses are busy on the heavy orders which they had sold ahead.

Mr. Wm. Clendenneg, jr., of the well-known firm of founders of this city, has just returned from an extended business trip through the States. The firm is at present engaged on some heavy casting work for the Royal Electric and the street railway companies.

Mr. McMaster, of the Montreal Rolling Mills Co., was out of town the other day for a short trip up West.

Painchaud, Squire & Co. report good spring orders for their special lines of cutlery.

Jos. Hutton & Co. are offering some new special lines of the famous Rogers cutlery to the trade this year. A line of hollow-ground razors is one of the features.

Drummond, McColl & Co., agents of the Canada Iron Furnace Co., say that the demand for supplies from the Ontario agricultural implement makers is beginning to give signs of improvement.

The Messrs. Pilkington have been placing some good sized lots of plate glass for some of the new stores in course of erection this spring.

Ramsay & Son say that business is rather quieter this week, but that they have been doing a good average trade in paints, varnishes, etc.

Messrs. W. H. Cottingham & Co. report fair returns from their special line of artists' supplies, etc., which they are offering to the trade.

TORONTO MARKETS.

TORONTO, March 17, 1893.

HARDWARE.

In spite of the bad condition of the country roads the volume of business in shelf and heavy hardware seems to be larger than a week ago, and orders for good quantities are coming in freely. The demand for garden and harvest tools is particularly good. In tinware the principal business for the season seems to be about over. The advance in Mrs. Potts' sad irons anticipated in last week's hardware has materialized. It amounts to about 25c. per set. There has been a 5 per cent. increase in the discount on certain wires and there is some change in the list on hinges. Prospects for spring trade are bright and payments continue to improve. About the only drawback to trade at the moment seems to be business in the Northwest. The snow blockade in that section of the country is interfering considerably with the movement in merchandise, but as soon as the roads are again open to traffic a good trade is anticipated.

WIRE—The discount on annealed, annealed, and oiled, and galvanized, has been increased to 20 per cent. for the standard list. Other kinds named on the list remain as before. The change is not likely to make much difference to the trade at present, as a large number of dealers throughout the country had received their stock before the change was made.

NAILS—A fair business only is being done in this line, and association prices seem to be strictly adhered to.

FILES—As the lumbering trade is about over the demand from this source has fallen off, and as large quantities are used by this industry the movement is small. The principal kinds selling are Kearney & Foot, Jowitt's, and "Black Diamond."

ROPE—Demand is steady but devoid of any special feature.

SHIPCHANDELERY—Trade in this line is beginning to move, and as the indications favor more work being done this season a good spring trade is anticipated.

CHAIN—A few orders have been booked for import, but there has been no special business doing.

METALS.

Nothing particularly new has developed in this line during the week. Trade has been good and will naturally become still better as the spring season advances. The indications at the moment favor a brisk spring and summer trade. Prices do not show any marked changes. In fact about really the only change is an advance of 1c. a pound in ingot tin. Bar and pig iron, both in regard to volume of business and to prices are about the same as a week ago. Stocks of tin plates are gradually diminishing and demand is good. The position of sheet iron seems to be exceptionally good, and ingot copper is moving fairly well.

PIG IRON—There are no special features to note. The movement continues small at unchanged prices.

Rogers, Brown & Co., Buffalo, N.Y., report the Toronto pig iron market as follows: Prices continue low, but are firmer than for many weeks. There is quite a little activity at present, although mostly for small lots, from a car load to 100 tons. Considerable interest in the market is being manifested by consumers. It is now being generally conceded that a very great slump in prices in the near future is improbable. We quote for cash f. o. b. cars, Buffalo: IX Foundry Strong Coke Iron, Lake Superior ore, $15.70; 2X Foundry Strong Coke Iron Lake Superior ore, $14.70; 2 Foundry Strong Coke Iron Lake Superior ore, $14.45; Jackson County Silvery 1, $18.00 to $18.30; Jackson County Silvery 2, $17.30 to $17.80; Lake Superior Charcoal, $18 20; Southern Soft 1, $14.10 to $14.35; Southern Soft 2, $13.85.

BAR IRON—Demand is good at association price.

TIN PLATES—Stocks held by dealers are extremely low. Demand is good and prices rule firm. Makers claim that they are manufacturing at an absolute loss.

SHEET IRON—Stocks in this line are also low, while the demand has been exceptionally good, several good sales being reported.

CANADA PLATES—There is not a great deal doing at the moment. Sales are reported for import. Prices remain as before.

GALVANIZED IRON—Demand is good, especially for Gordon Crown and Queen's Head brands. Prices have been without change this week, although competition has brought them down somewhat during the last three months.

INGOT TIN—Prices have advanced about 1c. a pound during the week, and reports



regarding the future of the market are conflicting. The movement on the local market has been good, and stocks are reported to be fair.

INGOT COPPER—A good business has been done in this line, some large orders having been put through within the last few days. The trade has been principally in imported copper.

ZINC AND SPELTER—Inactive and featureless.

SOLDER—Although no change has been made in this line, should the advance in ingot tin continue the price of solder will have to follow.

LEAD—A steady trade is being done in pig lead, but there are no special features to note.

ANTIMONY—There has not been much doing in this line, orders being small. Quotations are unchanged.

PAINTS AND OILS.

Trade generally is brisk, and a peculiarity about it is that nearly every order received has either oil or turpentine on the list. White lead seems to be about the only thing that is discounted to any extent. Linseed oil and turpentine are in active demand. Turpentine is higher at 55 to 57c. Linseed oil has been advanced 2c. to 61 and 63c. for raw and to 64 and 66c for boiled. Castor oil is quoted ½c. to 1c. above last week's prices, and demand is good at the advance. White lead is again quoted. It is on the 5¼c. basis, as previously intimated it would be, and when taken in ton lots one shipment on delivery 2½ per cent. is allowed off invoice. In prepared paints a steady business is being done, and much the same applies to varnishes.

GLASS.

Demand continues fair, principally for small sizes. Further shipments of window glass are expected to arrive within the next few weeks.

OLD MATERIAL.

Supplies are coming in a little more freely but there is no change in prices. We quote as follows:—No. 1 heavy cast scrap 65 to 70c. per 100; stove cast scrap 40 to 45c.; No. 1 wrought scrap 50 to 60c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c.; new light scrap copper, 8 1-2c.; heavy scrap copper 9½c.; old copper bottoms, 8c; light scrap brass 5½c.; heavy yellow scrap brass 7½c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1¾ to 2c.; scrap zinc, 2½ to 2¾c.; scrap rubber, 2½ to 2¾c.; country mixed rags, 80 to 85c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; plough shares, 60 to 65c; burnt cast scrap, 15 to 20c.; railroad iron, 60 to 70c.; malleable scrap, 25c.

SEEDS

The market is quiet, deliveries being about completed and jobbers have not began to buy. There are no change in quotations. Dealers are paying $8.50 to $9 for scattered lots of red clover that are offering. In alsike the market remains unchanged, prices still ranging from $5.50 to $6.60. Some interior lots are selling below these figures, while fancy seed brings a little more. For the few

MARKETS—Continued

lots of timothy offering $1.50 to $2.50 is being paid, while for an occasional lot of flail threshed 25c. extra is paid.

TORONTO TRADE NOTES.

Ingot tin has been advanced 1c. a pound.

Mrs. Potts' sad irons are 25c. a set dearer.

The association price of white lead has been issued.

There has been an increase in the discounts on drill bits.

Brass manufacturers report business in their line especially dull.

There has been a considerable advance in the price of barn door hinges.

Stewart & Wood report that Champion Mixed Paints are being extensively asked for.

English manufacturers of castor oil have withdrawn their quotations from the market and will only quote by cable.

There is not much improvement in the trade for plumbers' supplies, although it seems better in the country than in the city.

M. & L. Samuel, Benjamin & Co. are doing a large trade in nickel platers' supplies, of which they carry a full line.

Trade for milk can trimmings is about over, the bulk of the orders having been filled as far as the jobbers are concerned.

Frankel Bros., who recently purchased the Toronto Smelting Works, report being in good position for turning out solder and babbit.

The interests of the Kruse and Lamson companies have been absorbed by the National Cash Register Company, of Dayton, Ohio.

Mr. N. Courtemanche, of Penetang, was in the city a couple of days ago and, judging from the orders he left, he anticipates a brisk spring trade.

J. B. Griffith of the Hamilton Electric Railway, was here this week arranging with Mr. Walker of the Canadian Rubber Co., to manufacture a number of hard rubber articles that are now imported.

H. S. Howland, Sons & Co. say: "We think it best to advertise in HARDWARE. The number of orders we have received for Samson's spades and shovels is simply surprising, and we attribute it a good deal to the advertisement we have in HARDWARE."

The silverware for the Canadian Pacific Worlds Fair Dining Car, was manufactured specially to order by the Toronto Silver Plate Co. This company has also in course of manufacture, the silverware to be used on the North Shore Navigation Co.'s new Steamer, City of Collingwood, which is to be run in connection with the Worlds Fair. This speaks well for Canadian enterprise.

Messrs Abbott & Co., of Montreal, have asked HARDWARE to state that the Mr. Mills referred to in an item of our issue of January 21st, was not the manager of their works as was said, but their traveller and correspondent. Messrs. Abbott & Co. have appointed as traveller for Montreal and vicinity Mr. Knox Henry, late of Messrs. Pillow & Hersey Mfg. Co., while Mr. W. J. Jeandron, of Toronto, will travel for them in the west.

AMERICAN MARKETS.

New York, March 16.

Pig Tin.—London cables were a shade lower, the latest ones quoting £94 10s. for prompt and £93 17s. 6d. for future deliveries. This turn was somewhat surprising, since late advices are to the effect that speculative interest there is greater at present than it has been for some time past, and that a considerable amount of "long" tin is in the hands of strong holders, who, naturally, are interested in higher prices. Some observers imagined that they discovered the work of the master of London manipulation in holding prices down for some purpose, and guessed that the operator referred to is inclined to encourage an extensive outside following. This, however, was all surmise. The one plain fact visible was that there was quite a large "bull" interest in the local market with which outside operators and regular dealers are identified, and that more or less business has been effected privately of late is very probable. Prices were well maintained, in the face of the reaction in the London market, but public transactions were moderate, including 10 tons for March delivery at 20.95c.

Copper.—Orders for ingot come this way slowly, and it is the exception that these call for other than small, unimportant quantities of the metal. The principal producers make the same display of firmness that has been a conspicuous feature of their position since the beginning of the year, and still quote 12c. upward for Lake Superior ingot. Outside lots may be secured at 11 7-8c., however, without a great deal of shopping. On casting brands the prices quoted vary but little from 11c. London cables quoted merchant bars at £45 7s. 6d. for prompt and £45 15s. for futures, with sales for the day of 200 tons and 275 tons respectively.

Pig Lead.—Small sales were put through in this market at 3.90c., and the market was apparently firm at the close, with that price bid for single car lots, and 3.95c. asked. Demand ,however, was without sign of improvement. From St. Louis 3.70 was again quoted.

Spelter.—Business is still extremely quiet. Consumers buy as imperative wants dictate, and seem inclined to go slow pending developments after the opening of navigation. From the primary sources of supply there are offers to sell at 3.97 1-2c., which, at ruling freight rates, is equivalent to about 4 1-4c. delivered at the East. On spot lots of Western 4.27 1-2 to 4.30c. is quoted. London cables were £17 17s. 6d. for good merchant brands.

Antimony.—The jobbing distribution is fair, but otherwise business is moderate. Prices about steady, with 10c. quoted for Hallett's, 10 1-4 to 10 3-8c. for LX, and 10 1-2 to 10 3-4c. for Cookson's.

Tin Plate.—The aggregate of spot and future business has been only fair during the past few days. Prices are firm and rather higher for cokes, steady for bright charcoals, and a little easy on most varieties of ternes.

Pig Iron.—There has been no decided change in the character of business or in the demand for any class of domestic iron, and the movement into Eastern channels of consumption is only fair. Some brands move at slightly irregular prices, but for popular makes values remain quite steady.

Scotch pig is selling in moderate quantities to arrive, and the demand is without visible change in character.

Old Material.—There has been but little movement in this line, but, although the market remains slow, prices are quite steady. Iron tee rails are quoted at $17 to $17.50, steel rails at $14 to $14.50, No. 1 wrought scrap iron at $16, and machinery cast scrap at $12.50 to $13, all f.o.b. Jersey City.

In other lines of manufactured iron and steel the business experience is variable, but slow trade is the rule, and prices are still rather weak nearly all along the line.

CO-OPERATION AND BUSINESS PROFITS.

Attempts at co-operation thus far have generally shown a strong if not fatal tendency to failure because of the difficulty of commanding the requisite skill and faithfulness in management, says the Popular Science Monthly. Co-operators are not willing to pay the price for services which their business needs in order to succeed. They always stand on the theory that the men who conduct great enterprises get too much for doing the business and operatives too little. In course of time, and usually not very long time, their scheme goes down. This is because in the nature of things no hired person on a salary of fixed amount will all the time keep his wits alive and study into the small hours of the night devising ways and means to make money for other people. They propose in their constitution to take from capital and skill a portion of the profit that has usually been accorded to them and give it to labor, but after thousands of experiments during forty or more years of good business in this country, there is hardly a single case of such undoubted success as to warrant the assertion that demonstration of feasibility has been attained. The combined skill of all the co-operators in half a century has produced no concern of magnitude. The almost uniform failures seem to prove that great management must have great compensation, and in endeavoring to get the skill without the pay the co-operators' dream has come to naught.

Now, this is equivalent to saying that the world finds its business can be done at less cost than by co-operation. The latter fails because it is undersold and unable to compete with such skill as gets the better pay. Had Commodore Vanderbilt been content with the salary of a steamboat captain he would never have developed into a great business man and railroad manager. The prospect of great emolument brought into exercise great powers, so that he cheapened transportation to an astonishing degree and yet made money to an astonishing amount. The people who saved four or five dollars in a round trip between

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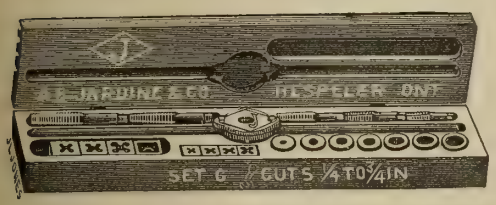
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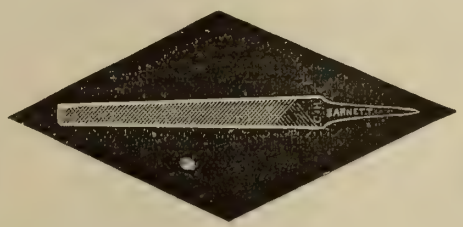
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Boston and New York, and the people who got their barrel of flour twenty-five cents less because he ran a railway to Chicago, enjoyed the sensation at that time, but when they saw his fortune, could not refrain from tears to think of the merciless robbery they suffered at his hands. The thing happened and succeeded, not because Vanderbilt was a robber, but by virtue of his giving better terms to people who had to travel and had to eat bread. His inducements were such that he got the business. Suppose he and some others of the same kind of enterprise had not come upon the stage, what would have been the result? Evidently the old ways of business would have continued. We would still be going to Buffalo on canal boats and creeping along the streets of our cities in dilapidated omnibuses, still be doing our journeying in stage coaches over dusty roads and tedious hills at a great sacrifice of time,money, comfort and strength.

The enterprise of the money-makers has profited everybody else by exciting production and accumulation. The money-makers have taken pay, not out of labor, but out of the increased production and savings which their efforts have secured. Individuals have sometimes suffered. The omnibuses were killed when the horse-car came, and A. T. Stewart did the business of a hundred small shopmen; but the people at large saved time in getting where they were compelled to go in one case, and got what they wanted at less cost in the other. The street railroad makes ten times the money that the stage did, and the people save money and time. The people can do better by buying of Stewart, and therefore they buy. They enriched him to the tune of thirty millions, clean cash. This is a great fact, but it does not show great robbery. It may show the very opposite.

Stewart was in business for about 40 years, and for many years sold twenty millions of goods per year. Had he sold but fifteen millions per year at a profit of five per cent, and invested the profit with his usual sagacity, he would have been worth more than thirty millions at the end of his forty years. That he left but thirty millions proves that his profit was not over five per cent. on the average. The margin from labor to gain from is, therefore, in the neighborhood of five per cent., because Stewart has proved that the ordinary man cannot part with more than that and continue in business. In other words, business stops when the margin goes down much below that rate.

There are some lines of business in which the profit is at times more than five per cent, but, in the long run, the average cannot amount to more than that. Competition increases from year to year, and profits tend downward all the time; consequently, it takes more talent and energy to make fortunes now than it did a few years ago. It is not so easy for a laborer to become a boss as it formerly was; and, as the chances for rising to bosshood grow less, the hatred of bosses increases. This is a symptom of discontent, and an evidence of the unreasonableness of the philosophy which is at the bottom of the schemes for relief. Capital must be paid, skill must be paid, and, if they are each paid but two per cent. of the accruing profits, one per cent. only remains for labor to get its share; and this to the laborer whose wages are one dollar a day would amount to but three dollars per year. This is something, to be sure, but as a means of elevating the laboring classes is of no account.

THREE RIVER BOG IRON ORES.

By A. P. Lowe, Geological Survey of Canada.

In 1667 bog iron ore was first found in the neighborhood of Three Rivers, and the right to work the deposits was granted in 1676. Little or no work was done towards mining or smelting them until 1733, when a company was formed and forges erected on the west side of the St. Maurice, some eight miles above Three Rivers. In 1743 the forges passed to the royal domain, and were carried on for several years in the name of the king. Besides other extensive repairs, a walloon hearth was built, and over one hundred and eighty men were employed. At the cession of Canada in 1760, they passed, with other crown property, to the English Government, and were worked under the military authorities for five years, and then transferred to the civil government of Three Rivers. In 1767 they were leased for a term of sixteen years, at an annual rental of £25.

At the expiration of this term in 1783 the forges and lands were again leased for another sixteen years for £18 15s. annually. The property subsequently passed through a number of hands, the rental rising to £850 per annum, until in 1845, owing to the dissatisfaction of settlers in the neighborhood, the forges were separated from the lands and sold at public auction, the forges bringing £5,575, while the fiefs St. Etienne and St. Maurice were sold for £4,500 subsequently.

In 1861, owing to various reasons, the government bought in the lands and resold them to the numerous squatters already settled on them. The forges in 1863 became the property of John MacDougall & Sons, and were successfully and profitably worked by them until 1883, when operations ceased, as other furnaces had been erected at Radnor, where ore and fuel could more easily be obtained. The ruins of an old forge may be seen on the east side of the Batiscan river, at the head of navigation, near St. Genvievre. This forge has not been in operation since the beginning of the present century.

In the region about Three Rivers, where the bog iron ores and ochres under consideration are found, the valley of the St. Lawrence river is from 20 to 60 miles broad, extending from the Laurentian hills on the north to the highlands of the eastern townships on the south. From the level of the river on both sides the country rises in a succession of steps and flat terraces, cut out of stratified clays and sands, that here fill up and cover all irregularities of the underlying rocks, to a height of 600 feet above the present level of the river. The otherwise almost level plain is broken by narrow valleys cut by the small streams and rivers of the region. The clays almost underlie the sands, which vary in thickness from a few inches to 100 feet and over. These sands, generally of a distinct yellow color, are charged with a considerable percentage of iron, and from them are derived the numerous deposits of bog iron and ochre that are here found.

The gneisses and basic granites of the archean area to the north of Three Rivers, contain a considerable amount of iron in the form of magnetite or more commonly ilmenite or titaniferous iron ore. It occurs generally in small grains, intimately associated with the other minerals of the rocks, and its presence is so constant as to appear to be a constituent rather than an accessory mineral of the rock. Often the ilmenite occurs in large segregated masses, which are sometimes so abundant as to form the greater part of the rock mass.

Previous to the glacial period the surfaces of these rocks, exposed to the action of the weather, must have been more or less decomposed. During the time of the glacier the ice moved down from the highlands to the northward, and covered all the country far to the south of the St. Lawrence. In its flow southward the ice not only removed from the archean hills any decomposed material that may have covered them, but rounded, grooved, and polished the rocks beneath, by the abrading action of the material carried by the ice and pressure of its mass. The material removed by the glacier was often reduced to a fine state, the quartz to sand and the feldspars to clay. As a rule this material was not transported far by the ice, being deposited in any place sheltered from the direct action of the moving ice, as in valleys, or behind rocky hills, where the force of the glacier was broken. At or towards the close of the glacial period the level of the country was about 600 feet lower than at present, and the wide valley of the St. Lawrence was occupied by a deep arm of the sea. Into this was poured the waters of the St. Maurice and other rivers, now falling into the St. Lawwrence.

Coming from the retreating foot of the glacier these rivers must have been greatly swollen by the water from the melting ice, and with their great volume and strong currents removed much of the finer drift material left by the glacier in the valleys drained by them, and deposited it again in the quiet waters of this arm of the sea. The clay being most easily held in suspension, was carried far out, and was deposited over the entire bottom of the valley, the sands being less finely divided were thrown down along the margin of the old sea bottom.

As the land rose to its present height it remained at the level of each terrace long enough to allow the waves to cut deep faces into the one above, and the sand thus cut down was carried farther out by currents,until finally they nearly everywhere covered the lower clays. The grains of magnetite and ilmenite in the glacial debris were carried along and deposited with the sand. It is to the presence of these more or less decomposed grains that the prevailing yellow color of the sand is due.

The present surface of the greater part of this wide valley is sandy; but, as before stated, the sands are everywhere underlaid by beds of stiff blue clay, impervious to water. As a consequence, in many places where there is little or no slope, a slight uplift of the clay along the front of the wide terraces has rendered the drainage defective, and has formed vast swamps, while the lower portions of the overlying sands have become charged with water. These swamps support a rank growth of vegetable matter, their higher parts being covered with a thick forest, whose roots penetrate deep into the sandy soil.

Decay goes on quickly in these swamps during the summer, and as a result of this decomposition, quantities of organic acids are formed which remain in solution in the waters of the swamps. These waters coming in contact with the finely

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divided iron mixed with the sand, the acids reduce the peroxyd to a soluble protoxyd, and it is brought to the surface either as a carbonate of protoxyd, or, when organic matter is abundant, as a combination of protoxyd of iron, with some of those organic matters which have received the names of crenic, geic, and humic acids. These protosalts of iron absorbing oxygen from the air, the metal is rendered insoluble, and is precipitated from the solution of the carbonate as a hydrated sesquioxyd, or from the organic solution, as a compound of this oxyd with the vegetable acid. The bog iron ores consist of variable mixtures of hydrous sesquioxyd of iron with the organic compound, while the ochres are probably the organic compound in a nearly pure state.

The bog iron ores occur in patches near the surface of the sandy soil. These patches are from a few square feet to several acres in extent, and from three to thirty inches in thickness. They are always found in or near the borders of the swamps.

These deposits seem to be formed by the ferruginous solution from the swamps, precolating through the adjacent sands, where, coming in contact with the air on the porous soil, the iron is precipitated in the form of concretions about particles of sand. These concretions, covered by successive layers of iron, continue to grow as long as the supply of ferruginous water is kept up. In size they vary from that of small shot to masses several inches in diameter,and when large they have the form of irregular rounded discs, that often show concentric rings of growth.

The region about Three Rivers was carefully examined by Sir William Logan in 1852, and a number of the following localities were mentioned by him in the Geological Survey Report 1852-53.

Many of these deposits have since been worked, and now only afford moderate quantities of fine grained newly formed ore. On the west side of the St. Maurice river, in the augmentation of the township of Caxton, there is a deposit covering about one hundred acres. This locality was worked for a number of years to supply the old St. Maurice forges, and is now nearly exhausted. Northeast of this locality, about four miles, there is a considerable swamp in the fourth range of the fief of St. Etienne, it has an area of about 1,200 acres. Ore is found at uncertain intervals of space along the northwestern border of the swamp, and it probably occurs in patches over the greater part of it.

About two miles and a half southeast from this locality, in the second range of St. Etienne, bog ore is met with in patches over a surface of from thirty to forty acres. The thickness of the mineral patches in this ground appear to range from six to nine inches. Further south, in the seigniory of Pointe-du-Lac, there are several localities from which large qauntities of ore were once taken, but they are now nearly exhausted.

To the east of the St. Maurice river, and between it and the Batiscan river, are several localities abounding in this mineral. Near the banks of the St. Maurice, about a mile and a half below Pointe-a-la-Hache, there are indications of ore.

To the northeast of this, at a distance of six miles, is a triangular area lying in the St. Felix and Ste. Marguerite ranges, partly in the seigniory of Cap-de-la-Madeline, and partly in that of Champlain. Its superfices extend over about six square miles, it has a uniform level about two hundred feet above that of the St. Lawrence. Throughout this neighborhood areas from one-sixteenth to three-quarters of an acre are more or less occupied with patches of ore, from two to four, and occasionally six parys across, and from six to ten inches thick.

In the seigniory of Champlain a considerable field of the ore exists on the south side of the Champlain river. It has a breadth of twelve to eighteen acres, and its superfices is about 1,100 square acres. There is another band northwest of it, and separated from it about ten acres, this band has an area of about seventy-five square acres.

The ore, as in other instances, is found in these bands in numerous patches, the thickness of which varies from three inches to a foot. From that part of the band which lies in the vicinity of the river A-la-Lime the old forges on the Batiscan river were supplied with ore. On the eastern side of the Batiscan river bog ore is found on the river Veilette, upwards of a mile and a half from the bend in the Batiscan, below the old forges. It occurs in several patches,one of which extends over a third of an acre, with a thickness of from three to six inches and sometimes a foot. A mile and a half beyond, on the road to St. Prosper, it is found not far from the boundary between the seigniories of Batiscan and St. Anne-de-la-Perade, here the patches are small and the thickness does not exceed three or four inches.

In the seigniory of St. Anne-de-la-Perade indications of ore are met with on the southwest side of the road which turns up from the St. Anne river and runs parallel with the Charest, but the patches do not seem to be numerous, the thickness is from three to four inches.

Lac-a-la-Tortue is situated in thesouthern part of Radnor, about one mile beyond the north lines of the seigniory of Champlain and two miles from the St. Maurice river. The lake is about three miles long from northeast to southwest and has an average breadth of about one mile. It occupies the lowest depression of a great swamp called Grand Pile, that extends north and south from the lake. At its centre the water is under 20 feet deep, and shoals gradually to the shore. By removing an obstruction at the discharge the water has been lowered some six or eight feet, and a wide margin of its bed has been exposed on all sides.

The lake is fed by a number of small streams flowing from the surrounding swamp; these are highly charged with salts of iron, giving the water of the lake a very ferruginous taste and coloring it a rusty yellow. The ore is found in the form of concretions scattered through the soft greenish mud for several feet below the surface of the bottom. It appears to be formed by the precipitation of the protosalts in solution, which take up oxygen from the surface and becoming insoluble, sink to the bottom, where they collect about various particles of foreign matter and form flat porous concretions of various sizes, the largest being often six or eight inches in diameter, by over an inch in thickness, and show distinct rings of growth.

The growth of the ore in the lake bottom is quite rapid, it having been found that paying quantities of ore can be obtained from areas completely exhausted some eight or ten years ago.

Work is carried on by hand in the shallow portions along shore, and in the areas left bare by the lowering of the level of the water. The operation consists in shovelling the mud containing the ore into iron sieves of about thirty inches in diameter, where the ore is washed free from mud and then made into convenient heaps for removal. In the deeper parts of the lake the ore is raised by a dredge with three rows of iron buckets on an endless chain. This dredge is capable of working to a depth of twelve feet, and brings up the ore mixed with soft mud; this is dumped into a long cylindrical sieve, placed on an incline so as to discharge on to scows moored alongside.

Along the axis of the sieve are arranged a number of jets of water, which as the sleeve rotates,wash away the mud and allow the clean ore to fall out at the lower end on to the scows. The loaded scows are towed to the west end of the lake where the Piles Branch Railway passes close to the water, and from there loaded cars are run direct to the furnace at Radnor.

During the past season large deposits of massive ore were discovered in the bottom of the lake which are claimed to be two feet and upwards in thickness, and although work has been carried on here for more than thirty years, the supply of ore last season was much greater than in any former one. The ore was formerly supposed to lie in the mud within a foot or so of the bottom, but this year paying quantities were found in the underlying sands to a depth of six feet, the limit to which the dredge would work. From this it will be seen that the supply of ore in Lac a-la-Tortue is far from exhausted.

On the south side of the St. Lawrence, opposite Three Rivers, in the second, third and fourth ranges of Gentilly, the Canada Iron Furnace Company have discovered and are working a number of remarkably rich beds of ore. These are generally found along the faces of the terraces. The largest bed is about ten acres long by half an acre wide. Work has been carried on to the depth of four feet without reaching the bottom of the bed, which will reach five or six feet in places. The ore on top is fine, but towards the bottom it becomes heavy and massive, and has to be broken out by picks.

Medium sized patches of ore have been found extending over an area of six square miles in this locality, and no doubt many others will be found in the neighborhood.

Work has also been carried on by this company in the fourth range of Kildare, County of Joliette, where one patch is three acres long by half an acre wide, with an average thickness of twelve inches, all of fine rich ore. There is a band here that is said to have been traced for a distance of seven miles.

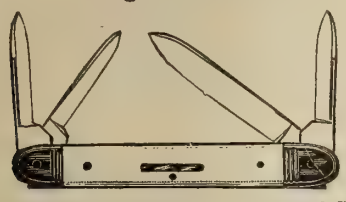
It will thus be seen that although iron iron has been mined and smelted in the vicinity of Three Rivers for a period of one hundred and seventy years, there yet remains considerable quantities of ore in the deposits first worked and that new beds of great extent continue to be found containing sufficient ore to supply the larger and newer furnaces for probably a long time to come.

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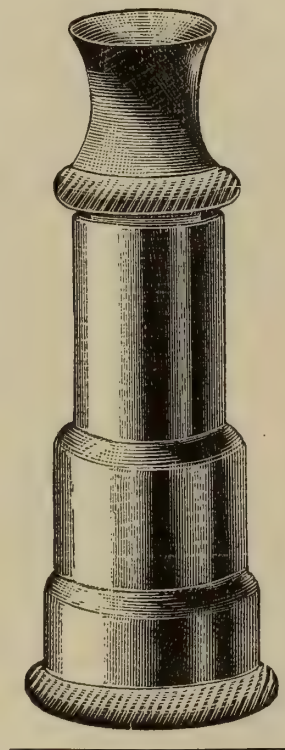
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237 Arch St., Philadelphia, Pa.

BUSINESS CHANGES.

SALES MADE OR PENDING.

Wm. Pirie, blacksmith, Port Dover, is advertising his business for sale.

The general stock of Levi S. Lewis, Newboro', is advertised for sale Mar. 20.

John Hood has been registered proprietor of J. Hood & Co., polishers, Montreal.

The stock of rubber goods of Esley & Co., St. John, N.B., is being sold by auction.

The general stock of J. W. McDonald, Carleton Place, has been sold at 60c. on the dollar.

The general stock of A. Breux, Chambly Canton, has been sold at 25 cents on the dollar.

Wyatt, Son & Chambers, stoves and tinware, London, have been succeeded by Wm. Wyatt & Son

The stock of W. J. Hall, stoves, tinware and hardware, Peterboro', is to be sold by auction March 21.

John P. Seybold has been registered proprietor of the wholesale hardware firm of Seybold, Son & Co., Montreal.

The general stock of M. McKenzie, of Port Rowan, valued at nearly $3,000, was sold at auction in London a few days ago to Mr. Williams, of Tilsonburg, at 75 cents on the dollar. The general stock of Bean, Peltz & Bean, of Harriston, valued at $3,243, was sold to W. Trott, of Oil Springs, at 72 cents.

PARTNERSHIPS FORMED AND DISSOLVED.

Franklin & Fuller, hardware, Wolfville, Que., have dissolved.

F. Gavlin & Co., general store, St. Felix de Valois, have dissolved.

Cochrane Bros.. general store, Petitcodiac, N. B., have dissolved.

McKay & McLean, general merchants, Eureka, N. S. have dissolved.

H. C. Barnes & Co., general merchants, Salesbury, N.B., have dissolved.

Beal & Mowatt, coppersmiths, Victoria, B.C., have dissolved, H. F. Beal continuing.

C. P. England and W. H. Kilburn, have been registered proprietors of a general store at West Sheffield, Que.

E. F. Cook, W. D. Hughes, and John H. Cook have been registered as proprietors of the firm of Hughes, Cook & Co., oils and tallow, Montreal.

Mulholland & Co., manufacturers of mouldings and wire mattresses, Toronto, has dissolved. S. M. Flyn retires and A. A. Mulholland continues.

FIRES.

Henry Cross, general merchant, Fenella, has been burned out.

James Horgan, general merchant of Southport, P. E. I. has been burned out.

McCreary & White, sash and door manufacturers, Arnprior, have been burned out, partially insured.

Two general stores were burned out in Vanleek a few days ago, and neither carried insurance. They were P. T. McLaurin and J. R. McLaurin & Co.

DEATHS.

Mr. Angus McDonald, general merchant, Summertown, is dead.

Joseph Copp, of Copp Bros, general merchants, Port Elgin, N.B., is dead.

W. G. Munderloh, of the firm of Munderloh, shipping and general merchants of Montreal, is dead.

Mr. George Craig, of Bedford road, this city, died at his residence Ssturday. He was a partner in the firm of Jacques & Hay, and latterly in that of R. Hay & Co.

Mr. James K. Cameron, secretary-treasurer of the Monetary Times, died suddenly Sunday evening. He was 36 years of age, and leaves a large circle of friends.

"Honest" John McAdam, of St. Stephen, N. B., is dead, aged 86 years. He was born in Belfast, Ireland, 1807, came to New Brunswick and amassed wealth as a lumberman.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

E. Blanchard, plumber, Montreal, has assigned.

John H. Holland, window blinds, Halifax, N.S., has assigned.

Andrew De Wolfe, hardware, St. Stephen, N.B., has assigned.

L. E. Morin, jr., & Co., oils, Montreal, have suspended.

G. A. Biron, St. Telesphore, general merchants, has assigned.

S. N. Lloyd, general merchant, Croyden, has assigned to the sheriff.

W. J. Fraher, general merchant, Sarnia, has assigned to A. E. Parey.

A St. Thomas manufacturer named Grant Mulligan has assigned to Angus McKenzie.

G. W. Bell, general storekeeper, Vars, is offering to compromise at 40c. on the dollar.

The estate of J. C. Lapointe, general store, St. Jerome, Que., is offering 50 cents on the dollar.

A. W. Lawrie & Co., grocers, crockery and hardware, Port Dover, are offering to compromise.

E. A. Payne, general merchant, Burin, Nfld., has made application to be declared insolvent.

Joseph Dusseault, tinsmith, St. Henri, Que., is absent and a demand of assignment has been made.

Alexander Gibson, general storekeeper, Kalmaurs, is offering to compromise at 45 cents on the dollar.

W. H. Wylde, of Port Mulgrave, and W. D. Johnston, of Sunny Brae, N.S., general merchants, have both assigned.

Henry Tozer, builder, 509 Richmond street, has assigned the other day to Love & Dignan on behalf of his creditors. A meeting was held and an offer of 50 cents on the dollar was accepted.

Charles Dube, contractor, Montreal, has assigned at the demand of Arthur Desjardins, with liabilities of about $28,000, of which $23,000 is on mortgages, including the Credit Foncier Franco-Canadien, $13,500; C. J. Coursol et al., $7,500, and D. G. Couture, $3,000. The largest creditor outside of this is Ferdinand Tremblay, $2,015

D. Sinclair, general merchant, Alvinston, has assigned to C. B. Armstrong, of London. W. Cornwall, in the same line of business at Beamsville, has placed his affairs in the hands of D. Blackley, a Hamilton assignee.

D. Braund, blacksmith, Exeter, has been unable to make financial ends meet, and so an assignee is in possession of his business. W. H. Widdifield, in the same line of business at Whitchurch, has found it necessary to take a similar step.

A local firm complain they recently were obliged to sign a contract with an American firm from whom they bought goods agreeing to pay for them in gold or its equivalent. They say this has not been practiced since the war and indicates the small amount of faith the American firm in question has in its currency.

H. D. SIMMONS
MANUFACTURERS' AGENT,
85 York St., Rossin House Block, Toronto

REPRESENTING:
Peck, Benny & Co., Montreal,
Alex. McArthur & Co., Montreal.
J. L. Goodhue & Co., Danville, Que.,
Shepard Hardware Co., Buffalo,
Etc.

Orders and correspondence promptly attended to.

Thos. Firth & Sons, Ld.,
Best Crucible Cast Steel.
Steel, Peech & Tozer, Ld.,
Bessemer Steel,
Open Hearth Steel.
James Hutton & Co.,
Agents.
MONTREAL AND TORONTO.

Plate Glass
ALL SIZES IN STOCK.
MANUFACTURERS OF
STAINED GLASS FOR EVERY PURPOSE.
McCausland & Son,
72, 74, and 76 KING ST. W., TORONTO.
Telephone 1112.

OFFICES: 100-102 Reade St., New York, U.S.A.

K&F KEARNEY & FOOT CO

WORKS: Paterson, New Jersey, U.S.A.

Manufacturers of FILES AND RASPS.
Superior quality fully guaranteed.

CAPACITY OF WORKS: 1,200 doz. per day.



Illustrated Catalogue Price Lists mailed on application.

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Canada Iron Furnace Co., Ltd.
Manufacturers of
CHARCOAL PIG IRON
MONTREAL.
BRAND "C.I.F." THREE RIVERS
PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.
GEO. E. DRUMMOND,
Managing Director and Treasurer



ELECTRICAL
HOUSE -:- FURNISHINGS.
Bells,
Batteries,
Push Buttons.
The largest and best assorted stock in Canada.
Send business cards for discounts.
T. W. NESS,
749 Craig St., MONTREAL.

THE BEST
English Sporting Gunpowder
USE THE
"ALLIANCE"
PRIZE POWDER
—Made only by—
Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.
Always obtainable from
Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.

Wm. Clendinneng & Son.

Iron Founders and Stove Manufacturers

Makers of the "Etna" Hot Water Boilers, Soil Pipe and Fittings, Stable Fixtures, Machinery, Builders and Special Castings

WRITE FOR ESTIMATES

WORKS: Cor. William and Inspector Sts.,
OFFICE and WAREHOUSE: 145 to 179 William Street
MONTREAL

BUYERS OF CUTLERY

WILL find it to their interest to see our samples before placing Spring orders. A choice assortment in stock of Jos. Rodgers & Co.'s and E. M. Dickinson's goods at special prices.

A. C. LESLIE & CO., MFRS. AGENTS,
MONTREAL and TORONTO

OUR SALES OF
"BURHAM" Portland Cement
For the past 8 months have been
25,499 CASKS.
"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,
McRAE & CO., OTTAWA

MUNN'S LIQUID GLUE
IS THE BEST.
Kennedy Bros., Agents
101 Bay Street, TORONTO.

Established 1864.
CLARKSON & CROSS,
CHARTERED ACCOUNTANTS
NO 26 WELLINGTON ST. EAST
E.R.C.Clarkson, F.C.A.
W. H. Cross, F. C. A.
Edward Still.
John F. Helliwell.
TORONTO, ONT.

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.
GALVANIZED SHEET IRON. SP

FOREIGN CORRESPONDENCE.

Letters translated from or written in any foreign language.

I. H. CAMERON, 10 Front St. E

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—		
56 and 28 lb ingots, per lb	24,	25
Strip "	25,	26

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
M.L.S. equal to Bradley		
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 25	4 50
I.X., "	5 25	5 50
I.X.X., "	6 25	6 50
I.XXX., "	7 25	7 50
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box.

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65,	

Tinned Plates

72x30 up to 24 gauge	6¼	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$2 05	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼inch	$2 45
16 "	2 35
¾ " and thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2⅝, 2¾
26 "	2¾, 3
28 "	3 , 3¼

Canada Plates.

Blaina	½ bright	2 75 ....
Abercarne		2 75 ....
Lion		....

Iron Pipe.

Wrought 62½ p. c. to 62½ p. c. and 5 p.c. Galvanized, 37½ to 40 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5¼
26 gauge, "	5¼, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5¼
26 gauge, "	5¼, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4⅞ 4⅞
" ⅜ " "	4⅞ 4⅞
" 7-16 " "	4¼ 4¼
" ½ " "	3⅞ 4
" ⅝ " "	3⅞ 3⅞
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 14	0 14½
Lake Superior	0 13	0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in	$0 22	$0 25
" round & square 1 to 2 in	0 20	0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16	0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17	0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26	0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20	0 22
" 35 to 45 " "	0 19	0 20
" 50 lb and above per lb	0 18	0 19

Boiler & T. K. Pitts.

Plain Tinned per lb	....	0 21
Spun " "	....	0 25

Wire.

Pure, in coils—		
From 1 to 20 gauge	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20	0 21
" " 27 to 30 "	0 23	0 25
" " 30 and up	0 26	0 28
Sheets, hard-rolled 2x4 ft	0 21	0 23

Zinc Spelter.

Foreign, per lb	0 05	0 05½
Domestic "	0 04½	0 05

Zinc Sheet.

5 cwt casks	0 06	0 06½
Part casks	0 06½	0 06¾

Lead.

Imported Pig, per lb	0 03½	0 03⅝
Domestic "	0 03⅜	
Bar, 1 pound		0 05
Sheets, 2½ lbs, per square ft, by roll	0 04¾	0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04⅝	0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)	0 17	0 19
Standard	0 16	0 18
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½	0 14
Other makes "	0 13	0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per lb		... ...
No. 1 Do. "		... ...
No. 2 Do. "		.. ...
No. 3 Do. "		... ..

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	....	$1 20
2nd qualities "	....	1 00

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.c	cwt	1 35	1 40
" " (J.F.L.S.) "	"	2	75
Venetian Red (R.C.2) "	"	1	50
Venetian Red, (best) "	1 80	1	90
English Oxides per	cwt	3	25
American "	" "	2	25
Canadian "	"	1	75
Paris Green, per lb	0 13	0	15
Burnt Sienna, per lb	0	08½	
Burnt Umber "	0	05	
do pure	0	08	
Drop Black "	0	09	
Chrome Yellows "	0	12	
" " Lemon pure,			
8 lb. tins, per lb	0	19	
Chrome Greens "	0	12	
Golden Ochre	0	03½	

Varnishes (in bbls).

No. 1 Furniture, per gal	0	60
Extra "	0	70
Brown Japan "	0	55
Brown Japan, Turpentine p. gal.	0	71
No. 1 Carriage "	1	30
Gold Size Japan "	0	95
Pure Orange Shellac "	2	00
Hard Oil Finish "	1	30

Linseed Oil (in bbls)

Raw, per gal	0 61	0 63
Boiled "	0 64	0 66

Turpentine (in bbls)

Selected Packages, per gal	0 55 0 57

Castor Oil.

Best, per lb	0 08½ 0 09

Cod Oil.

Cod Oil, per gal	.... 0 48

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet makers	0 17	0 18
White	0 16	0 17
London Town	0 7½	0 08½
Gelatine	0 22	0 27
Stripped	0 16	0 17
Coopers	0 17	0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50, 50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 50
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 30 to 35 per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 25

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 45 to 47½ p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary,
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross..... 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p.c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05
Screw and Strap, per lb .. 0 03½ 0 04½
Per doz. sets
Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.
Per doz. pairs
Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

BOWMAN, KENNEDY & CO., London, Ont.

WRITE US FOR PRICES ON THE FOLLOWING SPRING GOODS:

Spades and Shovels. Mixed Colors. Cut Nails.
Harvest Tools. Dry Colors. Wire Nails.
Linseed Oil. Paris Green. Fence Wire.
White Lead. Windsor Green. Wire Cloth.

And We will give you Closest Prices and Best Terms.

Wrought Hooks and Staples, Amer dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am. per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 30 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze, Gem, " 6 00 9 00
Brass " 8 75 10 00
Shutter, porcelain, F & H, screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   Basis—50 to 60 dy 2 30
   40dy 2 35
   30 dy 2 40
   20, 16 & 12 dy 2 45
   10 dy 2 50
   8 & 9 dy 2 55
   6 & 7 dy 2 70
2. American Pattern Only
   from 4 to 5 dy 2 90
   3 dy. (lath) 3 30
3. Canada Pattern Only
   from 4 to 5 dy 2 80
   3 dy. (lath) 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross 1 00 4 25
" Carpenter 2 25 3 60

Picks

Per doz 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz 1 35 2 00

Pruning Shears.

Per doz 4 00 5 50

Pulleys

Hothouse, per doz 55 1 00
Axle. 22 33
Screw 27 1 00
Awning 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in	10½ 10¾	11½ 11¾
Cotton, per lb	22	25
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 1 00 1 10
" N P. " 1 25 1 35

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.
Hack, complete, each 1 75 2 75
" frame only 75

Saw Sets.

Per doz 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz 3 25 4 00
Bench iron per doz 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia ½ gross boxes 3 25
" ¼ and ⅛ gross boxes per gross net cash 12 00

Soldering Irons.

Per lb 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons .....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 57½ per cent.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap 0 11½
" Crown 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Iron and Steel, annealed, annealed and oiled, galvanized 20 per cent. dis
Bright coppered steel and spring 15 per cent f.o.b. Montreal.
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " " } 4½ 4¾
" Plain twist, 2&3 wires
" Steel thorn and ribbon 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 80 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10 p.c.
Coe's Genuine, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR — SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE — HOLLOW WARE.

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR — WM. ROGERS. — KNIVES, FORKS, SPOONS.

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

---

Why Handle Kalsomines?

Fifty per cent. Profit to the Dealer on . . **ALABASTINE**

All Dealers who are in the trade for money should handle the best Wall Coating on earth—Cold Water Alabastine.

Ready for use by mixing in cold water.

Nothing like it on the market.

The only goods in this line extensively advertised.

Our special advertising sells the goods without talk.

Country dealers should keep it as it sells to the general public as well as to painters.

No goods sold in Ontario by jobbers, but full stocks kept on sale in Winnipeg, Man., Montreal, Que., St. John, N.B., and Halifax, N.S.

If our travellers have not called on you, write us for tint card and prices.

ALABASTINE COMPANY, SOLE MANUFACTURERS,

PARIS, ONT.

DIRECT IMPORTERS AND DEALERS IN

SCOTCH FIRE CLAY-BRICK



DRAIN AND WATER PIPES.

Double strength or railway culverts, etc.

Sewer Bottoms or Invert Blocks, Cement.

NOTE.—Only pure SCOTCH unglazed Fire Clay Linings and pipes are kept in stock; any other quality is worthless for resisting heat and frost. Correspondence invited. Quotations promptly furnished.

OFFICE : 31 Wellington St., Montreal.



PATENT VENTILATED CLOSET. — Absolutely odorless No earth or ashes required. Endorsed by the Medical Profession. Can be placed in any room in the house having a chimney or stove pipe. Send for price list and testimonials.

M. M. Vardon, 67 Yonge Street, Toronto.

Sole Agents for Canada.

PRINTERS — Aplin Bros. — TORONTO

WEDDING SOCIETY **INVITATIONS**

AT HOME VISITING PROFESSIONAL SOCIETY **CARDS**

Printed

Equal to Copper Plate or Lithography at less than one-half the cost

TRY US AND BE CONVINCED — **54 YONGE ST., TORONTO**

BOOKS FOR BUSINESS MEN.

How to Keep Store.

By Samuel H. Terry.

CONTENTS : The Selection of a Business; The Choice of a Locality; On Buying a Stock of Goods; Obtaining Credit on Purchases; Examination, Marking, and Arranging of Goods : Advertising a Business; Employment of Clerks; The Art of Selling Goods; Selling Goods for Cash; Selling Goods on Credit; Selling for Cash and Credit Combined; Replenishing Stock; Settling for Purchases; Depreciation of Goods; Losses by Fire, Theft, etc.; Keeping Accounts; Expenses; Co-partnerships; Influence of Social Life on Business; Buying Goods at Auction; Investment of the Profits; Insolvency; Business Qualifications, etc. **12 mo, Extra Cloth, $1.50.**

Ideas for Hardware Merchants.

By D. T. Mallett.

This novel book is the only book ever written especially for Hardware men, and every Hardware Merchant will find it of decided help and of intrinsic value. It tells HOW TO ADVERTISE a Hardware Store. HOW TO DRESS a Hardware Store Window. HOW TO SELECT Seasonable Goods and HOW TO DISPLAY them to best Advantage. HOW TO MAKE a success with Hardware. HOW TO COMPETE with "Department Stores." HOW TO TURN a Credit Business into a Cash Business. HOW TO AVOID Bad Debts and Increase Trade. HOW TO SECURE Low Quotations from Jobbers and Manufacturers. HOW TO ARRANGE the Fixtures in a Hardware Store. HOW TO TREAT and Manage Clerks. HOW TO KEEP your Accounts with the Least Labor. HOW TO SYSTEMATIZE your Business and Arrange its Details. HOW TO ARRANGE Price Lists. HOW TO MEET close Competitors and HOW TO BE ENTERPRISING. HOW TO PROPERLY proportion Store Expenses, and thousands of practical hints for Hardware Merchants. **—Paper Cover, $1.**

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By B. F. Cummings.

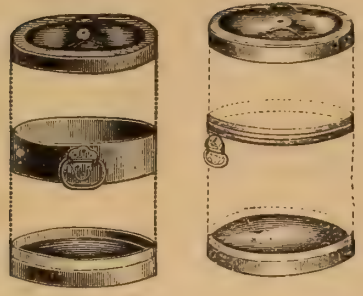
A Prize Essay, 10c.

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THE J. B. McLEAN PUB. CO., TORONTO.

. . . . MILK CAN TRIMMINGS . . .

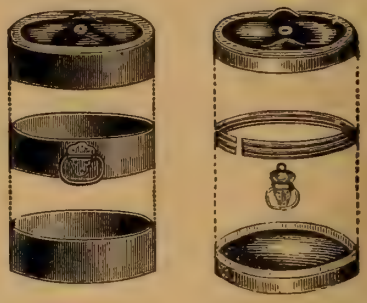
Right Cut. Wrong Cut.



TO THE TRADE:

Please notice that the wrong wood cuts of Can Trimmings have been used in our advertisement of this season. We have both in this issue so that they may be noticed. All orders for Trimmings this year will be filled with **BROAD CENTRE HOOPS.**

Right Cut. Wrong Cut.



SEND IN YOUR ORDERS — **Thos. Davidson & Co., Montreal**

Why don't you sell . . LAMPS



You sell Chimneys! You sell Burners! You sell Wicks! You sell Coal Oil! Why don't you sell Lamps? We mean nice Lamps? They are just as staple and a good profit!

WE HAVE SOME NICE JOB LOTS JUST NOW.

The very thing to make a trial with. Write for particulars.

Gowans, Kent & Co.

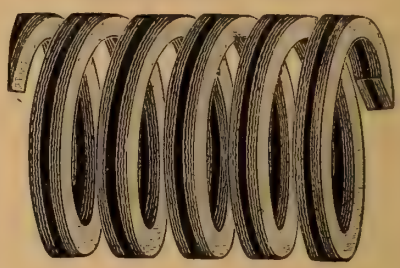
TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., Toronto.

The bearings are long and adjustable, compensating for all wear.

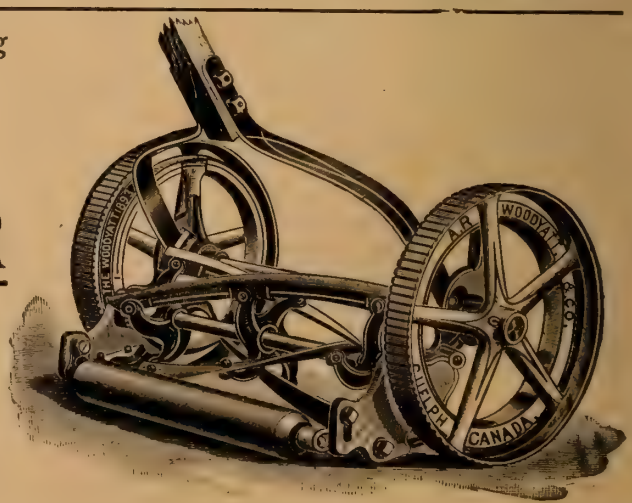
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THE "WOODYATT" LAWN MOWER

Light, Durable, and Efficient.

Now On Sale by all Wholesalers.

A. R. WOODYATT & CO. GUELPH, ONT.



CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, MARCH 25, 1893. No. 12.

NEW YORK ALUMINUM BEARING METAL CO.

NEW YORK OFFICE, N. E. Cor. Washington and Cortlandt Sts. CHICAGO OFFICE, 12 Pacific Avenue.
MONTREAL OFFICE, H. McLaren & Co., Agents.

MANUFACTURERS OF

ALU

TRADE MARK.

"Genuine Babbit," - -	Price	30c.	per	lb.	f.o.b. New York
"Champion Metal," - -		25c.	"	"	" "
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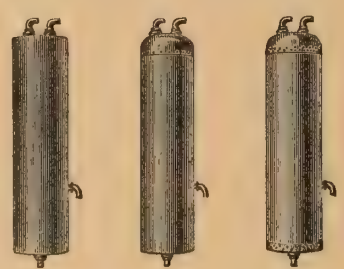
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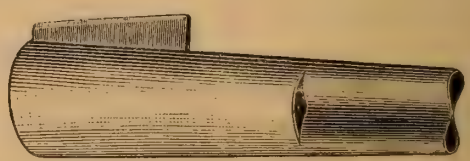
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. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, MARCH 25, 1893 No. 12

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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The condition of the iron industries is looked upon by many as the most reliable of business barometers. Without questioning the soundness of their faith there are good grounds for believing that there is something wrong with the barometer just now. In practically all branches of industry except iron the trade conditions are bright. In this one exception prices are unsatisfactory and the production has fallen off. 'Tis true that the production in Pittsburg shows a gradual increase for each of the first three months of the present year, but it is when these months are compared with the corresponding ones of last year that the unsatisfactory results are revealed, the indicated decrease being on an average of sixteen thousand tons weekly. The dullness of the trade and the lowness of the price of bar iron contributed a good deal to bringing this about, but the competition and the recent cutting of prices in the lower grades of pig iron by the Southern furnaces are responsible for a good deal.

* * *

The figures regarding the consumption of pig iron are turned to with a little more satisfaction, even if the grain be small. And this satisfaction is obtained from the fact that while the production during the first three months of the present year exhibited a decrease of 16,000 tons weekly, the consumption has been only 3,000 tons less per week than a year ago. The weekly consumption since the first of the year is placed at about 176,000 tons, and as it is only during the present month that the weekly production has reached these figures, it is inferred that the surplus stocks have been drawn upon slightly. The New York Bulletin, commenting on the situation, points out, as a noteworthy fact that this actual consumption continues, with an increase of 5,772 tons in the output of pig iron during the month of February, notwithstanding extremely low prices, pig iron being $1 to $2 a ton lower in both Philadelphia and Pittsburg than a year ago. The prices of manufactured products are also lower, but in spite of this the consumption of pig in the manufacture of various forms of iron and steel is substantially the same as a year ago. "From this it may be fairly inferred," adds our contemporary, "not only that profits have been curtailed, but that the sharp competition of furnaces and manufacturers during the past year has forced many establishments to greater economies in production, so that they find themselves able to turn out iron and its products with some margin of profit at prices which would have been considered unremunerative a year ago." They are cutting their pattern according to the cloth, and that is what manufacturers and business men generally are compelled to do in these days of keen competition.

* * *

The Iron Age, in referring to the situation, does not view it in such a bright light. The recent tendency to higher prices in some branches merely, in its opinion, accentuates the unsatisfactory condition of business, and adds that it only requires a little contact with the manufacturers to realize that the situation has not brightened materially. "Seldom has the volume of business," it says, "been so heavy as thus far in 1893. Some of the transactions which have come to light have been of really enormous magnitude, whether crude iron or finished product be considered. Only two or three years since such contracts would have sent prices skyward, but now the capacity for production is so great that values have hardly been affected. Its concluding sentence is: "Looking forward, very little encouragement is to be gathered in favor of more profitable business."

* * *

Science is ever appropriating some latent force and employing it as a motor power. First water was utilized for industrial purposes. Then the winds were pressed into service. Steam followed, and next electricity was harnessed. This was the greatest step of all. Now if the despatches are correct, another agency of which great things are expected has been appropriated and applied as a propelling force. The agency in this instance is ammonia, and the object at present is to utilize it for street railway purposes. Friday last it was put to a practical test in New York by the Railway Ammonia Company. A car was run along one of the streets of the city and the result is reported to have been satisfactory. It was demonstrated that the car was capable of a high rate of speed. The power is furnished from anhydrous ammonia, and the cost of running a car by this agency is claimed to be much less than by either steam or electricity, and its projectors anticipate that it will supercede both these for street car locomotion. Time will tell. It will, however, have a long and swift race to run before it overtakes electricity, there now being some six thousand miles of this kind of street railway on the North American continent.

* * *

As everybody knows, the onus for the proposed amendment of the tariff regarding coal oil is placed by both the crude men and the refiners upon the shoulders of the retailers, whom they claim were in some instances reaping excessive profits. During his speech in the House Mr. Moncrieff pointed out that at Essex

Centre oil sells at 15c., while at Ottawa 30 and 53c. a gallon was being charged. In Woodstock it sold at 20c., while down at Quebec 15c. to 17c. was the retail price. In a word, they charge that it is the retailer who is the "nigger in the fence." Now an agitation has been started to adjust and control the retail prices in order to prevent excessive profits and to obtain more uniformity. Retailers in towns where competition has prevented them from securing sufficient remuneration for handling the oil will not be adverse to the innovation, but there are doubtless many others who will warmly resent any such interference. If there is anything that a live, energetic merchant detests it is being made a mere automaton for handling fixed-priced goods over his counter. His message boy can do that as well as he. Aside altogether from the question as to whether the crude men and the refiners are justified in taking the proposed step, it is likely they will have a hard row to hoe before they accomplish their purpose, if they ever do.

* * *

The warmer and longer days remind the merchant as well as his wife of the approach of spring cleaning. At least if it does not it should. During the sleep of winter there are always some things that accumulate about the cellar, store house, yard or lanes that are not conducive to health. This season more than usual vigilance should be exercised in this particular. Cholera was epidemic in portions of Europe last year, and some of its victims reached the very gateways of this continent. This year cholera is expected to make its appearance in earnest, and the period of its visit and the extent of its damage will be limited by the precautions that may be taken to grapple with it. Cholera is a dirt disease. If the water supply is pure, the sewage system good and the streets, lanes, yards and dwellings clean, it has little chance of establishing itself. Cholera and other disease germs, scientists tell us, do not proceed directly from filth. They say we may live on polluted soil, drink contaminated water, breathe impure air, without getting typhoid fever, scarlet fever, diphtheria, or, in fact, any infectious disease unless the specific germs of either of these have been introduced. The trouble is that bad drinking water, polluted soil and filth attract the specific germs just as the dead horse on the plain does the carrion crow. But there the comparison ends, for while the latter does not breed, the disease germ multiplies about as fast as one can think. Hence the desirability of cleanliness.

* * *

A hardware merchant should always aim at keeping the size of his stock in proportion to that of his capital,even if adhering to the rule necessitates carrying a small stock. Where the proportion is unequal the merchant is like a ship at sea wth an abundance of sail but little ballast. As long as everything is favorable, —customers paying up well, no competition—there seems no danger, but let a few adverse winds arise, and over she goes.

RETAILERS' RIGHTS MENACED.

The bill to be introduced at the next session of the Ontario Legislature to amend the Pharmacy Act, would, if adopted, be a disgrace to the statute book that it would adorn. The duty of our legislators is to make laws for the preservation of the peace and for improving the condition of the people ; not to enact measures to the detriment of the many for the benefit of the few.

Ever since this country was settled by white man part of the stock-in-trade of practically every general merchant has been what is commonly known as patent medicines. Insect powders some of them also sold. In all hardware stores these latter articles, particularly Paris green, are to be found. The country has never been injured by reason of these patent medicines and insect powders being handled by this class of merchants. On the contrary it has been benefited.

The bill that has been prepared by the Ontario College of Pharmacy aims to deprive all except duly accredited druggists or general dealers who are not within five miles of a pharmacist, of these vested rights. Even such simple remedies as castor oil, senna, salts, turpentine, horse medicines, etc., would come under the bane. The bill is clear on this point. "No person shall keep open shop for retailing, dispensing, or compounding poisons or medicines of any kind, or sell, or attempt to sell, any of the articles mentioned in schedule A," is the reading of the vital clause. Further down the clause is specified Paris green and London purple. The The schedule A referred to contains a list of poisons. Even scammony, bromide of potash, and other mild drugs are placed upon it. In fact, the framers of the bill seem to have searched high and low for every substance or thing in which there was the smallest proportion of poison and placed it on the list. But after all they might have gone a little further. They might have included some articles that are in daily consumption, such, for instance, as apples, turnips, cabbage, potatoes, etc., for there are poisons in all these. Carrots, of course, they could not have touched ; for nature, it is said, has put no poison in their make up.

The Ontario College of Pharmacy has no doubt been led to take this step by reason of encouragements received by judicial decisions in England and in Canada, where judgments have been obtained against persons selling proprietary medicines in which, upon analysis, were found to be certain poisons. Analyze our bread, our butter, and in fact about everything we eat, and poison could be discovered. But the zealous druggists have no desire to carry their investigations so far. It is not the public weal they are most interested in. What they want is a monopoly of the trade of patent medicines. Poison or no poison, they will have no qualms of conscience about selling them. There are about 3,300 general merchants in the province selling patent medicines compared with probably about four-fifths of that number of druggists.

The general, or any other merchant as far as that goes, is just as competent as the druggist to hand a bottle of patent medicine or a box of pills over the counter. Nobody denies that. There can, therefore, be no question as to motive. It is patent on the very face of it. The plea that the sale of medicines does not come within the purview of a general merchant will not suffice, aside altogether from the fact that years in the trade has practically given him vested rights. It does not come within the province of the Legislature to say what one merchant shall sell and what another shall not, except of course where the public safety is in question, such, for instance, as the practice of medicine or the making up of prescriptions. And if the Ontario Legislature is to depart from this principle for the benefit of the druggist, why not for the grocer, the boot and shoe man, the dry godos man, the hardware man—in fact, why not prohibit every merchant from selling an article of merchandise that is outside his immediate line of business ? This would only be carrying out to its logical conclusion the absurdity that the proposed bill will initiate. One can scarcely conceive, however, the possibility of the bill going through the House. First of all it has the common sense of the legislators to contend against, while arrayed behind this will be the opposition of the manufacturers of patent medicines and of those whose interests it menaces. It will not do, however, to trust to possibilities, What everyone interested in the defeat of the bill want to do is to drop a line to his representative in the Ontario Legislature. That will materially assist in the premises.

IS A BIG TRUST BREWING ?

The announcement that parties interested in the American syndicate which had secured control of the Nova Scotia and Cape Breton coal mines had also procured options on all the iron works in the Maritime Provinces has caused considerable talk in Montreal, especially owing to a report which was in circulation that the directors of some of the rolling mills there had also been approached. With a view to ascertaining whether this was a fact or not HARDWARE'S Montreal correspondent called on one or two of them but failed to verify the report. Mr. MacMaster, the managing director of the Montreal Rolling Mills, the largest concern, said that he heard that the representative of the Whitney syndicate had been in town, and also that it was a positive fact that options had been secured on all the rolling mills in the sea-coast provinces, viz., the Portland Tolling Mills (J. Harris & Co., St. John, N. B.), the Coldbrooke Railway Mills Co. (I. & E. R. Burpee, St. John, N. B.(, and the Nova Scotia Steel and Forge Co., of which Mr. Graham Fraser is the president. Mr. MacMaster denied that he had been approached at all, nor did he hear of advances to any others in Montreal.

Mr. Graham Fraser, above mentioned, was in Montreal recently, and HARDWARE had it on good authority that he admitted that an option had been secured on his works. Therefore, although Mr. MacMaster says he has not been approached,and other rolling mill men back him up, there are whispers in the air that the visit of the American gentleman to Montreal is significant of negotiations in connection with the Montreal establishments. It is pointed out that it would not lead to much if only the Maritime Province works were consolidated and the big western works left out.

While one story has it that over $5,000,000 has already been actually subscribed to carry out the consolidation of all the iron works in Canada, forming a gigantic coal and iron trust similar to the ones across the line. The Americans behind it it is said have hopes that in the not distant future the New England market will be opened to them as well as the Canadian one, and the move is said to be only the first one in the game, Whatever the exact particulars are, the Montreal people are very reticent, but it is more than likely that where there is so much smoke there must be some fire.

THAT QUEBEC BUSINESS TAX.

There was a very lively meeting of retail merchants in Montreal on Monday evening last, the occasion being a gathering to consider the provincial business tax which has raised such a rumpus, and the particulars of which have already been fully made public. After a very stormy meeting, at which a report detailing the course taken by the committee who had interviewed Provincial Treasurer Hall and their reception by him were submitted, it was decided to carry the case to the Privy Council of the Empire, so it would seem that the Montreal men are in dead earnest in their intention of resisting the obnoxious impost.

When the chairman, Mr .Joseph Fortier, called the meeting to order, the hall was well filled. On the platform with him were Mr. John Lewis, the hon. secretary; Mr. James Baylis, the hon. treasurer, and Messrs. H. Huot, A. Michaels, Israel Rubenstein, W. Paul, A. Michaels, A. M. Featherston, C. P. Chagnon, J. O. Labelle, R. Hemsley, W. A. Stephenson, J. B. A. Lanctot, all members of the committee. The first business was the reading of the hon. secretary's report, which was simply a review of what had been done, ending up with the following strong sentiments:

"On the 13th instant they saw with surprise and indignation that the Government had not kept faith with them, and had, through Mr. Lambe, issued public notice that the tax would now be collected with rigor. The executive committee immediately convened, ordered a letter to be sent to the Treasurer expressing surprise at this action and asking the promised communication on the subject and calling this meeting to take into consideration what shall be done in the premises.

"The Government says: 'Pay the tax under protest if you will' and then we will grant you one or two test cases to prove the constitutionality of the act. There are 1,000 to 1,500 dealers in Montreal subject to this unequal tax,450 have subscribed 10 per cent. of the tax to defend themselves against its injustice. You subscribers to that defence fund are called here to-night, and only subscribers are supposed to be here,at any rate,only such can vote as to what action shall be taken. We regret that some citizens were unjust enough to refuse to subscribe to this fund, while waiting to avail themselves of the advantages of this agitation and the work of your committee, being willing to reap where others have sown."

After a very hot discussion the following resolution was adopted:

"Whereas, we learn with regret and indignation that notwithstanding our earnest appeals and courteous remonstrances, that the Quebec Government, in violation of their promise made through Premier de Boucherville on the 24th of November last, that the obnoxious and unjust Commercial Tax bill should be remodelled during the last session of the Quebec Legislature, so as to equalize the burden placed upon the trading community of Montreal. But during the session no action has been taken in the matter;

"And, in despite of the promise made by the Cabinet Ministers to our deputation which waited upon them at their own request before the session closed, which promise was emphatic; that although no relief had been afforded by legislative action, the Cabinet would consider immediately the session closed what could be done by order in council or otherwise for the relief of the commercial community of Montreal if any such relief could be had, and that no action should be taken until our deputation was informed of the result of such deliberation.

"And,whereas, no information has been vouchsafed as promised and a respectful letter to the Hon. Treasurer asking for such information having been completely ignored, the only answer being a public notice in the newspapers calling upon all concerned to pay this obnoxious, unjust and unequal tax, and that it will be collected with vigor, and that since the calling of this meeting to decide what shall be done in the premises legal process involving expense has been taken to enforce it. Therefore, be it resolved that our executive committee are hereby instructed to take such legal action in the matter as the solicitors in the case may advise to test the constitutionality of the act, which we believe both unjust and ultra vires."

After this a motion by Mr. A. M. Featherston that the tax be paid under protest and that a subscription be opened to defray the legal expenses of carrying it to the highest court in the realm be taken, was carried amid applause.

The feeling over the action of the Hon. Mr. Hall in refusing to attend the meeting is very bitter.

BOARD OF TRADE TALK.

The fourteenth annual report of the Wnnipeg Board of Trade has been issued, and shows that the board is steadily progressing. The president, in his speech, deprecates a Dominion Insolvency Act, and says it would prove detrimental to the interests of Manitoba and the Northwest Territories.

The council of the Brandon Board of Trade invite applications for the position of secretary.

The London Board of Trade banquet, to commemorate the opening of the new Canadian Pacific railway station in that city, will probably take place in the third week in April.

A Board of Trade has been organized at Gananoque with these officers: President, E. L. Atkinson; vice-president, W. F. Latiner; sec't.-treas., J. T. Green; council, C. E. Britton, R. Taylor, O. D. Cowan, S. McCammon, W. N. Rogers, Jas. Donevan, Wm. Byers, M. McParland, J. B. Turner, J. B. McMurchy, W. J. Gibson, Thos. Roach.

T. S. Ford has been chosen president of the Mitchell Board of Trade.

The Tilsonburg Board fo Trade is having petitions made ready to forward to the officials of the G.T.R. asking to have the evening train from the East arrive there earlier than 9.35, to have the delay of the morning train at Brantford lessened so that the travelling public may reach Toronto earlier in the day; also to have the trains coming east on the Air Line in the afternoon timed so as to make connections with the Brantford train which leaves Tilsonburg at 4 p.m.

NOT SO BAD AS ALLEGED.

The electric wire as an incendiary has been elaborately manipulated with the usual adjuncts of fool-foes and fool-friends. It has been washed of all suspicion by one and been literally bedaubed with scandal by the other. The truth, as usual, is in the middle of the road. Fires have been caused by the electric wire, but not to the extent implied or asserted. The returns from seventy-six cities show that of 1230 fires in 1892, but 1.4 per cent. were caused by electric wires. In comparison with other causes it is shown that lighted cigar stumps, hot ashes from pipes, fire-crackers and fire-works caused 90 per cent. more fires than the electric wire; gas jets and gas explosions, 95 per cent more; defective flues, 107 per cent. more; sparks, heat from furnaces or steam pipes, 150 per cent. more; and kerosene lamps 460 per cent. more. In this classification the electric wire is the least guilty of them all, though under careless or reckless conditions it might be a graver menace to public safety. It is, however, to be admitted that much of public fear in this matter is not substantiated by facts.—Age of Steel.

THE INDISPENSABLE GIMLET.

A contemporary says that there are about twenty-five different patterns of gimlets, made in a dozen factories, none of which make them exclusively, the industry being generally associated with that of auger bits. They are sold by the gross and are manufactured with extraordinary cheapness. Among the better sorts is the Star, which is suited to all sorts of woods, having what is called the German cut. They are of the most expensive sort, being tempered in oil and made with either a screw or diamond point. When a metal handle is used, care is taken to have it of a substantial character. It is cast solid about the shank and no rivets are used. This makes a smooth surface for the hand and prevents the handle from becoming loose. When the handles are of wood, they are either of rosewood or maple. One sort has a solid head, the whole being made of one piece. The double-cut gimlet is for soft wood and is made in a variety of styles. The nail gimlet, the cheapest of all, is made by the bushel. When the price for some of them is known to be $4.50 per gross, it can readily be seen how cheaply they can now be manufactured. A cast-steel gimlet, fitted with a handle, costing less than a cent at first hands, is a marvel. The pod and spike-nail gimlet are variations of the foregoing. The skill of the gimlet maker is probably found in the bell-hanger's, which are often 36 inches long and as small as 3-16 of an inch in diameter. It is made double-cut, or with a diamond or screw point, and of extra cast steel. The 36-inch gimlet sells for about $15 per dozen.

THE HOLDING POWER OF NAILS.

Relating to the tests as to the relative holding power of cut and wire nails, we have, says the Iron Age, the following communication from a correspondent in Indiana, who alludes to the effect of time on the holding power of wire nails:

In regard to the tests to be made as to the holding power of cut and wire nails, I wish to say that to make the tests of any value or significance, the work after being nailed should be allowed to stand for a week or two and the nails then drawn. It has been my experience that cases nailed with cut nails are easier to open with a nail puller than the same cases in which steel nails have been used. The cut nail after starting comes out easy, whereas the wire nail holds its full length. Carpenters also say that in taking off shingle roofs that have been nailed with wire nails the shingles break and the nails all remain in the sheathing.

A CASH BASIS.

For many years the question as to whether retail merchants should sell on a cash or credit basis has been debated warmly in trade papers and in meetings composed of merchants, and also in grange lodges and Patrons of Industry. Of course the principles of the Patrons is to buy wholesale, deal for cash, and do away with middlemen. However, many men have pointed out the use of credit, especially where a fair percentage of the merchant's customers are agricultural laborers or farmers. These men receive their year's pay or profit during the last three months of the year, and for the other nine are supposed to be without any considerable amount of cash. And for this reason many boldly declare that a retail merchant cannot succeed when doing business on strictly cash principles. At a debate in a neighboring village last week this question came up, and this reasoning was advanced.

Now this appears to be both fallacious reasoning and from wrong premises. The farmer does not market his produce in this country all in one day or all in one month. At least a farmer who judiciously varies his crops and products should have a perpetual harvest all the year round. The product of the farm is not all grain; it is composed of different classes of articles or products which are marketed each week, or can be if necessary. Even the grain is marketed at intervals during the winter months, and plenty of farmers in this district often hold over until spring. In all these cases the reasoning of the credit men breaks down.

But even if the whole statement were true, and farmers did market their grain all between October first and January first, that proves nothing. They have their money, and why should they lose the interest on it as well as the merchant? A cash business no doubt will be mutually beneficial. Every person is making for the cheapest market to buy in, and where goods are sold on credit cannot be the cheapest place. Neither can a cash and credit business be the cheapest, although cash customers may get a discount, yet the credit price is always asked, and even with discount off the prices are not as low as they would be if the business was strictly cash.

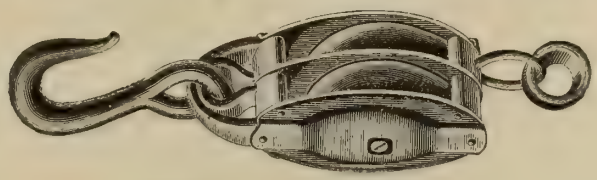
It is an undoubted fact that the man who sells the cheapest is the men who sells for cash. If mechants would put their cash business plainly and honestly before their customers they would undoubtedly succeed in convincing them that a pure cash basis in the retail business would be much more economical.—London Free Press.

ONE PRICE.

The merchant who succeeds in building up his business and realizing the most profits, asks one price for his goods, and firmly refuses to lower, says Canadian Traveller. The customers who want good goods are willing to pay what the article is worth. These are truths which close and intelligent observation always confirm. Yet there are some retail dealers who, rather than lose a stubborn customer, will reduce the price of goods to almost what they cost; and there are customers who invariably haggle for a lower price, even if an article is offered at a reasonable rate. The merchant who begins to occasionally "knock off a little" on regular prices, having shown himself vulnerable, will be continually tormented by cunning and mean customers until he yields again and again, to the serious detriment of his business; and only by a decisive return and a continued adherence to a one price basis can he recover his former prestige.

Customers who invariably try to "beat down" on prices wherever they go to trade, although they occasionally get many things cheap, only accomplish their purpose by showing that they have no self-respect; and, moreover, in most places in which they enter, they expend their breath in vain, for care is taken that they never be given a cent's worth more than their just due. On the contrary, reasonable customers, who do not complain at reasonable prices, will be the favored ones, and will have extra pains taken with their orders, so that they will be sure of obtaining their full money's worth. Justice, clear and simple, and business stability, require that goods and articles of all kinds should be sold at one price. Whoever succeeds under such circumstances in getting anything for almost what it cost, knows that he is defrauding someone out of his dues, and the dealer who yields to the imposition knows that he is sacrificing his own rights, as well as strict business honor.

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Etc., Etc. . . . . .

WHAT ZERO MEANS.

The word zero is from the Spanish,and means empty, hence nothing. It was first used on a thermometer in 1707, by a young Prussian named Gabric Fahrenheit, then but nineteen years of age. From a very small boy he had been an observer of nature, and in the year mentioned above, while experimenting by putting snow and salt together, found that it produced a degree of cold equal to the coldest day in the year. The young discoverer was struck with the coincidence of his little scientific discovery, and hastily concluded that he had found the lowest degree of temperature known in the world, either natural or artificial.

He called the degree "zero," and constructed a thermometer, or rude weather glass, with a scale graduating up from zero to boiling point, which he numbered 212, and the freezing point 32, because, as he thought, mercury contracted the thirty-second of its volume on being cooled down from temperature of freezing water to zero, and expanded to the one hundred and eightieth part on being heated from the freezing to the boiling point. Time showed that this arrangement, instead of being truly scientific, was as arbitrary as the division of the Bible into verses and chapters. Fahrenheit's thermometer became widely adopted before anyone adopted a better scale, and those who now use it cling to it as Englishmen cling to their difficult and cumbersome fractional money. The three countries which use Fahrenheit's scale are England, Holland and America, Russia and Germany use Baumer's, in which the boiling point is counted 80 above freezing, zero. France uses the Centigrade,so called because it marks the boiling point 100 degrees from freezing point.—Carriage World.

STEEL-TRIED CAST IRON CAR WHEELS.

A steel-tired cast iron car wheel, made at a works in Pennsylvania, is beginning to attract considerable attention in railroad circles. Impracticable as is supposed to be the welding of steel and cast iron together, that feat has apparently been accomplished in the production of the wheel in question. For, while the line of demarkation between the two metals is easily distinguished, the weld or union is, to the eye, as perfect a one as may be had with homogeneous material under the most improved practice.

Samples from tests under the hammer also indicate that the weld is not merely an optical illusion. Sections of the wheel which were broken or cracked exhibited all the variations in the general direction and minor peculiarities of the parting lines that might be witnessed under ordinary conditions. The weld was least affected of all, and the iron and steel suffered a common injury.

These wheels are tired 1 5-8 thick on the tread and 2 1-4 on the flange, as against 5-8 chill or tread for the cast iron wheel, and their serviceableness has already been tested on some of the Eastern railroads. The Lehigh Valley road, it is said, has been using them to some extent for the past eight years, and now has over 8,000 of them running. The makers claim great advantages for this style of wheel—much longer life, greater strength, etc., than the ordinary wheel offers.—Age of Steel.

THREE RIVER BOG OCHRE.

By A. P. Lowe, Geological Survey of Canada.

The ochres are found along the courses of small streams flowing from swamps, or in the old beds of small shallow lakes. Near the surface the ochre is generally yellowish-brown, becoming reddish in the parts most exposed to air and light. At a short distance below the surface, however, the color is greenish, and when recently exposed is greenish white, indicating a compound of protoxyd of iron, which grows yellowish from protoxydation as the mass dries.

The water that oozes from the ochre is at first colorless, transparent and ferruginous in taste, but, by exposure to the air, soon lets fall a reddish brown precipitate of ochre and becomes tasteless. As the precipitate is buried by subsequent accumulations of the ochre, it is again reduced to a protoxyd, either by the reaction of the organic matter which it contains, or by that derived from the decaying roots and trees which are generally abundant in the deposits, and it thus assumes the greenish color already noted.

In some of the deposits there are layers of a brownish black color, due probably to the presence of manganese; and in some places the whole deposit is made up of this dark colored ochre.

Indications of ochre are seen along with most of the deposits of bog ore, but it also occurs without the presence of the latter, and often in great masses.

The principal deposits in the region under consideration occur on both sides of the St. Maurice river.

A very large ochre bed is situated on the St. Nicholas range of Pointe du Lac. It is crossed by the range road, running north-westward over a mile from the point where this road starts from the river side road. The deposit extends on each side of the road about a quarter of a mile to the southwest and a mile to the northeast, the breadth is irregular, and varies from fifty to eight hundred yards, and the whole area may be about four hundred acres. The thickness of the deposit ranges from six inches to four feet, and may have an average of about eighteen inches. The prevailing colors of the ochre are red and yellow, wth bands of a purple tinge, and others of a blackish brown. Farther to the northwest on the road of the same range, patches of ochre occur in considerable abundance for upwards of a mile; but are not so pure or thick as the great one just described.

About a mile and a half below the old St. Maurice forges, but on the opposite side of the river, a patch of ochre is found associated with the bog ore there. It has an area of about 200 square yards, and is from three to six inches thick, and of exceptional quality.

On the northwest side of that part of the road through the St. Marguerite range, which runs south-west of the river au-Lard, small patches of yellow and brown ochres are met with for a distance of six miles. They all contain more or less sand, and rarely exceed four inches in thickness.

In the St. Malo range of the seigniory of Cap de la Madeleine a great deposit of ochres occurs opposite to the end of the road which turns up from the margin of the St. Lawrence, about two miles below the Cap de la Madeleine church. The locality is about half a mile from the front of the St. Malo range, and about a quarter of a mile north of the C. P. Railway. Its breadth on a line continued from the road is about six hundred yards, and it extends rather more to the northeast than to the southwest, with a total length of about two miles, and the area is thus upward of six hundred acres.

Two openings on adjoining lots are worked by the St. Maurice Paint Company and the Johnston Paint Company.

The former company have the mining right extending over twenty-one lots. At their present opening the deposit is about five hundred feet wide, and varies from one to twenty feet in thickness, with beds of peat interstratified with the ochre. Small patches of bog ore rest on top, and the ochre is of a dark yellow, for from three inches to two feet below the surface; beneath this the color is a light green, and many stems and roots are present. In places the bands are of a purplish black color, due probably to the presence of maganese.

At the openings of the Johnston Paint Company there is about eighteen inches of peaty matter covering the ore, which is of a light green color, and is worked to a depth of six feet. At both places the ore is burnt on the spot, and thirteen shades of red and brown are produced.

On lot fourteen, in the second range of Radnor, and about half a mile west of St. Tite Junction, large deposits of ochre are worked by the Radnor Paint Company. The ochre is found in two gulleys, which join and descend to the St. Maurice.

The deposit has been proved for a distance of half a mile, and is from 50 to 100 yards wide, and in places fifteen feet thick. The prevailing colors are brownish or purplish black, due probably to manganese.

EARLY ENGLISH COKE MAKING.

The first record of coke-making is probably contained in Sir John Evelyn's diary. Under date of July, 1656, he writes: "Came home by Greenwich Ferry, where I saw Sir John Winter's new project of charring sea-coal, to burn out the sulphur and render it sweet. He did it by burning the coals in such earthen pots as the glass men melt their metal, so firing them without consuming them, using a bar of iron in each crucible or pot, which bar has a hook at one end, that so the coals being melted in the furnace with other crude sea-coals under them, may be drawn out of the pots sticking to the iron, whence they are beaten off in great half-exhausted cinders, which, being rekindled, make a clear pleasant chamber fire, deprived of their sulphur and arsenic malignity. What success it may have time will discover."—Connellsville Courier.

COLORED GLASS WINDOWS.

The prosperity of the people of the United States is indicated in no clearer manner than in the adornment of their homes, churches and public buildings. As America is pre-eminently a country of sunshine, the effects of colored glass windows in architectural adornment are especially sought. In no other country, we believe, are these effects produced by body colors as largely as in our domestic work of the past ten years. Much of this work is of a high standard of beauty and taste, but it must also be allowed that much of it is of the Indian character that seems to characterize the childhood of native art development. This glass is not pot metal, and the chief element in it is opal or milk-white glass produced by mixing any of the refractory lime silicates, as phosphate or fluorid, in the ordinary batch. These held in suspense in the otherwise transparent glass produce the degree of opalescence. Other colors are produced by various glass house pigments, too well known to need enumeration here.—R. M. Atwater in Engineering Magazine.

TRADE COMPETITION IN FRANCE.

An important bill has been passed by a very large majroity in the French Chamber of Deputies, the double purpose of which is to protect the smaller distributing traders from the competition of great establishments dealing in many kinds of goods, and to raise more revenue. The patentee, or license tax, is levied on all dealers. It is charged in two portions, one upon the rental, the other being a fixed sum, equal in amount in the same locality, but increasing with the size of the population. The tax upon rental varies from one-thirteenth on the smallest rents to one-seventh on the largest. Hitherto firms carrying on several branches of trade in the same building have only been chargeable as for one. Under the new bill, however, each branch is to be treated singly and taxed accordingly. An additional patentee is to be paid also, proportioned to the number of persons employed. The bill defines the kinds of goods to be included in each branch, and there are sixteen branches. It is estimated that the total amoun of license tax paid by the Bon Marche, a great retail establishment in Paris, which has 2,000 imployees, will be increased from $82,000 per annum to $228,000, and that of the Louvre from $82,000 to $195,000. Attempts were made during the discussion of the bill to fix the number of categories at 70 and even 102 instead of sixteen, but these were unsuccessful. The measure was passed by a majority of 379 to 54, the deputies being greatly influenced, it is said, by popular jealousy of large trading establishments, and by the fact that a general election is near at hand.

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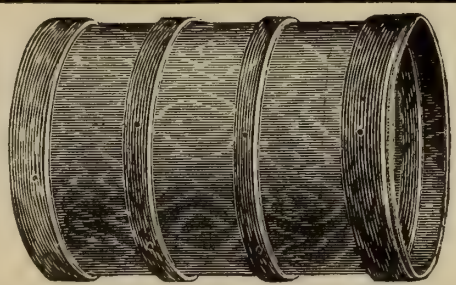
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BRITISH SHEET GLASS
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These words and brand are on every box. None genuine without this Trade Mark. We warn our friends against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

ORDER YOUR **NAILS** Wire . . . Cut . . . Horse Shoe



IN **PATENT KEGS**

Cost no more than in Common Kegs. The strongest, handiest, cleanest, neatest, and best store package in use. Made in one solid piece, lined with strawboard. No staves to get loose or break, No shrinkage or falling out of heads.

- Supplied by Graham Nail Works, Toronto; and Peck, Benny & Co., Pillow & Hersey Co,, and Abbott & Co., Montreal -

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BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

THE PNEUMATIC TUBE.

The pneumatic tube has been making biography for some years in Europe. In the local transmission of telegrams it is in use in the principal cities of Great Britain. The daily average of transmission is placed as being more than 100,000 messages, or 30,000 annually. The success of the British system led to its adoption in Paris. It is so perfected that a letter or message dropped into a special post box can be delivered anywhere in the city within an hour, and often in less than half that time. What is known as the "Tube post" was inaugurated in Berlin in the year 1876, covering at present date over 28 miles of tube, with thirty-eight stations. Letters are now delivered in the German capital more quickly than telegrams at a cost equivalent to 7 1-2 cents, and "tube post cards" at 6 1-2 cents. Austria inaugurated the tube post in Vienna in the year 1875, letters being delivered in nine districts within one hour after mailing. The system consists of a main circuit of 5.34 miles, with branch lines making a total length of 7.2 miles. The pneumatic envelope used in the transmission costs about 6 cents.

The tubes in the British system, as described by the Engineering Magazine,are made of lead, laid in cast iron pipes for protection, and are usually of 2 1-2 inches inner diameter, some, however, being an inch less or half an inch larger. The speed varies inversely with the length of the tube. The average speed in tubes not more than a mile in length is 25 to 30 miles an hour. The carriers are of gutta percha, covered with felt,with a buffer at the front end and an elastic band at the back or open end to hold the messages. An ordinary carrier, weighing two and three-quarter ounces, has a room capacity for about a dozen messages. The average length of tube is 630 yards, the greatest single length in London being 3,392 yards. The operation requires an aggregate of four hundred horse power.

The German tube is made of wrought iron and has an inner diameter of 2.55 inches. Eight steam engines are employed, representing a total of 128 horse power. In this, as in all other appliances, the graduation of methods and apparatus from the initial to the final point of efficiency is a matter of experiment and intelligence. There can be no doubt as to the advantages of pneumatic tube service where the conditions are favorable to its use. In such centres of importance as the cities named, where commerce and government are directly focussed, and communication is necessarily guarded and important, while the area covered is extensive and congested, the swiftness and security of the pneumatic tube is a manifest advantage. In parcels delivery it has an additional field of service, though subject to limits not imperative in the transmission of messages and letters. Its more extended and popular use is simply a matter of time and economic construction and manipulation.

THE PROSPECTS FOR CHARCOAL IRON.

What the future has in store for the charcoal iron trade is a question of considerable interest to a great many, and of special solicitude, of course, to those whose plants have been located and built with the view of producing this class of iron That the prospects are none too rosy goes without saying, for the outlook in all the iron markets is not as encouraging as it might be. The situation of charcoal iron in the market to-day seems to be somewhat similar to that of puddled iron, although to a lesser extent, for steel is rapidly taking the place of iron, but until there are radical changes in the manufacture of iron, charcoal iron will not be superseded in the near future. The experiments of making car wheels out of coke iron, with very little exception, have not been successful, so that the demand from this line alone will represent a large consumption of charcoal iron. Then the chilled roll makers doubtless will continue to use charcoal iron in considerable quantities, while such special uses as for hammer dies, glass moulds, etc., will require a not inconsiderable amount, but outside of these lines the demand will not spread, and may be restricted even within these lines by improvement in the manufacture of other and cheaper brands. The iron trade some 25 or 30 years ago required charcoal iron in almost all branches, but the improvements in making the cheaper coke iron have resulted in its substitution until to-day our mills use little or no charcoal iron, while its use in the foundries is confined to the lines mentioned.

The charcoal furnaces have to contend with a decreasing fuel supply as well as with the other hindrances, the former having been the cause of suspension at a number of furnaces, notably in the Lake Superior region. The tendency towards cheapness has reduced the margin on iron so that the weaker makers of charcoal iron have been forced out of the race and the stronger ones only have continued in operation but often at a loss. This has restricted the furnace capacity, but notwithstanding this, stocks have shown a marked tendency to accumulate. Another thing to lessen the demand for charcoal iron is that car wheel makers can secure old car wheels at such low prices, and they are trying every way possible to decrease the quantity of pig iron in their mixture and increase the use of old wheels.

A prominent and well-informed firm of pig iron brokers was asked as to the advisability of re-starting a charcoal furnace plant, and what the prospects were in that line. The reply of the firm was to the effect that the production of charcoal iron is not likely to be increased unless there is a decided revival among the railroads. Quite a number of Lake Superior furnaces have gone out of blast and probably will not resume under present circumstances. No new furnaces are heard of in the South, although it was stated that the success of the Rome, Ga., plant might lead to the erection of another stack.

The one line in which there is a chance for profitable operation of charcoal furnaces is making cold blast iron, and, although the demand may seem limited and the prospects none too bright, it would seem to be the wisest course, as no doubt there will be a legitimate demand for cold blast charcoal iron for some time to come.

While the outlook, as we have said, is none too rosy for charcoal iron men, we think the consumption of this grade of iron in 1893 will be equal to that of 1892, as the car works seem to be well employed on orders and anticipate a fairly profitable year, as the increases in rolling stock will be quite large this year on account of the World's Fair, and the demand from other sources than car wheels probably will not fall far below the standard of last year.—American Manufacturer.

ALUMINUM HORSESHOES.

Aluminum horseshoes are said to have been tried with remarkably successful results in the Russian army. According to a note translated by Captain E. Lambert from the Invalide Russe, a few horses in the Finland Dragoons were first chosen and show with one aluminum shoe and three iron shoes each, the former being on the fore foot in some cases and on the hind in others. The experiments lasted six weeks, and showed that the aluminum shoes lasted longer and preserved the foot better than the iron ones. No aluminum shoes broke, and they were used over again for re-shoeing. The horses, moreover, were worked over hard and very stony ground. The most important fact of all is that aluminum horseshoes are only one-third to one-fourth the weight of iron shoes. Their cost is admittedly greater; but on the other hand, very little charcoal is required in shoeing, there is no loss in weight, and the value of the old metal is the same as that of fresh.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
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SITUATIONS VACANT.

WANTED—HARDWARE TRAVELLERS with good connections in Lower Provinces and in Ontario. None but first-class men need apply. H. S., GAZETTE Office, Montreal.

SITUATION WANTED.

CLERK—EXPERIENCED IN HARDWARE business desires situation. References. Address: Reliable, Hardware Office.

BUSINESS CHANCES.

Advertisements inserted under this heading one cent per word each insertion.

FOR SALE—STOCK OF GENERAL HARDware, paints, oils, stoves, &c. Business established 25 years. Value about $3,500. Address, Estate J. Cameron, Beaverton tf.

TRAVELLER—EXPERIENCED—WANTS situation. Practical stove and furnace man. Has had also a good experience in hardware, paints and oils. Address W. B., HARDWARE Office. 14

FOR SALE—GOOD PAYING HARDWARE Stove and Tin business. Last year's turn over $12,000. Stock, etc, under $3,000. Smart town, brick store, modern improvements. Satisfactory reasons for selling. Would prefer to sell out for two or three years. Don't write unless you mean business. Address T., HARDWARE OFFICE.

COUNTRY BUSINESS FOR SALE.—A FIRST-class general store business. Good locality, old established stand. No other store within eight miles. Is now doing an excellent business. Open for sale for one month from date only. Only responsible parties need apply. A splendid opening. Applications to be made by letter addressed to COUNTRY STORE, Drawer C, Picton, Post Office.

Hardware Traveller Wanted

For our Winnipeg Branch. A thoroughly experienced man. Application by letter only. State age and salary expected.

The JAMES ROBERTSON CO., Ltd.,
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IMPORTERS AND DECORATORS OF

Crockery China and Glass.

LAMPS A SPECIALTY.

All glass, Vase, and Library Lamps, in every hue and design.

Our travellers will call upon you shortly with samples.

LONDON AND BELLEVILLE.



ASK FOR THE GRAHAM NAILS.

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¼ the PRICE of Iron. Write for Discounts

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Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

Manufactured by **A. RAMSAY & SON**
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When You . . . Purchase Paint Buy the Best .

Warranted Superior to any now on the Market . . . .

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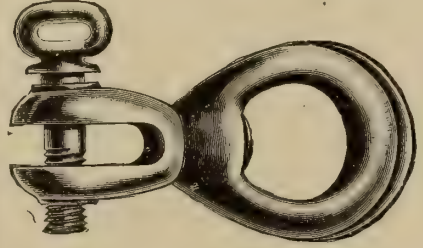
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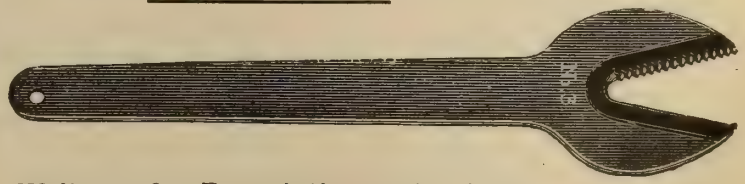
Canadian Branch: St. Catharines, Ont.



This new **Swivel Clevis** can attached to any Plow Clevis used in place of Shackle or End Clevis.

MADE OF MALLEABLE IRON.

ALLIGATOR WRENCHES



Write us for Description and Prices

TRADE CHAT

About ninety men were laid off at the Perth car shops a few days ago.

The Cumberland tin mill at Baltimore has gone into the hands of receivers.

Leamington is advertising for an electric light plant which it intends putting in.

Hundreds of miners are flocking into Kelso district of British Columbia, where splendid finds of gold are reported.

It is understood that arrangements have been completed for the establishment of a rolling mill at the old Parkdale waterworks pumping station.

W. C. Green, who lives five miles west of Arden station on the Kingston & Pembroke railway, has a fine mica mine on his property for which he was offered $10,000.

A loom for the Picton wire fence factory is being manufactured at J. C. Wilson's machine shop, Glenora. It will cost $4,000, and will have a weaving capacity of one mile per day.

Manager Thompson, of the Hamilton Electric Light Company, stated the other day that there was no prospect of a reduction in incandescent lighting. The rate is nominally one cent an hour, but a discount makes it equal to 8-10 to 3-4 cents.

The wires have been strung, the machinery has been put in the station, and it is now announced that the long talked of electric line will supersede horse cars on the St. John, N. B., street railway as soon as the ice melts this spring.

The Ottawa Lumber Co. has purchased the entire cut of 1893 of R. H. Klock & Company's mills at Klock's Mills and More Lake, and of McCracken, Boyle & Company's mill at East Templeton. The cut will aggregate about seven million feet.

A business which is proving profitable is the shipment of hardwood ashes from Kingston, Ont., to Florida and other points in the United States. During the winter large lots of ashes have been sent away, per G.T.R. The ashes are principally used for fertilizing purposes on fruit lands.

When chemically and otherwise treated a ton of good coal will yield, besides gas, 1,500 pounds of coke, 20 gallons of ammonia water, 140 pounds of coal tar, 69 pounds of pitch, 17 pounds of creosote, 14 pounds of heavy oil, 95 pounds of naptha, and a variety of other things almost too numerous to mention.

It is understood that a strong company has been formed in Toronto for the manufacture of brick and pottery in the vicinity of the C.P.R.'s new town of Estevan, Man. There are very rich clay deposits in that district. A plant, it is said, will be put in shortly and manufacturing will commence at once.

L. G. Duff Grant, secretary of the Smokeless Powder Co., Ltd., of London, England, was last week in Port Perry married to Miss Edith Donaldson Brown, of that place. It was the leading matrimonial event in the history of Port Perry. Mr. Grant, it will be remembered, delivered a lecture before the Military Institute in this city some weeks ago on smokeless powder.

There is every prospect of a big demand being shortly experienced in France for gas engines, in consequence of a possible early reduction in the price of gas.

Small users of power are often unable to employ these motors, as they do not find them sufficiently economical while the price of the combustible remains so high.

The Ophir Mining Company having had a force of men at work during the winter in prospecting and developing their property have sent their engineer to Toronto to purchase the engine and boilers for the large stamp mill they are going to have running by July next. It has been known to the initiated for some years that the Ophir vein, which is situated about a dozen miles behind the Bruce mines, is one of the most extraordinary formations on the continent, being over 40 feet in width and yielding free gold in an unusual rich proportion. The mill will begin with 20 stamps and crush about 50 tons a day.

At a meeting of the provisional directors and representatives of Rhodes, Curry & Co., and the Harris car works, of St. John, held last week at Amherst, N.B., the details of the proposed amalgamation of the two firms were finally arranged, so that the new industry is now an established fact. Work on the buildings and the removal of the plant from St. John will be commenced immediately, and the calculations are that during May cars will be under course of construction in the Amherst car works. Already orders for several months' work have been received. The company is a strong one financially, representing stock of over $200,000. The provisional directors are Thomas Dunlay, J. T. Smith, Jas. Moffatt, one from each of the present companies.

PERSONAL MENTION.

Mr. Wells, representing the Central Stamping Co., New York, was in town this week.

Mr. W. McMaster, superintendent of the Montreal Rolling Mills, was in the city this week.

Adam Hall, of Peterboro', has purchased the stock of stoves, tinware and house furnishing goods of W. J. Hall at 50c. on the dollar cash at private sale.

VENTILATION AND SANITARY PLUMBING.

The arts of ventilation and of sanitary plumbing are so intimately related to atmospheric conditions that any facts concerning these conditions, like those stated in the previous paragraph, should be studied as possibly affording information valuable when practically applied to these arts. A practical lesson that may be drawn from what has been written is, that while air supplied for ventilation should not be so dry as to become irritating to the respiratory passages, it should also not be supplied from exterior sources when fogs prevail and passed into apartments for ventilating purposes without first being dried to the proper degree of humidity and then filtered to remove noxious matters that float in it when fogs exist. In the near future, the problem of purifying air through absorption of hurtful gases and effluviæ of which it may be the vehicle, and the removal of irritating dust particles, will receive far more attention in sanitary engineering than has yet been given to it. We cannot live but a very few minutes without air, while only occasional potations of water are needed; yet the subject of purifying potable water has received the profoundest attention from physicians, engineers, chemists and mechanics employed in furnishing water supplies. In the art of ventilation the purest sources of air supply are sought when an important building, say a hospital, is required to be ventilated; but when a dense fog prevails around such a building there is no source from which pure air can be obtained; it enters the ventilating ducts temporarily loaded with seeds of disease, and these noxious matters, so far as it depends upon any law of nature, are as possible to be removed from the air so entering as are the impurities contained in water. If any difficulties are to be encountered they are likely to be purely practical ones.—Metal Worker.

THE MONTREAL BOARD OF TRADE.

The Council of the Montreal Board of Trade is at present discussing the advisability of depriving delinquent members whose dues are not paid of the little piece of paper that entitles them to the privileges and advantages of the Board of Trade, and as it is said that there are quite a few of these who are over a year in arrears, the board's action seems to be right and just. It is the desire also of many of the most prominent members of the board to make the certificates worth more than they are to-day. At present they stand at $65, but it is understood that at the quarterly meeting in April Mr. E. Judge will propose an advance in the value of the certificates. There are only a few for sale now, but if the board carries out the intention of confiscating the certificates of members whose dues are over a year in arrears there may be a lot more on the market.

There are two suggestions as to how the value of the certificates may be increased. One is to limit the membership and the other to put up the membership fees. The board will soon have to wrestle with both of these.

The Home of the Hustler

OTHERWISE the office of THE HARDWARE MERCHANT, is now the scene of great activity. The rush of trampling feet is heard the live-long day. The manager, the editors, the reporters, the advertising solicitors, the printers and typewriters have barely time to eat, so great is their desire to get out on time the Spring Trade Number of THE HARDWARE MERCHANT, and at the same time make it superior to anything ever published in America. They are going to succeed and make no mistake about it.

As this is the first Special Number of HARDWARE we are putting out, you have only our word for it when we claim something exceptionally good. We want you to place a little confidence in and believe us. It would not pay us to disappoint you, would it? It is pretty much as Longfellow says :—

"We judge ourselves by what we feel capable of doing,
While others judge us by what we have already done."

We are sorry we cannot take advertising except on the basis of our first love—cash. But on this basis your investment will be doubled.

Don't take less than a page. It may not be just, but it is nevertheless true, that the world judges a man by his appearance, and a business by its outward signs. Send in your copy at once and secure good position.

Respectfully yours,

THE J. B. McLEAN PUB. CO. LTD.

. . . TORONTO . . . .

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below, and in our Prices Current, necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, March 24, 1893.

HARDWARE.

The week has furnished a fairly satisfactory business in hardware, and the prospects are encouraging so far as they can be guaged at present. The break up of the winter roads has somewhat interfered with the actual movement this week, but orders for shipment after the change in freights, which takes place on April the 3rd, are decidedly on the increase for all kinds of hardware, from ordinary shelf goods down to regular lines of heavy material, such as tin plate, galvanized iron, Canada plate, etc. In the latter connection the demand seems to be mainly on builders' account, and everything seems to point to a large increase in operations of this nature during the coming spring and summer, especially in this city and its suburbs, where it is much larger than last year. This fact no doubt has its weight with jobbers, and they are showing more desire of procuring supplies of this nature than formerly in anticipation of wants of this sort. All in all the hardware trade seems to be in a very satisfactory condition.

PIG IRON.

Pig iron rules quiet and dull, although makers agents of Scotch pig iron show an evident desire to make sales. Buyers however maintain their indifferant humor, and the consequence is a continuation of the dullness of previous weeks. Offers of Summerlee, and equal brands for spring delivery are freely made in the basis of $19 laid down here, but they fail to induce any large business, while ocean freights also are very low, being offered at 3s. 6d. to 4s. per ton Glasgow to Montreal. On spot the remaining stock in store is small and consists of a few lots of Langloan and some Eglinton and Carnbroe. Langloan has been sold at $21, but the lower grades are offered at $19. In Nova Scotia iron sales for prompt delivery have been made on the basis of $19.25.

BAR IRON.

Makers report some improvement in the orders for iron, but the article fails to show any general degree of activity as yet. Some round lots however have changed hands for shipment after the 300 on the basis of $1.95 and smaller quantities $2 to $2.05.

SCRAP IRON.

There is no change in scrap iron which rules dull at $15 to $16 per ton.

SHEET IRON.

Demand for sheet iron has been more active, sales of several round lots of No. 28 having transpired.

GALVANIZED IRON.

Galvanized iron, like other lines of heavy hardware utilized for building purposes, has shown more activity both on spot and for importation. Several sales at £17 5s. f.o.b. Bristol being reported on account of importers here.

TIN PLATES.

The demand for tin plate has shown somewhat more activity, and some business for forward delivery is to note also. Cokes have sold on the basis of 12s. and charcoal 13s. On spot sales of round lots of cokes are noted at $3.20, and we quote $3 20 to $3.25 for cokes and $3.75 to $4.25 for charcoal, as to brand.

CANADA PLATES.

Canada plates have shown more life, both for spot business and for importation. Purchases on the other side are reported on the basis of £7 15s. per ton, while round lots have changed hands from store here at $2.50, and we quote $2.50 to $2.55.

TERNE PLATES.

Terne plates are quiet and steady for spot business on the basis of $7.25 to $7.75.

COPPER.

There has been no great change in copper, but somewhat more has been done in a jobbing way. We quote 13¼ to 14c.

ZINC AND SPELTER.

There is no change in either of these, a moderate business being to note on an unchanged basis.

TIN.

Tin is steady with a moderate business at former prices, viz., 23 to 23½c.

LEADS AND PAINTS.

The market has furnished a fair uniform trade with a good many new orders for shipment after the 3rd of April. In fact prospects are encouraging. Choice brands of paints, Government standard, $5.25 ; do. No. 1. $4.87½ ; do. No. 2, $4.50 ; do. No. 3 $4. ; dry white lead, 5¼c. ; red lead, pure, 4½c. ; do. No. 1, 4¼c.. with 2½ per cent off these prices for ton lots.

OILS.

The oil market is firm and unchanged for all kinds. Advices state that linseed is a little weaker in England, but this will make no differenoe here, owing to the fact that a number of shipments have been made from the other side at the late high prices. Values therefore are steady at 65c. for boiled and 62c. for raw in round lots. Fish and other oils are all steady also, with nothing very special to note in their case.

GLASS.

The glass market is quiet and unchanged on the basis of $1.35, while putty sells at $1.90 in bulk.

NAVAL STORES.

Naval stores are moving more freely, but the market is still quiet and some lines are almost entirely neglected. Turpentine continues firm, and now the jobbing price for it is 57c., while round lots could not be had for less than 55 to 56c. We quote as follows : Turpentine, 55 to 56c. as to quality; in cases 56 to 57c.; rosins, $2.40 to $4.50 as to quality ; coal tar, $3.50 per brl.; pine pitch $2.50; pine tar $3.50 to $3.75; cotton waste, colored, 5¾ to 5½c.; white 8 to 10c.; oakum, 5½ to 7c.; cotton oakum, 10 to 12½c.

CEMENT, ETC.

The cement market is fairly active in a jobbing way, but no large transactions are reported. We quote : English brands, $2.40 to $2.60 per cask, and native Portland cement at $2.10 to $2.20. There is a steady movement of firebricks in fair sized lots, prices being firm at $19 to $23 per thousand, according to brand and quantity.

PETROLEUM

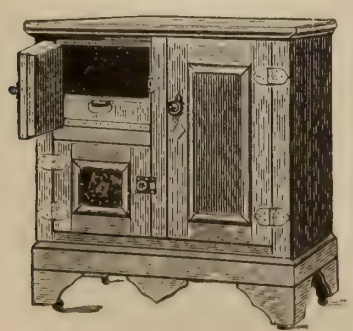
Refined petroleum is in better demand, but the aggregate movement is small and prices rule steady on the whole. We quote as follows : Canadian 12c. to 12¼c. at shed in Montreal for round lots and 13½ for small quantities. American petroleum, 19c. in car lots, 20c in 10-barrel lots, 20¼c. in 5 barrel lots, and 20¾c for single barrels, 2 per cent. off for cash ; American benzine, 23 to 25c, ; Canadian benzine, 10½c Petrola ; 12½c. Montreal.

MONTREAL TRADE NOTES.

Building operations promise to be very brisk around Montreal this summer.

The 15,000 barrels of cement sold to the Soo Canal contractors are to be shipped via

Refrigerators



Hardwood, Lined Galvanized Iron, Patent Locks, Four Sizes

These are highly finished and each season has shown an increasing demand. This year we are also making a cheaper line in above style, so as to meet all requirements.

Milk, Delivery and Creamery Can Trimmings.
All Sizes Body Stock for Cans and Cheese Vats.
Galvanized Iron Eave Trough in 8 foot lengths.
Lithographed Tea Caddies and Signs.
Advertising Glass Signs.

We make and Supply everything used in the Stove and Tinware Trade.

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

MONTREAL Markets Continued.

New York from the other side, owing, it is said, to the more favorable ocean freights to that port.

English cables quote linseed lower, but the fact will not affect prices on the market.

Building supplies of all sorts have shown considerable activity during the week.

Ocean freights on iron, etc., are very low this year, offers on Scotch pig from Glasgow to Montreal being made at 3s. 6d. to 4s. per ton.

W. H. Cottingham & Co. report plenty of orders for paints, etc., for shipment after the 3rd of April.

McArthur, Corneille & Co. say that railway freights go down on the 3rd, and Mr. Hoyden reports that they are kept very busy in anticipation of the change.

A. Ramsay & Son reports their spring orders as being fully up to the average.

TORONTO MARKETS.

TORONTO, March 24, 1893.

HARDWARE.

Trade has not developed any particular improvement, but at the same time the volume of business has been fairly good during the week. A number of large orders that had been booked some time ago are now being put in hand for shipment April 1, when rates will be lower. Harvest and garden tools and tinware are moving out in fairly good quantities. Wire is quiet, the trade having been pretty well supplied before the recent reductions were made. A feature of the trade is the continued briskness in ship chandlery. Fairly satisfactory as trade is it would doubtless be more so were it not for the broken condition of the roads. When these improve business is expected to follow. A satisfactory feature is the continued improvement regarding payments, particularly in the country. City payments are still slow.

WIRE—There has not been a great deal of business done in this line since the reduction in price, the larger portion of the orders have been placed prior to that. There are however a number of enquiries from dealers throughout the country who have not yet booked their orders.

NAILS—Orders are now being handed to manufacturers for shipment as soon as a change in freights take place. There is no change in prices.

ROPE—There is a steady demand in this line, but no large lots are moving out.

CHAIN—In fair demand, principally for sizes running up to half inch; for sizes larger than this the demand is not as good as it has been. Prices remain firm and unchanged.

TOOLS—Harvest tools, garden tools, spades and shovels are in fair demand from the country, but in the city there is hardly anything doing.

TINWARE—Freight rates do not interfere as much with business in this line as in general hardware, and a fairly good demand is reported.

METALS.

Business has been good in the metal line. Tin plate particularly has been going out well. There has been a little doing in pig iron, but trade in this line is much about the same as a week ago. Bar iron is also moving in small lots, and in sheet iron demand has been good. Canada plates are quiet, while galvanized iron is moving freely. Demand for ingot copper has been active.

PIG IRON—Business keeps just about the same. Car lots of Southern pig have changed hands within the last few days at $23.50, and we quote from $23 to $23.50. Summerlee is quoted at $24 to $24.50, but there is no Carnbroe or dry sherry on this market. The local foundries are very quiet.

Brown & Co., Buffalo, N.Y., report Toronto pig iron market as follows: The past week has registered no change in the market of any importance. The demands for car load lots are brisk. Some considerable inconvenience is being experienced by the short supply of certain grades of Southern irons, notably the 1 soft grade. We quote for cash f. o. b. cars, Toronto, in bond: IX Foundry Strong Coke Iron, Lake Superior ore, $15.70; 2X Foundry Strong Coke Iron Lake Superior ore, $14.70; 2 Foundry Strong Coke Iron Lake Superior ore, $14.45; Jackson County Silvery 1, $18.00 to $18.30; Jackson County Silvery 2, $17.30 to $17.80; Lake Superior Charcoal, $18 20; Southern Soft 1, $14.10 to $14.35; Southern Soft 2, $13.85.

BAR IRON—Demand good, although quantities moving are not extra large, being only for immediate wants. Prices remain unchanged at $2.05 hundred pound basis f. o. b. Toronto, Montreal, or Hamilton; 5c. more f. o. b. London.

TIN PLATES—Going out freely, in fact the demand promises to exhaust the supply on hand. This however will be overcome in the course of the next few week when some heavy lots will be arriving. Prices on this line are remaing firm, although round lots have been cut pretty low.

SHEET IRON—Trade in this line has been brisk. Stocks have been light, but shipments now arriving from manufacturers will make assortment of sizes and gauges complete. There are no special features or changes in prices to note.

CANADA PLATES—There has not been much doing in this line for present shipment, although car lots have been taken for import, but these are for special purposes and not for the regular stove pipe trade. All dull is being held at $2.65, half-half at $2.75, and all bright at $2.80 to $3 per box.

GALVANIZED IRON—Is also moving freely, and considerable improvement is expected in this line during the next month. There has been no change in prices.

INGOT TIN—A fair business has been done in this line. The market, however, is somewhat easier than it was a week ago, prices being quoted ½c. lower at 23½ to 24c. Some good sales of Straits tin are reported.

INGOT COPPER—Trade has been particularly lively in this during the week, and some dealers have been unable to supply the demand. They will however be in a position in the course of a week to fill all orders. Prices remain as before at from 12⅞ to 13c. for good quantities.

ZINC AND SPELTER—Dull, featureless and unchanged.

SOLDER—Is in sympathy with ingot tin and is scarcely as strong as it was.

LEAD—There has not been a great deal doing in pig. Although in steady demand no large sales have been reported. Prices remain firm at from 3¼ to 3½c.

CORRUGATED IRON
ILLUSTRATED CATALOGUE FREE
METALLIC ROOFING Co.
MANUFACTURERS TORONTO

ANTIMONY—Not much doing, although some orders have been taken for import. Quantities for shipment from stock have not been large.

GLASS.

Demand is not active, as most of the large dealers throughout the country have booked for import and are only purchasing for immediate wants in small quantities to keep up assortment. Prices are unchanged at $1.25 first break, 50-foot box. All kinds of spring glass is to hand and a few orders are being filled.

PAINTS AND OILS.

Trade is fairly well maintained, although in some lines the briskness is probably scarcely so pronounced as it was. Linseed oil is still in good demand, although the volume of business is probably not so heavy as a week ago. Prices remain firm at 61c. Toronto and 63c. at outside points, freight allowed. English advices report the market there about the same as a week ago. The volume of business in turpentine also exhibits a slight falling off, but the demand is nevertheless still good. There has been a slight reaction in the South on account of the milder weather, but it is expected to be of a temporary character. Stocks on the local market are light and prices unchanged at 55c. Toronto and at 57c. freight allowed to outside points. Manufacturers and jobbers are exceedingly busy on prepared paints, some of them having found it necessary to increase their shipping-room staffs. White lead continues dull, dealers having got in ample stocks before the recent advance in price went into effect. Trade if anything shows a slight improvement in varnishes. Castor oil continues in good demand at 8½ to 9c. The market is still without English quotations.

PETROLEUM.

The Petrolea Advertiser in its weekly resort says: The market position continues unchanged, and little movement in any way can be looked for until the amendments to the Petroleum Inspection Act have been made, and become law. Transition periods like this in an industry necessarily cause stagnation, as people do not know what to do. The crude man cannot keep on drilling; the refiner cannot buy stock freely; the dealer will only buy from hand to mouth; and the general tone is thus depressed.

The following are the latest quotations here:—Canada refined oil, 13½ to 14c; carbon safety, 17½ to 18c; Canada water white, 19c; American water white, 21 to 22c photogene, 25c.

OLD MATERIAL.

Supplies fair and demand good at unchanged prices. We quote No. 1 heavy cast scrap 65 to 70c. per 100; stove cast scrap 40 to 45c.; No. 1 wrought scrap 50 to 60c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c.; new light scrap copper, 8 1-2c.; heavy scrap copper 9½c.; old copper bottoms, 8c; light scrap brass 5½c.; heavy yellow scrap brass 7½c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1¾ to 2c.; scrap zinc, 2½ to 2¾c.; scrap rubber, 2½ to 2¾c.; country mixed rags, 80 to 85c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.;

MARKETS—Continued

plough shares, 60 to 65c.; burnt cast scrap, 15 to 20c.; railroad iron, 60 to 70c.; malleable scrap, 25c.

HIDES, SKINS, WOOL, TALLOW.

HIDES—The market is without change. Car lots of cured have been moving at 5¼c. and No. 1 cows' is quoted at 4½c.

SKINS—There is less enquiry for sheepskins, although prices are unchanged at $1.35 to $1.40. Calfskins are in good demand at 7c. a pound, with supplies light.

WOOL—There is very little doing. Demand is moderate for pulled wools, but there is no fleece in the market. Enquiry from local mills is steady. Pulled wools unchanged at 22 to 23c. for supers and at 26 to 27c. for extras. No. 1 and black are unchanged at 20 to 21c.

TALLOW—Business is rather quiet. Dealers are paying 7c. and selling at 7½c.; rough unchanged at 3c.

SEEDS

The market is in a decidedly nervous condition, and quotations are subject to variations from day to day. This applies more particularly to red clover, but other lines are affected to a more or less extent, and when jobbers quote it is generally accompanied by the request that a reply be sent by wire if price is favorable. During the past week there has been an advance of 75c. in red clover in Toledo, but this market has only slightly responded, but what it might be compelled to do is another thing. Country customers are ordering sparingly, although the parcels are numerous. Red clover is being jobbed out at $8.60 to $9.50. A fair jobbing trade is being done in alsike at prices ranging from $5.50 to $8.50, the outside price being for fancy seed. The demand for timothy is so far only moderate. Prices range from $2.40 to $2.90, the outside figure being for flail threshed and unhulled, but the chief demand is for the prime to choice article, which is being jobbed at $2.50 to $2.65.

TORONTO MARKET NOTES.

Ingot tin is ½c. a pound cheaper.

A big demand is reported for oil cake.

An improved trade is reported in cutlery.

Turpentine is easier in the south, but unchanged here.

Car lots of Southern pig iron have changed hands at $23.50.

The market is still without English quotations on castor oil.

Stewart & Wood report the arrival of the first shipment of spring glass, included in which is a large quantity of double diamond.

H. S. Howland, Sons & Co, have just received a large consignment of Baldwin gun wads, and are prepared to fill orders in all kinds.

M. & L. Samuel, Benjamin & Co. are making a special drive on plumbers' supplies and steam fittings, of which they have a full line.

H. S. Howland, Sons, & Co. are in receipt of a car load of "Sampson" spades and shovels, and can assure the trade that all back orders will be filled this week.

Cold Water Alabastine is having an unprecedented sale this season. The manufacturers are over five hundred cases behind in their orders at the present time. G. F. Stephens & Co., Winnipeg, are their agents for Manitoba and the N. W. Territories.

AMERICAN MARKETS.

NEW YORK, March 24, 1893.

PIG TIN—Business was at a standstill. Speculators appeared to have been without a cue, and dealers manifested very indifferent interest aside from accommodating their out-of-town trade at prices very close to the official quotations. There was some talk about spot supplies being concentrated, and difficulty in securing round lots at less than 21.10c. for current month delivery, but April delivery offered at 21.05c. during the latter part of the day found no takers, while March delivery, for which 21.15c. was paid during the forenoon in one instance, was subsequently offered at 21.10c. Surface indications were that the aggregate of tin on spot and afloat is cumbersome and so heavy that the leading manipulators find it extremely difficult to carry out their programme of forcing prices to about 22c., on the theory that the proposed duty of 4c. per pound will be levied on July 1st. For the present any price above 21c. would seem to be high for round lots on the spot.

PIG LEAD—About 200 tons more were sold at 4c., and that price was bid at the close, while offerings were moderate, with anything below 4.05c. apparently a strictly inside and exceptional price. This strong position was attributed to light stocks at the primary centres of supplies available for shipment during the next thirty days, and recent liberal purchases by prominent consumers. Export movement also cuts some figure as a factor, although London cables again quoted as low as £9 15s. for soft Spanish.

SPELTER—The market looked a trifle firmer. In any event, offers at prices on a parity with 4¼c. delivered in the East were withdrawn, and it seemed difficult to buy at less than 4.30c. for May shipment. Demand was a trifle better, but by no means active. April shipments were not offered, and from the West there were advices of 4c. bid, the deduction from which was that considerable spelter is moving out to galvanizers on old contracts. Higher cost of zinc ore, however, is a factor, the latest mail advices quoting the latter at $23 per ton at Joplin, Mo. The production of ore in the West during the week ending March 18th was 10,137,170 pounds, making a total of 64,864,400 pounds since January 1st.

COPPER—The market remains slow and bare of new feature. There is no speculative interest to speak of, nothing more than routine buying on the part of consumers and no change in the attitude of sellers. About 11¾c. for Lake Superior ingot and 10¾c. for casting brands seemed to have been full value.

ANTIMONY—There is little doing outside of routine jobbing movement. Prices are steady at 10½c. for Hallett's and 10½ to 10¾c. for Cookson's.

TIN PLATE—Business is still of strictly routine character and moderate all told, but prices remain steady, particularly for 100-lb. and lighter weight coke.

PIG IRON—Some round lots of Southern forge iron have been placed recently at prices rather below the basis of $12.50 at tidewater. Upward of 5,000 tons were involved. There is also some movement of foundry grades at variable prices, and, upon the whole, it would appear that stringency in the money market is having some effect upon the weaker producers. Recognized standard brands hold their own fairly well, however, and move out with sufficient freedom to prevent any great accumulation of stock on furnace banks.

Scotch pig iron is without decided variation in price, and business passing is wholly of routine character

Foreign spiegeleisen and ferro manganese are in moderate demand, and the few sales making are at former prices.

OLD MATERIALS—The market remains quiet, but current business and negotiation serve to keep prices quite steady in the absence of freer offering at any point.

MANUFACTURED STEEL AND IRON—New orders for steel rails come in slowly, and are almost invariably for small lots or special sections. Prices for heavy sections are, however, held at $29 f.o.b. mill. In fastenings there is merely a hand-to-mouth business at prices within the range of 1.90 to 1.95c. for spikes, 1.55 to 1.60c. for fish plates, 2.45 to 2.50c. for bolts and square nuts, and 2.55 to 2.60 for hexagon nuts.

New business in beam and other structural material is still on a moderate scale, and competition continues keen, keeping prices low all along the line.

There was no radical change in the Eastern market for steel billets, rods, etc., or in ordinary merchant iron and steel, but advices from Pittsburg note rather more firmness to prices there, and very fair business the past few days.

Harris' Refining and Smelting Works

Is the cheapest and best place to get Mixed Metals, Bar Solder, Sheet Solder, Wire Solder, Electro, Stereotype and Type Metal, Babbitt Metal a Specialty. It will pay you to use my 20c. Babbitt.

C. C. HARRIS, cor. Yonge St. and Wickson Ave. Toronto.



H. D. SIMMONS, Canadian Agent, 85 York St., Toronto.

FIRE BRICK
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Scotch . .
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GAS RETORTS
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Write for Prices to

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Also for Sewer Pipes, Invert Pipes, Flue Linings, Portland Cement, Calcined Plaster, Keen and Roman Cement, Etc.

Phone. 3763 Mention this Advt.

CHAS. STARK CO.
BICYCLES AND HARDWAREMEN

We would call the attention of all Hardware Dealers to the fact that we handle the best makes of English Bicycles sold in Canada and will allow all dealers a liberal discount on all sales. Write us for our lists and discounts. Bicycle Sundries a Specialty.

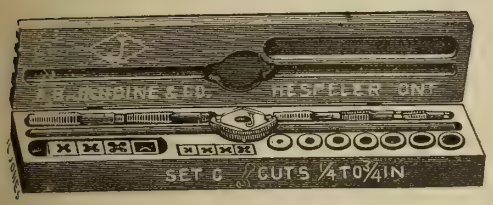
Chas. Stark Co. 56, 58 & 60 Church St., Toronto

SAND SCREEN CLOTH

Sand Screens, Mason Hand Screens for Stonemasons, Bricklayers and Plasterers.

Manufactured by Write for Catalogue and Prices.

THE B. GREENING WIRE CO., Ltd., HAMILTON, ONTARIO.

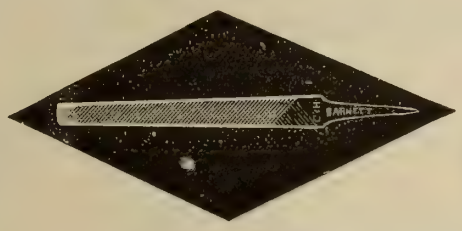


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HESPLER, ONT.

- Blacksmiths' Tools
- AND
- Tube Expanders

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BLACK DIAMOND FILE WORKS,



21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,
—MANUFACTURERS OF—

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES.
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
CLIMAX SAWFILES. LIGHTNING SAWFILES.

—AND—

EVERY OTHER DESCRIPTION OF SAW FILES.

The Old Wooden Bucket Must Go
Indurated Fibre Ware.



No Hoops, No Joints, Cannot Leak, Swell, or Water Soak.

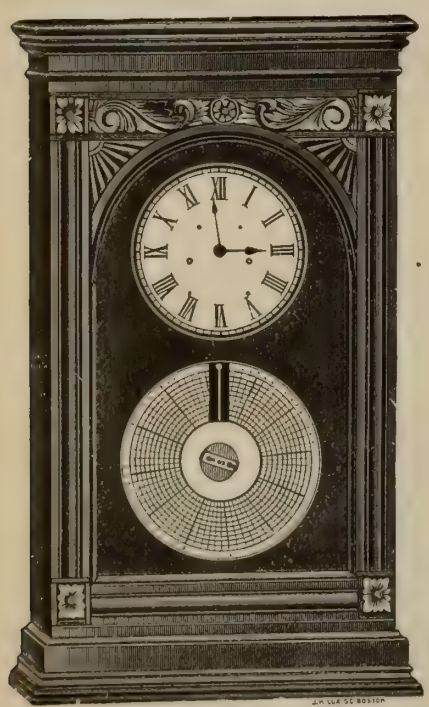
The E. B. Eddy Co.
Mammoth Works
Hull, Canada.

AN INSOLVENCY BILL.

A private bill was introduced in the Nova Scotia Legislature Monday providing for the distribution of insolvent estates, the main provision of which makes preferences illegal, and provides for the equal distribution of assets among the creditors. Provision is also made for making assignments to sheriffs of counties, but creditors are allowed to substitute assignees of their own nomination. The bill is largely a re-enactment of the Ontario act, omitting some provisions that have been the subject of controversy in the courts.

ACME WATCHMAN'S DETECTOR.

A watchman's register has now become a necessity in many factories and public buildings, especially where it is considered advisable to furnish the insurance companies with positive proof that your premises are regularly visited every night. The best method for doing this is by using the Acme Detector, manufactured by The Haltzer Cabot Electric Co., represented in Canada by T. W. Ness, of Montreal. A cut is given herewith showing the detector, combined with an ordinary time dial, and used as an office clock. Wires are run from this clock to any portion of the building desired, so that when the watchman calls at each station and touches the button the record is made on a paper dial in the clock showing the exact hour and minute and station visited. The record is permanent, as a small hole is punctured in the paper by means of a sharp needle, and if the watchman fails to make his rounds no holes are punched. Where it is not considered advisable to use battery power it is arranged to signal with a magnetic bell, similar to the telephone generator. This is a great point in favor of the "Acme." By using these detectors a correct record is kept on fyle, and the advantages of being able to do this will be clear to all interested.



SYSTEM IN THE STORE.

"Order is heaven's first law, then
Break it not, for chaos follows after."

Webster defines "system" as "An assemblage of things adjusted into a regular whole; or a whole plan or scheme consisting of a chain of mutual dependencies," etc.

The principle of system, in common with all principles of action, is found in the operation of Nature. The man, therefore, who lacks system is out of line with nature, and to be out of line with Natural system is to be at odds with the world, and his surroundings. What the rudder is to the boat, system is to business, without which it will helplessly drift beyond rescue. It is often stated that men of genius are particularly noted for being careless in their methods and habits of action, but these are not the "geniuses" who make a success of business lines.

I honestly believe that if a man were possessed of sufficient capital, and experience, and all the other factors of success, but was totally lacking in system, he would surely make a failure in the hardware business. Some of the principal matters in which system relates to merchants are the buying of goods; the arrangement of stock; the division of labor; the recording of sales and accounts; and the delivery of goods to customers.

In the matter of buying it is necessary that the buyer should avail himself of a system which will keep him posted as to goods needed, or soon to be needed, and the market prices and relative differences in goods.

He will, therefore, keep a record of goods asked for but not kept, and new articles which are brought to his notice by the trade papers or manufacturers' circulars. He will also keep a record of current prices and quotations, and freight, or other allowances, to enable him, when he buys, to purchase with intelligence in regard to his needs, and with discretion in regard to the market.

It is much more business-like and productive of far better results, to be able at a moment to decide the market value of an article by the use of a well-arranged "price-book," than to be obliged to overhaul goods or invoices, to ascertain what they cost you, or the quantity you sold last season, etc. Such a buyer is entitled to, and receives more consideration and respect, in the minds of those of whom he purchases, and plainly shows that he buys on a system of certainties, and not the haphazard of guess, or conjecture. After the stock is carefully purchased, comes the matter of arrangement and the system of its disposal upon the shelves and counters.

If you have a system which will enable you and all your clerks and familiar customers, to know the exact location of every article in your stock, then further advice is unnecessary; but in many stores if an article seldom used is called for it is quite a common occurrence for all hands to join in looking for its location, only to come to the final conclusion that it is "out of stock," while in fact it abounds in plenty, but has been, perhaps, crowded behind other goods or carelessly misplaced upon a foreign shelf. "A place for everything, and everything in its place," is a good old maxim to hang up in a prominent place in any store to impress its value upon the minds of the merchant and his clerks.

Arrange your stock in sections or departments, and have all the goods which pertain to, or are used in connection with other goods, kept together. Place the articles which are in daily demand near the front of the store to save time and shoe leather, and facilitate selling. If goods are of a nature which cannot be exposed in bulk, or from lack of room, always have samples tagged with the price, size and number, for ready exhibition, and in a prominent position.

The matter of system in the division of labor is of great importance, and many of the jars, in retail business especially, are due to everybody's work being nobody's duty. If there is fault, or neglect, in employees, it should be possible to always place the blame where it belongs; and thereby correct the error and prevent the recurrence. In a store where, when the proprietor asks "John" why he did not attend to a certain matter, and is told that "'James' generally looks after that," and "James" says "he supposed 'Frank' had done it," while "Frank" was laboring under the impression that the proprietor had attended to the matter, it is evident that some system in labor would be decidedly beneficial. The men who have the most to attend to, are often seemingly possessed of much leisure time and are never hurried, which prevents the work of yesterday from encroaching upon to-day.

System in sales and accounts is necessary, because without it an otherwise prosperous business might prove a failure.

The time to charge an article to the customer is after the sale, no matter if other customers are needing your attention. If you are obliged to lose customers for this reason, it is not because the principle is wrong, but because you need more system in accounting for sales. Have pads, checks, or other devices, ready at hand, and consecutively numbered to detect loss, for the use of your clerks, and you will know where to place the blame if any article sold is not promptly charged upon the books.

Send out your bills promptly, and be sharp in your collections. People who expect to pay for what they buy at the time it is due, will not feel offended if you present the bill. Keep your account books posted up to date and your cash account balanced daily. Have the ledger conveniently indexed, and your system of accounts so practical that you can determine your assets and liabilities at any time with certainty.

In the matter of the delivery of goods, system is necessary to prevent them being delivered to the wrong address, or, if "C.O.D." the collection of the money. To facilitate this, have tags with your name and business printed on them, and space for name and address of customer, and time to be delivered and other particulars. All "C.O.D." goods should be entered in a special book before they leave the store. If your customer says he wants the goods delivered to the "second floor," or at a particular hour when he will be at home to receive them, state these particulars on the tag and leave no room for doubt as to their proper and timely delivery.

Do not allow idle remarks about "red tape" deter you from thoroughly systematizing your business in all its details to the end that your affairs shall smoothly progress to increased success and wider opportunity.

"He had a preciseness in his manner
That marked him in a crowd, and
In his dress each detail spoke
A simple system in his thoughts."

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

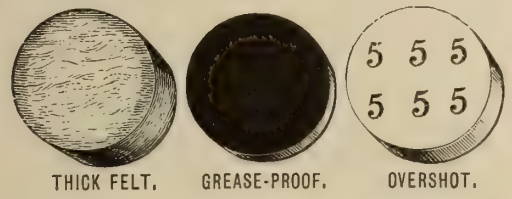
WESTERN BRANCH:

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

The Best in the Market.

BALDWIN'S



THICK FELT. GREASE-PROOF. OVERSHOT.

GUN WADDING,

For SPORTING and other CARTRIDGES. Best Hair, and Brown Felt of uniform thickness; also Best Cloth, Field, Grey Felt, Black Grease-proof and Card Wads. Overshot Wads, printed name and number. Indented Wadding, suitable for muzzle loading guns.

To be had of all Jobbers and Dealers in Sporting Goods.

JAMES BALDWIN & SONS,

ORIGINAL MANUFACTURERS,

Morville Street, Birmingham, Eng.

Agent:--W. H. JAGGER,

131 Bay Street, TORONTO

Price Lists and Samples to the Trade Only.

Spades and Shovels.

Harvest Tools, "Montana" Brand

"Iwan's" Post Hole Diggers and Drain Cleaners.

Vaughan's Post Hole Augers.

Jones' Draining Tools.

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, Toronto.

ENGLISH HOUSE: SAMUEL, SONS & BENJAMIN,
164 Fenchurch St., London, E.C

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES

A. Lewis & Co., dealer in stoves, Victoria, B. C., have assigned.

Joseph Disilets, general store, St. Clotilde de Horton, Que., has assigned.

E. W. Bickle & Co., general merchants, Wellington, B. C,, have assigned.

The Prince Furniture Manufacturing Co., of Montreal, are offering to compromise.

Duncan Sinclair, general merchant, Alvinston, has assigned to C. B. Armstrong.

J. B. Carrier, general merchant, La Baie, Que., has compromised at 50c. on the dollar.

A demand of assignment has been made upon A. Boisevert, general merchant, St. Croix, Que.

John Burbridge, waggon maker, Malton, is offering a compromise with his creditors at 25c. on the dollar.

Digory Braum, blacksmith, Exeter, has assigned to William Bowden, and the stock is to be sold by auction to-day.

Galbraith, Grant & Cook, general merchants, Telegraph Creek, B.C., have compromised at 40c. on the dollar.

Baker & Cressell, plumbers, 342 College street, this city, have been unable to make both financial ends meet and have assigned to John Ferguson.

John Campbell, general merchant, Brockville, has assigned, and D. P. Burke, in a similar line of business at Joggins, N.S., has done the same thing.

Hardware and groceries combined have been insufficient to keep Walter T. Peterson of Thorald afloat, he having been compelled to assign to Thomas F. Pattison.

The liabilities of Stickles & McBride, the insolvent general merchants of Lisle, Ont, are $6,000, and assets nominally $7,000. Of the latter nearly one-half consist of book debts. Stock is to be sold by auction March 28.

Henry & Oldham, dealers in hardware, paints, oils, etc., Beamsville, have assigned. They were burned out some weeks ago and this is said to be the cause of the assignment. Mr. Henry carries on the business alone, Mr. Oldham having died some time ago. The firm has been established for some years, and is well spoken of.

SALES MADE OR PENDING.

The general stock of R. Randall, Bewdley, is advertised for sale by tender.

The general stock of George Halliday, Arnprior, is advertised for sale by tender.

Ross, Sydmer & Co., general merchants, Bancroft, have sold out to Davy Bros. & Co.

The estate of Gamble & Son, grist and saw mill, etc., Inwood, is advertised for sale.

Miner & McKechnie, general merchants, Granby, Que., have sold out to W. R. Horner.

The general stock of Thomas Macnicol, Oak Lake, Man., has been sold at 63c. on the dollar.

The stock of hardware and stoves of W. H. Paulson & Co., Winnipeg, has been sold at 63c. on the dollar.

The stock of Ferguson Bros.' lumber yard, London, has been sold to Mr. Donald Ferguson at 60 cents on the dollar. The office building brought $105; the furniture $55, and the horses and wagons $105.

CHANGES.

Bonin & Co., plumbers, Montreal, have dissolved.

Ross & Tait, general merchants, L'Amble, are dissolving.

John White, general merchant, Heathcoate, has sold out to A. J. Watson.

Coles, Parsons & Sharp, stoves and tinware, St. John, N.B., have dissolved.

William O'Brien, blacksmith, Oil City, has been succeeded by Daniel Dixon.

T. Hamel and A. Poirier have been registered as proprietors of a general store at Quebec.

The tin and stove business of Fuller & McArthur, Harriston, has been sold to a Mr. Rumford.

J. H. Horstull & Co., manufacturers of oil cabinets, Montreal, have dissolved. H. Horsfull continues

N. Boule and Joseph Gagnon have been registered as proprietors of the painting firm of Boule & Gagnon, Montreal.

Doole & Hyder, plumbers, this city, have dissolved, H. Hyder retiring. The business will be carried on under the style of Doole & Co.

N Bouvier and J. Belair, have been registered proprietors of the firm of Bouvier & Belair, manufacturers of improved fire escapes, Montreal.

Richard Austin has been admitted a partner by F. X. Boehler, tinware manufacturer of this city. Austin & Boehler is now the name of the firm.

FIRES.

P. J. Adams, stoves and tinware, Mona Road Station, has been burned out.

F. & A. Caron, general merchants, St. Jean, Port Joli, Que., have been burned out.

REMOVALS.

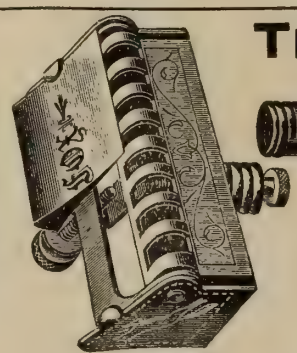
Gilbert Lavalle, general merchant, Starsene, is removing to Isle Verte.

Joseph Girard, general merchant, Moose Creek, is removing to Sturgeon Creek.

D Weismiller, general merchant, Hensall and Kippen, is closing up his branch at the latter place.

DEATHS.

Henry McElroy, of the firm of H. McElroy & Sons, Richmond and Carp, is dead.



THE FOX SAFETY RAZOR

EVERY MAN HIS OWN BARBER

THE FOX CUTLERY MANUFACTURING CO.

Canadian Office: Temple Building, MONTREAL



We would call the attention of the Trade to

NO. 1357

-Ice Pitcher-

In QUADRUPLE Plate, at

$6.00 NET.

THE TORONTO SILVER PLATE CO.

MANUFACTURERS OF

STERLING SILVER . .

AND

ELECTRO SILVER . . PLATE . .

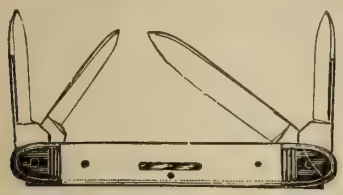
Factories and Salesrooms,
570 King St. West,
Toronto, Canada.

E. G. GOODERHAM, Manager.
JNO. C. COPP, Sec.-Treas.

TORONTO CUTLERY CO.,

M. MAYER, Propr.

65 and 67 Yonge Street, - TORONTO



Carry the most complete assortment of Cutlery in all branches of the Line.

Brands which we warrant:

Non-XLL Pocket Knives.
Imperial Razors.
T. C. Co. Scissors and Shears.

HOYT'S STANDARD BABBITT METAL

Wm. Darling & Co.,

30 ST. SULPICE ST.,

Montreal--Agents

ORDER BY LETTER. ONLY ONE PRICE.
TERMS 4 MOS OR 3%.

BABBITT METAL.

Gen.	Extra	00	1	2	3	4 A	4
27½	22½	18c.	14	12	9½	8	6½

A FEW REASONS WHY

You should Keep your Stock fully Assorted With

Boeckh's Superior Brushes

They are always reliable and as represented.
They are guaranteed in every particular by the manufacturers.
They are made of the very best material and workmanship
They are sold at closest possible prices.
They are finished and put up in neat and attractive shape.
They are well known throughout the Dominion and are popular with all classes of consumers.
They are handled by all leading Hardware and Paint and Oil trade.

See that the name "BOECKH" Is on every brush.

Boeckh's Flexible Bridled Brushes.

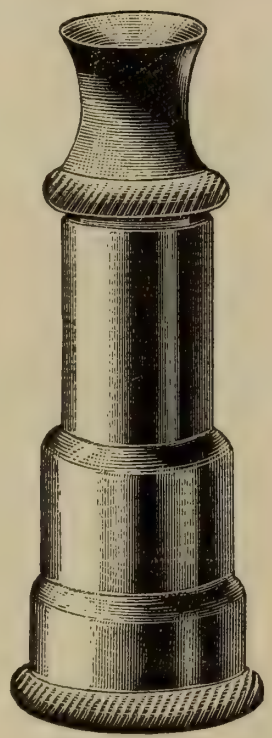
Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

TORONTO, - CANADA.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it

It is impossible for this pipe to get out of order.

Give it a trial and you will use no other.

Hamilton Brass Manufacturing Co.

HAMILTON, ONT.

H. Boker & Co.

are famous for their fine quality

Razors, Scissors

—AND—

Pocket Cutlery

TRADE MARK.

(TREE BRAND)

FOR SALE BY LEADING WHOLESALE HOUSES.



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.



Patented May 1892.

ROTARY BISCUIT AND CAKE CUTTER.—The most rapid Cutter made. It saves time and labour, and helps to make kitchen work a pleasure. Works easily and cuts clean. It is the fastest selling kitchen utensil on the market to-day. Trade supplied by **M. M. Vardon, Sole Agent for Canada, 67 Yonge St., Toronto.**



"BUILD TO-DAY THEN, STRONG AND SURE, WITH A FIRM AND AMPLE BASE." —Longfellow.

DO YOU?

WISH THUS TO BUILD, an advertisement in the CONTRACT-RECORD, TORONTO will bring you tenders from the best contractors.



A CHESTNUT REVENGED.

"I say, Mr. Hooligan!"
"Say it yuresilf. Yez hov yer mout' open."
"I only wanted t' know ef yo' evah heered a bed tick."
"Naw, Misther Johnsing; but——
——Oi've heered a chocolate drop."

The ratchet is noiseless, and is of cast steel, spring tempered.

❀

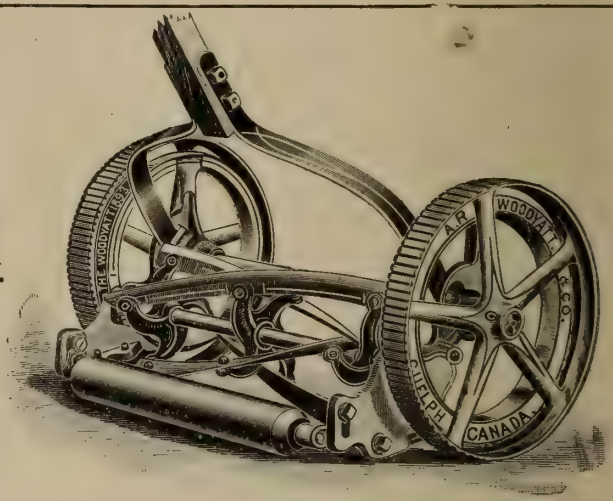
. . **1893** . .

THE "WOODYATT" LAWN MOWER

Light, Durable, and Efficient.

Now On Sale by all Wholesalers.

A. R. WOODYATT & CO. GUELPH, ONT.



Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,
Agents.
MONTREAL AND TORONTO.

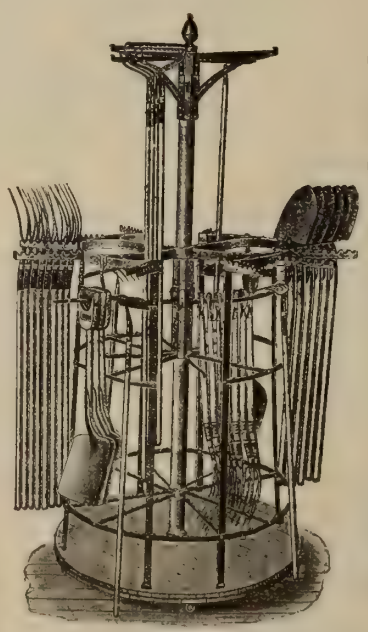
Plate Glass

ALL SIZES IN STOCK.

MANUFACTURERS OF

STAINED GLASS FOR EVERY PURPOSE.

McCausland & Son,
72, 74, and 76 KING ST. W., TORONTO.
Telephone 1112.



Herrick's Patent Tool Rack.

PATENTED MAY 2nd, 1889.

This rack solves the problem. Just what every hardware man requires. Easily holds 204 Tools and 88 Handles, or all the Tools any dealer in Canada could want to retail from. Write for full descriptive circular and prices.

KYLE & BARNETT,
MITCHELL, ONT.

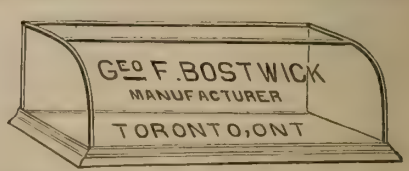
PRINTERS
Apted Bros.
TORONTO

WEDDING INVITATIONS
SOCIETY
AT HOME
VISITING CARDS
PROFESSIONAL
SOCIETY

Printed

Equal to Copper Plate or Lithography at less than one-half the cost

TRY US AND BE CONVINCED — 54 YONGE ST., TORONTO



Mantels, Grates and Tiles, Office and Store Fittings and Furnishings.

OFFICES: 100-102 Reade St., New York, U.S.A.

KEARNEY & FOOT CO

WORKS: Paterson, New Jersey, U.S.A.

Manufacturers of FILES AND RASPS.
Superior quality fully guaranteed.

CAPACITY OF WORKS: 1,200 doz. per day.



Illustrated Catalogue Price Lists mailed on Sppication.

PLEASE MENTION THIS PAPER WHEN WRITING US. Agents, M. & L. Samuel, Benjamin & Co, Toronto.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C.I.F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer



TELEPHONES

FOR
Main Lines
Warehouses
Colleges
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Send for new 32 page Catalogue of Telephone Testimonials.

T. W. NESS

Manufacturer of Telephones, Etc.

749 Craig Street, - MONTREAL

THE BEST
English Sporting Gunpowder
USE THE
"ALLIANCE"
PRIZE POWDER
—Made only by—
Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.

Always obtainable from
Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.

Wm. Clendinneng & Son.

Iron Founders and Stove Manufacturers

Makers of the "Etna" Hot Water Boilers, Soil Pipe and Fittings, Stable Fixtures, Machinery, Builders and Special Castings

WRITE FOR ESTIMATES

WORKS:
Cor. William and Inspector Sts.,

OFFICE and WAREHOUSE:
145 to 179 William Street

MONTREAL

BUYERS OF CUTLERY

WILL find it to their interest to see our samples before placing Spring orders. A choice assortment in stock of Jos. Rodgers & Co.'s and E. M. Dickinson's goods at special prices.

A. C. LESLIE & CO., MFRS. AGENTS,
MONTREAL and TORONTO

OUR SALES OF
"BURHAM" Portland Cement
For the past 8 months have been
25,499 CASKS.
"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,
McRAE & CO., OTTAWA

MUNN'S LIQUID GLUE
IS THE BEST.
Kennedy Bros., Agents
101 Bay Street, TORONTO.

Established 1864.
CLARKSON & CROSS,
CHARTERED ACCOUNTANTS
NO 26 WELLINGTON ST. EAST
E.R.C.Clarkson, F.C.A.
W. H. Cross, F. C. A.
Edward Still.
John F. Helliwell.
TORONTO, ONT.

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.
GALVANIZED SHEET IRON. SP

FOREIGN CORRESPONDENCE.
Letters translated from or written in any foreign language.
J. H. CAMERON, 10 Front St. E

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	24, 25
Strip "	25, 26

Tin Plates—*Charcoal Plates, Bright.*

M.L.S. equal to Bradley	Per box
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 25 4 50
I.X., "	5 25 5 50
I.X.X., "	6 25 6 50
I.XXX., "	7 25 7 50
D.C., 12½ x 17	3 75 4 00
D.X.,	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be urchased of 25c. box.

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

Cookley Grade—	Per lb.
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65, "	

Tinned Plates

72x30 up to 24 gauge	6½ 6½
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$2 05	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼inch	$2 45
16 "	2 35
¼ " and thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2¾, 2¾
26 "	2¾, 3
28 "	3 , 3¼

Canada Plates.

Blaina	½ bright 2 75 ....
Abercarne	2 75 ....
Lion	....

Iron Pipe.

Wrought 62½ p. c. to 62½ p. c. and 5 p.c.
Galvanized, 37½ to 40 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅝ 5
" 5-16 " "	4½ 4⅝
" ⅜ " "	4⅜ 4⅜
" 7-16 " "	4¼ 4½
" ½ " "	3⅞ 4
" ⅝ " "	3½ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 14 0 14½
Lake Superior	0 13 0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20 0 22
" 35 to 45 " "	0 19 0 20
" 50 lb and above per lb	0 18 0 19

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 05 0 05½
Domestic "	0 04½ 0 05

Zinc Sheet.

5 cwt casks	0 06 0 06½
Part casks	0 06½ 0 06¾

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03½
Bar, 1 pound	0 05
Sheets, 2½ lbs, per square ft, by roll	0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¾ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 17 0 19
Standard	0 16 0 18
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½ 0 14
Other makes "	0 13 0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per lb	5 25
No. 1 Do "	4 87½
No. 2 Do "	4 50
No. 3 Do "	4 00

Prepared Paints.
(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00

Colors in Oil.
(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.c.	cwt 1 35 1 40
" " (J.F.L.S.) " "	2 75
Venetian Red (R.C.2) " "	1 50
Venetian Red, (best) "	1 80 1 90
English Oxides per	cwt 3 25
American " " "	2 25
Canadian " " "	1 75
Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure,	
8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 60
Extra "	0 70
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	0 95
Pure Orange Shellac "	2 00
Hard Oil Finish "	1 30

Linseed Oil (in bbls)

Raw, per gal	0 61 0 63
Boiled "	0 64 0 66

Turpentine (in bbls)

Selected Packages, per gal	0 55 0 57

Castor Oil.

Best, per lb	0 08½ 0 09

Cod Oil.

Cod Oil, per gal	0 48

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet makers	0 17 0 18
White	0 16 0 17
London Town	0 7½ 0 08½
Gelatine	0 22 0 27
Stripped	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50, 50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 30 to 35 per cent.

Bench Stops.

Per doz..... ..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers'..... .. 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... .. .. 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 45 to 47½ p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.25	....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 56		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05
Screw and Strap, per lb .. 0 03½ 0 04½
Per doz. sets
Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.
Per doz. pairs
Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mortar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

BOWMAN, KENNEDY & CO., London, Ont.

WRITE US FOR PRICES ON THE FOLLOWING SPRING GOODS:

Spades and Shovels. Mixed Colors. Cut Nails.
Harvest Tools. Dry Colors. Wire Nails.
Linseed Oil. Paris Green. Fence Wire.
White Lead. Windsor Green. Wire Cloth.

And We will give you Closest Prices and Best Terms.

Wrought Hooks and Staples, Amer dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am. per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
ronze, Berlin, per doz .. 2 75 3 25
ronze, Gem, " 6 00 9 00
ass " 8 75 10 00
hutter, porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cert

Nails.

Cut Nails (Iron)
1. Either Canada or American Pattern.
Basis—50 to 60 dy 2 30
40dy 2 35
30 dy 2 40
20, 16 & 12 dy 2 45
10 dy 2 50
8 & 9 dy 2 55
6 & 7 dy 2 70
American Pattern Only
from 4 to 5 dy 2 90
3 dy. (lath) 3 30
3. Canada Pattern Only
from 4 to 5 dy 2 80
3 dy. (lath) 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross 1 00 4 25
" Carpenter 2 25 3 60

Picks

Per doz 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz 1 35 2 00

Pruning Shears.

Per doz 4 00 5 50

Pulleys

Hothouse, per doz 55 1 00
Axle. 22 33
Screw 27 1 00
Awning 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot 3 3½
Sliding Door, " 3¼ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	22	25
Russia Deep Sea, per lb..	13½	16
Jute	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 1 00 1 10
" N P. " 1 25 1 35

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.
Hack, complete, each 1 75 2 75
" frame only 75

Saw Sets.

Per doz 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
" R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, " 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia ½ gross boxes 3 25
" ¼ and ⅛ gross boxes per gross net cash 12 00

Soldering Irons.

Per lb 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 57½ per cent.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pc cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application.
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap 0 11½
" Crown 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

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Hand, per doz 4 00 6 00
Bench, parallel, each 2 00 4 50
Coach, each 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz 6 50 13 00

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Per doz 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8,10 & 12 in. 3 38 6 00

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Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Iron and Steel, annealed, annealed and oiled, galvanized 20 per cent. dis
Bright coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4¼ 4½
" 4 " 4 & 6 " "
" Plain twist, 2&3 wires
" Steel thorn and ribbon 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

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Ordinary, discount 25 p.c.
Painted Screen, p.100 sq ft 1 80 1 90

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Agricultural, 70 to 70 and 5 p.c,.
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Coe's Gen'ne, dis. 33½ to 35 p. c dis.
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Tower's Engineer, each .. 2 00 3 00
" S., per doz 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz 1 25 2 00

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TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

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REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS.

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

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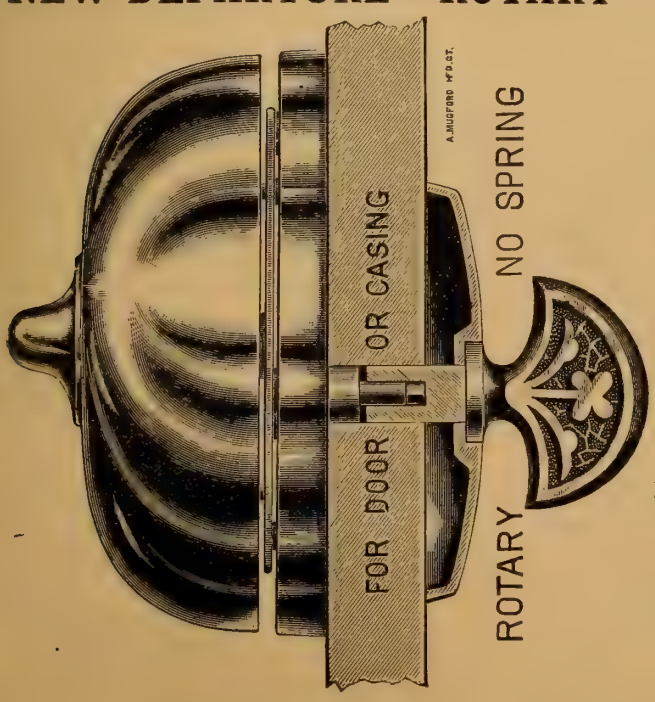
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The only goods in this line extensively advertised.
Our special advertising sells the goods without talk.
Country dealers should keep it as it sells to the general public as well as to painters.
If our travellers have not called on you, write us for tint card and prices.

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G. F. STEPHENS & CO., Winnipeg, Agents for Manitoba and North-West.

NEW DEPARTURE "ROTARY" DOOR BELLS.



Incomparable!
NO SPRING!
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Superior Finish!
Bronze Trimmings!
COMPACT!
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Ideas for Hardware Merchants.

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This novel book is the only book ever written especially for Hardware men, and every Hardware Merchant will find it of decided help and of intrinsic value. It tells HOW TO ADVERTISE a Hardware Store. HOW TO DRESS a Hardware Store Window. HOW TO SELECT Seasonable Goods and HOW TO DISPLAY them to best Advantage. HOW TO MAKE a success with Hardware. HOW TO COMPETE with "Department Stores." HOW TO TURN a Credit Business into a Cash Business. HOW TO AVOID Bad Debts and Increase Trade. HOW TO SECURE Low Quotations from Jobbers and Manufacturers. HOW TO ARRANGE the Fixtures in a Hardware Store. HOW TO TREAT and Manage Clerks. HOW TO KEEP your Accounts with the Least Labor. HOW TO SYSTEMATIZE your Business and Arrange its Details. HOW TO ARRANGE Price Lists. HOW TO MEET close Competitors and HOW TO BE ENTERPRISING. HOW TO PROPERLY proportion Store Expenses, and thousands of practical hints for Hardware Merchants. —**Paper Cover, $1.**

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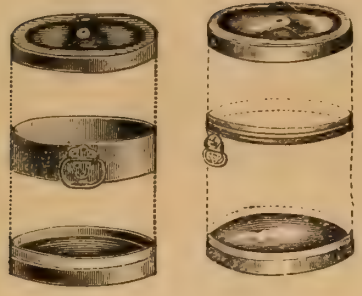
By B. F. Cummings.
A Prize Essay, 10c.

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THE J. B. McLEAN PUB. CO.,
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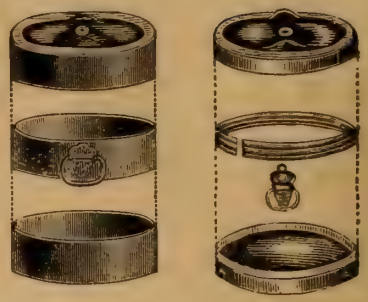
Right Cut. Wrong Cut.



TO THE TRADE:

Please notice that the wrong wood cuts of Can Trimmings have been used in our advertisement of this season. We have both in this issue so that they may be noticed. All orders for Trimmings this year will be filled with BROAD CENTRE HOOPS.

Right Cut. Wrong Cut.



SEND IN YOUR ORDERS

Thos. Davidson & Co., Montreal

Why don't you sell . . LAMPS



You sell Chimneys! You sell Burners! You sell Wicks! You sell Coal Oil! Why don't you sell Lamps? We mean nice Lamps? They are just as staple and a good profit!

WE HAVE SOME NICE JOB LOTS JUST NOW.

The very thing to make a trial with. Write for particulars.

Gowans, Kent & Co.

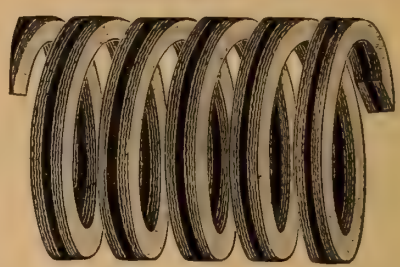
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Only Rubber Factory in Toronto.

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ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7 16, 1-2, 9 16, 5 8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., **Toronto.**



BARB WIRE. - - WIRE NAILS.



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ADDRESS

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Offices: 54-56 Lombard Street. Works: 55-59 Richmond Street East, **TORONTO**

CANADIAN
HARDWARE
AND METAL MERCHANT

VOL. V. TORONTO, APRIL 1, 1893. No. 13.

NEW YORK ALUMINUM BEARING METAL CO.

NEW YORK OFFICE, N. E. Cor. Washington and Cortlandt Sts. CHICAGO OFFICE, 12 Pacific Avenue.
MONTREAL OFFICE, H. McLaren & Co., Agents.

MANUFACTURERS OF

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TRADE MARK.

"Genuine Babbit," - -	Price	30c.	per lb.	f.o.b.	New York
"Champion Metal," - -		25c.	"	"	" "
"Aluminum Bearing Metal,"		18c.	"	"	" "
"Big 4 Babbitt," - -		14c.	"	"	" "
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"Mystic Metal," - - -		8c.	"	"	" "

CLOSE FIGURES MADE ON LARGE ORDERS OR CONTRACTS.

Our metals are superior to any like Babbitt Metals in the market. We Solicit Your Orders.

You are safe with

Adamant



I've Used Them.

Its great reputation has not been made by chance. It has been earned by merit and is increasing year by year.

THE SUCCESS OF

Adamant . . Floor Paints

Is the result of long study with the view of producing a paint in every way adapted to floors. **Adamant Floor Paint Dries Quickly** and will give a **Hard Solid Surface** that will wear and look well. We claim that our Floor Paint is also the most economical of any from the fact that one gallon will cover a greater surface, and do it more thoroughly than any other.

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RICE LEWIS & SON, LTD.

FINE MECHANICS' TOOLS - -

Lathes, Bench Vises, Screw Plates, Chucks, Drills, Reamers, Etc.

HOUSE FURNISHINGS - -

Success Water Filters, Agate Ware, Puritan Cookers, Iron and Brass - Bedsteads, Etc.

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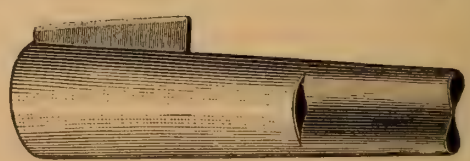
Reasons Why . . The "Steel-Clad" Bath is Best

It is all open.
Has no encasing of any kind.
No place for impurities to collect.
Dampness cannot affect it.
It is all Metal.
Nothing about it to shrink or decay.
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It is light, but strong and durable.
It does not cool the water.
It is handsome in appearance.
It is the **Cheapest Bath on the Market.**

MANUFACTURED BY

THE TORONTO STEEL-CLAD BATH AND METAL CO., Ltd
123 Queen Street East, TORONTO.

40% More Sap Obtained BY USING THE Maple Leaf Sap Spout.



The Maple Leaf Sap Spout is made of Tinned Steel and will supply a long-felt want for a first-class article at a low price. It is a combined Sap Spout and Bucket Support.

It is guaranteed to obtain the most sap with the least injury to the tree; it only has a small bearing on the inside surface of the hole; it is made in one piece, consequently cannot be broken; the bucket may be covered if desired when using this Spout.

SAP BUCKETS.
SYRUP CANS.

KEMP MANUFACTURING CO.
TORONTO, ONT.

HARDWARE

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, APRIL 1, 1893 No. 13

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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A nation's commercial possibilities are largely limited by the facilities of its waterways. Where these are extensive there is as a rule the accompanying cheap and convenient means of transportation. Probably no country under the sun is richer in the matter of waterways than Canada. What Nature has done for us engineering and scientific skill has enhanced, for where the former left unfinished its labors, the latter has in many instances carried it on. Where the connecting links between the great chain of lakes were left imperfect, the hand of man has improved either by deepening existing channels or by building new ones in the shape of canals. And still the work goes on.

* * *

In pursuance of this system of canal evolution a gigantic scheme is now before the House of Commons for consideration. Its promoter is the North American Canal Company, and in order to qualify for carrying out its object it now seeks incorporation. According to the prospectus of the company it is proposed to widen, deepen and straighten the Welland canal from Lake Erie to a point just south of the existing locks, which will be undisturbed, and thence towards the Niagara river, descending the escarpment with two lifts, and make a long level, to be called the Niagara section, reaching to the Niagara gorge, the descent into which will be made with two lifts. The route from Erie to Ontario will have two long levels and four lifts, and a vessel will traverse it in four hours. The Niagara and St. Lawrence rivers will be improved, no canals or locks being necessary until the Cornwall canal is reached. The summit level of the Cornwall canal will be improved and the descent therefrom to Lake St. Francis made with one lift and forty-eight feet. From the southeastern corner of Lake St. Francis, a canal, to be called the Chateauguay section, will be made across the valley of that name, descending to the Champlain level with one lift of about 55 feet. From the Chateauguay section an arm, to be called the St. Louis section, will descend the Chateauguay valley, coming out on Lake St. Louis, probably at Caughnawaga, the descent from Lake St. Francis, 82 feet, being made in one lift. The Lachine canal will be widened and deepened to a point just above St. Gabriel's lock, whence a new canal will be made through the high land adjacent to the river to the head of the new harbor in Montreal, where will bx one lift 45 feet high, the locks being 27 feet draft, 60 feet wide, and 450 to 500 feet long. The canal will also be 27 feet deep, and make an inner harbor extending to Lake St. Louis, and ample for the commercial growth of many years. It is estimated that by this proposed route a vessel will make Montreal from Port Colborne in 32 hours and New York in 60 hours. The distance from the Lake Erie entrance of the canal to Montreal would be 365 miles, and to New York 706 miles. In these days of engineering skill the obstacles to be surmounted are usually more of a financial than a physical character, and if the means are forthcoming for getting over the former in this instance much concern need not be entertained regarding the latter.

* * *

Ocean freights have advanced 11s. 3d., and hardware importers know it to their sorrow, for lying at Swansea are large quantities of goods which it was thought they would have been able to get through before the change took place. HARDWARE is creditably informed that Toronto houses alone have about 3,000 tons stored up in the Welsh port which will have to pay the increased rate. This means that the receipts of the steamship companies will be enhanced to the extent of some eight thousand dollars at the expense of the local hardware men's pockets alone.

* * *

If members of Parliament are not elected to look after the interests of their constituents what are they? Some weeks ago HRDWAARE pointed out that a heavy duty had been imposed on catalogues consigned to a local hardware house, but which the latter had refused to pay, contending that not only were similar catalogues for the dry goods trade given free entry, but that the amount levied was practically more than the books were worth. The firm in question immediately wrote to one of the citys representatives at Ottawa regarding the matter, but from that day to this not a word has been heard from either the member or the Government. The firm is one of the largest in the city and its imports are necessarily large,and for this reason alone it was entitled to courteous treatment. But where a grievance exists in regard to the tariff it is the duty of the people's representatives to investigate them, be the complainant small or great. That is what they are elected and paid to do.

* * *

In The Toronto World of Monday last was published an interview with a local bank director regarding the curse of of over-competition. "Even the saloon business is overdone," said he. "The wholesale dry goods business has been pretty well weeded out, and the houses now in that line are making money. All kinds of shop-keeping is overdone. If we had half the butcher shops, half the bakeries, half the groceries, etc., that line our main business streets, all would be occupied by happy and contented citi-

rens." In regard to a remedy he suggested that some system of doubling up should be adopted.

* * *

As far as bank director's views go re evils of over-competition no one will dispute with him. They are apparent to everyone. But with the remedy he suggests it is different. It is all right in theory, but it loses all its plumes when viewed seriously. There are a thousand and one obstacles in the way of its ever advancing beyond the theoretical stage. Jones on this corner and Smith on that could be no more induced to double up than could a canary be induced to mate with an eagle. Smith, for instance, may have a good business and plenty of capital, while Jones may not have much to boast of in either particular. But even take it for granted that merchants here and there would join issues, what is to prevent Brown from stepping in and taking possession of the store made vacant by one of them? Nothing. The last state would then be worse than the first. No, it is just as possible to dam the Niagara as to try by such methods to regulate the number of stores. Nor can it be accomplished by statute. Popular opinion would resent any such interference with the liberty of the subject. There is only one feasible way by which limitations can be placed on people going into business. That is by closing up some of the avenues which now make access to business so comparatively easy. Let wholesalers set a higher standard with regard to capital and experience for those with whom they will open up accounts; inaugurate shorter terms of credit; and offer greater inducements for cash payments. Then it would not be so easy for those to start into business whose qualifications often consist of little else beyond an ambition to be a merchant. It is of little use to talk about reducing the number of business houses while the way into business is so easy of access. What is wanted is to nail up some of the entrances. Then when a weak merchant succumbs it will lessen the possibility of his being replaced by one equally as weak.

* * *

Montreal business men have been assured by the Quebec Government that interest and taxes not yet paid, in accordance with the demand of the business tax, would not be collected, and that amounts already received as costs of legal notifications would be refunded. The business men of Montreal have had a hard fight to obtain this assurance, and they are to be congratulated upon the result. It shows what business men can sometimes accomplish if united.

BRITISH IRON TRADE.

The British Board of Trade returns regarding the iron trade for the month of February last are quite as disappointing as the statistics for previous months of the year, and demonstrate plainly the permanency of the depression which has ruled in iron circles across the water. In fact, compared with January or December preceding they show a decrease as well as with the month of February one or two years ago. There were shipped on the aggregate last month 191,000 tons of iron and steel, against 184,000 in February last year. This was valued at £1,554,000, but, although there were 7,000 tons less shipped last year, it was valued at £1,694,000, so that despite an increase of 4 per cent. in the shipments values fell off 8 per cent., which is enough to discourage the most sanguine. The Iron and Coal Trades Review considers it so at any rate, and also deplores the decrease of 7,611 tons in the shipments of cast and wrought manufactures "coming as it does after an increase of 1,244 tons in January, a decrease of 4,623 tons in December, and an increase of 3,248 tons in November."

The chief cause for the moderate gain in the exports of iron and steel were the increased shipments of railway material to the British East Indies, to Australasia and th Japan, and there were gains also in the exports to this country, Chili and Brazil. On the other hand the British possessions in South Africa, Russia, Spain, Norway, Sweden, and the Argentine Republic have taken less.

In the figures of exports of iron and steel to the United States it is interesing to note that the shipments of tin plates keep up pretty well. There was shipped to the United States in February 20,190 tons, as compared with 23,498 tons in January this year, and 23,268 tons in February last year. The exports of British pig iron into the United States increased 654 tons for the month, and hoops and bands 881 tons, while old iron fell off 971 tons.

STEEL BOILER TUBES.

The information as to the relative merits of iron for boiler tubes, which we have published from time to time in our columns, says Machinery, appears to have excited considerable discussion. We are advised that in the case of a large number of steel tubes the results, so far as wear is concerned, have been unfavorable. The following definite experiment, however, has been made: An engine was equipped with 114 iron tubes and 113 steel tubes on Dec. 20, 1890. The iron tubes were placed on one side of the centre and the steel tubes on the other side of the centre of the boiler, the tubes being divided by a vertical line through the centre of the flue sheet. On March 6, 1892, the flues were all removed. Seventeen of the iron tubes were condemned on account of pitting and corrosion, while 64 of the steel tubes were condemned for the same defect. This would indicate that steel tubes are more affected by corrosion than iron ones. Further experiments and information in this line, however, are desirable to fully settle this question.

NEW DODGE FOR THE COLLECTION OF DEBTS.

Recently a scheme for collecting debts from delinquents has been devised and used by a collection agency in the Western part of this State. I am told that it has been very successful. The accounts are placed in the hands of the agency, with a certain amount for postage (and if the merchant is green, a membership fee as well), and a series of letters sent out to the delinquents. The letters are similar to those used by hundreds of associations throughout the country.

The succeeding steps, however, are different from those usually taken and show the cunning hand of someone versed in the byways of the law.

If the accounts are not settled when the series of letters has become exhausted, the collection company proceeds to acquire the ownership of the accounts by assignment.

It then begins suit for these accounts in places far distant from the domicile of the debtor, and to ensure the presence of the debtor to prove the claim, issues a subpoena for him.

The debtor usually treats all suits at law with contempt, and expresses his feelings in this way usually: "Let 'em sue and be d—d! I haven't got anything."

In this case, however, he finds a vast difference. In case he does not show up an order of arrest is granted for contempt of court, and that has always brought about a settlement, I believe, up to date. It can readily be seen that this is a great scheme to circumvent the bad debtor.

But alas! some friend or client of Senator Parson has been hurt, and he has introduced a bill to do away with this terrible injustice to the much abused delinquent!

So much for the prayers of the faithful! The delinquent has always a friend at court, and never, apparently, lacks one at Albany. We shall watch with interest the course pursued by this bill, and shall be glad to report such progress as it may make.

It is yet in committee, and will probably remain there for some time to come. —Harlem in National Grocer.

STOVES AND CIVILIZATION.

The progress of to-day is nowhere more forcibly illustrated than in the development of the stove and furnace product, remarks Stoves and Hardware Reporter. The primary idea of these lines has always been that of strict utility, and but little more than the commonest form was originally thought possible. That such manufacturers should be studied scientifically was dismissed as the suggestion of an impractical enthusiast, and any recognition of art in connection with the subject was scouted as an idle dream. But such views have long since been numbered with the things of the past. It is no longer sufficient that the articles of the household shall be an improvement on the rude equipment of early days, but there is everywhere a well defined demand that the article of domestic use shall be abreast of the most advanced thought of the age. The pendulum of public sentiment has swung to the opposite extreme, and what was good last year no longer satisfies the clamor of the present. The best information is more generally disseminated. The consumer is everywhere better informed as to the requirements of the highest utility and the highest standard of comfort.

The trade has long since felt the influence of this popular progress, and competitors vie with each other in offering to the public the best that inventive genius and mechanical skill can produce. It is common to hear manufacturers declare that there are few inferior articles among the leading staples. A certain high standard of quality is the very foundation of any success, and each competitor for public favor is straining to add to this essential characteristic something to appeal to the advanced taste of the consumer.

But it is not taste alone that exercises a marked influence on the trade. The requirements of science which has taken so strong a hold upon popular attention, are scarcely less powerful. The stoves of to-day have scarcely anything in common with those of little more than a quarter of a century ago. Economy in the use of fuel, the most effective radiation of heat, and the best adaptation to the uses of the kitchen are among the prime consideration of purchasers, and these considerations by the common people would doubtless astonish the pioneer stove makers. Furnaces for house warming are no longer the luxury of the rich alone. They have become a necessary adjunct of the modern home. In its changed location it is no longer tolerated as an article of ornament rather than use. The expense of maintaining grates as the necessary complement of the furnace is forbidden by the practical sense of the present.

The result is that the defects of old time constructions have been overcome. Every feature entering into the promotion of domestic comfort is rigidly scanned, and the catalogues of manufacturers are rapidly coming to resemble treatises on heating and cooking rather than an ordinary anouncement to the trade. More attention is required of the dealer in fitting and placing these articles of domestic use, and the best results of a carefully studied experience are thus furnished for his guidance. While the exactions in all lines are more or less pronounced, those in the line of heating and cooking appliances are, perhaps, most fully developed and most fully met.

PLUMRING BY THE DAY OR JOB.

There is a lively discussion going on among builders and others as to the best method of letting plumbing work. A very widespread idea is that if you want the very best workmanship attainable it is necessary to have the work done by the day. It may be said that practically everybody admits that if you want things done well, beyond a question, they should be performed by day labor. This may be true under some circumstances, but I have failed to see the circumstances up to the present time. Workmen must be exceptionally honest in order to have things done by the day in just such shape as would be desirable, unless a very large and unnecessary price is paid for it. With a carefully drawn contract, and an intelligent and conscientious inspector things are likely to go on something in this way: The inspector comes upon the ground and finds part of a line of pipe or somelead work, or some other detail of workmanship or material, put in contrary to the rules and regulations, or contrary to the contract. He objects. The workman says, "Certainly; this work is to be done by the day, and they want to have it right, regardless of expense." So, that which was put in by the day, is taken out also by the day. On the morrow the inspector finds it replaced by other work which cannot pass. This alteration was put in by the day, and again taken out, and the third time, perhaps, goes in as it should have gone on the first occasion. Errors under this system are made by the day, and corrected by the day, and the frequency with which they are made leads to a curious suspicion in the contractor's mind that they were made for the purpose of being rectified.

Some of the finest work that I have ever seen under any circumstances has been done by contract, and such work has the advantage of being made right in the first instance. A fixed sum being agreed upon, the journeyman and the foreman understand that no unnecessary labor can be expended on any portion of it. They take pains, therefore, to see that every step proceeds correctly. They make no mistakes by the day. When the job is completed no unnecessary labor has been expended on it, and no portion of the work has been injured by the making of alterations which would not have been required had proper care been taken. Even when there is no intention of dishonestly prolonging the amount of labor on a job, it is still vastly better for owner and for plumber to have the work done on a fixed basis, and then depend on careful testing and inspecting to determine the question of workmanship. In this way the plumber can reap the reward for his own careful foresight and business tact. But plodding along on the day's work plan confers no benefits under any consideration, and there is always a gain in having the work especially under the supervision of the head of the establishment. — Metal Worker.

LIVE MERCHANTS AND COMPETITION.

When but one store is found in a locality it is often said that it supplies the needs of the neighborhood, and that the addition of a second store only divides the business. This is only partially true. The division of business does occur, but the aggregate sales are usually greatly increased so that each of the two stores may have to its credit as great a margin of profit as the solitary store had before, and this too without any great accession of new customers. The explanation is that new trade is created. Everything is purchased under a stimulus. In the elementary articles of trade, food, clothing, fuel, etc., the promptings are the common feelings, hunger, cold, etc. These are constant but as elastic as rubber. Delicacies and silks, if introduced, appeal to a taste that will build up a great trade if properly fostered. The desire for finer food, finer clothes, finer houses, prompts the individual to greater efforts in procuring the luxuries. Therein is exemplified the difference between a progressive and a conservative race. The civilized notions of this age are the product of this restless desire for better things. Offer a prize to a school and half the pupils will work for it if there is anything like an even chance of success. The result is an expenditure of a large quantity of latent energy. Show an improved stove in your store. Make the people realize the superiority and advantages over the old stoves. Make them desire it, and you may be assured that many of them will have it. What is more important still, the greater the number sold the greater will be the demand for it.

There is an immense amount of human energy that is going to waste. It is frittered away in the useless collection of postage stamps and divers other harmless ways. It is the business of the merchant to build a dam across the current of this ill-directed energy, and to divert it to the mutual good of himself and neighbors. This can be done by the judicious introduction of new goods. The dealer in agricultural implements knows that when a new and improved corn planter or hay rake appears on the market, it usually depends very much upon himself whether the sales to his trade shall be large or small. If the demand does not exist it must be created. No matter how great a labor-saving principle may be involved, no matter how great may be the value to the purchaser, as a rule the desire to buy in the customer must be educated by the seller. The dealer therefore stands in a very important role. He connects the human element with the material element of progress. He is not merely the medium through which daily needs are bartered and doled out to the race, but the invigorating spur to progress in all material lines. One merchant may kill a community. Two or three or even half a dozen may awaken it to a growth that brings prosperity and infinitely greater comfort to life. Competition ruins very few merchants.—Ironmonger.

LABOR AND MACHINERY.

The utter absurdity of the idea that labor-saving machinery deprives the poor man of employment—an idea that was general centuries ago and still entertained by many—was never better illustrated than in the use of agricultural machinery in the grain growing section of the Northwest. Only a few years ago the farm laborers were burning, smashing with axes and sledge hammers, and otherwise destroying reapers, binders and mowers, and in some cases wagons and farm engines. There came a wail from Minnesota and South Dakota last summer where in harvest time one is never out of sight of a reaper, and often within sight of fifty or more at one view, for more hands. The farmers' organizations said that 44,000 additional laborers were required to harvest the crops of the two States. The introduction of machinery so changed the conditions of farming and increased the farm products, and increased consumption by lowering the prices, that the small lack of employment at the first was only temporary.

The whole history of the rise of steam power, the spinning jenny, the loom and many other inventions is a record of repeated opposition to their use by the laborers. The first saw mill erected in London was torn to pieces by a mob. To-day there are millions whose support is derived exclusively from the operation of machinery and labor saving implements and the improved condition of the working classes to-day is due vastly more to their use than from any efforts of the working classes themselves. Most of the ills laborers complain of are largely the result of their own ignorance and folly.—Merchants' Review.

THE VERSATILE HARDWAREMAN.

The hardwareman has to be versatile, says a contemporary. He must know something about paints and varnishes; more about building; must be an electrician; a good plumber, or some one else will plant himself in the neighborhood; must sell stoves, and, perhaps be a tinker; be an expert in woodenware; keep rubber goods, and vibrate between high prices or worthless goods; sell bicycles and supplies; and on and on; and the more he knows in each line, the better off he will be. He generally stands high among men in the small metropolitan centres. He knows all the contractors, the builders, the city officials, the mill men, the manufacturer, and the well-to-do housekeeper, for they all come to his hopper; and there is something fascinating in a fine display of hardware, the handling of a good tool by both expert and amateur, and the imaginative want of it by the latter; in fact, the business is one that, well located, brings in results for every hour of intelligent work bestowed upon it.

THE SUCCESSFUL MERCHANT.

"No profit grows where is no pleasure taken,
In brief sir, study what you most effect."

He believes that strict integrity is the foundation of all legitimate business success.

He places no limit to his ambition, since the field is free to all and work the price of progress.

He pushes for more business in busy seasons, and if customers are scarce still pursues.

He depends upon his own exertions and abilities, and they reward his confidence.

He practices strict business economy, but does not condescend to penuriousness.

He has an eye open constantly for new goods, and accepts valuable ideas regardless of their source.

He realizes that the prime object of business is to make money, and he therefore refrains from extreme competition in prices.

He is not bounded by his surroundings, and if they prove too meagre he seeks wider fields for his operations.

He prefers to be original in his methods and leads rather than follows.

He never allows custom to prevent departure, or prejudice defeat progress, or obscure facts.

He stands on the happy medium plane, between commercial timidity on the one hand, and ill-digested schemes on the other.

He is not utterly defeated by defeat, nor careless from success.

He is aware of the changes which are almost imperceptibly creeping around his business, and tacks to catch the wind.

He is honest, not only from policy, but from principle; he considers success lacking self-approbation as failure in disguise.

He is not intimidated by unmerited or ignorant criticisms. Opinions have weight with him in comparison with their source and cause.

He pays promptly and collects as he pays, rather than pays as he collects.

He is courteous in manner, and appreciates the commercial value of cordiality.

He is careful in details, knowing that they are the mortar which bind his operations.

He thinks first, and deeply; and speaks last and concisely.

He believes in system, but does not depend blindly upon it for results, since he considers demand the power, and system the method of supply.

He keeps his hand on "To-day," but his eye on "To-morrow," and works in the present, while scrutinizing the future.

He possesses executive ability to a degree which renders him appreciative of the valuable points of his employees.

He seeks education both inside and outside of business, and widens his horizon of ideas by a healthy interest in the interests of the world.

He believes in judicious advertising, but never advertises his competitors by adverse criticisms.

He considers his business his means of existence, but he remembers his duty to his neighbor and himself.

"Your maxims seem to hold the truth,—
Pray loose your grasp kind neighbor."

—D. T. Mallett in Ideas for Hardware Merchants.

THE MORAL OF LOW PRICES.

The popular idea of a bargain is to get something at a low price, says Stoves and Hardware Reporter. The fact that something cannot be evolved from nothing does not enter largely into any consideration of the matter. The fact demanded is the low price. Such action is calculated to demoralize trade. Manufacturers and dealers are only human, and when the absolute price, without proper reference to the value involved, is the deciding consideration they make an effort to meet the situation. The result is that all kinds of shams are invented to meet this demand, and the pity of it is that comparatively few of them are generally discovered. The blame of adulterated foods and shoddy manufacture, the oppression of labor, and a multitude of evils, real and imaginary, are charged to the manufacturer and dealer when, if the truth were ascertained the fault belongs to those who in season and out of season demand a reduction of prices.

The story of the Irish woman is familiar. Inquiring the price of an article she misunderstood the price of fifteen cents to be fifty and promptly offered thirty-seven. When corrected she immediately reduced her offer to ten cents. This is an exaggerated illustration of a tendency that is not so restricted as it should be. The idea of a profit on goods is too often practically resented in the minds of many, and often leads gullible persons to snap at offers of goods at cost, or at a discount. It is a familiar practice among shop men to raise the price to certain customers that they may eventually drop to a fair price, and apparently this is the only way of doing business in such cases.

There are manufacturing houses that refuse to cater to this demand. When a line becomes unprofitable they drop it and turn to something else that will afford a business profit. The fact that business houses acquire wealth is not because of a large profit on the single article, but because of the aggregate of small profits on a large sale.

Many who read the "Song of the Shirt" with keen appreciation of its truth fail utterly in putting it to practice. An exorbitant demand of value for the price paid is the most powerful lever that can be applied to the oppression of labor. Reductions have been made possible by the employment of machines and improved processes, but the limit must be reached where further reduction means oppression. Many a business failure and untold misery is fairly chargeable to the demand for low prices, and many would view their shrewdness in bargain driving with less complacency if they could trace the chain of circumstances to its inevitable outcome. Let the demand be a fair price, and let the right of dealers, manufacturers and workmen to a fair compensation be recognized, and there will be less complaint of shams and much less misery in the world.

..SHIP SUPPLIES..

Ropes, all Kinds. Steel Tackle Blocks, Single, Double and Triple.
Oakum, Pitch, Etc. Lead, Oils and Brushes.
Nails, Hinges, Glass, Etc., Etc.

H. S. HOWLAND, SONS & CO.,

WHOLESALE HARDWARE

37 Front Street West, - - TORONTO

Carriage Paints . . .
Superfine Coach Colors
Varnishes . . . . .
Linseed Oil . . . .
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Our Pure Prepared Paints
Are the
STANDARD CANADIAN MAKE
EVERY PACKAGE GUARANTEED

SPECIAL ATTENTION AND PROMPT SHIPMENT.

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White Lead . . . .
Colors in Oil . . . .
Oil Stains . . . . .
Harness Oil . . . .
Carriage Top Dressing
Etc., Etc. . . . . .

TRICKS IN TRADE.

Now, for instance, let us suppose you have put up $10 on ten shares of Manhattan. Forty-nine other customers have done the same. That makes $500 in the bucket shop.

Manhattan is a fairly lively stock, we'll say, and it closes several points higher than it opened, yet you and your fellows in misfortune lose.

How is that?

Simple enough, my dear fellow. The bucket shop man goes to a member of the stock exchange and tells him that it will be worth his while to break the price of Manhattan one point.

The broker quietly sells 100 shares of Manhattan at one point below the opening price, regardless of the fact that it has since risen one point. This transaction cost him $200, or two points a share. The bucket shop man pays him this and $100 more for his trouble. Thus the bucket shop man loses $300. Subtract that from his $500 and you see he is still $200 ahead. Had he allowed the prices to go their course he would have had to return to the customers their $500 and $1,000 more, but the quotations on the ticker show his broker's transaction and so the customers can't kick when their margin is wiped out.

HOT-AIR FURNACES.

In a recent volume of the proceedings of the Engineers' Club of Philadelphia was the following note by George T. Gwilliam:

The difference in the cost of steam or hot-water apparatus when compared with hot-air furnaces will make the latter the most popular method of heating dwellings for some time to come. The heater in common use is of the portable type, made up of a cast-iron fire-box, with a system of wrought or sheet iron drums and tubes, the whole covered with a sheet-iron jacket, from the top of which the heat pipes diverge. To supply moisture to the heated air a cast-iron water box is located at some point of the heater to suit the fancy or convenience of the workman; the box will hold from one to three gallons, and seldom contains water, usually mud and rust; the heat pipes are seldom tight and rarely covered. The cracks and crevices around the cellar windows and the foundations of the house supply the heater with fresh air; it collects, in its passage across the cellar, coal dust, ashes, and the different odors commonly found in cellars; the gases from the leaky heater joints are added, then it is delivered throughout the house at varying temperatures, from 60 degrees in very cold weather to 140 degrees when the weather moderates.

In theory the question of heating and ventilating should go hand in hand; the practice is, however, to heat only. While it is next to impossible to get a heater that is perfectly tight, a good one can be selected—one with a minimum number of joints—and it should be large enough to heat the volume of air required without forcing. The fire-box of a heater should not be allowed to get red hot. The pipes conducting the heat should be run direct, avoiding abrupt turns and horizontal runs. The jacket of the heater and the heat pipes should be covered with some non-conductor. The water-pan, properly placed, should be connected with a tank having a ball cock, so the water supply will be constant.

All rooms should have some means of ventilation, and when no provision has been made to that end, good results can often be obtained by simply adjusting the window sash.

Since the introduction of laws regulating house drainage and plumbing in this city, the character of the work has changed greatly for the better; and if similar laws were passed regarding heating systems, much sickness arising from breathing impure air and gases from defective heaters would be avoided.

TRADE CHAT

The new binder twine machinery of the Kingston penitentiary will manufacture 500 tons a year.

The membership fee of the Gananoque new Board of Trade is $2, with an annual fee of $1.

A Mitchell man advertised a $20,000 stock, but when the assessor called he said he was only worth $500.

The new postal law has gone into operation whereby eleven pounds can be carried by mail between England and Canada.

The Mack Manufacturing Company has begun operations in Belleville. The company will make rock drills and general mining machinery.

J. Stark, of London, England, a mica expert, says the mica business is very good, and that large quantities are being shipped to England. He thinks the Cleveland administration will remove the duty, which will make the Canadian trade lively.

A successful trial of a submarine electrical lamp has been made at Toulon at a depth of 30 feet under water. It is said to have illuminated a radius of 100 feet. Fish were attracted by and surrounded it as insects collect about a light.

One of the most promising fields now open to the electrical engineer and manufacturer is said to be the application of electricity to agricultural work. It is a field that should well repay the cultivator, and it will probably not be long before it is well cultivated.

The employment of electric motors in factories where long lines of shafting are necessary in using steam power, is becoming more general. It is claimed that a saving of from 16 to 75 per cent. of the power transmitted is thus saved. Such economy is an important feature in a large establishment and is likely to stimulate investigation and the extension of the use of the electric motor.

The people of Petrolea are rejoicing to think that the old days of big oil gushers are coming again. Some time ago Mr. S. Stokes struck a well that pumps a good twenty barrels, and a week or so ago Mr. W. C. Mackenzie struck a well at the west end of the town that threw oil clear over the derrick, and is now pumping twenty-five barrels a day.

The Engineering and Mining Journal says that according to official statistics just issued the mineral exports of Newfoundland during 1891 were as follows: Copper ore 7,060 tons, value $63,540; regulus 3,626 tons, and ingots 1,139 tons, value of both $502,210; iron pyrites 19,150 tons, value $57,900; antimony $1,000. The total value of ores exported in 1891 was $624,750. From 1854 to 1891 the total value of copper ore exported in that period was $9,504,717.

An Anstralian ax, which is said to give good results, has on each side three wide grooves running parallel from within one-half inch of the edge nearly to the back. Observation of a successful wood-splitting machine is said to have convinced the inventor of this ax that this principle of grooving is useful, and applied to the ax it has proved that it gives easier entrance to the wood, and more freedom from jamming or choking, and consequently easier withdrawal and straighter cutting.

Paper pulleys have been invented by a Frenchman, M. Burot. The center of nave is made of cast iron with iron spokes supporting a stay on which the paper rim reposes. This stay maintains the rim during the process of manufacture and gives it a greater solidity afterwards. The paper, which is of a special quality is sized rolled and compressed on the stay in one operation. The rim has then to be dried and then steeped in a mixture of linseed-oil and resin. These pulleys are much lighter then those made of iron and are less expensive.

The Dominion Coal company (the Whitway syndicate) has refused an offer of the Broad Cove coal areas on Cape Breton island. These are on the west side of the island, and contain a considerable area of undeveloped coal fields. The Dominion company is proceeding with the work for the development of the mines it controls. The survey of the railway to Louisburg has been completed and improved machinery and a large number of new coal cars are being provided. The large sales already made indicate that the output of the mines this year will show a good increase over 1892.

An agreement has been reached between London, the London and Port Stanley Railway Syndicate, and the Michigan Central Railway Company, whereby the Michigan Central will continue to run its trains over the London and Port Stanley track, while the Cleveland, London, and Port Stanley Company will have station accommodation and terminal facilities at the hands of the Michigan Central. The business men of London the Less are again happy.

A new metal for bearings, presumably an alloy, is said to have some remarkable properties, among which are its great affinity for most metals, its low fusing temperature, its hardness when set, and its wearing qualities. It is called "Cauricedale metal" and melts at 500° F., low enough for ease of working in lining up boxes, and yet high enough to prevent melting from heating bearings under ordinary circumstances. Its chief use is in lining up worn-out boxes to their original state, the affinity for the metals making this particularly easy, as no tinning is required. The metal is simply run on the bearings, and it adheres with no further precaution than having the metal run free from any grease. It is melted in a ladle or otherwise and poured into the bearing around the shaft or some mandrel, when it sets and hardens, and forms an excellent bearing metal.

MINERAL WOOL AND ITS USES.

The curious substance called "mineral wool," has come into very general use for a variety of forms of service for which its peculiar composition and remarkable texture make it well suited. It may, says an exchange, be described in general terms to be a vitreous substance converted by artificial means into a fine fibrous condition. The material of which it is formed is understood to consist principally of the vitreous slag of the blast furnace, which, being melted in a suitable furnace, is allowed to flow in a thin stream from an orifice where it meets with a regulable jet of steam, by which it is blown into a mass of very fine, glassy threads, interlacing in every direction, and greatly resembling in appearance a mass of cotton or wool, whence the names, "mineral cotton," "mineral wool," "silicate cotton," etc., by which it is variously known.

Of late a number of improvements have been introduced into its manufacture, in consequence of which the product formed is very free from shot or dross, and its texture uniformly fine. The most valuable property of this material is its unsurpassed power as a heat insulator. This quality is due in part to the poor conducting quality of the substance of which the mass is composed, but mainly to the enormous mass of the product, which enables it to hold entangled a great quantity of air in proportion to its mass. To this imprisoned air, therefore, the high value of this fine fibrous material is chiefly to be ascribed. It is estimated that of the fines grades of mineral wool from 94 to 96 per cent. of their volume is formed of imprisoned air, and but 4 to 6 per cent. of their volume is composed of the solid substance of the fibre.

The high value of this product as a heat insulator for all purposes where it is found to be desirable to retain, or prevent the loss of heat by conduction or radiation, or to prevent the entrance of heat from an external source, has been fully demonstrated by years of practical experience. No less important, in its way, is the property of preventing the transmission of sound, and its serviceability as a protector against rats, mice, and vermin generally. Mineral wool is now largely used as a non-conducting covering for steam pipes and steam boilers, as a lining of cold storage warehouses, refrigerators, and coolers, as a filling in the roof of tanneries, for lining walls and floors in hospitals, asylums and other buildings to deaden sound, fort lining the walls of dwelling houses to increase the interior warmth in winter and decrease it in summer. It is also applied in various forms as a sound deadener and heat insulator on railway cars.

TORONTO PLATE GLASS IMPORTING CO.,

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WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

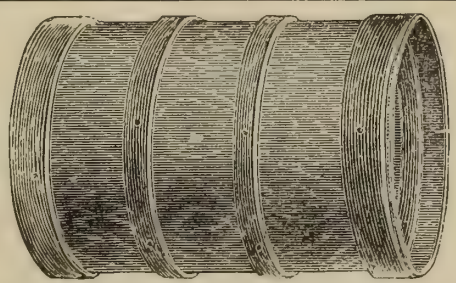
ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."

BRITISH SHEET GLASS
P.B.

These words and brand are on every box. None genuine without this Trade Mark. We warn our friends against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

ORDER YOUR **NAILS** Wire . . . Cut . . . Horse Shoe



IN **PATENT KEGS**

Cost no more than in Common Kegs. The strongest, handiest, cleanest, neatest, and best store package in use. Made in one solid piece, lined with strawboard. No staves to get loose or break, No shrinkage or falling out of heads.

- Supplied by Graham Nail Works, Toronto; and Peck, Benny & Co., Pillow & Hersey Co,, and Abbott & Co., Montreal -

---

BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

TESTING HEAVY RAILS.

The Pennsylvania railroad is making exhaustive tests of 100-pound steel rails on its lines between New York and Pittsburg. It may be said to be the first company to use this weight of rail, the general standard in this country being 85 pounds to the yard, while the standard in England is 90 pounds. The Pennsylvania some time ago imported several thousand tons of the 90 pound rails, and the results attained were considered so satisfactory that tests of 100-pound rails were decided upon. The company has now about 2,000 tons of the latter down, 500 tons each on the New York, Philadelphia, Middle and Pittsburg divisions, but it is yet too early to render a decision as to their value. The objects aimed at are principally economy and solidity.—Philadelphia Record.

ZINC AS A PROTECTIVE COVERING FOR IRON.

The cause of iron becoming corroded is its superior affinity for oxygen. Supposing we could secure both iron and water in a pure state this action would hardly be perceptible, but, as a matter of fact, under ordinary circumstances, neither exist in a pure state. Iron, owing to its own impurity, is subjected to a rapid and very marked destructive influence, which eventually destroys the nature of any piece exposed. This renders its protection by some substance not so affected a matter of necessity. Three materials are used for this purpose, which are paint, tin and zinc. The first may be dsmissed on account of the shortness of its life. The second cannot be considered as by any means effective, because the tin, being electrically negative to the iron, renders it a means of destruction instead of protection when any portion of the iron is exposed. According to the laws of electricity, when two metals are in contact, the negative metal is protected at the expense of the positive. Circumstances, such as different chemical menstrua, may alter the relative electrical states of metals. But under all ordinary circumstances this rule holds good, therefore the third material suggested above (zinc) is scientifically the correct one to use, because, being the positive metal, it becomes in consequence a protector to the negative metal, iron. This electrical property of zinc, in connection with iron and metals, is a strong recommendation for its use as a coating material. Two difficulties have to be overcome if the operation is to be successful—first, the zinc itself must be in a pure state; and, secondly, it must be applied so as not to injure the texture or nature of the iron. The reason that so many operations conducted by the aid of zinc have failed is because the ordinary zinc of commerce is never pure, being impregnated with one, and sometimes with all, the following elements —iron, lead and arsenic. These are all electrically negative to zinc, and, as a consequence, according to the above law, each atom of these impurities, in connection with the zinc, forms a galvanic battery of many thousands of pairs of plates.

Several well-known authorities maintain that the heating of a piece of iron to at least 800 degrees Fah., as is usual for zinc coating, causes an alloy of iron and zinc upon the surface, which changes the state of the iron, rendering it cold, short and brittle. The iron loses in tenacity and otherwise suffers through the process. Apart from this influence upon the iron itself, two serious objections are raised: first, the impossibility of obtaining pure zinc, except at an enormous expense, the method being sublimation or distillation; and, secondly, the impossibility of retaining its purity during the process of applying it to the iron. Setting aside the fact of an alloy of iron and zinc being produced by the action heated iron immersed in melted zinc, the presence of foreign matter necessary to retain the zinc renders the infusion impure; these matters forming less fusible compounds, and, zinc being very volatile, a great amount of waste is created. But it is well known to all those acquainted with the disposition of metals from soluble salts by the electro process that pure metal only is deposited, so that this process is not open to the objection on this head, which may be made to every other, more especially in treating a metal of so intractable a character as zinc. It is also applicable to all sizes and shapes of work, requires no expensive erections, and, what is important in large operations, may be performed anywhere and by any person. The following three points have to be kept in mind: That zinc is electrically positive to other metals, and thus protects them from oxidation at a very trifling loss to itself; and that, by a well-known law of electrical science, one body being electrically excited, that body induces its opposite state in other bodies with which it is in contact. Dr. Kane says: "Zinc preserves the other metals, even if it be iron, from oxidation"; and, again, "Zinc, when exposed to the air, even in the presence of water, becomes covered with a varnish of a grey substance, probably of a definite sub-oxide, which is not further altered by exposure."

From these statements we notice that pure zinc has a double protecting influence, the iron being protected by the zinc, and zinc by its own oxide. It is a matter of regret that zinc cannot be used with the same protecting property to articles in use at sea. This arises from its strong affinity for muriatic acid, thereby forming muriate of zinc, which being readily soluble is taken off by the water, leaving a new surface to be acted upon, thus rapidly destroying the zinc. The zinced iron solders readily; and all other metals may be treated by this process for ornamental or other purposes. The depositions by alkaline solutions are perfectly firm, and not subject to the objection to which those made by acid solutions are, these being always insecure from the formation of an oxide upon the iron induced by the aid of the solution. —Building and Engineering Journal.

THAT EXPENSE ACCOUNT.

That strict surveillance some houses keep on their road salesmen is as derogatory to their interests as it is harrassing to their equanimity. To require that a detailed statement, accounting for every cent spent on the trip should be submitted to the scrutiny of the house, is doubtful policy. It implies that a low view of the status of the traveller is taken, whereas the sort of service the traveller is engaged to do, and the extent to which he is thrown upon the guidance of his own judgment, justify the belief that the wholesale trade have a rather high conception of the nature of a traveller's work. He is no mere servant with a specified limited commission to carry out. If he were, it is probable the ways and means whereby he should proceed to do the thing directed to be done would be as clearly defined as the duties themselves. He is an executive agent, entrusted with some of his principals. He has to decide for himself in as many cases as they have to decide for themselves or their agents. His house must delegate some high authority to him, in the same way as the country must delegate authority to its government, and—to bring the parallel a step further—while he must render an account of the money he spends and receives—as a ministry must —so, like a ministry, he should be allowed to put the details of some classes of expenses under the general entry of secret service outlay. There is no doubt the traveller has to be diplomatic in his methods. With one customer expenditures pay in an altogether different direction than that spent in company with his neighbor, and it takes a good deal of human nature to discriminate when a mistake is apt to mean the loss of an order. There is no need to indicate more closely some very necessary expenses that probably, if made self-explanatory or justifiable on paper might wrongly be deemed more condemning than justifying.

All this is said upon the supposition that the traveller has a creditable record that is well known to his firm. If he has, he ought to be allowed to lump his secret service expenses in one entry. The test of whether or not he is worthy of this confidence will be found in the returns from his work, and it is by this criterion that his expenditures should be judged.—Ex.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton, Ontario.
SP

SITUATIONS VACANT.

WANTED—HARDWARE TRAVELLERS with good connections in Lower Provinces and in Ontario. None but first-class men need apply. H. S., GAZETTE Office, Montreal.

SITUATION WANTED.

CLERK—EXPERIENCED IN HARDWARE business desires situation. References. Address: Reliable, Hardware Office.

BUSINESS CHANCES.

Advertisements inserted under this heading one cent per word each insertion.

CREAM SETTER CAN—AUTOMATIC SKIMMER; township rights, $6; exhibitor World's Fair. Tyndale, 171 Oak st., Toronto. 14

FOR SALE—STOCK OF GENERAL HARDware, paints, oils, stoves, &c. Business established 25 years. Value about $3,500. Address, Estate J. Cameron, Beaverton tf.

TRAVELLER—EXPERIENCED—WANTS situation. Practical stove and furnace man. Has had also a good experience in hardware, paints and oils. Address W. B., HARDWARE Office. 14

FOR SALE—GOOD PAYING HARDWARE Stove and Tin business. Last year's turn over $12,000. Stock, etc, under $3,000. Smart town, brick store, modern improvements. Satisfactory reasons for selling. Would prefer to sell out for two or three years. Don't write unless you mean business. Address T., HARDWARE OFFICE.

COUNTRY BUSINESS FOR SALE.—A FIRST-class general store business. Good locality, old established stand. No other store within eight miles. Is now doing an excellent business. Open for sale for one month from date only. Only responsible parties need apply. A splendid opening. Applications to be made by letter addressed to COUNTRY STORE, Drawer C, Picton, Post Office.

Harris' Refining and Smelting Works

Is the cheapest and best place to get Mixed Metals, Bar Solder, Sheet Solder, Wire Solder, Electro, Stereotype and Type Metal, Babbitt Metal a Specialty. It will pay you to use my 20c. Babbitt.

C. C. HARRIS, cor. Yonge St. and Wickson Ave. Toronto.

W. J. REID & CO.

IMPORTERS AND DECORATORS OF

Crockery China and Glass.

LAMPS A SPECIALTY.

All glass, Vase, and Library Lamps, in every hue and design.

Our travellers will call upon you shortly with samples.

LONDON AND BELLEVILLE.



ASK FOR THE GRAHAM NAILS.

Hamilton and Toronto



—AND—



CO.

HEAD OFFICE: HAMILTON, CANADA

¼ the PRICE of Iron. Write for Discounts

READY

MIXED PAINTS

TRADE  MARK

Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

Manufactured by **A. RAMSAY & SON**

MONTREAL

When You . . .
Purchase Paint
Buy the Best .

Warranted Superior to any now on the Market . . . .

Robertson's Ready . . . Mixed . . .

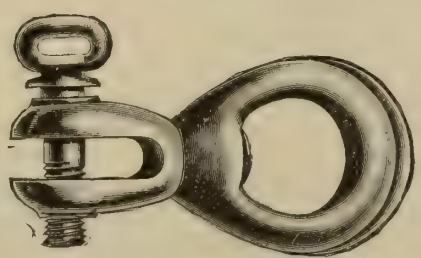
MANUFACTURED BY

The James Robertson Co'y, L't'd

TORONTO

THE WHITMAN & BARNES MFG. CO.

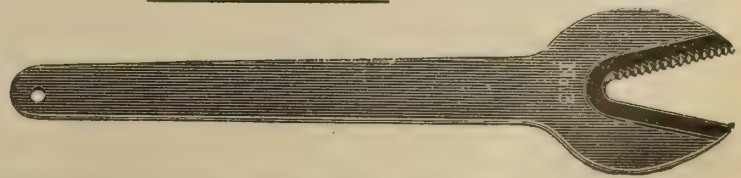
Canadian Branch: St. Catharines, Ont.



This new **Swivel Clevis** can attached to any Plow Clevis used in place of Shackle or End Clevis.

MADE OF MALLEABLE IRON.

ALLIGATOR WRENCHES



Write us for Description and Prices

A NEW LABELLING MACHINE.

A new labelling machine has been invented by F. E. Gaudrie, of Port Hope. During a trial test it labelled tomato, salmon, baking powder, and other cans at the rate of 100 per minute. When driven fast three men could not supply it. It is made to go either by hand or power, and a child ten years old can easily run it. Mr. Gaudrie has just shipped a number of machines to Halifax, N.S., and is daily receiving orders from all over the Dominion, including British Columbia. He has secured patents in Canada and the United States, and will shortly receive one from England, France and Germany. He will manufacture for Canada only, and will sell the right to all other countries. He has already received a number of offers for the United States. Alonzo W. Spooner, the maker of Copperine, is sole agent.

A CENTURY'S EXPERIENCE.

The well-known firm of William Jessop & Sons, Ltd., Sheffield, Eng., makers of the famous "Jessop's Steel," celebrate their centennial this year, for it was in 1793 that this business, now grown to enormous proportions, was established in a modest way by William Jessop, in Sheffield.

After the death of the founder the business was continued by the sons, Thomas, Sidney and Henry, who, through careful and judicious management, and a thorough acquaintance with the practical part of the steel-making business, amassed great wealth, and placed the firm of William Jessop & Sons at the head of all similar concerns in the world for size, importance, and the value of its product. At the death of Sydney Jessop, Thomas Jessop became sole proprietor. Eleven years prior to the decease of Thomas Jessop the firm was organized under the English Limited Liability Act, and he became the chairman of the new company, his nephew acting as one of the managing directors. Thomas Jessop died at the advanced age of 84 years, and his son Willliam stepped into his position as chairman of the corporation.

To-day there is no business more staunch, reliable, or better known in the world than that of William Jessop & Sons, and no steel more sought after or more generally used throughout the world than "Jessop's." The works at Sheffield are situated on the banks of the river Don, and cover no less than thirty acres of ground, and there are supplementary works in other sections of the city.

Several years ago the firm introduced a new branch into their business—that of steel castings. They now have one of the best and largest plants in existence for this purpose, and have produced the heavy marine castings for many of the largest steamships afloat. The premises are of the most complete character, their equipment including extensive converting and melting furnaces, forges, rolling mills, steel foundry, gas works, engineering shops, and all the necessary appliances for the successful manufacture of steel in its various forms, from the heaviest forgings and castings to the smallest bars, and from the largest plates to the thinnest sheets. The rolling of sheet steel is carried on to great perfection, the company supplying large quantities for the manufacture of circular and other saws, for which Jessop's steel has been found especially valuable. Another important branch of the business is the manufacture of sheet steel for steel pens, for which William Jessop & Sons, have almost a monopoly.

Messrs. A. Leslie & Co., the Canadian agents, carry a complete assortment of Jessop's steel in stock at Montreal and Toronto, and report a constantly increasing demand. Mr. Chas. L. Bailey is the well-known and popular traveller for Messrs. Jessop in this country.

PERSONAL MENTION.

W. Matthews, Toronto, agent for Nixey's, London, has received samples of blue and knife polish which he will show to the trade in Western Ontario shortly. His Nixey's black lead has long had a name for itself in Canada for its excellence, and this should greatly assist the sale of those products of this firm which are new to this market.

TRADE SALES.

At Suckling's Tuesday the stock of J. Hall, general storekeeper, Owen Sound, amounting to $6,444, was sold at 52c. on the dollar, to W. J. Creighton, Owen Sound. The stock of Stickles & McBride, general storekeepers, Lisle, was sold at 65c. on the $ to J. P. McKay, of Toronto.

LEARNING TINSMITHING.

We notice the following complaint, emanating from the correspondent of a contemporary, in regard to the inefficiency of the current trade education afforded tinners: "What inducement do employers offer to an intelligent boy to learn the tinsmith's trade? The first thing he has to do is to clean up a dirty and often insufferably hot shop, for every one in the store, after it is cleaned up, to upset again. The clerks come in and black their shoes on the bench and dirty the whole place. All this the apprentice boy has to clean up. Next he is made a beast of burden and has to take loads of tools and tin to all parts of town, sometimes lugging a fire-pot half the size of himself. Finally, when he has spent about two years at this kind of work (I can't call it a trade), another boy is taken to learn the work."

"They say Chauncy Deporter sometimes gets five hundred dollars for one speech."

"That's nothing. I knew a fellow who got a million dollars for a speech."

"For one speech?"

"Yep. He said, 'I love you' to a rich widow, and she gathered him in."

A DRUMMER'S DIFFICULTIES.

The following amusing sketch of a rehearsal scene between a Yankee "drummer" or commercial traveller, and one of his employers, is extracted from the Boston Commercial Bulletin: One of these gentlemen, who has recently returned from a trip for Thistle & Co., of this city, did not show a very large exhibit of orders to balance the liberal 'expense" account allowed him by the firm, and Mr. Thistle, after looking over his returns, said: "Mr. Rataplan, I am afraid you did not approach the dealers in the right way. I used to be very successful in this line. Now, just suppose me to be Mr. Bigher, of Sellout, Illinois, and show me the way you introduce the house." Accordingly Rataplan stepped out of the counting room, and re-entered, hat in hand, enquiring, "Is Mr. Bigher in?" "That is my name," answered Thistle, urbanely. "My name is Rataplan, sir. I represent the house of Thistle Brothers & Co., of Boston." Thistle, in his character of western merchant, here rose, offered the salesman a chair, and expressed his pleasure at meeting him. "I am stopping with Overcharge at Stickemhouse, and have a fine unbroken lot of samples which I should like to show you. I think we can offer you some special advantages," etc., Rataplan delivering himself in a neat little speech in professional style. "Very well, very well," said Thistle, "I don't see but that you understand the way to get customers." "Excuse me, Mr. Thistle," said Rataplan, "I am afraid you do not understand the style of western merchants. Just now suppose you exchange places with me, and we repeat the rehearsal." "Certainly," said Thistle, and, and, picking up his hat, he stepped out. Returning, he found Rataplan with his chair tilted back, hat cocked fiercely over his right eye, his heels planted on Thistle's polished desk, and a lighted cigar between his teeth. Thistle looked a little staggered, but, nevertheless, he commenced: "Is Mr. Bigher in?" "Yes he is," responded Rataplan, blowing a cloud of pure Connecticut into Thistle's eyes; "who the deuce are you?" "I represent the house of Thistle Brothers & Co.," said the astonished employer, coughing about a quart of smoke from his throat. "Are you of that concern, then?" "No, sir, I'm not," said Thistle. "Well, it's lucky for you that you are not, for I've had two drummers to one customer in my store for the last two months; and if I could get hold of one of the fools that sent 'em out here at this time I'm darned if I wouldn't boot 'em clean out of the town of Sellout." "That'll do, that'll do," Mr. Rataplan," said Thistle. "I have no doubt you did the best you could for the interest of the house. Trade is a little dull."


The Last Day
For Receiving Advertising Copy for the Spring Trade Number of
The Hardware Merchant
With its Large Circulatlon is
April 5th
You will be disappointed if you are not represented

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below, and in our Prices Current, necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, March 30, 1893.

HARDWARE.

The general hardware trade has not shown any noticeable change since last week but a fair business is to note of a moderate volume on account of orders for future delivery, for as we noted last week the fact that freights will be reduced on the 3rd instant is creating considerable enquiry for not only shelf hardware but for heavy lines, also on building account. Naval stores also have been the subject of an improved call, and all in all the prospects seem to point to a spring trade fully up to the average. The fact that the roads in the adjacent districts are in their transition state interferes with the actual spot movement at present, but once locomotion in this respect is improved indications are favorable on the whole. In nails the makers report some improvement in orders, but say that it might have been better. They admit however having some fair orders for shipment after the fall in freights. The demand for harvest tools and implements generally, rope and chain, etc., has also materially contributed to increase the volume of trade. Wire is quiet, but there have been some fair transactions to note in barbed wire. Lamp goods and such specialties have furnished a fair demand also according to reports from American makers agents here, and the assumption is that jobbers also have been doing their share in this respect. Payments are satisfactory with the houses here.

PIG IRON.

In pig iron the market is steady on spot, further sales of Longloon being reported at $21 and Carnbroe at $19. This business has further reduced the small stocks on spot. In the matter of spring importation business is still backward on the whole, but something has been done affording a guide to the basis of value. As we have pointed out before low prices rule, Summerlee having sold for delivery by the first vessels at $18.50 net cash, and Gartsherrie at the same figure or about $1 less than the opening price last spring, as predicted by HARDWARE some time ago.

BAR IRON.

There is still reports of prices being shaded on bar iron for round lots, which makers deny. The reported sales are said to be on the basis of $1.90, but the regular trade price is quoted still at $2.05.

GALVANIZED AND SHEET IRON.

There has been further business in galvanized and sheet iron for spring delivery, but nothing is doing on spot, builders having supplied themselves for the time being.

TIN PLATES.

Coke tin from stock here has sold at $3.20 to $3 25, and charcoal $3.75 to $4.25, as to grade. We do not note anything new in the way of cost and freight this week.

CANADA PLATES.

Further round lots of Canada plates have changed hands from stock here this week on the steady basis of $2.50 to $2.55.

OTHER METALS

Copper, zinc, spelter, tin, etc., are featureless and unchanged.

LEADS AND PAINTS.

This market has maintained the good feeling already noted. A good seasonable enquiry is noted for varnish, etc. We quote choice brands of paints, Government standard, $5.25; do. No. 1, $4.-87 1-2; do. No. 2, $4.50; do. No. 3, $4; dry white lead, 5 1-4c.; red lead, pure, 4 1-2c.; do. No. 1, 4 1-4c., with 2 1-2 per cent off these prices for ton lots.

OILS.

The oil market is steady. Linseed oil has not furnished any particular change, sales being reported in jobbing lots at 65c. for boiled and 62c. for raw. Fish oils, etc., are quiet and steady. Cod has changed hands at 40c. and 41c. for Newfoundland and 38c. to 39c. for Gaspe. Cod liver oil rules at 65 to 75, as to quality. Steam refined seal remains steady car load lots selling at 51 1-2c. net cash.

GLASS.

Glass is dull and unchanged on the basis of $1.35 for first break and so on. Putty in bulk $1.90.

NAVAL STORES.

While there is an improvement noted in the demand for naval stores, business is still rather slow. Turpentine is in fair demand, and stocks here are small. The feeling is stronger, however, in sympathy with advices from the South. We quote: Turpentine, 56c. to 57c.; resins, $2.50 to $5, as to brand; coal tar, $3.75 to $4; coton waste, 5 1-2c. for colored and 7c. to 10c. for white; oakum, 5 1-2c. to 7 1-2c., and cotton oakum, 10c. to 12c. Cordage, sisal at 9 3-4c. for 7-16 and upwards, and 15c. for deep sea line. Pure manilla, 12c. for 7-16 and upwards, and 13c. for smaller sixes.

CEMENT.

Business in Portland cement is active, both from stock and for delivery at the opening of navigation, and prices for present shipment are firm, quotations ranging from $2.40 to $2.65, according to quality, and after the opening of navigation $2.12 to $2.25. There is a good steady demand for fire bricks in moderate sized lots, prices ranging from $19 to $24 per 1,000 ex yard.

PETROLEUM.

The petroleum market does not show any change, prices being about the same and the demand slow. We quote: Canadian, 12c. to 12 1-4c. at shed in Montreal for round lots, and 13 1-2 for small quantities. American petroleum, 19c. in car lots, 20c. in 10 barrel lots, 20 1-4c. in 5 barrel lots, and 20 3-4c. for single barrels, 2 per cent. off for cash; American benzine, 23c. to 25c.; Canadian benzine, 10 1-2c. Petrolea; 12 1-2c. Montreal.

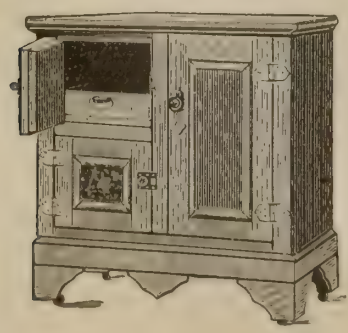
TORONTO MARKETS.

TORONTO, March 30, 1893.

HARDWARE.

Trade has improved somewhat during the week. The movement is now pretty brisk and all is hurry and bustle around the warehouses. Ship chandlery is moving in increasing volume, but the greatest demand at the moment is for such seasonable goods as poultry netting, green wirecloth, lawn mowers, screen doors, window blinds and garden hose. A good deal of enquiry is heard from small buyers for wire, and nails are beginning to be more enquired after. Harvest and garden tools are going out with increasing freedom. A good deal is being done in tinware of a sorting-up nature. Travelers' orders are fairly satisfactory and payments continue to improve. The only opinion regarding the spring and summer trade is that it will at least be fairly good. The changes this week are few. The advance of 25c. a set in Mrs. Potts' sad irons, announced recently, has been withdrawn and the old prices

Refrigerators



Hardwood, Lined Galvanized Iron, Patent Locks, Four Sizes

These are highly finished and each season has shown an increasing demand. This year we are also making a cheaper line in above style, so as to meet all requirements.

Milk, Delivery and Creamery Can Trimmings.
All Sizes Body Stock for Cans and Cheese Vats.
Galvanized Iron Eave Troughs in 8 foot lengths.
Lithographed Tea Caddies and Signs.

We make and Supply everything used in the Stove and Tinware Trade.

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

MARKETS—Continued.

substituted, the agreement having fallen through on account of a new manufacturer having sprung up. There has been a further reduction of five per cent. in all sizes of chain. The manufacturers of hinges announce an advance in the price of certain sizes.

WIRE—Business in this line is beginning to increase. All large buyers made their purchases some time ago, and the orders that are now coming in are from small dealers. Since the drop in the price of annealed and annealed and oiled the American product has been shut out of this market.

NAILS—There has been no change although more enquiry is heard, but shipments will not be made till April 3, when lower freights will rule. The nut and bolt manufacturers will meet next week, but it is thought that there will not be any change in prices as a result.

ROPE—There is a good deal moving, but prices are unsatisfactory on account of the small margin.

CHAIN– Prices on all sizes have been reduced about 5 per cent. There is not much doing.

TOOLS—Trade is opening up well, harvest tools, rakes, spades, shovels, lawn mowers, etc., selling freely. Trade in this line is beginning rather early, but merchants evidently think that as they will not have to pay for these goods till October they may as well have them in stock.

TINWARE—Sorting up orders are coming in freely, and prices seem to be well maintained.

HINGES—The manufacturers announce an advance in certain sizes ; 12 inch and under are quoted at 4¼c. ; 14 inch up to 20 inch, $3.75 ; 22 inch up, 3¼c. a pound.

SAD IRONS—The agreement having fallen through the prices of Mrs. Potts' sad irons has been put back to the old figures at from 75c. to $1.10.

METALS.

There has been no material change in the metal market. A fairly good seasonable trade is being done, and prospects for a brisk business after the lower freights go into force are good.

PIG IRON—Business in this line, if anything, shows a slight improvement, although it still rules quiet. A few cars of Southern and Seimens' have changed hands during the week at $23 to $23.50. Summerlee is unchanged at $24 to $24.50.

BAR IRON—A quiet trade is being done in small lots. Prices remain unchanged at $2.05 hundred pound basis f.o.b. Toronto, Montreal or Hamilton ; 5c. more f.o.b. London. A meeting of manufacturers will be held April 1, when some change may be made.

TIN PLATES—Stocks have been reduced somewhat, but they are now being replenished. Prices are unchanged and, if anything, the tendency is towards higher values.

SHEET IRON—There is nothing special to note beyond a good local demand. Prices, as before, range all the way from 2⅝ to 3¼c. according to size and quality.

CANADA PLATES—Trade is about over for the stove plate business, but the same article is selling for metallic roofing, some large lots being taken for that purpose. Prices are unchanged. All dull is being held at $2.65, half-half at $2.75, and all bright at $2.80 to $3 per box.

GALVANIZED IRON—There is a good demand for Gordon Crown and Queen's Head brands at unchanged prices.

INGOT TIN—The price of this article is no stronger, but prices are unchanged at last week's decline, namely, 23½ to 24c.

INGOT COPPER—There is at the moment a dearth of this article, but imports are coming on now and dealers will be in a position to fill orders later on. Prices ramain as before at from 12⅞ to 13c. for good quantities.

ZINC AND SPELTER—Sluggish and nothing doing. We quote as before. Zinc spelter 4¾ to 5¼ according to brand and zinc sheet 6 to 6½c.

SOLDER—Quiet and unchanged, prices ranging from 16 to 19c. according to quality.

LEAD—Very little is being done and prices of pig are unchanged at 3¼ to 3½c.

ANTIMONY—There is not a great deal doing and prices remain as before at 13½ to 14c. for Cookson's and 13 to 13½c. per lb. for other kinds.

OLD MATERIAL.

Supplies fair and demand good at unchanged prices. We quote No. 1 heavy cast scrap 65 to 70c. per 100 ; stove cast scrap 40 to 45c. ; No. 1 wrought scrap 50 to 60c. ; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c. ; new light scrap copper, 8 1-2c. ; heavy scrap copper 9½c. ; old copper bottoms, 8c ; light scrap brass 5½c. ; heavy yellow scrap brass 7½c. ; heavy red scrap brass 8¼ to 8½c. ; scrap lead 1¾ to 2c. ; scrap zinc, 2½ to 2¾c. ; scrap rubber, 2½ to 2¾c. ; country mixed rags, 80 to 85c. per 100 lbs. ; clean dry bones, 50 to 60c. per 100 lbs.

PAINTS AND OILS.

Trade generally is brisk and more so than for some time, although some complaints are still heard regarding payments. The principal feature is the active demand for mixed paints. Linseed oil is not so brisk. Stocks of oil here are fair, and by purchasing of Canadian manufacturers are easily replenished when necessary. Prices are unchanged at 61c. Toronto and at 63c. outside points, freight allowed. Turpentine continues to decline in the States on account of the milder weather, but prices here are as before owing to the light supply on this market. Prices unchanged at 55c. Toronto and at 57c. freight allowed to outside points. The volume of business in this line is also rather smaller. Prepared paints are in active demand and the trade experience some difficulty in keeping up with it ; prices unchanged at $1 to $1.10. Spring stocks of castor oil are beginning to arrive. Demand is fair and prices unchanged, at 8½ to 9c. per pound. Demand for varnishes is good, particularly English makes. White lead is selling more freely, consumers having evidently realized the fact that they have now got to pay the advanced association price ; the 5¼c. basis still rules. There is not much doing in dry colors. Forward shipments of paris green are being made at from 13 to 15c., and these prices are being fairly well maintained.

GLASS.

Stocks are arriving and prices are unchanged at $1.25 to $1.30 for first break of 25 inches. In consequence of the possibility of the reappearance of the cholera epidemic in Europe it is only those whose orders have been placed by the first steamer that feel safe. Should the sickness again break out there might be some difficulty in getting glass later on. Local dealers report that they are sending out large quantities of glass both on city and country account.



PETROLEUM.

Business is falling into its usual seasonable quietude. We quote : Canada refined oil, 13½ to 14c ; carbon safety, 17½ to 18c. ; Canada water white, 19c. ; American water white, 21 to 22c., photogene, 25c.

PETROLEA, March 30.—Oil opened and closed at $.18¾.

HIDES, SKINS, WOOL, TALLOW.

HIDES– Market unchanged, carlots moving as before at 5¼c ; No. 1 cows' is quoted at 4½c. Demand is good and supply is about as usual at this season.

SKINS—There is not much doing in sheepskins; supply has fallen off and nobody is anxious to buy and prices are easy, $1.40 being the outside figure. The supply of calfskins is increasing but demand is good and prices higher at 8c.

WOOL—There is a fair demand from the factories, chiefly for small lots. There is no speculative tendency and prices are steady. Reports from the Old Country markets speak of an advance of 10 per cent. in some grades of fine wool. Pulled wools unchanged at 22 to 23c. for supers and at 26 to 27c. for extras. No. 1 and black are unchanged at 20 to 21c.

TALLOW—The market is easier. There is not much business doing, views of buyers and sellers being apart. Dealers are selling odd barrel lots of rendered at 7½c., but much less would be taken for carlots; they are paying 6½c. Rough is ½c. lower at 2½c.

SEEDS

A good active business is being done in all lines and prices are without material change. Red clover is being jobbed out at $8.60 to $9.50. A fair jobbing trade is being done in alsike at prices ranging from $5.50 to $8.50, the outside price being for fancy seed. Prices for timothy range from $2 40 to $2.90, the outside figure being for flail threshed and unhulled, but the chief demand is for the prime to choice article, which is being jobbed at $2.50 to $2.65.

TORONTO MARKET NOTES.

White lead is selling more freely.

Stocks of tin plate are being replenished.

Forward shipments of Paris green are being made.

People are beginning to specify for cut nails.

Turpentine is still declining in the Southern States.

All sizes of chain is being reduced about 5 per cent. in price.

Tarred, felt and building paper is beginning to move briskly.

Mrs. Potts' sad irons are again selling at the old figures, 75c. to $1.10.

The Montreal Electric Co. announces that it will occupy its new premises at 302 St. James street, Montreal, May 1. The genera

MARKETS.—Continued

management will be in the hands of John Shaw (late office manager for J. & C. Hodgson.) The firm will carry on a general electrical construction, supply and manufacturing business.

M. & L. Samuel, Benjamin & Co. have sold large quantities of poultry netting during the last few days.

The approach of spring is seen in the large sales being made of lawn mowers, green cloth, screen doors and window blinds.

H. S. Howland Sons & Co. are prepared to furnish everything in the ship supply line, such as blocks, rope, chain, lead, paints, etc.

Stewart & Wood have just received another consignment of over 2,000 boxes of glass, which they report to be going out freely.

For some reason or other the Canadian manufacturers of wrought butts have not joined their American confreres in making the advance as announced some weeks ago. It is thought however that they eventually will. In the meantime the old prices rule in this country.

The Toronto Lead & Color Co. (Ltd.), has issued a revised card showing the different colors of its prepared paints. Three new colors have been added, a pearl, a light drab and a bottled green. The two first are for inside work and the third is for doors and store fronts.

Something unique in the way of a stove mat is being offered to the trade by Thomas Davidson & Co., of Montreal. It is known as the Crown Stove Mat and is scorch proof. It can be placed on top of range, stove or open grate fire and it cleans itself by being heated to a red heat.

AMERICAN MARKETS.

New York, March 31.

Pig Tin.—In the New York market speculation was exceedingly tame and trade conservative in the full meaning of the term. Besides the London market peculiarities, operators had to contend against the effect of advices by cable quoting lower prices in Holland. At that point Banca tin was quoted at 56 1-2 florins, against 58 florins a week ago, and Billidown from 56 3-4 florins to 56 florins. In the New York market there were sellers early in the day at 20.85c. for March, 20.90c. for April, and 21c. for May delivery.

Copper.—The market remains quiet and to all appearances bare of distinctly new feature as far as the attitude of buyers and sellers in this quarter is concerned. There were offers to sell at 11 3-4c. for Lake Superior ingot and 10 3-4c. for casting brands. London cables to the Metal Exchange quoted merchant bars as £45 7s. 6d. for prompt and £45 15s. for future delivery.

Lead and Spelter.—There was no change in the market for either metal. Enquiries were moderate, the offerings merely routine, and sellers prices about the same as quoted last week, say 4.05c. for common lead and 4.30 for spelter, early shipments. St. Louis quoted 3.80c and 4c. respectively. No change was cabled from the London market.

Iron ,Steel, Etc.—The local market was quiet, and the situation in the various departments without sign of any radical change. Foundry and mill grades of pig iron were ordered to a fair extent, but chiefly in moderate quantities, and the business effected was at practically the line of prices that ruled a week ago.

Scotch pig iron is nominally $21.50 to $22 for Coltness, $21 to $21.50 for Summerlee, $20 to $25.50 for Carnbroe, and $19.50 to $20 for Eglinton.

Foreign spiegeleisen and ferro-manganese quotations are $25.50 to $26 for 20 per cent. spiegel and $57 for 80 per cent. ferro.

On old material current quotations are $17 for iron tee rails, $14 to $14.50 for steel rails, $16 for No. 1 wrought scrap iron, $12.50 to $13 for machinery cast scrap iron, and $13 to $13.50 for car wheels.

Prices of steel rails and fastenings stand precisely as they were at the close of last week, with the market soft in all quarters where combine influence does not check competition. Steel billets and rods are firmly held, but find rather slow sale in eastern territory.

Competition keeps prices on structural steel low, and beams, plates, etc., can be purchased as cheaply now as they have been at any previous time this year.

CARBON IN A NEW FORM.

A new variety of carbon has been obtained by Luzi. When a piece of porcelain, such as a crucible or crucible cover, is heated in a blast furnace to the highest atainable temperature, say to 1,770 degrees C., the fusing point of platinum, and then the access of air is cut off, the highly-heated porcelain is surrounded by a smoky flame, which is allowed to act upon it for 10 or 15 minutes. On removing the pieces of porcelain from the furnace it is found to be covered with a peculiar deposit of carbon. If it were unglazed, the deposited carbon resembles graphite; but if glazed the deposit is bright and silvery and has a metallic lustre, resembling closely a silvered mirror. Portions of the deposit adhere so firmly that they may be polished with a cloth; others separate in the form of mirror-like facets of high lustre. Loose portions may be pulled off, and they then curl up into rolls like metal shavings. They are exceedingly light and stick to the fingers like silver-leaf. This form of carbon is free from ash and does not contain hydrogen, nor does it give the nitric acid reaction for graphite. Moreover, it is absolutely opaque. The author has examined 17 additional varieties of natural graphite by his nitric-acid reaction. Nine of these give the action, and are therefore graphite proper; eight do not, and are therefore included in the second class, which he calls graphitite. Of the 31 specimens thus far examined, 16 were graphite and 15 graphitite. The blackish-gray substance into which diamond is converted on heating, and which resembles graphite, did not give the nitric-acid reaction.

THE FUTURE FOR FORGE IRON.

With the rapid change from puddled iron to soft steel in our rolling mills interesting and perplexing questions arise concerning the future of forge iron. No one pretends to claim that puddling, for certain purposes, will not continue to hold its own, but relatively the consumption of mill pig iron will be very small. To those furnace plants which have been running specially on this grade using non-Bessemer lake ores, there will be little hardship in such a development, since they simply go on to Bessemer iron. In some sections where Bessemer ore is not as cheaply available the furnacemen will probably turn to making foundry irons. It is upon the Southern districts, and notably upon Birmingham, that the shifting current would have its most serious effect. With few exceptions the furnaces of that district make a very heavy proportion of forge and lower grades, by far the greater part of which has been sold to consumers north of the Potomac and the Ohio rivers. A diminishing demand from the puddling mills would throw the whole weight of the great product upon the cast iron pipe makers as the principal buyers. The capacity of the latter to develop as increasingly large buyers has been subject to some doubt lately, since recent lettings of large waterworks contracts have shown the danger of inroads by the making of riveted steel plate pipe.

That the leading Southern iron producers are thoroughly aroused on the questions at issue is thoroughly proven by the earnest interest they are taking in the establishment of steel manufacture from local raw material. Their future is tied up in it. They cannot hope to compete when they base the industry upon imported ores, which at best may serve to enrich their mixtures. There has been some talk lately of a steel plant based on Cuban ore, the parties interested being identified with a leading Birmingham plant, and at the same time with a Cuban ore enterprise. We doubt, however, whether there is much prospect of success in such a venture.

The Southern producers must look to their cheap pig iron as the foundation of the industry. It has been urged that their first efforts should be directed to an improvement in their furnace practice, so that they make better foundry iron and more of it. That, of course, is very important, and should not be neglected; but, after all, it does not go to the root of the matter. They must become steel makers, and from present indications it looks as though they will succeed. Until the Talbot process appeared, with its promise to overcome certain patent obstacles, we were skeptical as to the outcome, not on technical grounds, but purely from a commercial point of view. The cheap and efficient desiliconizing process alluded to practically removes the most serious obstacle and promises to make Southern steel an economic possibility.

A desiliconized basic pig iron at $8.50, delivered to the open-hearth furnace, is likely to possess a capacity for lively competition against $13 Bessemer pig at Pittsburg, or $15 metal of the same grade in Eastern Pennsylvania. It will not do to pooh-pooh it, particularly since a large share of the product must reach Northern markets at first, as did the Chattanooga basic steel.—Iron Age.

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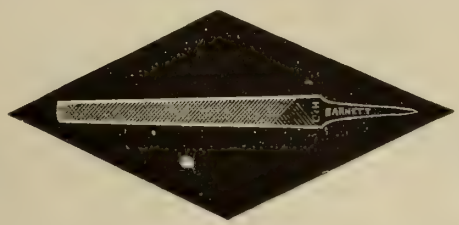
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MAMMOTH WORKS
HULL, CANADA.

DANGERS OF THE CUTLERY TRADE

The foreign statistician has recently compiled figures relating to the baneful effect of the unavoidable inhalation of metallic dust by cutlers and file cutters, says an English exchange. "Assuming," it says, "that in the case of an ordinary active existence in a healthy atmosphere the number of deaths per 100,000 artificers is 100, the figure of mortality resulting from consumption and other lung complaints among the first-named workmen would be 383, and among the file sharpeners 396. The death rate in the cutlary trade would, it seems, be much heavier were it not that the allied handle manufacturing trade is included in the statistics. Altogether the number of fatal terminations to pulmonary diseases among cutlers and file cutters is nearly equivalent to the aggregate deaths among fishermen from all causes, including accidents, which are numerous."

THE JUTE SITUATION.

The clearances of jute from Calcutta during the six months ending January 31 were, it appears, the largest on record. Including cuttings and rejections, the total was 2,437,107 bales, as against 1,725,998 bales and 2,332,984 bales in the corresponding period of the two previous seasons, the increases being 538,715 and 147,247 bales respectively. So far the figures have borne out the estimate of the Director of Agriculture as to the outturn of the crop. The clearances for February are estimated not to exceed 200,000 bales. "This quantity," says a Calcutta paper, Capital, "will exhaust all the loading tonnage on the berths, and until fresh orders are received from Europe it is very probable that shipments during March will show a decided falling off; but this state of things will not be caused by any scarcity of jute, but by a cessation of orders from Dundee and elsewhere. On January 1st, 1893, the stock of jute held in Dundee was 600,000 bales, which was an ample supply for the mills up to 30th June next; and the jute since arrived and on the way is sufficient for their requirements until next September, by which time the new jute crop will be at hand. It follows that shipments made after this month (February) will be for stock, and such being the case the Dundee folk are not likely to pay the high rates which are at present demanded by balers. The manufacturers on the Continent are much in the same position. Now that the export demand is in great measure satisfied the agents of the local mills should at once force prices down in the bazaars. The native shroffs have had their day, and the time has now arrived to make them disgorge a portion of their enormous profits. The stock in the bazaar is put down at about 600,000 maunds, but it is doubtless much larger, the daily arrivals having been underrated throughout the season. Balers must also have a fair quantity, and the supplies in the interior are by no means exhausted."

THE COUNTRY DEALER AND LAMPS.

The sale of lamps in the small towns throughout the country has been large this season. In an out of the way place in Pennsylvania the other day the proprietor of a hardware store said: "We laid in a good stock of hanging lamps this season, and hardly expected to sell them all, but I have only one left. You see, the country people cannot use gas, but a desire has sprung up with them largely to have hall lamps that will give a brilliant light, and also large lamps for other purposes, and they are buying freely. The old sperm oil lamp drove people to bed at nine o'clock in spite of themselves, but now the young people have the merry part of their lives in the evening, and the dance does not end with midnight." It behooves the hardware man everywhere to lay in a stock of lamps.—Ex.

The Quebec Board of Trade has been collecting evidence as to whether it would be possible to navigate the St. Lawrence up to this port in winter. Sailors and pilots say it is possible from March 1st to December 10th, or even to the 25th, and they were willing to make the experiment if the Federal Government or some syndicate would provide the means tney claim that it would be necessary only to strengthen the bows of steamers in case of meeting floating ice.



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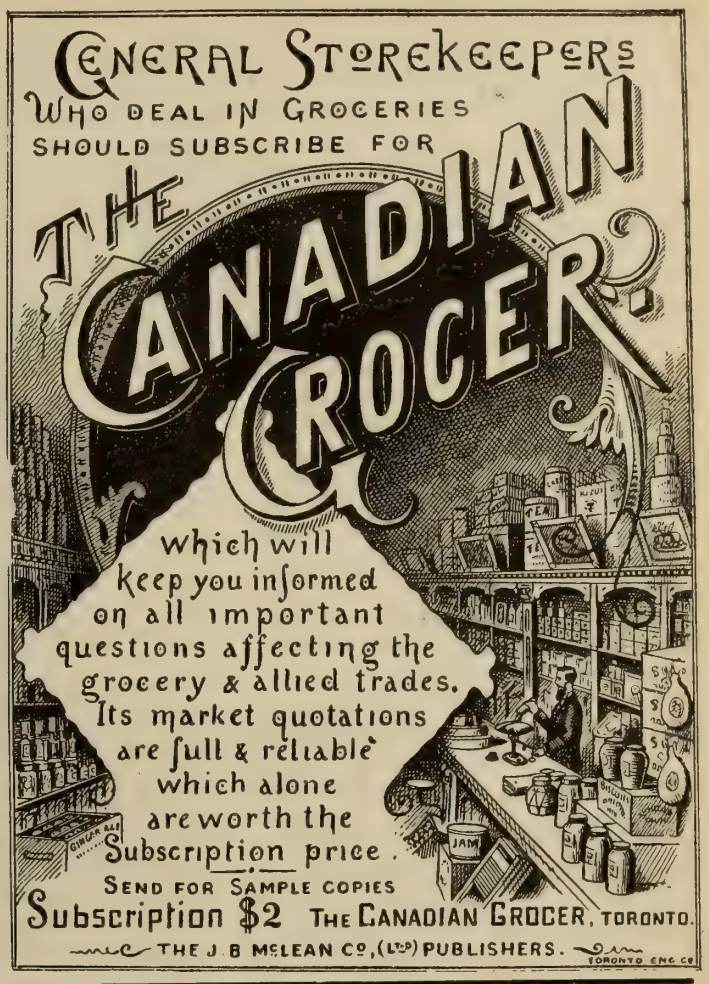
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BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES

J. A. Morin, general dealer, Kingsley, has assigned.

John Howard, lumber, Whitby, has assigned to Sheriff Paxton.

Boisvert Adolphe, general merchant, St. Croix, Que., has assigned.

Isaie Charbonneau, general store, St. Therese, Que., has assigned.

G. W. Shipley, general merchant, Ailsa Craig, has assigned to E. B. Smith.

Heintzman & Gaiser, general dealers, Shipka, has assigned to C. B. Armstrong.

A demand of assignment has been made on Simeon Beauchamp, general dealer, Montreal.

A. G. Montgomery & Co., general merchants, Tiverton, have been succeeded by Balantyne Bros.

Johnson & Green, general merchants, Martinville, have assigned, and a meeting of creditors will be held April 5th.

Windsor McCammon, general merchant, Binscarth, Man., is asking an extension. F. C. Thorgirsson, in the same line of business at Churchbridge, Man., has obtained one.

The failure of L. E. Morin, Jr., & Co., Montreal, agents for the Consumers' Oil Company, of Petrolea, has caused some talk in the trade. The liabilities are about $15,000 to $17,000, of which about $13,000 is due the company, which held mortgages as security, although it is thought there will be a loss of $5,000 in any event.

SALES MADE OR PENDING.

The stock of T. Castor & Co., dealers in bankrupt stocks, Port Stanley, has been sold.

J. T. Carswell, general merchant, Douglas, Man., has sold out to G. Draper and J. C. Berry.

The general stock of George Halliday, Arnprior, has been sold at 60 cents on the dollar.

The general stock of G. A. Biron, St Telesphore, Que., is advertised for sale the same day.

J. W. Jones, of London, has sold the stock of T. Castor & Co., of Port Stanley, consisting of general merchandise, to A. Neighborn, of London, at 55½ cents on the dollar.

The form of advertisement and conditions of sale of the stock and factory of the insolvent Drop Forge Co., of New Toronto, were fixed by the court Tuesday afternoon. The sale will be held in the office of Assignee E. R. C. Clarkson on Friday, the 7th of April. The assets of the company amount to $25,000, and the failure was undoubtedly due to insufficient capital, as the company was doing a profitable and extensive business.

CHANGES.

G. W. Bell, general merchant, Vars, has sold out to J. H. Bell.

J. Hourston & Co., hardware, have sold out to W. H. McKenny.

Fred. Hunt, carriage maker, St. George, has been succeeded by W. Field. Henry Hickox, blacksmith, of the same place, has sold out to Albert Sears.

Jacob Koebel, blacksmith, Tavistock, has been succeeded by Henry Roedding, Jr.

Mara & Lang, general merchants, Hespeler, have been succeeded by A. G. Lang.

J. A. Powers, sash and door factory, Shedden, has been succeeded by William Farral.

E. McClay, agricultural implements, Linwood, has been succeeded by Robert Kerr.

M. Hastie, blacksmith, Molesworth, Ont., has sold out to John Meicklejohn, Toronto.

John L. Somers, hardware and stoves, Edmonton, is removing to South Edmonton.

A. C. McEown & Co., general store, Boissevain, Man., have sold out to Hunter & Moore.

Albert Proulx has been registered proprietor of the firm of Blanchard & Co., plumbers, Montreal.

George Spackman, agricultural implements, Rodney, has been succeeded by Archibald McMillan.

FIRES.

The stock of Alex. McKay, plumber, Montreal, has been damaged by fire.

PARTNERSHIPS FORMED AND DISSOLVED.

Boyle & McQuarrie, general store, Mabou, N. S., have reported to be about to dissolve.

Jane Horskin has been registered proprietress of the firm of H. Horskin & Co., stoves, Bedford, Que.

Charles E. Skelding, hardware, Pipestone, Man., has admitted J. J. Rattray as partner. Rattray & Skelding is the style of the new firm.

H. E. Moore and W. A. Robertson, North Sydney, N. S., have been registered co-partners under the firm name of Moore & Robertson, general merchants.



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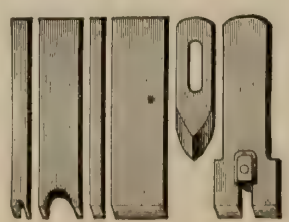
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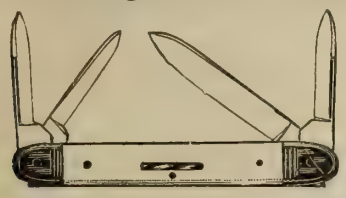




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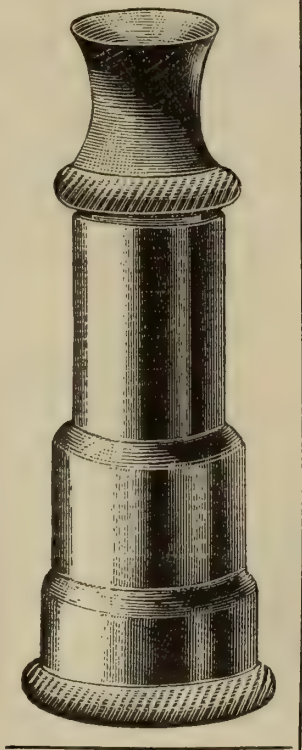
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IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it

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Give it a trial and you will use no other.

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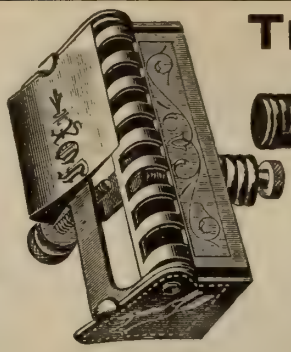
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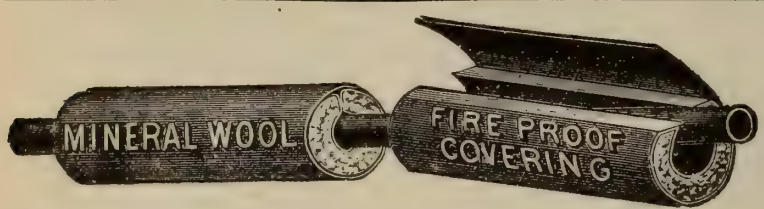
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Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

No springs or extra pieces used to get lost.

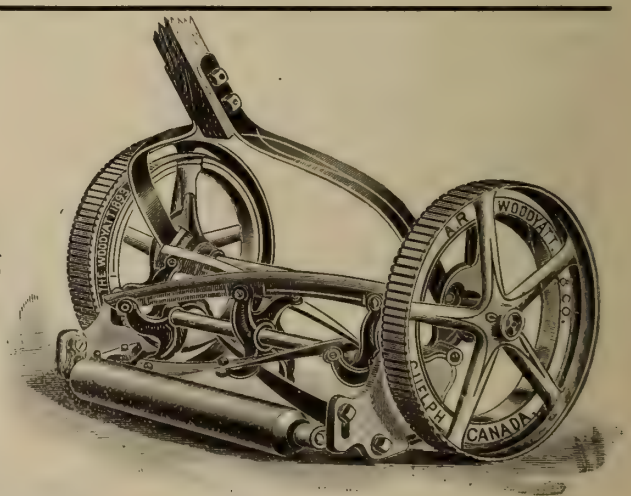
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THE "WOODYATT" LAWN MOWER

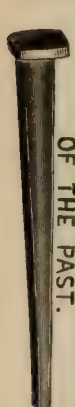
Light, Durable, and Efficient.

Now On Sale by all Wholesalers.

A. R. WOODYATT & CO. GUELPH, ONT.



BARB WIRE. - - WIRE NAILS.





ORDERS SHIPPED ON SIGHT

ADDRESS

ONTARIO LEAD AND BARB WIRE CO.,

. . Limited . .

Offices: 54-56 Lombard Street. Works: 55-59 Richmond Street East, **TORONTO**

OFFICES: 100-102 Reade St., New York, U.S.A.

K&F KEARNEY & FOOT CO

WORKS: Paterson, New Jersey, U.S.A.

Manufacturers of FILES AND RASPS.
Superior quality fully guaranteed.

CAPACITY OF WORKS: 1,200 doz. per day.



Illustrated Catalogue Price Lists mailed on Application.

PLEASE MENTION THIS PAPER WHEN WRITING US. Agents, M. & L. Samuel, Benjamin & Co, Toronto.

Canada Iron Furnace Co., Ltd.

Manufacturers of

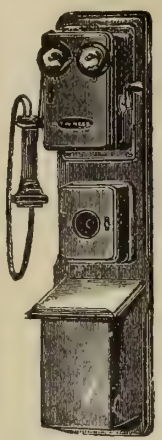
CHARCOAL PIG IRON

MONTREAL.

BRAND "C.I.F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer



TELEPHONES
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Main Lines
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Send for new 32 page Catalogue of Telephone Testimonials.

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Manufacturer of Telephones, Etc.

749 Craig Street, - MONTREAL

THE BEST
English Sporting Gunpowder
USE THE
"ALLIANCE"
PRIZE POWDER
—Made only by—
Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.

Always obtainable from
Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.

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Iron Founders and Stove Manufacturers

Makers of the "Etna" Hot Water Boilers, Soil Pipe and Fittings, Stable Fixtures, Machinery, Builders and Special Castings

WRITE FOR ESTIMATES

WORKS: Cor. William and Inspector Sts.,

OFFICE and WAREHOUSE: 145 to 179 William Street

MONTREAL

BUYERS OF CUTLERY

WILL find it to their interest to see our samples before placing Spring orders. A choice assortment in stock of Jos. Rodgers & Co.'s and E. M. Dickinson's goods at special prices.

A. C. LESLIE & CO., MFRS. AGENTS,
MONTREAL and TORONTO

OUR SALES OF
"BURHAM" Portland Cement
For the past 8 months have been
25,499 CASKS.
"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,
McRAE & CO., OTTAWA

MUNN'S LIQUID GLUE
IS THE BEST.
Kennedy Bros., Agents
101 Bay Street, TORONTO.

Established 1864.
CLARKSON & CROSS,
CHARTERED ACCOUNTANTS
NO 26 WELLINGTON ST. EAST
E.R.C.Clarkson, F.C.A.
W. H. Cross, F. C. A.
Edward Still.
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TORONTO, ONT.

Excellent Quality! Reasonable Price!



ADAMS-MARS
BEST.
GALVANIZED SHETE IRON. SP

FOREIGN CORRESPONDENCE.
Letters translated from or written in any foreign language.
I. H. CAMERON, 10 Front St. E

CURRENT MARKET QUOTATIONS.

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	24, 25
Strip "	25, 26

Tin Plates—*Charcoal Plates, Bright.*

M.L.S. equal to Bradley	Per box	
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 25	4 50
I.X., "	5 25	5 50
I.X.X., "	6 25	6 50
I.XXX., "	7 25	7 50
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be purchased of 25c. box.

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

Cookley Grade—	Per lb.
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65,	

Tinned Plates

72x30 up to 24 gauge	6½	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$2 05	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼inch	$2 45
5/16 "	2 35
¾ " and thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2⅞, 2¾
26 "	2¾, 3
28 "	3 , 3¼

Canada Plates.

Blaina	½ bright	2 75
Abercarne		2 75
Lion		

Iron Pipe.

Wrought 62½ p. c. to 62½ p. c. and 5 p.c. Galvanized, 37½ to 40 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6	6	3-5
" ¼ " "	4⅞	5	
" 5-16 " "	4½	4⅝	
" ⅜ " "	4⅜	4⅜	
" 7-16 " "	4¼	4½	
" ½ " "	3⅞	4	
" ⅝ " "	3½	3⅝	
" ¾ " "		3	1-5
Trace, per doz. pairs	$3 60	5	90
German coil, per 100 ft	1 65	2	70
Jack chain, iron, single, per doz yards	0 13	0	50
Jack chain, double, per doz yards	0 15		
Jack chain, brass, single, per doz yards	0 20	1	10

Copper—*Ingot.*

English B.S "	0 14	0 14½
Lake Superior	0 13	0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22	$0 25
" round & square 1 to 2 in	0 20	0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16	0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17	0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26	0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20	0 22
" 35 to 45 " "	0 19	0 20
" 50 lb and above per lb	0 18	0 19

Boiler & T. K. Pitts.

Plain Tinned per lb		0 21
Spun " "		0 25

Wire.

Pure, in coils—		
From 1 to 20 gauge	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20	0 21
" " 27 to 30 "	0 23	0 25
" " 30 and up	0 26	0 28
Sheets, hard-rolled 2x4 ft.	0 21	0 23

Zinc Spelter.

Foreign, per lb	0 05	0 05½
Domestic "	0 04½	0 05

Zinc Sheet.

5 cwt casks	0 06	0 06½
Part casks	0 06½	0 06¾

Lead.

Imported Pig, per lb	0 03½	0 30⅝
Domestic "		0 03½
Bar, 1 pound		0 05
Sheets, 2½ lbs, per square ft, by roll	0 04⅜	0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04⅜	0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)	0 17	0 19
Standard	0 16	0 18
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½	0 14
Other makes "	0 13	0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per lb		5 25
No. 1 Do "		4 87½
No. 2 Do "		4 50
No. 3 Do "		4 00

Prepared Paints.

(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1	20
2nd qualities "	1	00

Colors, in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p. cwt	1 35	1	40
" " (J.F.L.S.) " "	2	75	
Venetian Red (R.C.2) " "	1	50	
Venetian Red, (best) "	1 80	1	90
English Oxides per cwt	3	25	
American " " "	2	25	
Canadian " " "	1	75	

Paris Green, per lb	0 13	0 15
Burnt Sienna, per lb	0 08	0 08½
Burnt Umber "		0 05
do pure		0 08
Drop Black "		0 09
Chrome Yellows "		0 12
" Lemon pure, 8 lb. tins, per lb		0 19
Chrome Greens "		0 12
Golden Ochre		0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 60
Extra "	0 70
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	0 95
Pure Orange Shellac "	2 00
Hard Oil Finish "	1 30

Linseed Oil (in bbls)

Raw, per gal	0 61	0 63
Boiled "	0 64	0 66

Turpentine (in bbls)

Selected Packages, per gal	0 55	0 57

Castor Oil.

Best, per lb	0 08½ 0 09

Cod Oil.

Cod Oil, per gal	0 48

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet makers	0 17	0 18
White	0 16	0 17
London Town	0 7½	0 08½
Gelatine	0 22	0 27
Stripped	0 16	0 17
Coopers	0 17	0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50,50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ...
" Sewing, " ....
} 7 25 8 00

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 30 to 35 per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 99 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 8 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 45 to 47½ p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 56		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05
Screw and Strap, per lb .. 0 03½ 0 04½
Per doz. sets
Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.
Per doz. pairs
Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

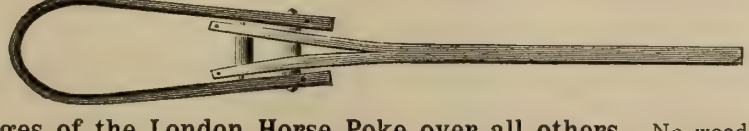
Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross... 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

THE LONDON HORSE POKE.

DURABLE  STRONG

Some of the Advantages of the London Horse Poke over all others.—No wooden pins to break or loose. No wire spring to rust or get out of order. The London Poke is the only one made with iron bolts, which cannot get lost or broken in shipping. It is the only adjustable Poke made to fit any size horse from a Pony to Clydesdale.

Send for Sample Order. **BOWMAN, KENNEDY & CO., London,** Western Agents

Wrought Hooks and Staples, Amer dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am. per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., per doz. 85 to 3 00
ronze, Berlin, per doz .. 2 75 3 25
ronze, Gem, " 6 00 9 00
ss " 8 75 10 00
hutter, porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy.....	2 30
40dy.....	2 35
30 dy.....	2 40
20, 16 & 12 dy.....	2 45
10 dy.....	2 50
8 & 9 dy.....	2 55
6 & 7 dy.....	2 70

American Pattern Only

from 4 to 5 dy	2 90
3 dy. (lath).....	3 30

3. Canada Pattern Only

from 4 to 5 dy	2 80
3 dy. (lath).....	3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Nails.

Galvanized, per doz..... ... 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... .... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	22	25
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts,	per set 75	85
" N P.	" 1 00	1 10

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.

Hack, complete, each.... 1 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia ¼ gross boxes..... 3 25
" ½ and ¼ gross boxes per gross net cash 12 00

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 5 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 57½ per cent.

Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ per cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application.
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8,10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Iron and Steel, annealed, annealed and oiled, galvanized 20 per cent. dis
Bright coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " } 4½ 4¾
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 80 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 0
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS, KNIVES, FORKS, SPOONS.

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

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Why Handle Kalsomines?

Fifty per cent. Profit to the Dealer on . . **ALABASTINE**

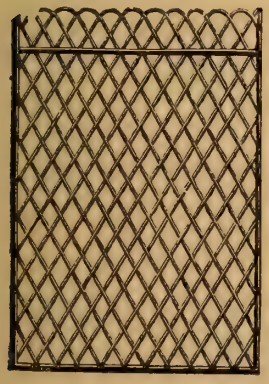
All Dealers who are in the trade for money should handle the best Wall Coating on earth—Cold Water Alabastine.

Ready for use by mixing in cold water.
Nothing like it on the market.
The only goods in this line extensively advertised.
Our special advertising sells the goods without talk.
Country dealers should keep it as it sells to the general public as well as to painters.
If our travellers have not called on you, write us for tint card and prices.

ALABASTINE COMPANY, SOLE MANUFACTURERS,

PARIS, ONT.

G. F. STEPHENS & CO., Winnipeg, Agents for Manitoba and North-West.



WIRE WINDOW GUARDS

WIRE GOODS —AND WIRE WORK

We manufacture a complete and superior line.
—All branches.



WIRE BASKETS, ALL SIZES.

THE DENNIS WIRE AND IRON WORKS

LONDON, ONT.

Send for Illustrated Catalogue.



WIRE ANTI-RATTLERS.

. . REFRIGERATORS . .



Manufactured by

KNOWLES & NOTT.

BRANTFORD, ONT.

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DIRECT IMPORTERS AND DEALERS IN

SCOTCH FIRE CLAY-BRICK



DRAIN AND WATER PIPES.

Double strength or railway culverts, etc.

Sewer Bottoms or Invert Blocks, Cement.

NOTE.—Only pure SCOTCH unglazed Fire Clay Linings and pipes are kept in stock; any other quality is worthless for resisting heat and frost. Correspondence invited. Quotations promptly furnished.

OFFICE : 31 Wellington St., Montreal.

THE OAKVILLE BASKET CO.,



Manufacturers of

1, 2, 3 Bushel

Grain

AND

Root

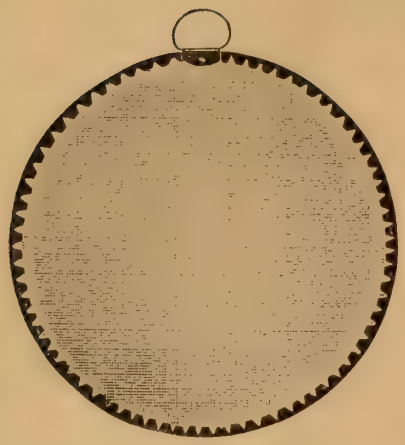
BASKETS

THE OAKVILLE BASKET CO.

CROWN STOVE MAT.

SCORCH PROOF.

PATENTED.



This useful article will be fully appreciated after one trial. All kinds of cereals, milk, chocolate, etc., may be cooked in ANY UTENSIL without the least danger of scorching, if used on this mat. It is unequalled for toasting bread.

DIRECTIONS.

Place mat on top of stove, range, or open-grate fire, and put utensil upon it. If it becomes soiled it may be cleaned by heating it red hot. Do not wet or scrape it.

Peerless Enamelled Ware,
White Enamelled Ware,
Retinned Ware,
Japanned Tinware,
Pierced Tinware,
Galvanized Iron Ware,
Wire Goods.

German, English and American Specialties in Metal Goods.

Thos. Davidson & Co.,

MONTREAL.

Why don't you sell . . LAMPS



You sell Chimneys! You sell Burners! You sell Wicks! You sell Coal Oil! Why don't you sell Lamps? We mean nice Lamps? They are just as staple and a good profit!

WE HAVE SOME NICE JOB LOTS JUST NOW.

The very thing to make a trial with. Write for particulars.

Gowans, Kent & Co.

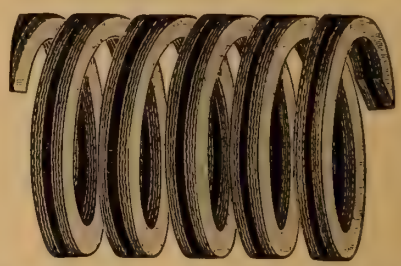
TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7 16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., Toronto.

Dominion Wire Mfg. Co., (Limited)

WIRE DRAWERS, GALVANIZERS AND MANUFACTURERS

MONTREAL AND TORONTO

Iron, Steel : and Copper



Bright, Annealed, Oiled, Galvaized, Coppered, Spring, Nail, Rivet, Telephone, Telegraph and Tinned (for Mattress and Broom makers use.

Wire

Also "Lyman" 274 Barb Ribbon, Thorn and Plain Twist, Fencing.
Wire Nails and Wood Screws.

Price Lists Furnished and Discounts Quoted on Application.

Canadian Hardware Merchant

SPRING TRADE NUMBER.

1893

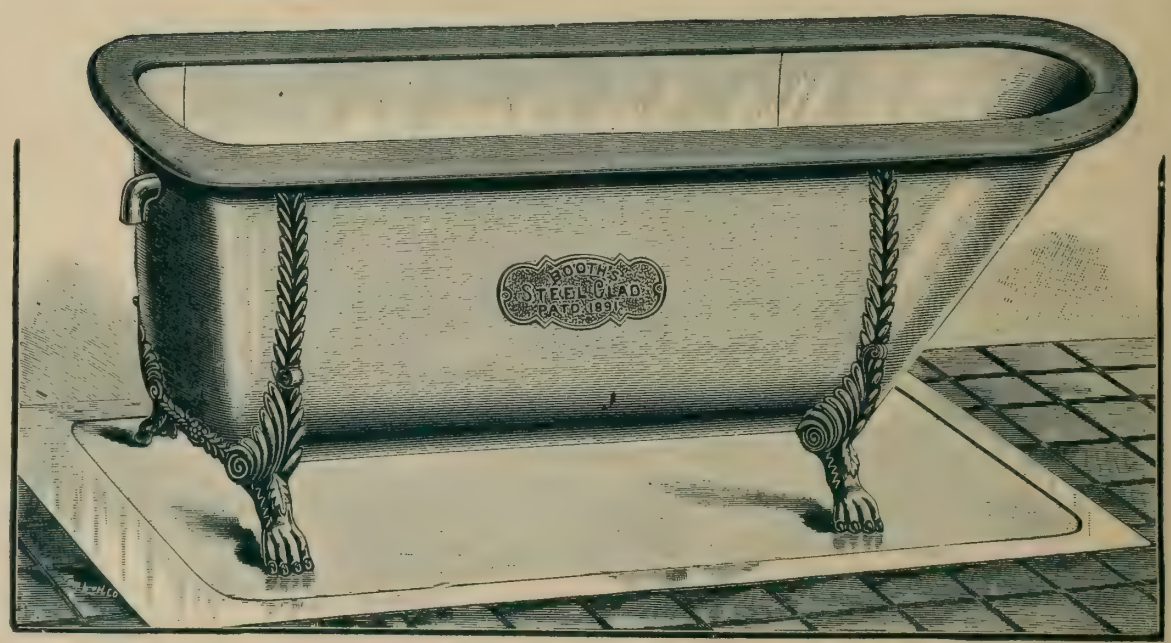


THE J. B. MCLEAN CO. TORONTO
TRADE JOURNAL PUBLISHERS

Steel-Clad Baths

REGISTERED
"STEEL-CLAD"
TRADE MARK

AGENCIES -:- -:-
Montreal, Winnipeg, Victoria, B.C.,
Vancouver, B.C., St. John, N.B., Quebec



PATENTED IN -:- -:-
Canada, United States
England, Australia

Recommended by PLUMBERS
· · ON ACCOUNT OF THE PRICE · ·

DAMPNESS CANNOT AFFECT IT
NO PLACE FOR ACCUMULATION OF IMPURITIES

Specified by ARCHITECTS
· · FOR ITS DURABILITY · ·

IT IS *ALL OPEN* AND ACCESSIBLE . . .
HAS NO ENCASING OF ANY KIND . . .

Approved by PHYSICIANS
· FOR ITS SANITARY QUALITIES ·

A LEADING HARDWARE MERCHANT, SAYS:—"From our experience during last Season, we judge that your new pattern "STEEL CLAD" will be the only one specified by our Architects during the ensuing year."

The Toronto Steel-Clad Bath & Metal Co. Ltd.

123 QUEEN STREET EAST, TORONTO, ONT.

Importers and Dealers in

BRITISH . . .
CONTINENTAL
AMERICAN . .
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HARDWARE

METALS, TIN PLATES, ETC.

26 to 30 Front St. West . . . . Toronto, Ont.

Tinsmiths', Steamfitters', and Plumbers' Supplies a Specialty . . .

WHOLESALE AGENTS FOR

"COMMON SENSE" BINDER TWINE

Prompt Attention given to Letter Orders.
Correspondence Solicited in connection with General Import or Export Trade.

M. & L. Samuel, Benjamin & Co.

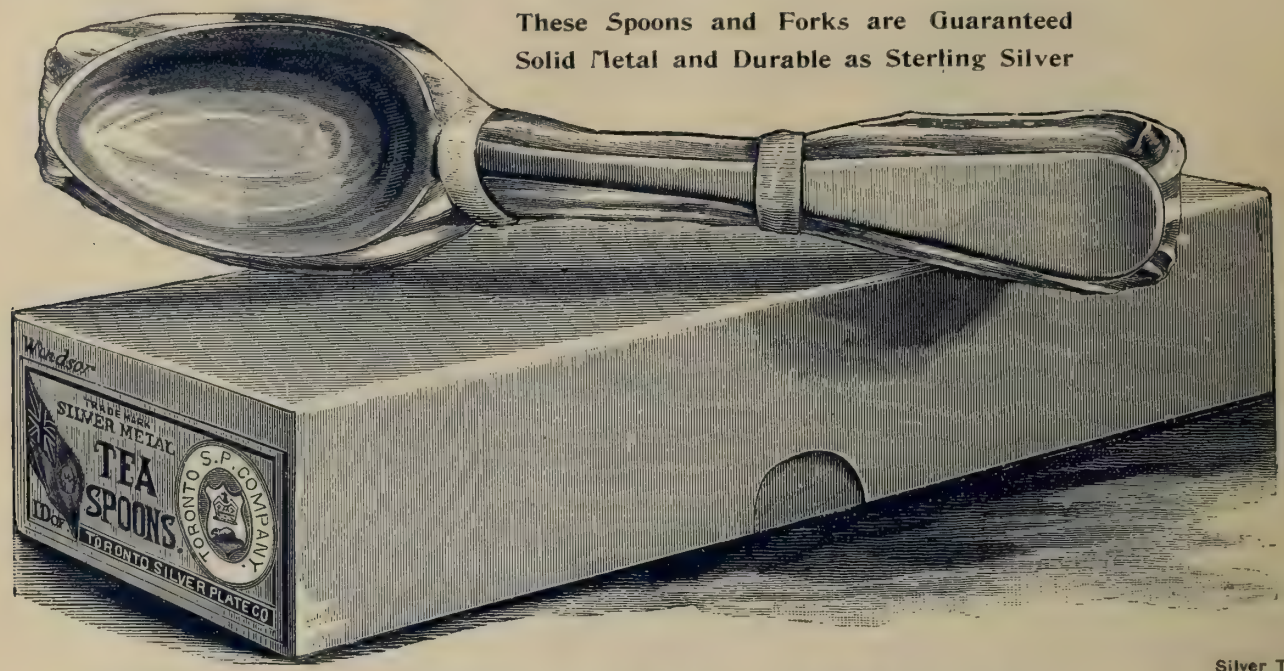
ENGLISH HOUSE:
SAMUEL SONS & BENJAMIN
164 Fenchurch St., London, E.C.

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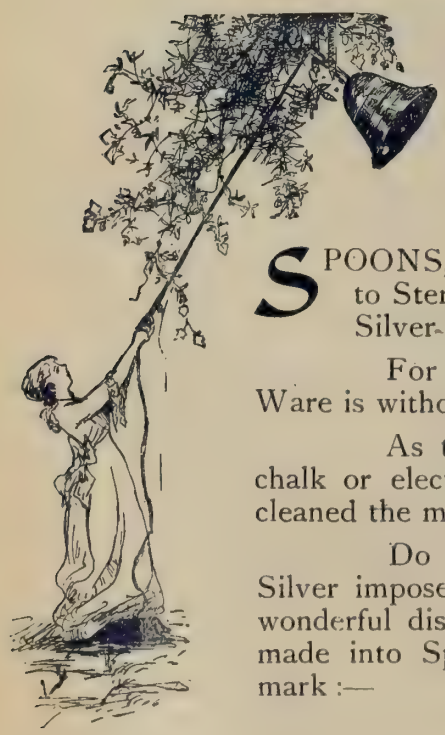
A New Discovery in Precious Metals

TRADE MARK:
Toronto Silver Plate Co. SILVER METAL

These Spoons and Forks are Guaranteed Solid Metal and Durable as Sterling Silver



SILVER METAL



SPOONS, Forks, Ladles, Etc, made of this new metal are superior to Sterling Silver in point of non-tarnishing, and equal to Solid Silver for durability, and at one-fifth the cost.

For Hotels, Restaurants and Family use, Silver Metal Table Ware is without a parallel.

As there is no Plate to wear off, any silver powder, polish, chalk or electorine can be used to clean them. The more they are cleaned the more whiter and beautiful they become.

Do not confound Silver Metal with the varieties of Nickel Silver imposed on the market. We claim for them no relation. This wonderful discovery is controlled by us, and we sell no metal except made into Spoons., Forks, Etc. All genuine goods bear our trade mark :—

Silver Tipped



Toronto Silver Plate Co. SILVER METAL

The Factories and Salesrooms of . . **The Toronto Silver Plate Co.** are at 570 King St. West, Toronto, Can.

E. G. GOODERHAM, Manager. JNO. C. COPP, Sec.-Treas.

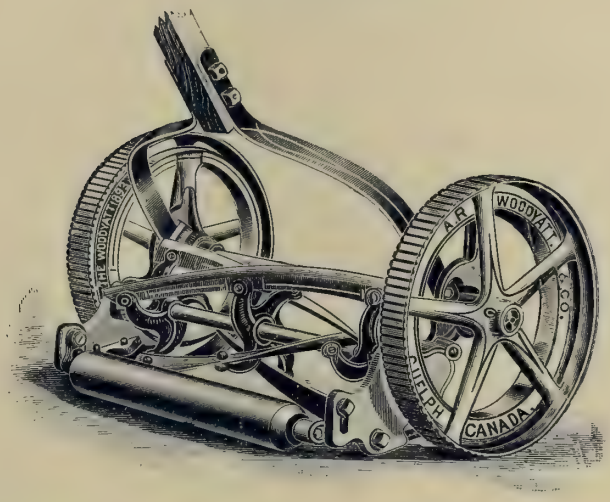
THE WOODYATT LAWN MOWER

. . 1893 . .

Light, Durable and Efficient

Handle Top, Malleable Iron

$10\frac{1}{2}$ in. High . . . .
Open Wheel . . . .
Encased Gearing . .
Four Blade Cylinder



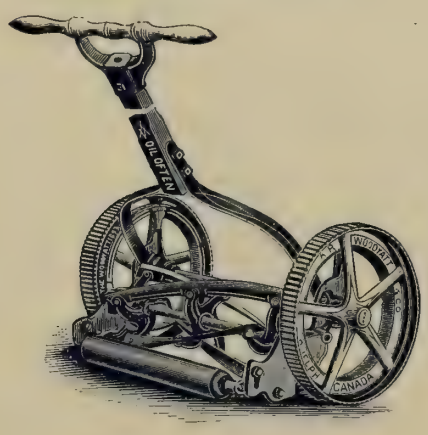
Cast Steel Knives
Rolled to Section
Oil Tempered . .

THE BEST MOWER IN THE MARKET

The Philadelphia Lawn Mower

1892 Pattern

Four Blade Cylinder
Malleable Iron . .
Handle Top . . .



$7\frac{1}{2}$ in. High . . .
Encased Gearing
Flat Wheel . . .

THESE MOWERS HAVE A WORLD-WIDE REPUTATION AND NEED NO RECOMMENDATION

FOR SALE BY ALL THE LEADING HARDWARE HOUSES

MANUFACTURED BY

A. R. WOODYATT & CO., - - Guelph, Canada.



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E.J. WHYTE



R. ROLSTON

"TRAVELLERS"

H.S. HOWLAND, SONS & CO., TORONTO 1893

WHOLESALE HARDWARE MERCHANTS.

HARDWARE

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

VOL. V. TORONTO, APRIL, 1892. No. 14.

THE J. B. McLEAN PUBLISHING CO., LIMITED.

Trade Journal Publishers, AND Fine Magazine Printers,

10 FRONT ST. EAST, - - - TORONTO.

J. B. McLEAN, PRESIDENT. HUGH C. McLEAN, MANAGER.

SUBSCRIPTION $2.00.

BRANCH OFFICES:

MONTREAL, - - - 146 ST. JAMES STREET. E. Desbarats, Manager.

NEW YORK, - - - ROOM 91, TIMES BUILDING.

LONDON, ENG., - Canadian Government Offices, 17 Victoria St., LONDON, S.W. R. Hargreaves, Manager.

COMPOSITIONS.

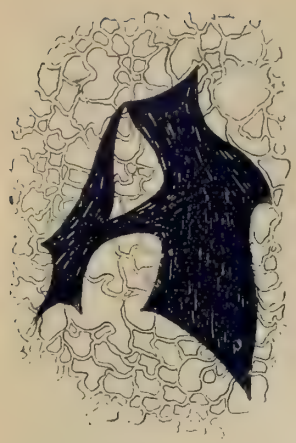


ONE of the worst features in the relations of the wholesaler to the retailer is the seeming necessity for compositions under certain circumstances. A retailer gets into difficulty and he comes into the city and says to the wholesaler: "I have been unfortunate, and am running behind in my payments; I cannot possibly pay the whole amount of my debt. Now, I don't want to do anything that is wrong; and if I give up everything I shall be out of an occupation. I have dealt with you for a large number of years, paid you thousands of dollars, and no matter how we fix the matter you are bound to lose. Now can you not oblige me with a composition, and give me a chance?" This is what places the wholesaler in a warm corner. He has to consider a number of conditions. If the debtor has more than one creditor, and he usually has, and if all other creditors agree to the composition, and one stands aloof with a stern "no compromise," the latter will suffer in point of future custom, and he believes he cannot afford to antagonize even a single purchaser. Again, the wholesaler must consider that if he doesn't offer this man a composition at fifty, sixty or seventy cents on the dollar, the estate will have to be wound up and the stock sold, perhaps at a much less figure. His loss will then be greater and there will be more trouble, anxiety and expense. If he compromise with this man he knows he is putting his other customers in the vicinity at a disadvantage; because the man who receives a composition generally goes home, marks down his goods, writes large advertisements and starts a slaughter sale. Yet even if the wholesaler refuse the composition the stock will be sold at a rate in the dollar and the slaughter will perhaps take place.

Everything considered compositions must be condemned. They put the honest retailer at an enormous disadvantage, and keep the ranks filled with incompetent men. It is abject folly to keep an incompetent man in the business, merely because he was successful once; his prolonged mercantile life is only a worry to himself and a vexation to his creditors. Moreover, the slaughtering may be prevented if the goods are put up for sale at auction in bulk or parcels, by the merchants interested in the retail trade of that vicinity buying up the stock. The proposed Insolvency Bill contains provisions for exterminating all compositions, and this will be a great benefit to the business men no matter from what standpoint the matter is viewed. The liquidator must in every case sell the assets, leaving the creditors if they choose to give the debtor his discharge, but indepen dently.

A discharge, after all debts are paid ratably, is not objectionable; but a composition which allows a man to continue in business with a likelihood of slaughter sales, and further failure, and a still further slaughter sale by a purchaser of the bankrupt stock is what we are protesting against. An assignment made under the Ontario Act or an act of any of the provinces makes no provision for the discharge of the insolvent, because to do so would be to make what is virtually an insolvent law, an undisguised insolvent law which the provinces have no right to have on their statute books. But it would seem just that if a man surrenders every possession, title, and interest, no greedy or exacting creditor should hold him, or be enabled to do so. But a creditor who refuses to sign a paper accepting a composition for his debt, and allowing an insolvent debtor to proceed in his disastrous business career is neither greedy nor exacting. He is simply protecting himself and his other customers, by bringing on the evil day at once, instead of delaying for a year. And there is no doubt that wholesalers themselves would be much pleased if the pernicious systems of compositions were done away with completely.

It is to be hoped that the Government will see fit to pass a National Bankruptcy Act which will remove this and other evils. Truly the need is great; and from merchants all over the country the appeals for this legislation have been sent forth, and at present this is perhaps the most earnestly sought legislation in this country. The Congress of the United States is also being asked to pass a National Bankruptcy Act for that country; the circumstances which require redress are much the same there as here..



CASH VS. CREDIT.

ALTHOUGH this is an old subject, we believe something new can be said on it. For many years the question as to whether retail dry goods merchants should sell on a cash basis or on a credit basis has been debated warmly in trade papers and in meetings composed of merchants. Many men have pointed out the use of credit, especially where a fair percentage of the merchant's customers are agricultural laborers or farmers. These men receive their year's pay or profit during the last three months of the year, and for the other nine are supposed to be without any considerable amount of cash; and for this reason many boldly declare that a retail merchant such as we have described cannot succeed when doing business on strictly cash principles.

Now, we believe this to be both fallacious reasoning, and arguments based on wrong premises. The farmer does not market his produce in this country all on one day nor all in one month. In the Northwestern part of our Dominion, the farmer comes very near the state described; but it is different in the other and older provinces. The product of the farm is not all grain; it is composed of different classes of articles or products which are marketed every week, or can be if necessary. Even the grain is often marketed at intervals during the winter months; and often held over until spring. In all these cases the reasoning of the credit men breaks down. But even if the whole statement were true, and farmers did market their grain all between October first and January first that proves nothing. They have their money, and why shouldn't they lose the interest on it as well as the merchant? A few days ago a director of one of the large departmental stores in Toronto, stated that on the flat of which he had control, they did a business of over $300,000, with a loss in debts of less than $25, and that was on account of some friend of one of his chief clerks. And let it be understood, that fifty per cent. of the customers of that store are from rural districts. These facts explain themselves.

But there is another side to this question, and it is well stated in a circular issued by the managers of a dry goods business in Clinton, Ont., the firm name of which is the estate of John Hodgens. These live business men speak as follows:

"On January 31st we close our financial year, and then purpose making a radical change in the method of conducting our business. From that date we will place it on a strictly cash basis. Before we decided on taking this step we consulted with as many of our credit customers as we could, asking their opinion of such a change, and have found an almost unanimous feeling in favor of doing business on the cash system, provided we could reduce prices by the change. It is a well-known fact that a great proportion of the losses in any business are caused by 'Bad Debts,' or long standing accounts, and the loss of interest, cost of collecting, care of books, etc. These losses and the cost of carrying accounts are all a charge on the business and must come out of the profits. For example: Suppose a firm commencing a cash and credit business, do a credit business of $15,000 the first year; during the year they receive by payments on account $5,000, which would leave them, when the year closed, with $10,000 on their books. From our own experience we can say, that, with no increase in the amount of business done, this firm would in future, never have less than the $10,000 out, for in their second year they would send goods out on credit as fast as they would collect their previous year's accounts. Now see what extra cost there is in a year, doing this $15,000 credit business:

Interest on $10,000 at 8 per cent. Bank Rate	$800 00
Losses from Bad Debts	400 00
Cost of Stationery, Postage, etc	150 00
Value of Time taken in Care of Books	400 00
Total	$1,750,00

Or to do the $15,000 business on credit there is an extra cost of $1,750, or nearly 12 per cent. When marking goods we have to figure on the cost of giving credit, just the same as we do for rent, taxes, help, etc. We believe a cash business will be mutually beneficial. Every person is looking for the cheapest market to buy in and where goods are sold on credit cannot be the cheapest place. Neither can a cash and credit business be the cheapest, although cash customers may get a discount, yet the credit price is always asked, and even with the discount off, the prices are not as low as they would be if the business was strictly cash. It is an undoubted fact that the man who sells the cheapest is the man who sells for cash. Buying where credit is given you not only have to pay for your own goods but for those of the man who does not pay."

This is the way a practical merchant figures it out. The arguments are convincing and incisive, and show that all that is needed to place the retail dry good business on a sound basis, is common sense action on the part of the merchants engaged therein.

The last argument adduced in the above quotation is one which should bear great weight if properly presented to the public. Undoubtedly in a combination cash and credit business, the man who pays for his goods must pay a certain percentage extra on account of the merchant's bad debts; that is, he must pay for the goods of the man who doesn't pay. If merchants would put this plainly and honestly before their customers they would undoubtedly succeed in convincing them that a pure cash basis in the retail business would be much more economical.

The half-heartedness of retail merchants in dealing with this measure leads one to think that either they do not recognize their interest, or that they prefer a cash and credit business to a purely cash one. It is hard to be convinced of the latter, and consequently the slowness with which this reform is permeating business methods, must be attributed to indifference and carelessness. Surely any one who reads the powerful arguments quoted in the above circular cannot fail to be convinced of the costliness of credit in a retail business; and that a near approach to the purely cash basis would be financially beneficial. The grocery trade of Canada has advanced towards perfection in this matter much faster than the dry goods trade; this has been helped to a great degree by the stand taken by the wholesale grocers, especially in Toronto, who utterly refuse to date bills ahead and whose terms are sixty days instead of four months. In the dry goods trade the dating ahead is due in a great degree to the competition of the British agents who visit this market, hence a reform cannot be hoped for very soon. But this should not prevent retail merchants thoroughly eradicating the credit mode of business from their practice. The Canadian Dry Goods Review.

EARLY CLOSING.

DURING the past year there have been in Montreal and other places in the Province of Quebec strenuous efforts put forth to have an act passed similar to the Ontario Early Closing Act, which would enable the majority of the merchants in any town or city to have a by-law passed that would secure a uniform hour for closing shops. In Montreal there is an Early Closing Association which has done good work in educating the merchants in that city with regard to the needs of the community in this particular. They have ably seconded Mr. Auge, M.L.A., in his efforts to secure the introduction and passage of an Early Closing Act. Mr. Auge gave notice at the last session of the Provincial Parliament of his Bill; but the important fiscal and other measures which could not be delayed prevented the consideration of the Bill in the session of 1892. The good work was kept up, and when Mr. Auge announced his intention of making another effort to secure the passage of the Bill, the Montreal Association did its best to have the Bill properly and suitably framed, and appointed a delegation to go to Quebec to urge the passage of the Bill. Many of the Associations in the Province passed resolutions in its favor, and copies of these were distributed to members of the Legislature. A few weeks ago the Bill was introduced, and when it came up for its second reading Mr. Martineau rose and moved the six months hoist. This was seconded by Mr. Kennedy, and as it was likely to carry, Mr. Auge raised the objection that the Bill was not printed in both languages, and on this technical ground was allowed to withdraw it. This leaves him in a position to reintroduce the Bill during the present sesion if he sees fit; but it is doubtful if it would pass even then. Nevertheless it is to be hoped that enough members can ultimately be secured to support it, to ensure its passage.

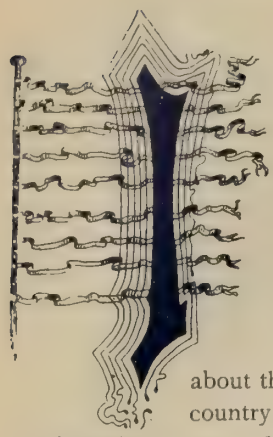
It seems strange, considering the features of the Bill, that the legislators of Quebec cannot be induced to pass it, and leave it to the municipalities to say whether or not they care to have it enforced. The bill as proposed applies only to the larger towns and cities, but other municipalities may pass by-laws to provide similar arrangements, on request to the council of two-thirds of the interested class of traders. It exempts tobacco shops, news depots, hotels and restaurants, and meat and vegetable stalls from its provisions, and grocery stores are to be allowed to keep open until nine o'clock. Other shops shall be closed at seven o'clock in the evening, and remain closed until five o'clock the next morning, except, however, the evenings of Saturday and those preceding public holidays, and also during the last two weeks in December. Goods may be sold in case of death, illness or accident, and apothecarys' shops may sell medicines and surgical instruments. If three-fourths of the merchants, proprietors, tenants, or occupants of shops in these towns, or if three-fourths of the merchants trading in similar products so desire, they may petition the Lieutenant-Governor in Council and he may declare that the Act shall no longer apply to such town or to such a class of merchants.

In Toronto the practice of closing early has obtained very strongly, and hardware clerks have little to complain of in the larger stores. The wholesale houses close the year around at one o'clock on Saturdays. The large retail stores close at six o'clock every evening, and during the summer months at one o'clock on Saturdays. The smaller stores keep open on Saturday evenings until ten o'clock and in some cases on all the evenings during the week. Other classes of retail stores such as groceries and shoe stores closing during one afternoon during the summer months, and the majority of them at six o'clock during every evening of the week except Saturday evening. In Hamilton the Saturday half holiday during the summer months obtains among the larger dry goods stores. Throughout this and other provinces in the larger towns and cities, the larger stores close at six or seven o'clock on every evening except Saturday evening. Looking at this widely spread practice in its various forms, it causes considerable wonderment that a body of legislators, such as the Quebec legislators are supposed to be, should refuse to pass an optional act such as that proposed by Mr. Auge. It is not in advance of public sentiment, if the whole of Canada be considered; nor is it even as advanced as the practice in the leading cities of Ontario, and those of the United States or England.

The great objection to such an act is that it interferes with public liberty. This is not so; it may be interfering with the liberty of a few employers who would work their employees twenty four hours in the day, if it were possible, but in no other way. In fact such an act would be granting liberty to a body of workers, a large portion of the public, who require as much liberty as the law can give them. The employed are always at a disadvantage as compared with the employer with regard to the terms of employment. The lack of such legislation as would tend to place the employed in an equal position with the employers is repressive of liberty, rather than conserving it. It allows a few grasping employers to draw after them the more liberal and better educated employers in upholding long hours, by preventing a universal shorter hour movement. If one man keeps his store open sixteen hours, his neighbor in the same business is obliged to do it in self defence, and thus for one man's foolishness many are punished. Nearly all classes of mechanical laborers work fewer hours now than they did ten years ago; and the manufacturing industries are not ruined. Why then should not all kinds of clerks participate in the benefits of the social change or as it should be termed—social advancement? No employees in the land work longer hours than do the clerks in retail stores. This is due to the lack of combination among them, which is again is due to the fact that they are mostly young; for when a man comes to years of discretion he says to himself that the hours of toil are too many, and he either enters the ranks as a merchant or seeks some other employment. Thus we see very few good men remaining as professional clerks, and their places are taken by boys and girls, among whom combination is not likely to exist. Great credit is due the many employers who refuse to work their clerks sixteen or eighteen hours a day, and who lose a certain amount of trade rather than ruin the health of their helpers; and there is occasion for congratulation that, in spite of the dilatoriness or conservatism of legislators the number of these employers is steadily increasing. It is to be hoped that during the year 1893, a general advance will be witnessed towards a voluntary shortening of the hours of labor of those employed in every kind of trade, and this will be beneficial in raising the standard of worth and merit among these employees. Shorter hours mean just as much business, less expense and brighter, more thoughtful, and more interested employees.

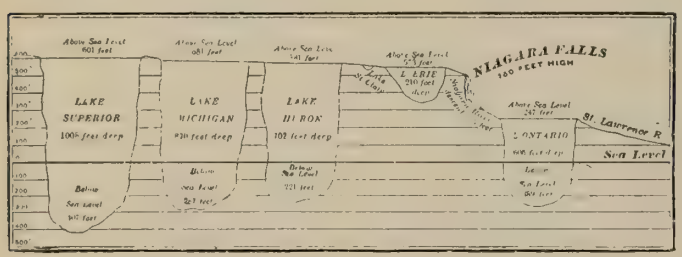
A statement has been compiled showing the value of manufacturing products of the leading countries of the globe. Austria, $1,262,000,000; France, 2,425,000,000; Germany, $2,915,000,000; Great Britain, $4,100,000,000; Russia, $1,815,000,000; United States, $7,215,000,000; other countries, $2,635,000,000; total, $22,370,000,000.

LEVELS OF THE GREAT LAKES.



IT is desirable, even from the more selfish dollars and cents' point of view, that we should possess at least a fair geographical knowledge of our own country and the continent to which we belong. Unfortunately either through dislike of the subject or of imperfect methods of imparting it, the average man and woman of to-day know comparatively little about the geographical character of their own country and much less that of the continent.

Object lessons are calculated to prove the most satisfactory. At the present time no subject is probably receiving more attention from capitalists and commercial men than that of utilizing to better advantage the inland waterway with which nature has so richly blessed this North American continent. In view of this the accompanying cut is at the moment of more than ordinary interest. As will be observed it shows at a glance the depth of water of each of the Great Lakes together with their different heights above the sea level. It was originally produced by an enterprising stove firm, and recently reproduced in Stoves and Hardware Reporter. It puts in a graphic and intelligible form a fact in the physical geography of the lake region not so readily grasped in any other way. It is clear at a glance that



the development of the business interests in the vast region readily accessible to this fresh-water oceanic system must eventually demand a more liberal provision for its necessities. While railroad facilities are now well developed, and while capital is only awaiting the fair promise of reasonable returns on its investment to still further extend them, there is none the less an urgent demand that the way shall be open to navigation for direct communication with the whole world. This will involve the employment of the highest engineering skill, and the expenditure of sums of money that in a single aggregate would probably prove fatal to both the statesman and the budget proposing it, but the region from which the demand will come is an empire, the outlines of which are but dimly visible now. That all its vast commerce must be dependent upon long lines of railroad, and be subject to the expense of reloading to the seaboard, in case of foreign traffic, will not be accepted as a settled fact until every known resource of science has been exhausted to raise such an embargo.

FARM VS. MERCANTILE LIFE.

YOUNG man go cityward. This is the cry that is to-day falling upon the ears of the young men in the rural districts; and numbers of them are obeying.

City life has undoubtedly its advantages. Man is essentially a social being, even if one of our genus does occasionally gather himself up in his own little shell. And it is in the cities and towns that he naturally finds to a larger degree conditions suited to his peculiarities. Amusements are more plentiful, life is given greater variety and educational facilities are better. But great as are these attractions there are others whose magnetic properties are even greater than those enumerated.

Farm work is often considered by those who engage in it as more akin to slavery than any other kind of free labor, while in the mechanical, mercantile and professional pursuits is to be found lighter labor and at the same time better remuneration. In part this may be true, but taken on the whole, farm life seems to possess advantages that make it preferable to life in the centres of populations. One thing at least is certain, the fight for existence is not waged with the same keenness. Take whatever you please, whether it be mechanical, mercantile or professional, there is an incessant struggle always going on. Workingmen form themselves into protective associations and try to keep the supply of labor at least to a point where it will not exceed the demand. The workingmen in the United States have proceeded further in this direction than those of any other country. There, in addition to their own respective powerful organizations, such as the Knights of Labor, for instance, they have what is known as the Alien Labor Law, whose object is to still further strengthen their bands in this respect. Even this powerful measure fails to satisfy. The next step some of them urge is the exclusion altogether of certain classes of emigrants. They have gone this far already in regard to the Chinese, and it would not take much further stretching of conscience to extend its application to the Caucasian race.

The lawyers, the doctors and, in fact, nearly all the professions have their close corporations. Manufacturers and wholesale merchants have their combines. Retailers among whom competition is probably the keenest of all have not got beyond the formation of innocent associations whose influence is more in the direction of enlightenment regarding business methods than in the effort to keep to a minimum the number in their respective trades. It is not because they are any less inclined to create combinations. The difficulty of securing cohesion is what stands in the way.

Farmers, on the other hand, as a class occupy a much more independent position. "A farmer is the freest man on earth," is an expression frequently heard; and there is a good deal of truth in it. When he has a horse, cow, pig, sheep, or a load of grain or hay to sell he has little or no difficulty of finding a purchaser. If the market price for his stock, gain, etc., does not suit him, he can hold it for months until it does, and yet feed sumptuously every day. Imagine the position of the business man, be he hardware or any other merchant who undertook to do this! Why, people would call him crazy and his creditors would close him up. On the other hand, when the farmer withholds his products about the only ones to suffer are the storekeepers to whom he owes money. Yet notwithstanding his favored position he steps outside his own sphere into the domain of the storekeeper and tries to rule in that. Vide Patrons of Industry and grange supply stores.

Farm work at certain seasons of the year is undoubtedly hard and the hours long; but the high tension is not maintained the year round. There are months in the year when his tasks are light and his hours of labor short. And where do we get more real enjoyment than during the winter evenings on a farm!

Then regarding financial success. A statistician has recently estimated that in New York out of every one persons who go

into business ninety-five per cent. fail New York is probably no worse than other large cities. And although this estimate may be far from the mark, it does not take a very close observer to tell you that the proportion of failures to successes in business is large. Take the farmer on the other hand. He needs relatively less capital, and where his land is fair and his methods of farming such as they ought to be, he is successful nearly every time even though he does get an adverse season now and then. But with the tendency of the age to mixed farming even the results of bad harvests are gradually becoming less felt. Then consider the healthy character of farm life. And health, you know, is better than wealth.

No, city life is not all it is cracked up to be; neither is country life as irksome as it is reputed to be. One thing is evident, the inducements held out by the farm are greater than by the store or the professions, and the young men of the country are gradually finding this out.

THE FUTURE OF PLATINUM.

NOTHING is sure in this world. Platinum has been considered one of the indispensables to an electric light, and those who had an interest in it anticipated great things. Their hopes are now at least in some danger of being blasted, an electric light company on the other side having introduced a lamp that contains no platinum.

Since the introduction of the incandescent electric lamp in 1880 the consumption of platinum both on this continent and in Europe has increased enormously, although improvements made from time to time have greatly reduced the quantity used in each lamp. In 1886-7, according to a contemporary, the Edison 16-C. P. lamp contained one grain, and the Sawyer-Mann lamp two grains; at present the Edison lamp contains but one-seventh of a grain, and the new Sawyer-Mann lamp none at all. In England the Edison-Berliner lamp, and in Germany the Siemens-Halske lamp have likewise had the amount of platinum reduced to a minimum, owing, as in this country, to the use of a shorter wire of a smaller diameter. Notwithstanding this, however, the gross amount of platinum used on this continent and in Europe in the manufacture of electric lamps has steadily ncreased from nothing in 1880 to about 55,000 oz. in 1892. If the new Sawyer-Mann lamp should prove to be a success, of which, however, there is yet no proof, it might eventually replace all the other kinds of lamps now in use, and consequently this particular demand for platinum would cease.

On the other hand, however, it is to be observed that all the manufacturers of incandescent lamps have large plants already established, and that the amount of platinum used per lamp has been reduced to a minimum, so much so that its value forms less than five per cent. of the value of the lamp. Consequently it is quite probable that platinum will continue to be used in electric lamps, and that the amount so used will continue to increase with the growth of the industry.

There are, moreover, two other uses for platinum, which are even more important than its use in electric lighting, namely, the construction of stills for the concentration of sulphuric acid and the wires by which artificial teeth are firmly fastened to a plate. The amount used for stills varies widely from year to year, but it has been estimated that the average amount so used during the last few years is about 80,000 oz. The manufacture of sulphuric acid is bound to increase, and although glass concentrating vessels are now being used to some extent, it is believed that this industry will continue to supply a constantly increasing demand for platinum.

For dental purposes platinum will always continue to be used, being the only metal which possesses the required properties of infusibility, ductility and strength. In the United States 35,000 oz. and in England 25,000 oz. are annually used in this industry, and this amount will probably increase at the rate of two or three per cent. per annum.

The other uses of platinum, such as chemists' crucibles, jewelry, plating, etc., consume about 20,000 oz. annually, making the entire consumption about 215,000 oz., or 6,680 kilos. Of this amount from 30 to 40 per cent. is old or scrap platinum, which leaves from 4,000 to 4,676 kilos to be annually supplied by the mines.

For many years the Siberian Urals have supplied the greater part (92 per cent.) of all the platinum used in the world, but it is questionable whether its output can be maintained at its present high level for many years. According to the official statistics of the Russian Department of mines, the output of platinum in that country reached its maximum, 4,400 kilos, in 1887, following which it dropped to 2,700 kilos, and so remained until 1891 when, owing to the abnormally high price of the metal, the production amounted to 4,226 kilos. Many of the old placers are now worked out, and it is believed that the above figure represents the maximum possible output of the country. If, then, the demand should continue to increase, as seems possible, it will be necessary to look for other supplies of the metal. Next to Russia the most important sources of platinum, so far as known, are Columbia, British Columbia and the United States.

At present Columbia produces but 125 kilos of platinum per annum, entirely the result of native washing. The platiniferous area, although of low grade, is, however, quite extensive, and in part suitable for hydraulic mining. A considerable amount of American capital has already been invested there, and it is quite probable that Columbia will become an important producer of the metal. The only platinum deposits of importance in British Columbia are found in the Talameen River. Recently a company has been formed to hydraulic these gravels, but so far the output has been small. The total production of British Columbia is 65 kilos.

In the United States much prospecting has been done to find platinum in paying quantities, but so far without success, and up to the present time all the platinum produced has been incidental to the production of gold from various auriferous gravels in California and Oregon. If the laws prohibiting hydraulic mining in California should be repealed, that State may become a more important producer of platinum.

The inference gathered from the foregoing is that even should the demand for platinum fall off from a source from which great things were expected there will be other fields in which the industry may be extended.

West Virginia has more square miles of coal than Great Britain, Germany and France combined, though it stands fifth in point of annual coal production in the United States.

As indicating the change from iron to steel manufacture, the Shoenberger mill at Pittsburg has reconstructed its 29 furnaces formerly in use for the making of iron, and converted them into rolls for the manufacture of steel. The output of the plant will be increased from 60 to 100 tons daily.



THE RACE FOR WEALTH.

BACK among the early centuries of this Christian era, down into the middle ages even, the aim of the bulk of human kind was glory and renown, which were attained by chivalrous and warlike deeds. Sir Walter Scott's novels, such as Ivanhoe, give us a glimpse of this kind of life. But even among all peoples in all ages there has been a class which sought wealth. The Phœnicians of pre-Christian centuries, and the stirring traders of Northern Italy during the middle ages, were anxious to accumulate wealth. But even the traders thought of something beside mere silver and gold for its own sake ; the age of sentiment was not wholly gone.

But a gradual transformation has taken place. The pursuit of wealth, once a subsidiary part of a man's or a nation's life, has become the one occupation of all. Wealth it is that opens the portals to pleasure, fame and power. The old thirst for glory in war or for renown through feats of prowess is dying slowly dying. It lingers in the minds of trained soldiers and hereditary rulers, but in English-speaking countries at least it has vanished. All are now engaged in the great race for wealth. The change has come and we must accept it as the criterion of a business age, and go forth ourselves into the business arena, there to win the golden crown instead of the laurel ; or else to meet with a defeat which condemns us to a life so miserable that it is inconceivable until it is experienced.

With such an alternative before him, every man turns to the business world for an avenue to success. The philosopher has wisely said that life has given nothing to mortals without labor ; and the man who labors is the only man who is sure of success. Too often the young man covets the "palma sine pulvere," the prize of glory without the dust of the race ; but such covetousness is vain, vain folly. Industry and energy are two great aids in the race. The young man who thinks he can succeed in the business life of to-day without years of hard work, both with body and brain, is going to be sadly disappointed. The Greek philosopher laid down the rule : "In the morning of life, work ; in the mid-day, give counsel ; in the evening, pray." The philosopher of the nineteenth century lays down the rule : In the morning, work ; in the midday, work ; in the evening, work, give counsel and pray.

The people of the American continent lead the world in the race for wealth. They devote their lives more assiduously to the accumulation of colossal fortunes than any other people in the world. There was once a time when the tinge of business unfitted a man for the best society, as the dark tinge under the finger nail now endangers the social chances of a person in some of the Southern States. On the American continent to-day, the fact of being a man of business is a help rather than a hindrance. Wealth opens the doors of society and calls down the favors of the great and the applause of the multitude. We may lament this or not, just as we please. But facts are stubborn things, and here they lie. The young man who starts in life to-day has but one aim—to become rich ; honorably, if possible, but rich anyway.

Truly this great race for wealth has made the world an enterprising one. The thousands of steamships that navigate the river, the lake, and the ocean ; the thousands of locomotives which puff and snort through valley or plain, and over mountain or river ; the ceaseless tick of the electric speaking machine ; the enormous accumulation of machinery in factories ; the great division of labor which this occasions—these and a thousand other enterprises show that this age is essentially a wealth producing age. Invention has reached a height never before known in the history of the world. Modern undertakings are putting to shame even the pyramids of Egypt, the colossus of Rhodes and the hanging gardens of Babylon. But while they show greater inventive power, they show also a refinement in conception. The modern structures lack the bulkiness which was the chief characteristic of ancient structures ; to-day the world's structures are judged by quality, not quantity. Twenty years from now, if electricity continues to be applied at the same advancing speed, we shall have an electric age, and the age of steam shall have vanished. The speed of the race for wealth will then be doubled, if not quadrupled.

THE NEED OF A CANADIAN FAST ATLANTIC SERVICE.

BY P. H. BURTON.

IN the matter of speed, our Canadian steamers have made scarcely any advance since the Parisian was built by the late Sir Hugh Allan some twelve years ago. Had the Knight of Ravenscraig been spared, no doubt he would have kept in the front rank. The consequence is that the great majority of Canadians travel by New York, and although we are only one-twelfth of the population of the United States, it often happens that we furnish one fifth of the passengers travelling on the New York steamers. Having crossed the Atlantic 95 times, I have had opportunities of judging, and I have long felt that the Canadian Atlantic service ought to be equal in speed to any other. We could have as fast and as good steamers as the Teutonic and Majestic, and not spend quite so much money on them, as these are in some respects needlessly elaborate and luxurious in their fittings. Still the fact remains that these steamers pay, and always attract the best travel. The loss to Canada is perhaps not so much that Canadians travel so much by New York, but that the travel from Britain and the Continent goes that way also, and the most of them think of Canada as a place something like Norway—no doubt a good country but cold—and we have fostered this idea in our illustrated papers by showing what beautiful ice palaces, toboggon slides, sleighing, skating, and all sorts of winter sports we have, and saying little or nothing of our immense wheat fields, grazing districts, coal and iron mines, nickel, copper, phosphate and other deposits. Our great need is the right class of immigrants and capitalists, but both these classes are drawn via New York by better Atlantic steamers, and Canada is "side-tracked."

We have in the C. P. R. undoubtedly the best trans-continental railway in America, and the fuss they make in the States about its competition is the very highest compliment that could be paid to it. The C. P. R steamers on the Pacific are undoubtedly the best on that ocean, and now we must have the connecting link in a first class fast Atlantic service. Who will undertake the task ? I think it would be much the best if the service were undertaken jointly by the C. P. R. and G. T. R. representing the railway interests of Canada, and the Allans and Dominion Steamship Companies representing the shipping interests. Let

these latter two build two Steamers each, of a speed of 20 knots, give them the mails, and a subsidy sufficient to make them pay 6 per cent. annually to the owners clear of all expenses and repairs. It would be much better to harmonise the existing interests than start a new concern if it can be done, but if not, give us a new concern. But if the four companies could agree on joint action they could so improve the entire service for passengers, freight produce and cattle as not only to make it very profitable to themselves, but also very advantageous to all the travelling, shipping, and produce people in the country and benefit indirectly every farmer, artisan and wage earner in the Dominion. Europe is our market where we want to sell our produce, and place it there in the most direct and economical way, and make it known as Canadian produce sent in Canadian steamers, and in return we want immigrants and capitalists to come to Canada in Canadian steamers, without being led off in "Statia." The Government may rest assured that the same patriotism that has commended the expenditures made on our railways and canals, will also commend and support a liberal expenditure to establish a first class Atlantic service which will not only satisfy Canadians and Europeans, but also from our much shorter sea passage, turn the tables on the Yanks, and bring the Chicago and western travel via Canada. We have the position, let us make the best use of it, and neither look to New York or Washington but put Canada first and foremost.

ON THE INJUSTICES OF THE ASSESSMENT OF PERSONALTY.

BY PAUL CAMPBELL.

THE taking of a citizen's property for public purposes is next to the power of taking life, or the holding of one's person, the most important function a government exercises. A legislature in delegating this power of taxation to municipalities should do so with the greatest caution and prudence. In enacting laws for the levying of municipal taxes, the government should base their mode of assessment on some principle of justice to all. In Ontario no such principle is carried out and injustice is done.

Municipal assessment in its application to personalty is crude and unjust and full of incongruities and absurdities. It throws the incidence of taxation on the very capital (the capital employed in manufacture and commerce) which should be the most lightly taxed, the capital that employs labor, the capital that builds up the manufacture of a country and develops its twin sister commerce.

Local taxation should be: Firstly, either based on wealth or the ability of the citizen to pay; or, secondly, it should be considered as a tribute due to the municipality for protection, and should be levied equally and uniformly on all property of the same kind.

Now municipal personalty assessment is not levied equally on wealth, as the capital of one class of citizens—the holders of stocks, mortgages and other securities—are taxed only on their incomes (if taxed at all), whereas the unfortunate merchant or manufacturer after paying on his realty is further taxed on the entire capital in his business. Justice and policy demand that the active capital employing labor in commerce and manufacture should not be taxed any more than the capital of the retired and wealthy invested in stocks, mortgages, etc.

If taxation is based on property as a tribute for protection it should be as stated levied equally and uniformly upon all property of the same kind; but what do we find? We find the stock of one merchant paying a heavy tax because he honestly admits having capital, whereas the stock of the dishonest is entirely free from taxation, both obtaining alike the same protections afforded by the municipality, such as fire, gas, water, police, etc.

The merchant and manufacturer demand fair play. They care not particularly what mode is adopted as long as they are treated fairly and equitably.

The Commission appointed by the Ontario Government to take written evidence regarding municipal taxation consists of J. S. Cartwright, Q.C., Hon. T. W. Anglin, and E. Saunders, Esq., Secretary.

Any facts bearing upon the subject can be sent in writing to the Secretary, addressed Parliament Buildings, Toronto.

THE BOOMER AND THE GRUMBLER.

THERE are two classes of merchants—and by merchants is meant all who are engaged in mercantile pursuits, manufacturer, jobber, and retailer—who represent extreme types, both of which do harm, but one more than the other.

The Boomer is a man who is always doing a huge business, laying large plans, building towering air castles, and disturbing things generally. He cannot do much harm, because people know him by sight, and his splurging speeches have no very great effect, but in some cases he succeeds in loading the wholesale or retail markets with unsaleable goods, and financial damage is done. Often he is a shark who is working up a joint stock company for his own advantage; but such a man is a boomer by calm, malicious forethought, while the one mentioned before is more natural aud his faults are unintentional.

But turning to the other side, the extreme type is the Grumbler—that wrinkle-browed, irritable, dyspeptic individual whom everyone wishes to avoid, but who is always cropping up to jar one's happy feelings and hopeful plans. With him the weather is always so unsuitable that business is being ruined. He cannot find a decent clerk or workman whom he can trust to properly carry out a piece of work which he wants done. If he is a manufacturer, the wholesalers cannot handle his goods properly, and to him they are a miserable set. If he is a wholesaler, he will go around with a funereal smile on his face and tell everybody that the country is going to the dogs; that business is entirely ruined by the tariff and would be worse if free trade were in vogue; that Canadian manufacturers are worse than useless, and that there isn't a decent piece of goods turned out from a Canadian mill. A man who goes around with such talk as this should be drummed out of the community, for misery is as contagious as joy, hope and enthusiasm. Moreover, it makes matters a hundredfold worse to have a few such men in the mercantile ranks, because they seriously retard the wheels of commerce. They throw cold water on the warm anticipations of new manufacturers, or of young and enterprising business men who desire to start out on new lines. What this country needs at present is a whole-hearted enthusiasm which will maintain the fact that, tariff or no tariff, Canadian manufacturing industries can be and will be developed; that Canadian wholesale merchants can sell goods as cheaply and do it as efficiently as the men who frequent Canadian markets from foreign countries; and that Canadian retail merchants are capable of handling all meritorious goods which are placed in their way.

HINTS ABOUT INVENTORY.

"Now count thy gains, and strike
A line across the debit side of life."

THE TIME to prepare for taking inventory is just after completing the last one. That is, a merchant should have in his mind the coming end of the year for its start and see to it that goods which are slow or damaged are not in stock when inventory actually takes place. Make it a point to dispose of such goods at any sacrifice rather than continue to inventory them year after year, with a loss of interest and value which is perhaps not apparent but none the less real, urges D. T. Mallett in Ideas for Hardware Merchants.

The proper method of pricing goods at inventory is to enter them at what they cost if price has advanced, or at present market rates if cost has decreased. This method does not give the actual present worth, but it determines the amount of profit made during the year which is the principal object sought. The most convenient way is to take down the stock on separate sheets of paper numbered numerically and have these sheets priced and extended by the book-keeper as fast as filled to save time in arriving at the result.

The fixtures in a store should be subject each year to a per cent. of discount equal to an amount which will in ten years cover their cost. When taking inventory have at hand a "Want Book" in which to note any articles which are needed, and also keep a list of articles which you come across which need particular pushing to reduce stock. The incidental value of taking a yearly or semi-yearly inventory is to be found in the opportunity afforded for straightening out, and assorting particular lines of goods and a general review and examination of the entire stock. Contact with the goods themselves is very necessary to the real merchant.

When taking inventory, do not favor yourself, rather cut off all doubtful goods, and deduct plenty of margin for old or poor selling articles to allow for some profit on these wares, when you sell them at a reduced price the coming year. In taking the inventory the tendency is of course rather to skip some goods through oversight, and it is seldom that the same articles are entered twice, but some caution needs to be exercised to prevent mistakes of either kind. It is a good plan to indicate the divisions of the shelving, counters, and show cases on the sheets to render it an easy matter to refer to any article which may be on the inventory. If you date your inventory say January 1st and commence say Dec. 26th, you will of course enter your cash and book accounts as they stand at the close of business Dec. 31st.

You will keep account of the cost of articles sold previous to January 1st, which have been inventoried and deduct them from the inventory. After Dec. 31st, you will keep account of the cost of articles sold which have not been inventoried and add them to the inventory.

Do not allow the store to become upset and disarranged while taking stock but put everything back into its place as you proceed. When the stock has been taken down complete on the sheets, have them copied into a book and the footings compared to insure accuracy.

Index the contents of your inventory book for convenience during the coming year. It is a tedious and often disagreeable task to take inventory, but if well done one is well repaid in the satisfaction of knowing—not guessing—how the business is progressing. When you hold the completed inventory in your hand it will, like the mariner's compass, guide you in your future operations, and should be a practical test of the methods employed to render your business successful, or otherwise.

"Now make some fresh resolves;
But first—resolve to keep them."

THE EXACTING NATURE OF BUSINESS.

BUSINESS is like a woman. It demands attention. Stick to it and it will stick to you. Grow passive or devote more attention than you should to anything outside your business and it will drift away from you.

The very nature of his business tends to develop in the hardware merchant those sporting proclivities that are present to a more or less extent in every one of us. And here is where hardware merchants sometimes fail. Some of their customers are going off duck shooting, hunting deer or other game, and a pressing invitation to accompany them is often hard to resist. "All work and no play makes Jack a dull boy." And the merchant who goes from bed to shop and from shop to bed becomes sordid, unfitted for business, and is soon outstripped by his more wide-awake competitor in the race for patronage. At the same time a man must be governed by circumstances in deciding whether he shall or shall not accept an invitation to join a hunting party, particularly as these excursions often extend into one or more weeks.

We have in mind at the moment a man who, although he had one of the most promising of country hardware businesses, ultimately failed, largely owing to this fact. His store was in a live village. It was large, built specially and with all the necessary appurtenances for doing an extensive hardware business. He possessed a moderately good capital and, besides, had wealthy and influential friends at his back. The stock was well assorted and well displayed, for the proprietor was a qualified hardware man, being possessed of both country and city experience, and in addition to this his manner was most agreeable. In a word, his was the model country hardware store, and taking into consideration the size of the town, the best of the kind we have ever seen.

Under such favorable conditions it was not to be wondered at that a large and lucrative business was soon worked up. But the merchant in question was handy with the gun, and, what was worse, he seemingly loved it, next to his wife and children, above everything else. Some would probably have said that the gun occupied the very first place in his affections. He certainly thought more of it than he did his business, and when he should have been near his family he was often far away shooting deer or lying in wait for ducks.

When away on these trips he left his store to the tender mercies of a youth who, while he did his best, could not fill the place of the merchant himself. On such occasions this and that article would naturally get out of stock. Then customers began to drop off, and, what did not at all tend to assist him, more competitors appeared on the scene. But these things were apparently unseen by the sport-loving hardware man, for he became seemingly more than ever absorbed in his pastime. Eventually he lost his credit, and finally his relatives refused to any longer come to his rescue. He did not actually go so far as to assign, but it was next door to it. He was compelled to sell out his

business, and to-day he is seemingly without a settled purpose in life. Now he is working at one thing and then at another, but never very long at anything.

Others there are whose experience has been similar. It has not always been an inordinate love of sport that has detracted their attention from business. Not infrequently it is the social glass, and these two—excess in sport and in drink—often go hand in hand.

The experienced man and the man with at least a fair amount of capital is pretty sure to succeed in business if, in addition to the possession of these qualifications he gives due attention to his business. Capital, experience, and attention are necessary factors to success in business, and he who launches forth without all three is like an imperfect piece of machinery set to perform an important work.

CHARCOAL PIG IRON.

A SPECIAL report on the manufacture of charcoal pig iron in the United States has been prepared by Dr. Wm. M. Sweet, special agent, and issued by the Census Bureau. The report declares that notwithstanding the competition incident to the manufacture of steel and the lower priced pig iron made with anthracite coal and bituminous coal and coke, the charcoal pig iron industry retains its importance, especially in the States of Michigan and Wisconsin and other localities where extensive deposits of iron ore and vast tracts of woodland, with a total lack of mineral fuel, favor the development of this industry. In 1880 there were 223 charcoal blast furnace establishments in the United States, which reported an invested capital of $27,909,919. The hands employed numbered 16,900, receiving wages during the year amounting to $4,143,551. The total cost of materials was $7,403,531, and the total value of charcoal pig iron and other products was $12,575,996. The quantity of pig iron produced was 435,018 tons of 2,000 pounds. In 1890 the number of establishments engaged in the manufacture of charcoal pig iron was 119, the total capital invested being $20,068,715. These works employed 3,314 hands, paid $1,205,061 in wages, and consumed materials costing $8,396,130, producing charcoal pig iron and other manufactures valued at $11,985,103. The quantity of pig iron produced was 664,497 tons of 2,000 pounds.

While the figures show a decline in values, the actual production has shown a considerable growth during the past decade, the production increasing from 435,018 net tons in 1880 to 664,497 net tons in 1890, or 52.75 per cent. The decline shown in the number of establishments arises from the fact that many of the small charcoal furnaces included in the presentation for 1880 have been abandoned and fewer but much larger and better equipped stacks erected in locations more favorably situated for securing an abundance of low-priced materials. The apparent decrease in capital invested, hands employed and wages paid is caused by the different methods pursued in compiling the data for the two census periods. The statistics for 1880 include not only the investment in blast furnace plants and macinery and the labor directly employed in pig iron production, but also the capital invested, hands employed and wages paid in mining and other operations conducted in connection with these works. Notwithstanding this fact, the cost of the materials reported was apparently the cost of the furnace. There is a duplication to this extent in the cost of production, and this accounts in a measure for the inconsistencies in the figures published by the Tenth Census. In order that the census for 1890, so far as practicable, should show the statistics of the manufacture of pig iron seperate from other industrial operations the statistics for that year relating to iron ore mining, limestone quarrying, charcoal burning and other similar industries dependent on the manufacture of pig iron have been eliminated from the tabular statements contained in this report, this data being included in the statistics of other branches of census investigation.

The distribution of the furnace stacks by States with their daily capacity is shown in the following table:

	No. of completed furnace stacks.		Total daily capacity.*	
States and Territories.	1890.	1880.	1890.	1880.
Alabama	14	10	606	159
Connecticut	9	8	129	91
Georgia	3	8	84	69
Indiana	.	1	..	15
Kentucky	1	18	17	205
Maine	1	1	18	18
Maryland	7	14	112	133
Massachusetts	4	5	55	53
Michigan	26	25	1,216	709
Minnesota	.	1	..	40
Missouri	3	9	120	249
New York	9	15	166	172
North Carolina	1	7	15	39
Ohio	11	33	134	434
Oregon	1	1	42	12
Pennsylvania	15	36	179	242
Tennessee	7	16	193	165
Texas	3	1	130	10
Utah	.	2	..	18
Vermont	.	1	..	11
Virginia	18	24	160	165
Washington	1	..	30	..
West Virginia	.	5	..	29
Wisconsin	6	11	377	288
Total	140	252	3,783	3,326

*Tons of 2,000 pounds.

The character of the product in both 1890 and 1880 is shown in the following:

	1890		1800	
	Tons.	Value.	Tons.	Value.
Hot or warm blast charcoal pig iron	627,661	$11,238,239	355,405	$10,080,581
Cold blast charcoal pig iron	36,836	714,241	79,613	2,393,175
Castings	204	4,880	300	14,988
Value of all other products	....	27,473	....	87,252
Total	664,701	$11,985,103	435,318	$12,575,996

The new electrical voting machine was used in two town elections in the State of New York recently with apparent success. The average time used by the voters was twenty seconds, and a mixed ticket was recorded in forty seconds. It is said a blind person required no more time than others.

HOW TWO HARDWARE DRUMMERS GOT WIVES.

WRITTEN FOR HARDWARE BY W. L. E.

"Say, Charley, how the deuce came Bob Merrill to strike it so rich?"

The interrogator was my old friend Tom Lewis. Tom was visiting Toronto after a five years' absence. For years he and I travelled for rival Toronto hardware houses. On the train, in the hotels or when in the city we were bosom friends, but when we were competiting for an order we knew not each other. Sometimes he euchred me and occasionally I turned the tables on him. And the one who came out second best had usually to lose the price of a bottle of beer in addition to a sale.

Well, a little more than six years ago, Tom received a tempting offer to take in the Western States for a Chicago house. As there was no alien labor law in those days he accepted, and although we corresponded regularly this was the first time I had set my eyes upon him since his departure.

The somewhat abrupt interrogation of his that comprises the opening paragraph was dropped as we stepped outside one of the leading wholesale hardware houses in the city of Toronto.

It would not be good taste to specify the actual one. That would probably cause someone to bluish. Our mission there had been to pay a fraternal visit to the Bob Merrill whose name had been associated with the question put to me, and who at one time had also been a knight of the gripsack.

"Well, old man," I replied, as I felt a blush creeping over my features, for the warm blood will occasionally peep through the thick skin of even a commercial's face when there's a girl in the case, as there was in this, "I can answer your question, but the answering of it will give you the laugh on me."

"Oh, pshaw! don't let that stand in the way, you didn't think much of that when we were on the road together. Go ahead, old man," he added, as he heavily clapped his hand on my shoulder.

By this time we had reached the Queen's hotel. It was a warm day in August, and after we had taken something—me to create nerve and he because I suggested it—we sat down beneath the shade of the balcony, tilted back our chairs, lit our cigars, and then I proceeded to answer his question. And, gentle reader, if you have the patience, I'll relate to you just what I told my friend Tom, now that it is no longer a secret.

"Well, old boy, if you demand it I suppose I must tell you how Bob obtained a partnership in the firm and how he came to marry an heiress," I leisurely began, chasing with a puff of Havana smoke a too inquisitive fly. "Two summers ago Bob, Fred German and your humble servant spent our holidays at Grimsby Park. Nothing would do but that we should camp out in true primative style. 'We can always have a house to shelter us; let's try a tent,' was our unanimous cry. But to the point. Well we pitched our tent on a shady knoll overlooking the lake.

But, by-the-bye, Tom, you may wonder what persuaded gay boys like us to spend our vacation at Grimsby. Well, to tell you the truth, it wasn't Grimsby that was the attraction at least for two of us, that was Bob and I. The attraction was Blanche Tyrell who was staying with an uncle, reported to be very rich, although unknown to each other at the time, we both were in love with her. Anyhow, that is I didn't know he was, althoughit has since dawned on me that I sometimes felt a little jealous of him when we used to call on her, often together, at her father's home in Jarvis street.

We had not been more than a week at the Park, however, before I discovered where his affections lay. Grimsby, you know, is favorably situated for love-making. And Bob and I were ever attending Blanche. Whether it was climbing the mountain, strolling through the fields or woods gathering flowers, or boating, Bob and I were her ever present attendants. As far as I could gather she bestowed her smiles no more liberally on Merrill than on myself. At last I grew desperate, and determed by some means to ascertain my fate. But there was the difficulty of getting Blanche alone. I laid several plans, but each failed at the critical moment. I did once or twice take her off for a walk alone, but as sure as eggs somebody would join us before we got far.

We had been at the Park nearly two weeks and on the morrow I was to return to business. With Bob it was not so imperative. In fact he was without a situation, the firm he had been with having failed some weeks previously. When I awoke that morning I decided upon making a bold attempt to learn that day if Blanche cared for me. I planned to see her as soon after breakfast as possible and try and arrange for a stroll or boat ride alone with her.

I guess it was about ten o'clock when I called at her uncle's cottage. She was not well, they told me. Was suffering from a headache and was laying down in an upstairs room. I was told the same in the afternoon. The day was hot and sultry, and when the wind is blowing from the south Grimsby Park is like an oven. On the plea of having a headache—although heartache it was, as you may guess, old man—I lolled about on the grass beneath the trees in sight of the uncle's cottage.

The sun was getting down well towards the mountains behind Burlington, when I noticed Blanche pass out of the front door and take a seat in an easy chair beneath the verandah. In a few moments I was by her side, but we were just as quickly joined by her aunt, who explained that her neice had slept most of the afternoon and now felt much relieved.

I told Blanche I was going back to Toronto on the following day. Would she honor me by taking a ramble through the woods that evening, or allow me to take her for a row alone? I had something imporfant I wished to consult her about. I tried not to appear serious, but I fancy the attempt to hide my feelings was weak. Whether she read my thoughts or not I cannot say. I fancy she did. Anyhow, she merrily tossed herhead and remarked, with a laugh, as she picked up a fan that was lying on a chair by her side:

"Of course I don't know what you wish to consult me about.

Besides, I don't think my advice would prove of any value to you. But such as I have I'll give unto thee," she added with another laugh. "But, by-the-bye, what is to hinder you from telling me now?" she remarked on second thought, as her aunt left us and entered the cottage.

It was one of what they call the "big" days at the Park. Crowds of people were continually brushing past us, and courtship under such conditions would be difficult indeed. So I immediately replied that the story was too long to tell just then.

Then she raised another obstacle. The young people on the grounds were getting up a concert. She had promised to give a solo and take part in a duet. She had arranged to meet with some of the others for practice that night, and it was at her suggestion that it was so arranged, so she could not well absent herself. It would be over by nine o'clock. After that hour she would be at my service. Would that do?

Of course I agreed. What else could I do? When I got back to our tent Bob and Fred were waiting supper for me. They wanted to know what I had been doing all day.

"Oh, just laying around trying to read, but the weather was even too warm for that. But, say, boys, what are you going to do to-night?" I added, turning the conversation and at the same time throwing out a feeler.

"I'm going to join a few old friends of mine who are spending the night at the hotel in a game of cards," quickly rejoined Fred German.

Bob Merrill was mum as an oyster and pretended to be interested in the antics of a chipmunk that was in the act of carrying off a crust for its evening meal.

"What are you going to do, Bob?" I queried.

"Do what?" he with affected innocence replied.

"Why, to-night, of course," I said, somewhat testily. "Didn't you hear what we were talking about?"

"Well, there is nothing to get annoyed about. If you want to know so bad, why I'm going to take some of the girls out for a row he rejoined."

"Some of the girls," I said to myself. "I guess who the some girls are."

"Here was a chance that after all my plans would be knocked on the head," I thought. And so, under pretence of chasing the chipmunk, I jumped from the table and ran towards the tree, up which I had seen the little creature run a few minutes before. Just then another idea struck me, and Fred at the moment joining me I said:

"Say, old fellow, I'm in a dilemma and I want your assistance. You know I am going away to-morrow. And I have a special engagement for to-night. Now I have reason to believe that Bob has plans on hand which will seriously interfere with mine. What I want to do is to keep him away; and I want your help. What I propose to do is this: You suggest that as there are so many strangers on the grounds, and as we caught a fellow coming out of the tent the other night with some of our clothing under his arm, that one of us remain around the tent all evening. To decide who shall stay we'll toss up. Of course I'll object to even this at first on the plea that as it is my last night on the grounds I should be exempt. Then at last I'll come around again and agree to toss up, the odd man to go on duty, you and I to turn up heads every time, do you see?"

It was agreed. And our plan worked like a charm. Bob, after objecting a little, finally agreed, and on the first toss was elected to keep his eye on the tent.

As soon as it was dark I wended my way to a little building they call the Boy's Tabernacle, where the practice was to have been held. Judge of my amazement when I reached the place to find it in darkness, except for the light from a distant electric light that stole in through one of the windows. I enquired of the people at one of the cottages if they had heard any singing in the Tabernacle. There had been, they informed me, a little about an hour before and that the young people who were practicing had got through, my informant gathered from the conversation she over heard, much earlier than was expected. You can imagine old man my feelings.

By this time big lowering thunderclouds were beginning to thrust their heads above the horizon encircling the lake, while away across the waters to the north, to all appearance in the neighborhood of Toronto, could be seen the incessant play of lightning flashes wriggling about like hundreds of fiery serpents. One almost imagined that he heard them hiss.

The moon overhead looked like a big ball of fire set in the bright blue bottom of an enormous inverted vessel, the gathering clouds representing the sides. You may think it strange for a fellow to notice such things under the circumstances. But the scene was so awful and yet so grand, that as I wended my way along the heights overlooking the lake even the thought of her who was uppermost in my mind was not sufficient to shut it out from my gaze.

I had traversed probably one-third of the park front when suddenly I heard the scream of a woman from the direction of the lake. Rushing closer to the edge of the bank I hastily scanned the surface of the water. Away out, about one hundred yards from the shore and a short distance to the west from where I was standing I discovered a dark object. In a moment I was scrambling down the bank. I threw off my coat and kicked off my shoes as I ran. I plunged into the water and struck out for the object I had observed. Just then I noticed another swimmer some distance in front of me and heading in the same direction.

I have won several prizes for swimming in my day, but I'll bet I never made such good time as I did that night. As I drew near I saw what appeared to be two women clinging to an upturned boat. Just as the swimmer ahead of me was almost within reach of them one of the women loosened her grasp and disappeared beneath the surface. The man in front of me dived almost simultaneously. A few more strokes and I was alongside the woman yet clinging to the boat, but it was none too soon, for almost the moment I grasped her she lost consciousness. Just at the same time Bob Merrill—for he it was who had swam out ahead of me—rose to the surface with—well, Blanche Tyrell in his arms, but of course unconscious.

Fortunately we were quickly surrounded by a number of boats, and we were rescued from our perilous position. When we reached the shore willing hands carried the unconscious girls into the cottage which Blanche left so full of life an hour or so before. A couple of doctors were soon in attendance, but it was a long time before Blanche and her companion were restored to consciousness. The first thing she did on regaining her senses was to ask if Bob was all right, she having recognized him the moment she lost her grasp of the boat. Her condition, however, was considered so critical that her father was telegraphed for, and he arrived from Toronto next morning by the first train. Blanche was his only child and he almost worshipped her. He was naturally profuse in his thanks to Bob and offered him a cheque for a thousand dollars, little as he could afford to do it, for his circumstances were only just comfortable. Bob of course

BEST VALUE AT MODERATE PRICES





DUMOULIN'S STANDARD QUALITY

.. GUNS, RIFLES AND REVOLVERS ..

Importation Orders Booked Now by

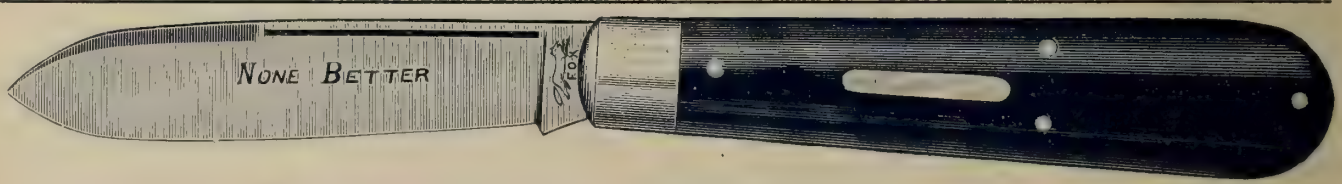
PAINCHAUD, SQUIRE & CO., AGENTS

MONTREAL

We Sell to the Trade Only. Illustrated List now Ready.



THE FOX CUTLERY MANUFACTURING CO.



HIGH . CLASS RAZORS AND SCISSORS . POCKET . . TABLE AND . BUTCHERS' KNIVES . .





refused. Shortly after Mr. Tyrell used his influence to get him a situation in the very firm of which he is to-day a partner.

Well, just twelve months to the day after the eventful night there was a double wedding. Bob Merrrill married Blanche Tyrell, and I was taken for better or for worse by Ethel Sinclair. Ethel was a cousin to Blanche, and was no other than the girl I had saved from a watery grave. She had only arrived at the Park to pay a visit a couple of hours before the accident. Both being spirited girls they had secured a frail canoe and had paddled out to enjoy the night breezes and to watch the approaching storm.

About a year ago Blanche's old uncle died leaving her nearly the whole of his enormous fortune. Bob was at that time still an ordinary hardware drummer, and Blanche wanted him to come off the road and take things easy for the rest of his days. Bob, you know, is one of those fellows we seldom meet. He loves work and wouldn't be happy unless he had something to occupy his time. He was willing enough to go off the road, but as for living a life of ease, that wasn't in his line; and he told his wife so.

Just at this time one of the partners in the firm for which Bob was travelling announced his intention to dispose of his interest, ill-health making it necessary that he should be relieved of the cares of business. This coming to the ears of Mr. Tyrell, he suggested to his daughter that it was just the chance for her to invest some of her money in a well-established and good paying business.

"Purchase the interest, my dear," said he, "and hand it over to your husband. Bob is such a scrupulous fellow that I suppose he will object. But leave the matter in my hands and I will arrange it."

Well, it was left in his hands and it was arranged satisfactorily. And Bob has been a partner now for some six months, and I understand that the infusion of the new and younger blood is already showing good results in both the volume of business and in the ratio of profits.

There, now I have told you how Bob Merrill came to strike it so rich. "All's well that ends well." If Bob hadn't been watching the tent that night he wouldn't probably have seen the two girls trying to navigate the canoe and thus been on hand in time to have rescued his wife that now is. And I—well, I wouldn't have got the best little wife in the world.

NICKEL FOR SUBSIDIARY COINAGE.

WHAT is called a subsidiary coinage with the British mint authorities and minor coinage by the American mint authorities, includes any kind of coin other than gold or silver and of a value less than ten cents.

This subsidiary coinage the world over is enormous in volume, both as to actual value and as to quantity of metal employed. The subdiary coinage of China and India alone is, when added up, something that will surprise even authorities on finance, and, when that of Europe and America is taken into consideration, it is easily seen an immense market would be opened to Canadian nickel if these countries could be induced to adopt it as a subsidiary coinage.

The great trading companies now operating in Africa are having immense sums of copper money minted for use among the natives in that newly opened up territory. Nickel is by all odds the best adapted for this minor circulation. It is of the same specific gravity as copper, it is silvery white, non-corrodable, and has no offensive odor like copper.

So far the nickel used in coinage carries 75 per cent. of copper and only 25 per cent. of nickel. But there is every reason for believing that nickel can be mined and sold at 25 cents a pound, and yet give a large profit, though the present ruling price is double that sum. This being the case, it will be found profitable for the different countries to use nickel for all values less than ten cents, and to use pure nickel instead of the present alloy. Already Germany has a small nickel coinage which is to be increased. So has Bulgaria, Servia, Egypt, Brazil, Mexico; and a proposition is now before the French mint for a pure nickel issue, the French, of course, having nickel mines in New Caledonia.

The practical point of Mr. Maclean's motion in the House of Commons the other day was to induce the Canadian Government to issue a nickel coinage here for all pieces less than 10 cents, made from pure nickel and, having established its usefulness, to set Sir Charles Tupper, the Canadian High Commissioner in London, at the task of inducing the British Government to adopt it there. Once England adopted the new nickel coinage all the world would likely follow. As a matter of fact the copper used in the British coinage is mostly American, and Mr. Maclean contends that it is only just that a Canadian product should be given a show.

Some of our contemporaries infer that because the House adopted Mr. McLean's motion that forthwith copper is to give place to nickel as a subsidiary coinage. This is a mistake. All that the adoption of that motion means is that the House has placed itself on record as preferring nickel to copper coinage, and intimating to the Minister of Finance that when he next issues a subsidiary coinage that Parliament would prefer that it be made of nickel instead of copper. But it is entirely optional with him whether he will comply or not.

NOT ON LODGE BUSINESS.

"If I am not mistaken," said the caller, removing his hat deferently, "I am in the presence of the grand and supremely exalted potentate of the Ancient and Honorable Order of Muckamucks?"

"You are, sir," answered the man at the desk, with an affable smile.

"Pardon the intrusion," said the caller, in the same manner, "and the familiarity with which I address you; but you spell your name S-m-y-t-h-e, do you not?"

"Yes, sir."

"And your initials, I think I am correct in saying are K. W.?"

"That is correct."

Thank you, Mr. Smythe. My name is Higgins—H-i-g-g-i-n-s—Higgins. I am glad to find you in, Mr. Smythe, after having made several previous attempts, without success, to make your acquaintance. I have the honor," he continued, putting his hat on briskly and taking a bundle of papers from his pocket, "to be the collector for the firm of Spotcash & Co., dealers in hardware. If it is convenient, Mr. Smythe, you will oblige me very much by settling a little bill of 75 cents that has been running for six months and save me the trouble of having to climb those doggoned beastly, rickety, filthy, old stairs again. Seventy-five cents, Smythe. Come down."

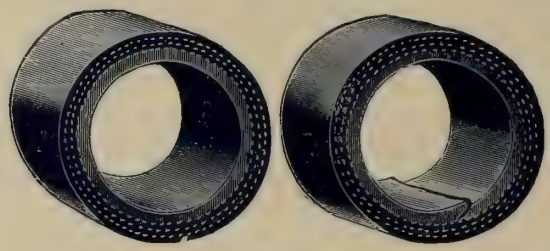
Smythe came down.

CANADIAN RUBBER CO.

OF MONTREAL,

COR. FRONT AND YONGE STS.

New Seamless Tube Old Lapped Tube



IMPORTANT

TORONTO, March, 1893.

Dear Sir,---It having been brought to our notice that competitors are trying to show by reference to our catalogue (page 13), that we do not consider "SEAMLESS TUBE" hose as good as ordinary "Lapped Tube." We would say, this catalogue was issued two or three years ago when there was a so-called "SEAMLESS TUBE" hose being made which was not a success. We have since purchased at great expense the improved machinery for the manufacture of "SEAMLESS TUBE" hose of which we hold the patent right for Canada. This hose is far superior in every way to the old style, and it is only a matter of time until "Lapped Tube" will be a thing of the past.

The best is the cheapest. Send in your orders and we will give them best attention.



Yours truly,

CANADIAN RUBBER CO., OF MONTREAL.

J. H. WALKER, Manager.



RETAIL ADVERTISING.

CAPITAL, experience, industry, integrity, and push are acknowledged essentials to success in business. But there is another, and this is advertising. It has not always been recognized as such. And even to-day there are those among whom a little missionary work is necessary. Advertising, to their minds, is like a fifth wheel to a coach, which on suffrance is allowed to remain, but whose absence would not be regretted. This class of business men are gradually getting less, and as they fall out of the race others—and those who recognize advertising as one of the essentials to success—take their place.

Advertising and push may be said to be twins. But like the famous Siamese twins, the one without the other is of little use. Advertising, it is sure, is a poor helpless thing unless it has the man of push behind it, while—provided it is possible to find such a thing—push without advertising is like a pneumatic-tired wheel uninflated. It may help to keep a business going just as antiquated machinery will keep an ocean vessel moving. But that is all.

An advertisement may be said to have a three-fold mission: It tells people where they can find what they want; it reveals to them what they want; it awakens their curiosity. The second and last offices are the most imported, and sub-divided again, we would say that the advertiser who creates curiosity is the most successful. A novel to be successful must be interesting. So with an advertisement. People as a rule do not want to be told where they can buy spades and shovels, nails and screws, jackknives and carvingknives, shotguns and rifles, pistols and popguns. They know they can get all these at the hardware store. Nor do they want to know every article that the hardware man has in stock, as the country merchant did who published this advertisement in his local paper:

HARDWARE.

I beg to call Special Attention to my stock of hardware which is now complete in every line, and what I have not got is not worth having. Acme Spring Skates. Cross-cut Saws from 40 cts. per foot up. Axe Handles, Table Cutlery, Silverware, and Granite Enamel Tea Pots. Building Hardware, Glass all sizes. Ready-mixed Paints all shades. Grain Scoops, 5 dozens just received. One ton Grindstones. Fifty dozens Cattle Chains cheap. Plough Lines, eight different kinds. Pick Axes, Logging Chains, Mink and Beaver Traps, four different kinds. Apple Pearers, Threshers, Lace Leather, Babbit Metal, Belting, Gauge Glasses, Globe Valves, Check Valves, Napa Buck Mitts, Copper Rivets, Sleigh Bells, Winchester and Colts Rifles, Breech-loading Shot Guns, Powder, Shot, Caps, and all sizes of Cartridges, at rock bottom prices. Call and examine before buying elsewhere.

That advertisement was probably not read by half a dozen people. Even those who had nothing to do could scarcely become interested enough to wade through it. The first essential to an advertisement is attractiveness. No matter what article is to be advertised. The next thing is to advertise something. "Go to Smith's for your Hardware." This is how some merchants spend their money in advertising. As far as usefulness is concerned, it is even less so than in the instance where the advertiser tries to enumerate every article in his store. In the latter instance the occasional few who possess the patience to read it through may be reminded of something they need. In the former instance they are being continually reminded of Smith's hardware store. In large cities it may serve the purpose of informing the public that said Smith is still in business; but in the ordinary towns and villages of the country it is not necessary to do this. Everybody knows Smith's place. The aim should be to advertise in a "catchy" manner such goods as are seasonable or upon which it is desired to create a run. At the moment people who have garden plots—and in the country places who hasn't them?—are beginning to turn their thoughts towards preparing them for their usual spring planting. This then affords an opportunity for advertising garden tools. Supposing, for instance, that it is done something after this fashion:

WE HAVE IN STOCK

GARDEN TOOLS

FOR OLD AND YOUNG.

SPADES,
SHOVELS,
HOES,
RAKES,
ETC., ETC.,

STOCK LARGE AND WELL ASSORTED.

ROBERT JOHN SMITH.

This is only in reduced size what may be done more extensively. The object is merely to convey the idea. The style of the advertisement and the character of the goods advertised should be changed frequently. Even if it is thought necessary to keep a particular article before the public for an extended period it is wise to do so in an as many different ways as possible.

The importance of advertising as a factor in securing success in business is gradually becoming more generally recognized. But there is still a good deal of converting necessary in regard to importance, methods and mediums. In the larger cities there are firms both wholesale and retail who employ experts to look after their advertising, and in a good many instances these men do nothing else but make contracts, write and check off advertisements. How to advertise and what to advertise are questions worthy the study of every business man, and he who obtains proficiency in these possesses at least one qualification necessary to success in business.

THE SUN AS A STOVE.

WHEN dwellings are in course of construction it is seldom if ever that the matter of how best to appropriate the heat from the solar stove is considered. If more attention was given to this particular our coal bills would be undoubtedly much smaller.

It must be remembered that windows turned towards the sun take in heat as well as light. By actual experiment it has

VICTOR



Up goes 1,600 lbs. with perfect ease.



DANDY HAMES STRAP.—For Bottom of Hames is Perfection.



DANDY ATTACHMENT. Ready to rivet to the Strap.



GEM OVERDRAW LOOP. —The Cheapest and the Best.

VICTOR

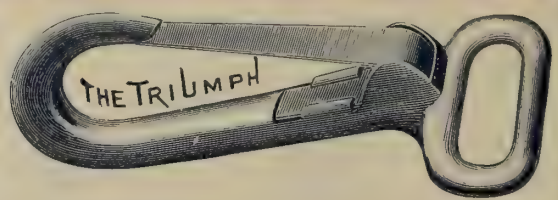


The "Victor" is the Best Selling Wagon Jack in the World. Fits any Carriage or Lumber Wagon.

Beware of Imitations.

ONLY ONE TRIUMPH SNAP THAT IS COVERT'S

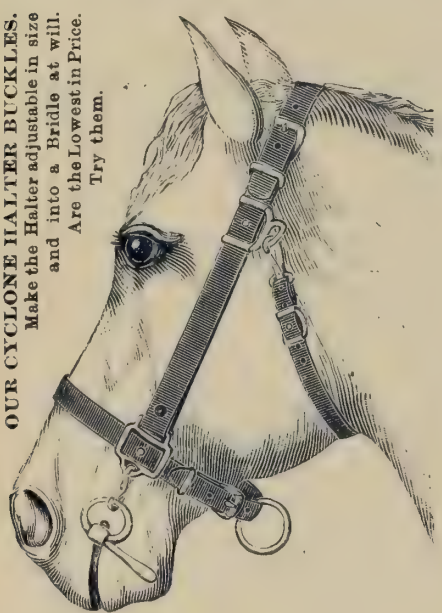
EVERY FEATURE A TRIUMPH

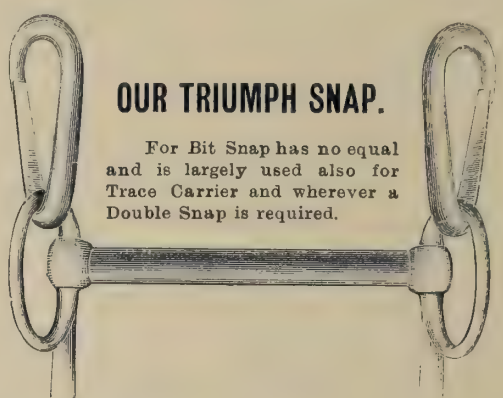


ACCEPT NO OTHER

Made in all sizes, both loop eye and round eye; also swivel eye and open eye, and double for bit snap. Roller eye for breast straps and baby sizes for satchels, etc.

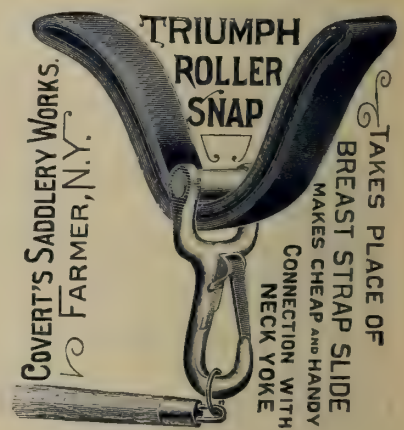
OUR CYCLONE HALTER BUCKLES. Make the Halter adjustable in size and into a Bridle at will. Are the Lowest in Price. Try them.

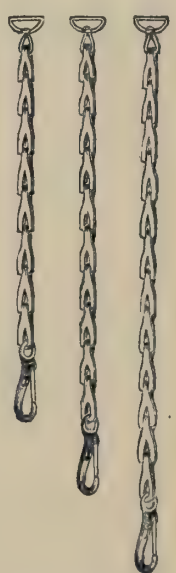




OUR TRIUMPH SNAP.

For Bit Snap has no equal and is largely used also for Trace Carrier and wherever a Double Snap is required.





REIN CHAINS.

OUR SUCCESS ROPE CLAMPS.—For Horse and Cattle Ties has no equal.







The old Sursingle must go. Makes a positive Stay-on Blanket; the horse more comfortable, and are handy to use, because always with the blanket and Triumph Snaps for fasteners. Can be attached to the blanket by sewing or riveting. Good quality leather is used.

Our Goods are for sale by all the Leading Jobbers in the United States, Canada and Europe at Manufacturers' Prices Get our extensive Catalogue in Saddlery, Coach and General Hardware.

COVERT'S SADDLERY WORKS, Farmer, N.Y., U.S.A.

W. J. JEANDRON, Toronto, Ont. Soliciting Agent for Canada.

been demonstrated that a thermometer when placed in the sunlight outside a window, will record 50, 60 or more degrees less than it did when placed in the sunlight inside the window. There may be a fire in the room, but even this would not make such a great difference, because the heat of the sunlight may be 100 degrees while the room itself may be only 70 degrees. It is a question of shelter. The air in the room is enclosed. Out of doors the air is free to move and does move, as when there is wind, and it is also free to rise. The heat from the sun falling on the glass outside warms it, but the air at once absorbs the heat, and, being free to move, carries it away as fast as it gathers. The air inside being sheltered from the wind and unable to rise, gathers the heat and stores it up, and grows continually warmer and warmer and permits the thermometer to register a high temperature.

A greenhouse having a glass roof confines a certain body of air. The air thus enclosed and fully exposed to the sun, rapidly becomes warm, and even in midwinter will have a summer temperature without the aid of a fire and wholly by the heat of the sun coming through the glass. It is the same with all horticultural structures, whether a cold frame or a house for trees and grapes. The heat of the sun is quite enough to keep them warm as long as the sun shines. Only at night and on cloudy days must a fire be used to keep such structures warm. Here is a practical daily use of the sun as a stove, and were all our buildings made with glass roofs there would be a very great economy in keeping them warm. The only defect of a glass house is that while it is quickly warmed inside by the sun, its walls are so thin that it rapidly grows cool as soon as the sunlight is withdrawn, and it takes a great deal of fuel to keep such structures warm at night.

Ordinary dwellings cannot be made wholly of glass, as they would be too warm on sunny days and too cold at night; and the glare of light would be unpleasant to the eyes. There is, however, one thing that can be done, and that is, wherever practicable, to have the house face the sun at noon and to have as many and as large windows on the sunny side of the house as possible. Sunny rooms require less fuel to keep them warm, and the heat from the sun is more even and healthful than from a stove.

The fact that the sun gives so much heat has led to many experiments to see if it might not be used to warm buildings and as a source of steam power. One of the most simple of these experiments was tried near Boston and gave curious, though not very practical, results. Under the windows of a dwelling-house were arranged slabs of dark colored slates covered with glass so arranged that there was a small air space between the glass and the slate. Below these were openings for the fresh air, and above were openings leading into the house. The sun shining on the slates raised them to a high temperature and heated the air under the glass, and as the air expanded in the heat, it moved upward into the house and warmed the room as long as the sun shone.

Experiments to ascertain if the heat of the sun could be made useful in making steam have been made in Europe and in the States. Large reflecting mirrors were used to concentrate the heat of the sun on a small steam-boiler, and the heat was sufficient to make steam that could be used to operate a small steam-engine for a few hours. While these experiments have been successful in obtaining heat and power, yet they are not of practical value, as the heat is apt to be cut off by clouds and is always lost at night. In actual work the only real value of the heat of the sun has been found in the warming greenhouses and other glass structures and in the protection given to plants and animals by shelter from the winds whereby the air in which they live is made warmer by the sun.

Looked at in a broader way, the sun is, indeed, the great stove on which all life on this planet depends. Its heat expands the air on tropic seas, and they rise burdened with watery vapor, and dryer, cooler winds move in from the poles to take their place. The water-laden air moves north and drops its fatness on every continent. The sun is the engine that keeps the vast machinery of the climates in motion. The clouds drop their water on cold mountains, and the brooks and streams flow down to the sea turning countless turbine-wheels and water-wheels and thus supplying power to our mills. The winds moved by the command of the sun, or rather by the difference of heat that it bestows in different parts of the world, turn our windmills and drive our ships. In like manner the heat of the sun once caused millions of plants to grow that, sinking in their native soils, formed the coal that now gives us fuel for heat and power; and thus the sun laid the foundations of our civilization before even the mountains were brought forth where now lie our treasures of fuel.

Heat expands and cold contracts, and everything warmed by the sun expands under its gentle heat. Every rail on all our railroads expands and grows perceptibly longer in bright sunshine, and contracts and grows shorter whenever a cloud cuts off the heat, or the earth in turning moves away from the sun. So it is found necessary to leave a little space between every rail wherein it can stretch itself in hot summer days. Were all the rails pushed close together in laying the track, the first day of hot sunshine would pull the track to pieces, or render it so uneven that it could not be used. Every iron bridge stretches in the sunlight and would tear itself to pieces were it not carefully adjusted for this expansion in the sun and given a chance to freely move on its foundations whenever the warm fingers of the sunshine are laid upon it.

Brooklyn Bridge is in four distinct pieces with plenty of room between to move, and it does move every day. In warm sunshine it is longer by several inches than on a cold night. The cables of the bridge are continuous, but the expansion caused by heat lengthens the cables and they let the bridge sink two or three feet in the middle. Even a passing cloud hiding the sun for a few moments, will cause the entire bridge to rise in the middle by cooling and contracting the cables. It has been demonstrated by actual measurement that Brooklyn Bridge, on a hot summer's day between bright sunshine and the shade caused by clouds, has moved over one inch in less than two hours. In building the great bronze Liberty in New York harbor, the same thing had to be guarded against, and provision is made to allow the whole vast figure to move under the expansion caused by the heat of the sun. The movement, owing to the irregular surface of the statue, is not visible, as in the Brooklyn Bridge, yet it is there. Even Bunker Hill Monument, which is built wholly of stone, is distorted out of shape every day by the sun, though the movement cannot be proved except by certain experiments made for the purpose.

Scientists tell us that the solar stove will eventually burn out, and our own Dr. Wild told his congregation a few Sundays ago that the world would not last another thousand years. But even these things should not deter some inventive genius from devising ways and means for appropriating more of the Sun's rays for heating dwellings. Even if Dr. Wild's prophesy should prove true, the successful inventor will at least have the satisfaction of knowing that he may possibly prove a benefactor to some twenty generations yet unborn.

TELEPHONE 2480

FRANCIS, FROST & CO.

SOLE CANADIAN AGENTS FOR

Troy Nickel Works,
Troy, N.Y.

Newton & Co.,
Albany, N.Y.

Glidden & Joy Varnish Co.,
Cleveland, O.

Pecora Paint Co.,
Philadelphia, Pa.

Buffalo Foundry Supply Co.,
Buffalo, N.Y.

Hatch Cutlery Co.,
South Milwaukee.

SUCCESSORS TO DIXON & DIXON

Importers, Manufacturers, Shippers,

Pure Southern Turpentine

In Selected Oak Machine Made Barrels our Specialty. We guarantee all our Turpentine absolutely pure in every case.

Pine Tar, Pine Pitch, Resin, Linseed Oil, Varnishes and Imported Dry Colors in original packages.

Red Oxide of Iron, 92 per cent Magnetic Iron.
Terra Cotta and Chocolate Oxides,
Fireproof Paints . . . . . .

FOUNDRY FACINGS AND SUPPLIES

33 Front St. West, - Toronto

TORONTO CUTLERY CO.

M. MAYER, Proprietor.

65 and 67 Yonge Street



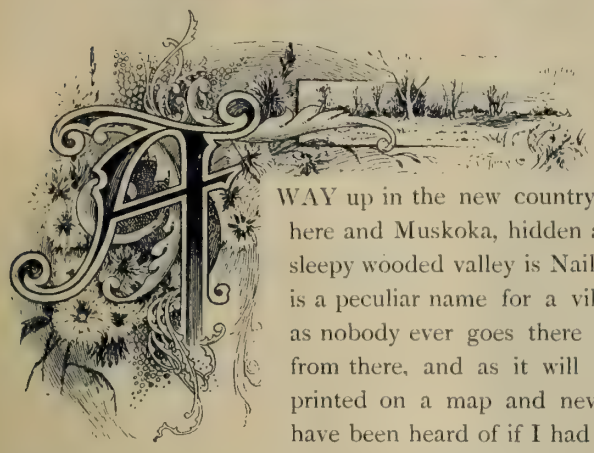
IMPERIAL RAZORS WARRANTED

We especially beg to call attention to Messrs. Joseph Allen & Sons, England, **NON-XLL Cutlery.** These goods are guaranteed and if not found tempered to hold edge or if they break from flaws may be returned to us and we will replace free of charge.

We have the most complete assortment of all kinds and grades of cutlery, and carry stock of everything we show. Correspondence Solicited.

MR. PRICE, OF NAILS.

WRITTEN FOR HARDWARE BY JOE. CLARK.



AWAY up in the new country between here and Muskoka, hidden away in a sleepy wooded valley is Nails. That is a peculiar name for a village, but as nobody ever goes there or comes from there, and as it will never be printed on a map and never would have been heard of if I had not mentioned it, for the life of me I cannot see that anyone has reason to object so long as I am suited. Nails was hammered into the wilderness as a peg for civilization to tie to, but the design failed. Civilization never came across it or even heard of it. Mr. Price, the disappointed designer and founder of Nails, is an eccentric Englishman of means who came to Canada supposing it to be uncivilized, and determined to colonize and open it up. Hugh Price is his name, but his fellow colonists always refer to him as High Price. He does not mind that one bit, for he knows full well that there is not ten dollars in the settlement that belongs to anyone but himself, and that his charges are so low that he annually draws £200 from England to keep his business going. His business is that of general purveyor for the community. He runs a general store, where everything a plain, honest man can eat, wear or handle is kept for sale; also a saw mill and a grist mill, each of which operate about two months of the year; while to feed these, employ men and furnish customers for his store he runs a farm of several hundred acres, with a score of hired men, all married, and living in neat frame houses. As I said he designed the place and rules it in his own way.

Mr. Price was a very angry man when he found cities like Montreal, Ottawa, and Toronto in Canada. Such centres of fashionable population were quite inconsistent with his ideas of the country; wroth, too, was he when he surveyed agricultural Ontario, and found colonization lands somewhat scarce. His scheme for importing a thousand Londoners, marrying them to female Indians and thereby creating a small race and dukedom of his own, was shattered at a blow. In the dazed indecision of that moment he bought one hundred acres of land in a popular western county and farmed for two years.

The farming operations of an Englishman of means is a somewhat splenderous experiment in this country, and Mr. Price gave as fine an exhibition as any compatriot of his ever did. In order to somewhat conform with his preconceived notions the farm which he purchased was a solid hundred acres of bush, upon which he at once erected a large log house and commenced clearing up the land. When sugar making time arrived he knew nothing of such things, but was invited across lots one night to a sugaring-off. It was a great night in his history, when he first saw tree water reduced to taffy.

When the party was about to break up each one was allotted a large chunk of taffy, the Englishman being treated with special generosity. He had nothing to carry his home in except a grain bag, into which he put his hot and sticky treasure and throwing it over his shoulder started joyously homeward. There are some nights in the year that superinduce nervousness and superstition, and it proved to be such a night. As he stumbled along he heard a creaking sound right behind his head, and the faster he walked to escape it the louder and more alarming it became. To aggravate matters rain began to pour down upon him and his bag of taffy, making the latter more sticky and noisy than ever. Now he became certain that evil spirits were pursuing him and climbing upon the taffy, pulling at it and sitting on it, making it twice as heavy as before. A panic seized him and he started to run, throwing the bag over his shoulder as he went. Imagine his horror when the haunted bag refused to be thrown away and pressed its burden still between his shoulders! At every jump the loose mouth of the bag would swing and curl about him, now twining around an arm and now getting between his legs, always belting and banging him as he floundered and gasped along. Some uncouth American kind of devil was riding him to death and he was nearly exhausted! A small stream crossed his path and, careless of the bridge thereabouts, he made a wild jump to cross it, fell on all fours a yard short of the other shore and scrambled up and out, but still the haunted bag clung to his shoulders and slapped him into frenzy with its loose end. Another fierce run brought him to his own door, which being bolted he smashed in with his boots, fists and body, and fell on the floor crying out "Pull it off! Pull it off! Kill it!"

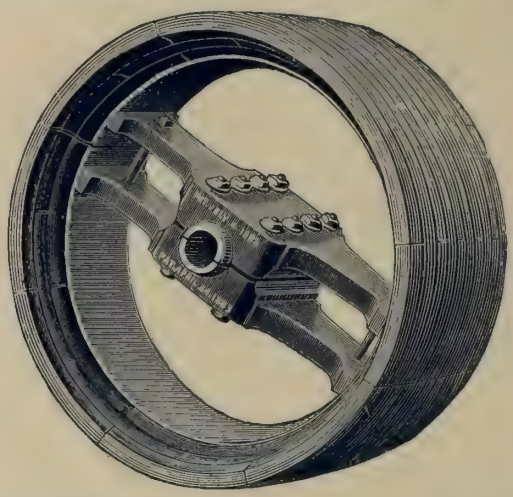
His hired man soon found out the trouble. Of course the taffy, under the heat of his body and the rain had melted and stuck to his back, also making the creaking sound that had first alarmed him. Mr. Price next day decided to maple sugar himself, leaving his hired man at work near the house. When boiling down time came, something seemed wrong and he called in a neighbor who could not understand the trouble for some time. He presently discovered, however, that the Englishman had tapped all the big trees he came too, elm, cedar, beech, ash and whatnot.

Mr. Price at the end of the second winter, through having employed a big gang of men, found that he had thirty acres ready for cultivation, so he discharged all his men but one. He decided to seed the whole place with turnips first year and having a supreme contempt for everything colonial he sent to England for a vast quantity of turnip seed. Onion seed was sent him by mistake and in it went, and the result was thirty acres of onions. The neighbors laughed until they were sore, and Mr. Price swore until his teeth ached. But finally he got in a gang of men and cultivated his immense crop, and onions being very saleable that year, he made a fortune out of them. The neighbors ceased laughing and their daughters tried to marry him.

Had he not been an eccentric man his accidental good fortune would have reconciled him to farming in Ontario, but he was eccentric, and the old idea of becoming a colonizer again possessed him, although modified in some degree by experience. He went off on an exploring tour and selected the site for his present settlement, signed a contract with twenty married men —he no longer insisted on squaws—steamed home to England and purchased immense quantities of everything required in founding a colony in the wilderness—picks, shovels, axes, nails, plows, teas, coffees, sugars, oils, dry goods, meals, flours, molasses, needles, boots; in fact, as I said, everything required. He declined to recognize Canadian factories and wholesale houses, for this would be condoning the offence of those who had preceded him in the work of colonizing this wooden country. It chanced that the first consignment of goods to arrive

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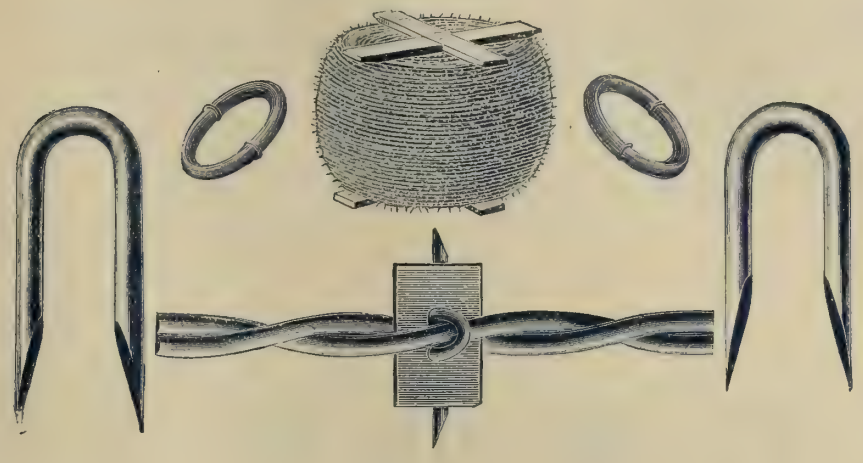
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from England at the railway station from which the stuff had to be teamed inland consisted entirely of nails—thirty kegs of nails. Hence he named his village Nails, and became in time Mr. High Price of Nails.

His is an interesting colony. Neither the Law nor the Gospel has penetrated to it, and within its pale no drummer has so far set foot. The simplicity of life there is extreme. If a child is born Mr. Price gives it a name and opens an account for it in his ledger; if a man proves a bad citizen he is teamed out to the railway, where the wagons go once a year, and shipped down this way where bad citizens are accepted at par. Some day a book will be written about Nails—a sort of a price-list it will prove, no doubt—but for the present I shall drop the subject.

HARTZ'S STEEL TACKLE BLOCKS.

H. S. HOWLAND, SONS & CO., wholesale hardware merchants, 37 Front street west, Toronto, are sole agents for Canada for the Hartz Blocks, illustrations of which are shown in the accompanying cuts. The shells of the blocks are of wrought steel. The straps run on the inside of the shell and through to the bucket, in all sizes larger than 6-inch,

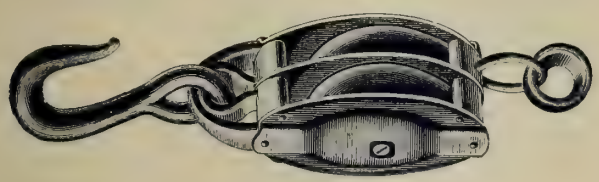


Fig. 1.

and in smaller sizes to and including the pin. There are no outside nuts or bolt heads to disfigure the shell or entangle in the rope. The steel pin is flattened on one side at the end opposite the head, so that it cannot turn, and the same end is slotted and is easily spread with a cold chisel so that it will not work out. The block shown in Fig. 1 is the regular mortise block, with plain bushing. All these blocks, up to and including 10-inch, have the same score as wide mortise blocks, and take the same size of rope. The plain, roller bushed and graphite bronze self-lubricating sheaves fit into the same shell and are interchangeable. The blocks are japanned, which is referred to as more durable than a coat of paint, and every block is warranted. This block is made single, double and triple. The automatic wrought iron and steel lock-snatch block, Fig. 2, is fitted with self-lubri-

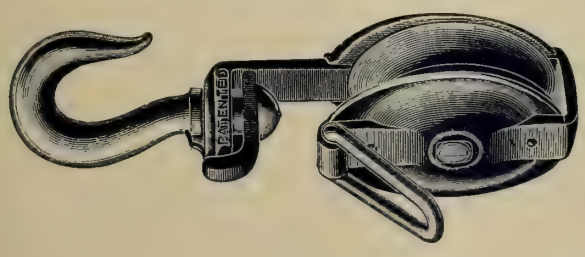


Fig. 2.

cating graphite bronze bushing, upon which no oil is used. The heavy strap goes completely around the whole block and inside the shell, rendering the block practically unbreakable. The gin or wire rope block, Fig. 3, is fitted with graphite bronze bushings, requiring no oil, and is made of the best grades of iron, with turned steel pins and rolled guards, guaranteeing perfect protection to the rope. It is remarked that these blocks are light, strong and cheap. Various styles of blocks besides those illustrated are manufactured, with plain, self-adjusting steel roller and self-lubricating graphite bronze bushings, some blocks being japanned and the others galvanized. The manufacturers claim

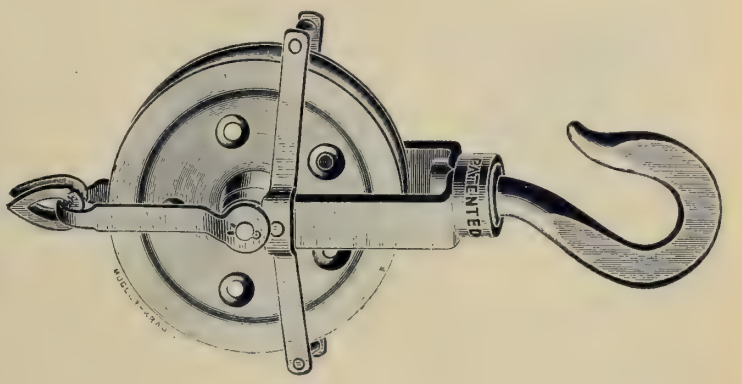


Fig. 3.

for these goods that they are light, strong and handsome, and that they are sold at about the same price as the ordinary wooden blocks.

THE MANUFACTURE OF DYNAMITE.

A DYNAMITE factory consists of a number of large houses, widely separated from each other, and of a number of small huts away in the distance, half buried in the ground, and used for the purpose of storing the nitroglycerine, the essential principle of dynamite. Each process in the scheme of manufacture has a house for itself, and each has a chief skilled in proportion to the danger which is encountered. A large tank is provided full of glycerine, while the acid drips slowly into it from a pipe above. The mixture of pure glycerine, nitric acid and oil of vitriol produces nitro-glycerine, the most deadly explosive known, so powerful that an ounce of it compressed would blow one into atoms, and so liable to explode that the least detonation or jar will instantly fire it. It is positively the most awful stuff to deal with that man has ever discovered, remarks a contemporary. No one really seems to know when it is going off; sometimes it will stand a good shake, at others the veriest jostle will produce a disaster. And there in the tank was enough of the fearful compound to destroy a city! One could not resist the thought—what if this stuff, which often explodes by spontaneous combustion, should go off now. The foreman kindly told me, says a writer in Invention, of London, that if such a thing did happen, no man would find a hair of my head or a fraction of my limbs. He seemed perfectly unconcerned as he told the tale, and then he showed me a thermometer dipped in the mixture to register its temperature. "If the heat of this mass goes up 6 or 7 degrees," he said, "the stuff will explode. I keep my eye constantly on that glass, so that if a fast rise in temperature took place I should open the tap at the bottom of the tank and let the nitro-glycerine run through into a water tank." Fancy five degrees Fahrenheit standing between eternity and yourself! When in the open I asked my guide if there had ever been a case when that shed had been blown up, and he said, "once," but he told me that the mass is often run off from the tank, and nearly always without trouble, as the record proves. With all this, I can imagine no more dreadful life than that of the man who stands daily before that cistern of death, and has but a few degrees of temperature between himself and utter annihilation.

SOME MISCONCEPTIONS CONCERNING ASBESTOS

DURING the past decade the uses of asbestos have become widely extended, and consequently brought to the knowledge of the great majority of those who live within range of our industrial centres. As a result of the wide applications of this substance and of the interest excited in the minds of many by a "stone" which may be teased out into a fluffy mass resembling silk or cotton, there has arisen a somewhat extensive literature of asbestos. This is scattered through geological, chemical, technical, and even religious publications, while there have appeared one or two not unpretentious volumes devoted entirely to this mineral. In these there are frequent statements which clearly indicate that the writers entertained serious misconceptions, and to call attention to some of these is the object of the following paper, written by J. T. Donald, M.A., of Montreal, and published in a contemporary.

1. There is a misconception as to the mineralogical character of asbestos, and this has arisen from the use of the name in a somewhat generic sense. Dana in his "Mineralogy" says that asbestos is a finely fibrous form of hornblende, but much that is so-called is fibrous serpentine. This statement seems to divide many of our writers into two camps, the one calling the mineral a variety of hornblende, the other proclaiming its serpentinous character.

The Province of Quebec produces, it is estimated, about 85 per cent of the world's supply, the balance coming principally from Italy. The products of these two countries are known the world over as asbestos, and it is not unreasonable, therefore, to ask that they be allowed to appropriate the name, even though they be of other composition than the mineral to which mineralogists originally applied the term, and that other minerals, if such there be, used for similar purposes, be otherwise designated.

The asbestos of commerce is a hydrated magnesian silicate of the same composition as ordinary serpentine rock; in other words, it is fibrous serpentine. It is curious to note, however, that the Canadian miners working continually among serpentine and nothing else have fallen upon the word hornblende, and apply it to very coarsely fibrous and polished serpentine, such as is often met with along lines of faulting.

2. The second misconception is in reality but a special case of the first; it is to the effect that Canadian and Italian asbestos are different minerals. In the early days of the asbestos industry Italy was the only source of supply, and immediately prior to the discovery of the Canadian deposits a powerful company had been formed and had succeeded in bringing under one control the numerous small mines of the Italian district. Under the circumstances it is not to be wondered at that the Canadian fiber found no favor in the eyes of the owners of the Italian mines. The Canadian mineral was declared to be far inferior to the Italian; the latter, it was maintained, is true asbestos, while the former is only fibrous serpentine. As a matter of fact the two minerals are practically of the same composition, as is shown by the following results of analysis of fair samples recently made by myself: Italian: Silica, 40.30; magnesia, 43.37; ferrous oxide, .87; alumina, 2.27; water, 12.72; total, 100.53. Canadian: Silica, 40.57; magnesia, 41.50; ferrous oxide, 2.81; alumina, .90; water, 13.55; total, 99.33.

Canadian asbestos has largely displaced the Italian, not because of difference in composition, but by reason of the greater ease with which the former can be wrought into the various forms required in the arts.

3. The third misconception is that asbestos is in nowise affected by heat. This is set forth in such statements as "temperatures of 2,000° to 3,000° are easily withstood," and "a mineral which has been successfully exposed to a heat of 4,500° to 5,000° Fahr." Now what are the facts of the case? It is true that asbestos is infusible except at very high temperatures, but it is equally true that only a very moderate degree of heat, heating to low redness in a platinum crucible for instance, is required to entirely destroy the flexibility of the fiber and render it so brittle that it may be crumbled between thumb and finger as readily as a piece of biscuit. In this connection one is reminded that the ancients are said to have possessed asbestos napkins which they cleansed by means of fire, and that Charlemagne in like manner cleansed his tablecloth to the delight of his warrior guests. It is not improbable that these statements are to a large extent mythical; certainly, if true, the articles in question were not made of asbestos, the hydrated magnesian silicate.

4. The fourth misconception is that asbestos is possessed of high non-conducting qualities. This is perhaps the gravest and most widely spread of the several misconceptions, and is held by many who should know better. As an example of the manner in which this last misconception is set forth I may cite the following from an address of a well known geologist: "Among the most important properties of asbestos is that of non-conductivity or its power of resisting the action of heat." Here we have the misconception clearly stated; it is that because asbestos is infusible it must of necessity be a good non-conductor. The truth is that asbestos itself is a very poor non-conductor, as any one may prove by placing a vessel of water on a sheet of asbestos cardboard and applying heat from below, or more simply still by placing a piece of wood on a sheet of asbestos millboard on a hot stove. If, however, asbestos is teased out and worked into a fluffy mass we then obtain a non-conducting material, but it is the air inclosed by the fibers that is the real non-conductor, the asbestos serving simply to entangle the air. The use of asbestos in the manufacture of non-conducting coverings for boilers, etc., is due to its fibrous texture and its infusibility. The latter property gives it a decided advantage over hair and other fibrous materials which char under continued exposure to heat, while the exceeding flexibility of its fibres gives it a like decided advantage over mineral wood and other fibrous but brittle mineral substances.

The removal of the misconceptions to which attention has been called will in no respect tend to decrease the uses of asbestos, for the mineral has a sufficiency of good quality of its own to maintain and increase the demand; while, on the other hand, a true conception of its nature and properties will prevent its use under conditions where only disappointment can follow; a circumstance which in the end would tend to bring discredit upon a valuable mineral.

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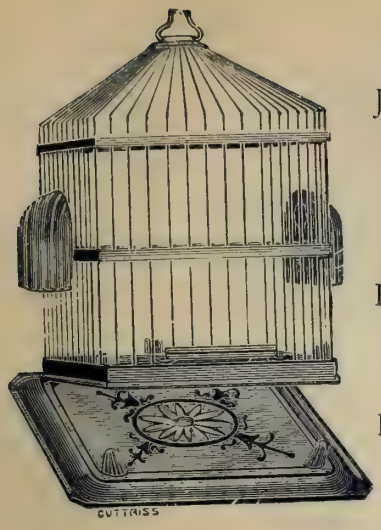
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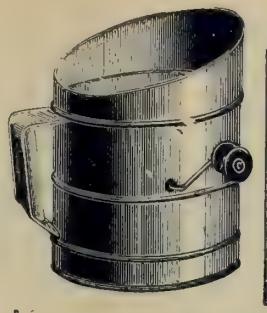
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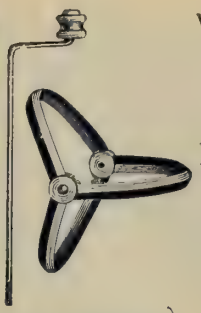




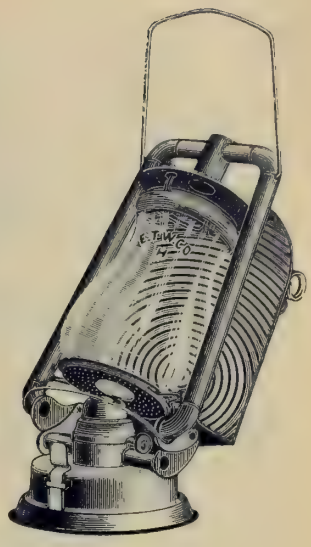
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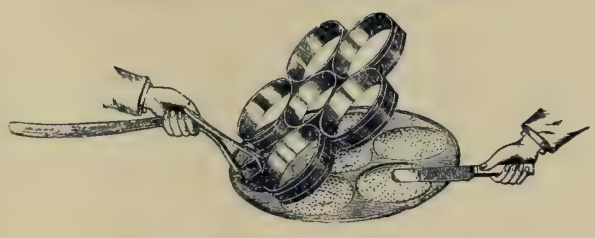


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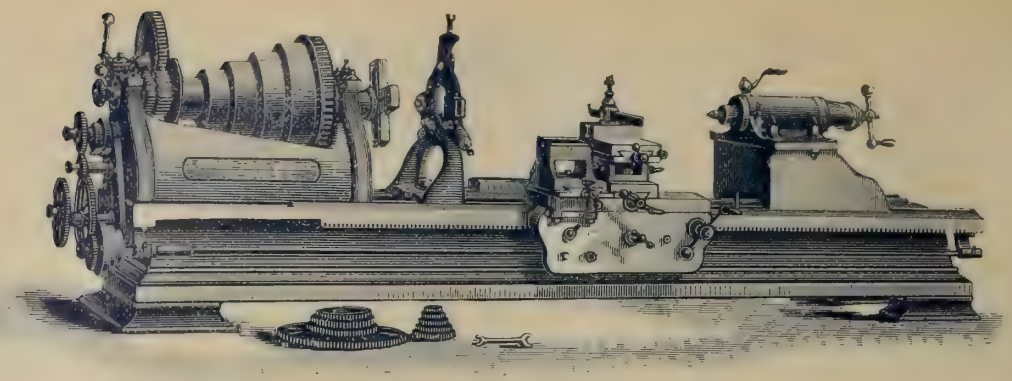


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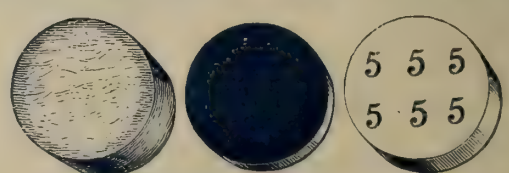
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EDITORIAL COMMENT.



HARDWARE of this issue is bound on a special mission. It is going to visit and pay its respects to every hardware merchant and member of the allied trades in the Dominion. The iron and hardware trade is one of the most important in the country, and should be approached as such. HARDWARE always goes out to its patrons well dressed and substantial in proportions. But an undertaking like the present demands something more. And we have complied. The cover was designed and made especially for the occasion, and, by the aid of special articles and special advertisements, HARDWARE is this week issued with nearly 70 pages. Special issues in hardware journals are rare in either Great Britain or the United States, and in Canada this is the first venture of the kind. This journal is only in its fifth year, and while it finds its way into every land where the English language is spoken, we believe its sphere of usefulness can still be extended. To those who are not yet numbered among its constituents the hint is obvious.

* * *

Capital is to business what the keel is to a vessel: It gives strength under pressure and steadiness during storms. And never before in the commercial history of the world was it so necessary as at present. It is the same in all branches of industry — manufacturing, mercantile, agricultural, commercial. Its want is the most prolific cause of failure, last year in this country 65 per cent. of them resulting therefrom. Firms apparently doing well often suddenly collapse because of weakness in this particular. A large manufacturing concern, whose headquarters are in this city, and whose machinery and steamboats have attained a Dominion-wide reputation, is an instance of this. To raise the capital it mortgaged its chattels, valued in all at $300,000, to the extent of $200,000, upon which the interest alone was something like $13,000 annually. It overshot the mark, from which it could not recover, notwithstanding the push, pluck and enterprise characteristic of the firm, and liberal governmental and private patronage. Had the firm in question been content to undertake only what its capital justified it would undoubtedly been on its feet to-day. Trouble usually comes to those who try to run before they can well walk.

* * *

A well-dressed winuow is as possible in a hardware store as in any other branch of trade. There may not by the variety of color to be found in a dry goods store or the toothsome and attractive goods that the grocery can produce, but there is the material for an attractive display just the same. And there is a sufficiency to give the window a dress appropriate to the reoccurring seasons. All that is necessary is an artist to turn the material to account. In the large houses in the cities there are always to be found one or more persons whose duty it is to dress the windows, but in country hardware stores this office often devolves upon the merchant himself. And in the arrangement of the window is generally reflected his artistic ability. Of course there are exceptions; for the proprietor may be a good window dresser and yet he may seldom if ever put his ability to practical use. But there is no reason why a window should go practically undressed as is seen in some instances. No matter how poor a man's taste may be in this respect inattention to the arrangement of the window is inexcusable. The art can be cultivated by anyone who will set himself to the task. All cannot become experts, but the most unpromising need not despair, for improvement will come with practice. Anyhow it is better to even attempt to do a thing than to stand idly by, hands in pockets, and see it go by the board. The present is opportune for making a start. Garden and harvest tools, dairy utensils, ship chandlery, etc., are coming into season, and they can be utilized in making up an attractive and pretty window. A King street firm has just made one of its windows a cynosure for all eyes by making good use of its ship chandlery stock. In the background are raised, tier upon tier, coils of different-sized rope, while thrown promiscuously about on these are skeins of various kinds of cordage. Blocks of different sizes and makes are suspended from the sides of the window. Hemp and caulking tools are distributed about on the floor. Standing out in bold relief is a windlass, while resting on either side of the window are the starboard and port lamps. Ensigns, furled and unfurled, are scattered about, and the whole display is enhanced by a canopy formed by large Union Jacks.

* * *

A business man ought to think twice before he puts capital into anything outside his own immediate line of trade. The only time he is warranted in thus branching out is when he has enough and to spare for the conduct of his own business. Then he must be careful, or he may perchance so distribute it, as to jeopardise his position should a commercial squal strike him. The ballast lying at a given point may be sufficient for one vessel, but if distributed among one or more all would be rendered unfit to ride out a storm. Stocks, grain, provisions, real estate are the most common channels into which capital rightly belonging to their own line is turned by business men. And notwithstanding the headstones that are daily being erected to mark the burial places of defunct business concerns whose demise has been the result of these practices few seem to notice and less to heed. This city to-day is still suffering from the effects of the real estate boom that suddenly petered out about three years ago. Business and professional men of all kinds who are to-day without store or office trace their downfall to speculation in real estate. And numbers, and with them clerks, travellers, accountants, etc., are being daily stranded by speculation. For a week or more back the press of this city has published daily sensational articles regarding the mysterious disappearance of a young and highly respected man, who occupied a trusted position in a loan company, and attributing his absence to speculation. But notwithstanding the number of failures traceable to speculation that are given publicity, of the great proportion the world hears nothing. The source of the evil is haste to get rich by methods which gives blanks many and prizes few. It is the old fable of the tortoise and the hare over and over again. In spite of the keenness of competition and the small margin of profits a live, progressive hardware merchants—or any other kind of merchant for that matter—who possesses a fair amount of capital is pretty sure of success in business. Stick to it and it will stick to you. On the other hand the longer you follow the siren of speculation the poorer, as a rule, will you become. Success in business is only attained by being on the lookout all the time for favorable opportunities to extend it or to appropriate passing opportunities. When a man has too many irons in the fire he can give no one the attention it should have and all in turn suffer, the most important with the rest.

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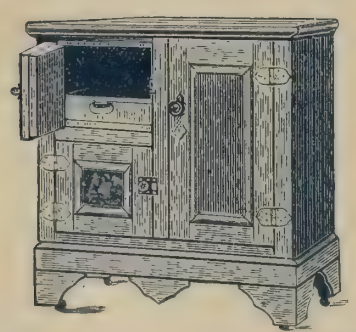
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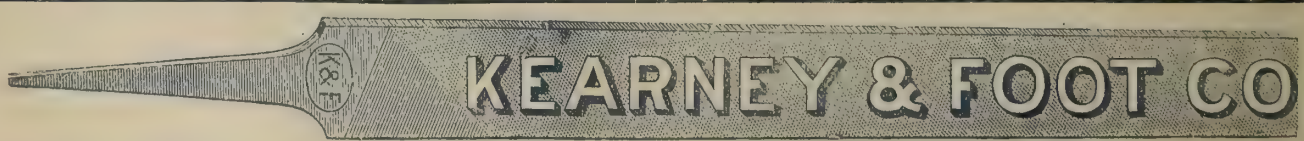
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ARTHUR B. LEE.

THE accompany cut is a portrait of Mr. Arthur B. Lee, who presides over the affairs of the hardware firm of Rice Lewis & Son (Ltd.) Away back in 1856, and when a young man of about 18 years, he entered the employ of the firm in the capacity of clerk. And that his services were well and faithful rendered may be judged from the fact that eleven years later he was taken into partnership. The business was established in 1847 by Rice Lewis, and when the subject of this sketch was made a partner, the firm consisted of Messrs. Rice Lewis, George Lewis and John Leys. This was in 1867, and when the firm name of Rice Lewis & Son was assumed.

In 1871 Rice Lewis died. Six years later George Lewis retired, and from then until 1889 the business was carried on by Arthur B. Lee and the late John Leys. In that year a joint stock company was formed, with A. B. Lee as president, which position he still occupies. The late John Leys was appointed to the vice chair. The firm carried on business at Toronto and King streets till 1889 when it moved into its present premises.



ARTHUR B. LEE.

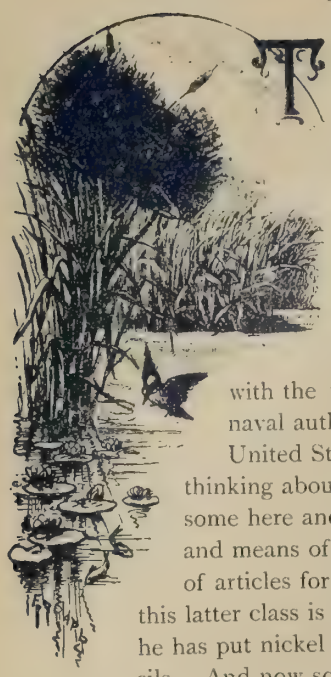
The question of a man's success in life depends a good deal upon the start. If he chooses that calling for which Nature has best equipped him, there is not much doubt, other things being equal, about his success. Too many start off wrong and they go wrong all their lives. Arthur B. Lee started right, and today he stands at the head of one of the largest hardware firms in Canada. Through all his mercantile career "Business first and pleasure after" has been his motto. Although he has a good and trustworthy staff under him he is always on deck himself with his weather eye open to catch every favorable breeze. To industry he has added urbanity, and this latter characteristic has led to his being surrounded by a large circle of friends. His daily life is a round of activity. In addition to his supervision of the business affairs of Rice Lewis & Co. he is president of the St. Lawrence Foundry Co., president of the Northey Manufacturing Co., chairman of the Board of Harbor Commissioners, a director of the Bank of Hamilton, the London and Ontario Loan and Savings Co., the Toronto General Trusts' Co., an ex-president and one of the most loyal members of the Toronto Board of Trade. Mr. Lee believes in play as well as in work. In the summer he likes to enjoy the lake breezes from the deck of a fast and staunch yacht, and in the winter his especial delight is to "soop 'er up" with his brother curlers. Mr. Lee was born in Toronto some 55 years ago, and he has preserved his age well. A. Burdette Lee, who succeeded to the vice-presidency of the firm on the demise of the late John Leys, is a son of the subject of our sketch, and Victor, a clerk in the employ of the firm, is another.

LEGENDS OF THE RADNOR FORGES.

SEVERAL interesting legends cluster about the Old Forge at St. Maurice. The origin of most of which are found in a dispute which arose between Mr. Bell, the proprietor of the Forge, and Miss Poulin, of Three Rivers, Miss Poulin was the owner of land covered with fine maples, and Mr. Bell continued to cut these maples for charcoal. She naturally resisted this invasion and several lawsuits between the parties were the consequence, in which Miss Poulin appears to have been usually worsted. She was not among the most devout, and being finally exasperated beyond endurance declared that since she could not enjoy her own property she would give the whole of it to the devil. And on her death-bed refused to make a will, still declaring that she instituted his satanic majesty her universal legatee, adding, that she hoped that the thieves who robbed her during her lifetime, would not enjoy their stolen property in peace. The devil seems to have taken this donation seriously, and from the moment of Miss Poulin's death, took possession as owner not only of her property but even of the Forge itself.

Leading to the Forge was a long road. This was precisely on the property bequeathed to the devil, and it was there that the best manifestations of his presence took place. At night a large fire could be seen with a great number of persons around it, the noise of chains, howling, cries of rage and noisy laughter filled the air, and the belated traveller trembled in his shoes as he heard horrible blasphemy and insults hurled at him. In some instances the devil chose to appear less offensive and to take delight in amusing the peasants. One Sunday in January, the people of the Forge returning from mass perceived a man in his shirt-sleeves, bare-headed, shaving himself in front of a glass suspended from a tree. The scene was too funny for fear, but none of the good people doubted but that this was a frolic of their enemy. Nearly all those who passed along this road experienced some mishap. Generally, the horses would stop, and would not start again till the bridles were turned upside down.

NICKEL COOKING UTENSILS.



THE utility of nickel seems to be about as varied as its strength and durability is wonderful.

Ever since the rich deposits were discovered in the northern part of the Province of Ontario, and its usefulness for armor plates was demonstrated, nickel has been but little talked of outside its connection with the tests it has been put to by the naval authorities of Great Britain and the United States. But while most people are thinking about nickel as a factor in warfare, some here and there have been devising ways and means of applying it to the manufacture of articles for use in the time of peace. Among this latter class is a German, and the use to which he has put nickel is making it into cooking utensils. And now some Toronto capitalists propose to imitate him.

The advantages claimed for nickel cooking utensils by the Berlinese maker are many. As far as durability is concerned, they are indestructible and suffer no injury even if heated to redness when dry. They contain no injurious properties like copper and brass, which oxidize easily and form the dangerous verdigris. Cooking is also said to take place more quickly than in copper or granite ware. The German referred to claims that his goods are made of pure nickel, and he offers to give 60 cents a pound for all the worn-out utensils of his manufacture that are returned to him.

HARDWARE ran against Mr. J. W. Cheeseworth a few days ago, and as he takes a keen interest in matters pertaining to the nickel industry the representative of this journal turned the conversation on to the subject of nickel utensils. It does not usually take much prompting to induce a man to talk on a subject which lies nearest his heart, and Mr. Cheeseworth was no exception to the rule.

After referring to the product of the German manufacturer, he said: "Refined nickel is worth 52c. a pound here, and that gives you some idea of the price that the German maker pays for his nickel when he can afford to buy his utensils back at 60 cents a pound. He would probably have to pay 75c. a pound for his nickel before turning it into cooking utensils. If he can manufacture and sell them successfully in competition with copper and granite ware, you can readily understand the advantages that would accrue to the manufacture of these utensils in this country. In Germany they have been drawing their supplies from Norway, where they were working from a very low grade ore. The average percentage of nickel obtained from the Norway ore is from ¾ to 1 per cent., while the average in Canada is from 2½ to 3 per cent., and in many instances it runs up to 10 or even 12 per cent. You understand, of course, that the deeper you go the greater is the percentage of ore obtained.

"What we claim is that this country is the natural source of nickel supply. Our ore is of superior quality, and the advantages for handling it are much better, the mines being in close proximity to the railway—the C. P. R. running through them. Then look how accessible we are to the chain of great lakes whereby we can take our product right down through to Montreal and on to Great Britain. You will observe that by looking at the map there," he added, rising to his feet and pointing to a map hanging on the wall. "Then I believe that in a short time there will be a series of loop lines running from the mines which will tend to cheapen means of transport. That then is what we claim for the nickel mines of Ontario over and above the mines of any other district on the continent of America, such for instance as the copper, silver, and gelatine mines in the Western States, which in some instances are thousands of miles away from water communication.

"Among the probable loop lines will be one to St. James' bay. Now geologists tell us that there are vast coal beds in that district. And this line once completed smelting fuel could be landed on the northern shore of Georgian Bay at fifty cents a ton over and above what the actual freightage alone would be from Cleveland.

"The disadvantage we have labored under is the want of matte. Would you believe it, notwithstanding the vast amount there is in the country we cannot buy even a ton. Some time ago we wanted to get a ton for the purpose of making some experiments, and we actually had to send to Cleveland for it. On this we had to pay a duty of 25 per cent. because we could not of course show that it was required for manufacturing purposes. This only goes to show that the large corporations operating in the Sudbury district at the present time are not doing so in the interest of Canada. They are simply trying to corner the product so as to enable them to get higher prices for their matte. There are in all four companies operating in that district. The Copper Cliff, which is the largest, is shipping all its products to the United States. Carnegie, Phipps & Co., of Pittsburg, Cleveland and Bethlehem, have recently constructed works, specially for the purpose of refining and manufacturing nickel, at an estimated cost of one million dollars. The next largest company in the district is the Hussey-Vivian, which ships all its product to Swansea, Wales. Then comes the Dominion Mineral Co., which is under contract with the Societee du Nickle, a French concern. The fourth runs what is known as the Traverse Mines, and it started last season. It has not so far done much work, but they expect to do more this season.

"What we think necessary to enable the people of this country to take full advantage of nickel is to create an open market for the product of our mines. At present small mine owners have no opportunity whatever of disposing of their ore either in the raw or in the roasted state. To illustrate to you the circumstances. Supposing for instance that you are an individual of limited capital—

"I don't suppose anything about it; I know it," interposed the newsman.

"Well, never mind, but suppose your capital is only two or three thousand dollars. You purchase mining property worth five or six thousand dollars and are prepared to spend one or two thousand dollars in developing and working the mine. In the course of your operations you succeed in finding good ore. You then proceed to find a market for it. Naturally you will approach some of the existing smelting works that are in the districts to know if they will purchase your ore. They will inform you that they are not purchasing ore as they can produce all they want. On the other hand, if you ask them to smelt for you they will tell you that they are fully occupied in smelting

for themselves. Consequently you will have thousands of tons of ore lying on the dump that must rot for want of a market. Some of the best deposits in the country are of no commercial value to the owner of limited capital simply because there is no available smelter in the district. The object of the Commercial Mining Company is to provide the district with a customs smelter. The company will purchase the ore outright from the miner, smelt it at so much per ton, or advance to the owner of the ore, and after it has been smelted deduct sufficient to cover amount advanced and return the balance. This mode of procedure is by no means new. It has been in operation in England and in the Western States. In the neighborhood of Butte, Mon., there are about a dozen customs smelters in operation, and the result has been a speedy development of their mines and an increase in the population of some 125,000, and with no more than 25 per cent. of the mineral advantages that we have in the Province of Ontario, whereas the district of Algoma has not increased within the same space of time more than 10,000. This is, we claim, owing to the difference in the way of doing business of the two countries. It would be decidedly to the advantage of the whole Province of Ontario if our mines were developed. It would cause a large increase in population and create a home market for the agriculturalists in the southern portion of the province, the need of which we hear so much about these days. There is no reason why, under a wise governmental policy, we should not have an increase of 50,000 people in that district within the next couple of years. As soon as we can get the necessary assistance from the government we shall establish works here in Toronto for the manufacture of nickel cooking utensils, etc."

It seems that the nickel smelting works in the Sudbury district have experienced a good deal of difficulty this winter owing to the excessive cold weather. The water has been frozen up, compelling them to stop for want of a sufficient supply. The quantity required per diem by each water-jacket is some 50,000 gallons.

EVOLUTION OF BOOKKEEPING.



[CONTRIBUTED.]

IN THIS age of progress and invention business men are beginning to realize more than ever before that much of their success is dependent upon accurately kept accounts and engagements promptly met, and that an efficient and and reliable office man is an absolute necessity to his establishment. Bookkeeping has made rapid strides during the last quarter of a century. The chalk may have kept the simple score of our forefathers on a smoke begrimmed wall, and later on the slate may have answered the same purpose, but to-day every new invention that will add to the accuracy or lessen the labor involved is eagerly grasped by the busy bookkeeper. The men who ten or fifteen years ago were considered experts in the science are being rapidly crowded to the wall, as "old fogies" whose ancient ideas and cumbersome and slow methods make them more of a hindrance than otherwise. Some of the books which were than looked upon as indispensable are now also thrown aside, modern and more concise modes no longer requiring their use. Among the many schemes, apart from special book rulings, offered to assist the bookkeeper, are two worthy of note, because of the effectiveness and accuracy of the assistance rendered. The first is a method by the adoption of which the office man is enabled to check posting and prove his additions and balance without going over the work a second time. The other enables him to reduce to almost a pleasure the old drudgery of footing up long columns of figures with which bookkeeping abounds. There is an incident which, amongst others, came under the writer's notice in which a general storekeeper, in a town not a hundred miles from this city refused to buy any more goods from a firm with whom he had been dealing extensively for years. He complained to the traveller that the house had dunned him for payment of an invoice which he had already settled. He explained that he had two boxes, into one of which he put his unpaid accounts, and into the other those which were settled, and though he had no receipt or entry of any kind he was very emphatic in his assertions that the account was paid because it was in the other box. He was at length convinced of his error, but yet sticks to his absurd method of keeping accounts. Other incidents of loose systems might be enumerated where men have refused to pay accounts, others have paid them twice, others again have given their cheque for goods never received, and frequently men are found weo are even generous enough to pay other people's bills and promissory notes in which they have not the slightest interest or liability. In the race for wealth the average business man of the past barely appreciated the labors of his bookkeeper, his short-sightedness only permitting him to perceive that the more goods he sold the more profit he was likely to obtain. But to-day he realizes that his year's gain is not only dependent upon his sales, but upon the watchfulness and promptitude exercised in the collection of and the honest and careful handling of the proceeds of these sales. He may have a shrewd, careful buyer, but he must also have a keen clear-headed foreman to meet his every engagement promptly, a single blunder in which might cast a shadow upon his highly prized credit. He may want an experienced man to sell his goods, yet a careful man, thoroughly acquainted with the accounts under his care is quite as essential. He may have a genial, popular clerk behind the counter, but he must have an efficient one at his books. He may have a social fellow who can entertain his customers, but he must have a thoroughly reliable man to handle his cash. A man who is a good judge of human nature may get an order for goods where another fails, yet more of this attribute is exhibited in the collector who can draw the "gold" from the miserly man's pocket without hurting his feelings or losing his future trade. Therefore it is quite evident that a bookkeeper occupies a position than which there is none more prominent or responsible in the commercial world, that he must possess a general knowledge, combining tact, forethought and accuracy, which are only gained by long experience and careful study, and that he must possess a character which for integrity and morality is beyond reproach.



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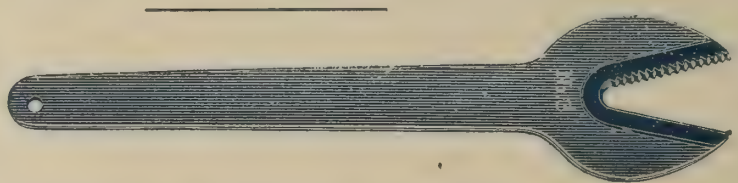
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EMANUEL SAMUEL.

THE subject of this sketch, Mr. E. Samuel, is the head of the old established house of M. & L. Samuel, Benjamin & Co. of Toronto, and Samuel, Sons & Benjamin of London, Eng. He is the eldest son of the late Mark Samuel, the founder of the firm, and is a native Canadian, having been born in Montreal in 1850. At an early age he developed a remarkable aptitude for commercial pursuits, and was considered by the firm, after a brief apprenticeship, capable of being entrusted with the various details of its growing business and even of conducting it during the absence of the principals. Before reaching the age of sixteen the power of attorney was conferred upon him. Gifted by nature with an excellent memory, a keen observation, combined with a rigid performance of a promise once made, and associated with a frank and genial demeanor in dealing with those with whom he comes in contact, Mr. Samuel was well qualified for a mercantile life, and the success which has attended him proves it. These are Mr. Samuel's strongest characteristics, and young men who are to-day starting out in any sphere of life, be it mercantile, professional or mechanical, might with profit copy them. All are essential to success, and where not inherent can, to a more or less extent, be acquired.



EMANUEL SAMUEL.

The energy and enterprise of the firm of M. & L. Samuel, Benjamin & Co. is manifested in its being interested in the promotion of manufacturing industries closely identified with the various departments of its business. Among these may be mentioned the Metallic Roofing Company, of which Mr. Samuel has been president for some years. The subject of this sketch is also on the directorate of the Ontario Lead and Barb Wire Co. of this city, and occupies the position of vice-president of the Steel Bath Manufacturing Co. of Detroit, Mich. He is a member of both the Toronto and Montreal Boards of Trade, and takes a keen interest in everything that tends to advance the industrial and general welfare of the country.

H. S. HOWLAND, SONS & CO.

When this firm was asked to allow the picture of its head to occupy a place in this issue, the managers modestly remarked that they thought the house was sufficiently represented by the photographs of its travellers. Hence the non-appearance of the photograph of Mr. Peleg Howland along with those of Messrs. E. Samuels and A. B. Lee.

MATTERS TO E AVOIDED.

Having been in the retail hardware business some more than twenty years and in a number of locations, I have undoubtedly made some mistakes which later experience would cause me to avoid, writes a correspondent of Metal. I have also learned some things. One thing I would avoid is buying of many "jobbers," or manufacturers—that is, spreading my trade too much -but rather confine my purchases to a few houses. It is more valuable to each, and you can get bottom prices and other accommodations, for you are better known by them and your trade is sought. I should also avoid giving credit to the man who "will pay in a few days," or, "in a day or two," which means a long time, or never; but would insist on a specified date, and I would see that it was attended to promptly at that time. I would also, as far as possible, pay promptly, so as to get the cash discount. In an ordinary business this will pay all expenses except rent and clerk hire. Another thing I would avoid is the habit of buying hardware specialties of travelling agents. If an article has real merit your jobber will soon have it in stock. I would also pay special attention to keeping my staple goods always in ample supply, even if articles that are occasionally sold at a larger profit should run low. I would keep my books posted to date, so I would always be ready to present an account when demanded, and to know if an account presented for payment is correct. I would aim to keep at least two grades of each article sold, if I bought less of each, so as to meet the wants of all purchasers. It is not possible in a short article to speak at length of such things as keeping a store attractive and in order, well lighted and warmed; of being courteous and pleasant to all callers (whether customers or not); prompt in attendance, and always doing just as agreed, making a character, etc. Although all these matters are very important to success, I would not forget the importance of taking a reliable trade journal, in order to become well posted in my line of business, and to know I was buying my goods at right prices.

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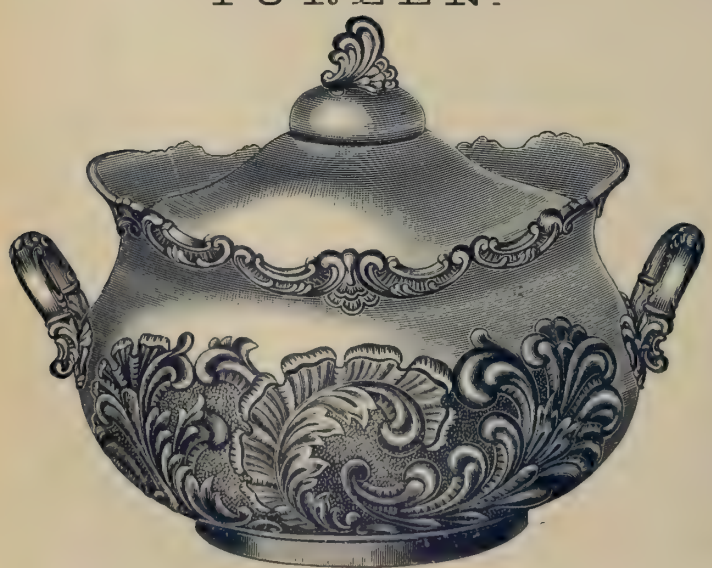
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Don't place your Spring orders without seeing shades and testing the quality of

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Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

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BRAND "C. I. F." THREE RIVERS

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English Sporting Gunpowder

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11 Queen Victoria St., London, E. C.

Always obtainable from

Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.

SOME LEADING MONTREAL HOUSES.

IMPORTANCE of the iron and hardware trade in a growing manufacturing country like Canada cannot be overestimated. During the last fiscal year the imports of various metals reached the colossal value of $11,072,329, and their value to the country may be estimated from the fact that they contributed no less than $2,959,088 to the Customs treasury. It is only natural that the bulk of this important and flourishing trade should centre in Montreal. It is there that the transhipment to the inland carrier takes place, and it is in that city that some of the largest users of the useful metals have their mills and factories. The result is that Montreal possesses among its merchant princes leading houses in the hardware trade, and that many millions of money annually are added to her commerce. The following table gives an idea of the various economic metals and their relative importance to Canada:—

	Value.	Duty.
Iron and steel	$810,090,955	$2,748,431
Copper and brass	928,963	197,250
Tin	46,423	10,614
Zinc	7,178	1,994

WM. CLENDINNENG & SON.

The firm doing business under the above name was founded by the late Ald. Rodden. It does a general iron founding and stove manufacturing business and also makes soil pipes and fittings. All the year round no less than 400 men are kept at work, although since the recent disastrous fire the full operations of the firm were interfered with to a certain extent, but the firm is almost in full running order again on its temporary premises at St. Henri. The firm is now composed of Wm. Clendinneng, Sr., and Wm. Clendinneng, Jr. It makes a specialty of the Leader stove, which possesses many advantages over the ordinary cooking stove. It has a round fire-box which keeps a fire burning longer and brighter than the ordinary square box stove. The C Leader is, if kept supplied with fuel, always ready for immediate use in case of emergency. In small houses it fills the duty of a hall as well as a cooking stove, thus effecting a large saving in fuel. Although the firm suffered so severely at the late extensive fire, it lost no time in proceeding with its business. The buildings have been temporarily re-erected, but the firm having secured exceptional advantages in the adjoining suburb of St. Henri, it is the intention to remove there. The Canada Pipe Founding Co. is run in connection with this firm, of which Mr. Wm. Clendinneng, Jr., is the president.

H. R. IVES & CO.

The firm of H. R. Ives & Co. started in 1857 as foundrymen and hardware manufacturers. It was the first in the country to manufacture small hardware. The struggle to find a market for this was hard and prolonged, but the firm persevered and at last achieved success. About 1868 business was entered upon on a more extensive scale by the manufacture of stoves. This has grown to an enormous extent and promises to be one of the great enterprises of the future. In 1880 a new branch of business was undertaken in the manufacture of barbed wire fencing, and the factory turns out nearly 1,000 tons per year. Several hundred men find employment, and so extensive has the business become that new buildings were erected in Longueil in 1881.

THOMAS ROBERTSON & CO.

The partners of the firm of hardware merchants and manufacturers of railway supplies are J. R. Wilson, of Montreal, and John Wilson, of Glasgow, Scotland. The business was established in 1855, and is located on Craig street.

CRATHERN & CAVERHILL.

Messrs. Crathern & Caverhill commenced business in 1851 as dealers in metal and heavy hardware. The firm is composed of James Crathern and J. T. Caverhill. They are among the largest dealers and importers in the trade.

CAVERHILL, LEARMONT & CO.

This firm does business in shelf hardware on the same premises as Messrs. Crathern & Caverhill. The present partners are Messrs. Frank Caverhill, J. B. Learmont, Geo. Caverhill and Thos. H. Newman.

FROTHINGHAM & WORKMAN.

This is one of the oldest firms in the trade, being founded as far back as 1809. It does an extensive business in heavy hardware and metals. The present partners are Messrs. Archibald, Hon. Senator Murphy, and Messrs. Edey and Angers.

B. & S. H. THOMPSON.

This is the Canadian representative of a big Birmingham house, its place of business being on St. Sulpice street. Heavy hardware of all sorts are carried, but lines of brass, coppers, etc., are more of its specialty.

THE MONTREAL ROLLING MILLS.

This is a big joint stock concern founded several years ago, and controlling one of the most extensive plants of the kind in Canada. The works are situated on the Lachine Canal in Cote St. Paul. Mr. Watson is the president and Mr. MacMaster the managing director. The concern turn out everything from bar iron to wire, horse shoes and cut nails.

J. & C. HODGSON

Are a young but enterprising firm of iron makers. Their specialty is iron pipe, and a line of iron pipe bedsteads which meet with general favor.

PILLOW, HERSEY & CO.

Have their works on Mill street on the canal bank and are large manufacturers of cut nails, tacks, etc., etc.

W. H. COTTINGHAM & CO.

Allied to the iron trade is paints and oils, and one of the enterprising business houses in this line is the comparatively young firm of W. H. Cottingham & Co. They do a large business in leads and make a specialty of fine lines of artist material.

A. RAMSAY & SON.

This firm are the largest manufacturers and dealers in lead, glass, etc., in the country. They occupy an extensive warehouse on Recollect street, and their mills and crushing establishments are on the Haymarket square adjoining those of Wm. Glendinneng & Co. They suffered severely in the fire which destroyed that establishment.



JOSEPH RODGERS & SONS
LIMITED.

CELEBRATED CUTLERY : : :

STILL LEADS THE WORLD.

OUR REGISTERED TRADE MARK

GRANTED IN 1764, IS STAMPED ON EVERY ARTICLE.

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Fifty per cent. Profit to the Dealer on . . **ALABASTINE**

All Dealers who are in the trade for money should handle the best Wall Coating on earth—Cold Water Alabastine.

Ready for use by mixing in cold water.
Nothing like it on the market.
The only goods in this line extensively advertised.
Our special advertising sells the goods without talk.
Country dealers should keep it as it sells to the general public as well as to painters.
If our travellers have not called on you, write us for tint card and prices.

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All glass, Vase, and Library Lamps, in every hue and design.

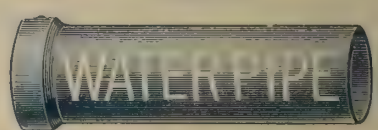
Our travellers will call upon you shortly with samples.

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Hamilton and Toronto



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HEAD OFFICE : HAMILTON, CANADA

¼ the PRICE of Iron. Write for Discounts



ASK FOR THE GRAHAM NAILS.



A GREAT LOSS?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

IT IS said the liabilities of L. A. Gurnett & Bro., Woodstock, will exceed over $8,000. Mr. Gurnett, of Ancaster, the father, has made a claim for over $3,000. The assets amount to $3,938, and the stock and effects are advertised for sale by the sheriff.

Robert B. Abbott, of Brinston's Corners, and Wm. Rannie, of Caledonia, general merchants, have assigned.

J. A. Laurin, general merchant, Sorel, Que., has assigned.

Richard Kincade, general dealer, Wallace, Ont., has assigned.

G. W. Ship, general storekeeper, Ailsa Craig, has assigned to E. B. Smith.

J. T. Foster, general dealer, Dornoch, Ont., has assigned to Charles Moore.

Richard Kincade, lately a merchant at Wallace, has assigned to John Hossin.

J. T. Craig, general merchant, Oxbow, Man., has secured an extension from his creditors.

John Hawke (formerly Hawke & Emes), hardware dealer, 1292 Queen street west, has assigned to W. A. Campbell. Previous to entering the hardware business Mr. Hawke ran a grocery store at Wellesley and Ontario streets, under the name of Mitchell & Co. About a year ago he sold out to a man named Hogarth, and invested the proceeds in the hardware business. The change was not registered, and Mitchell & Co. made an assignment to Mr. Campbell three or four months ago. The creditors of Mitchell & Co. then began to sue Mr. Hawke, hence his assignment.

A long and cold winter does not seem to have brought much grist to Alex. McKay, a Montreal plumber. At any rate he has assigned.

William Wilson, an Owen Sound furniture man is asking his creditors to accept 40c. on the dollar in lieu of one hundred.

A. Lewis & Co., stoves and tinware, Victoria, B. C., have not found business profitable, having been compelled to assign.

The stock, fixtures, and book debts of Frank S. Taggart & Co., dealers in firearms, watches, etc., this city, is to be sold by auction under power of chattel mortgage. Mr. Taggart has only been in business two or three years, and although doing a good business apparently did not possess enough capital.

CHANGES.

W. J. Clarke, general store, Woburn, has been succeeded by W. Secor.

B. P. Quarry, general merchant, Centralia, has been succeeded by P. Hanlon.

Lambert Bros., general merchants, Craven, have sold out to E. C. Davidson.

A. Gillespie, general merchant, Creemore, has been succeeded by Earle & Creighton.

Adams & Wigle have succeeded Oscar Grenier in his hardware business at Kingsville.

Peter Johnston, blacksmith, Nairn, has been succeeded by R. Emery.

PARTNERSHIPS FORMED OR DISSOLVED.

C. Lamontagne and P. Boucher have been registered proprietors of the tinsmithing firm of Cleophas, Lamontagne & Co., Montreal.

John Burns & Co., plumbers, Montreal, have dissolved, and Mrs. John Burns has been registered as proprietress.

Patrick Martin and Ovide Vezina have been registered proprietors of the firm of Martin & Vezina, plumbers, Montreal.

N. Myette and Z. St. Aubin have been registered as proprietors of the plumbing firm of Myette & St. Aubin, Montreal.

SALES MADE OR PENDING.

The general stock of Heintzman & Gaiser, Shipka, Ont., is advertised for sale 6th inst.

The general stock of N. A. Mansfield, Gowansville, is advertised for sale.

Frank Saforcadə, general merchant, Victoria, B. C., advertises business for sale.

The general stock of Duncan Sinclair, Alvinston, is advertised for sale by auction.

W. H. Dobson, of Rocklyn, general merchant and hotel keeper, advertises hotel for sale.

The stock of Robert Morgan has been sold by auction to F. T. Thomas at 21 cents in the dollar, and the book debts at 35½ cents.

The stock of A. J. McTavish, of Exeter, has been sold by A. W. Jones to G. G. Johnston, of Palmerston, at 65½ cents on the dollar.

W. E. Holmes, blacksmith, Norval, is advertising his business for sale.

The estate of Wm. Pullan, foundry and scrap iron dealer, this city, is advertised for sale.

DEATHS.

E. Blair, of the firm of Pritchard & Blair, general merchants, North Wakefield, Que., is dead.

John Farley, contractor, this city, is dead.

James Hay, senior, founder of the firm of James Hay & Co., furniture manufacturers, Woodstock, and father of Mayor Hay, died this morning from paralysis, in his 70th year.

TEN LIVE TRAVELLERS.

A good staff of travellers is like a well-disciplined army—it brings honor to those who send them on the road. H. S. Howland, Sons & Co., of this city, seem to possess a staff of this character, and in another part of this issue is published photographs of them. The likenesses are all good, and the many friends of the men throughout the country will readily recognize them.

Mr. Dexter is now the buyer for this firm, a position in which he is showing marked ability. He and Mr. Rogers, who assists him, as well as doing the pricing and the correspondence in connection therewith, makes only occasional trips.

In Ontario, Mr. Heming, North and North-West; Mr. Grover, West and South-West; Mr. Whyte, West and North-West; Mr. Ashdown, in the Midland and Niagara Districts; and Mr. McCoy, in the East, are all doing well. Mr. Rolston goes to British Columbia, taking in Manitoba and the North-West Territories, and is holding the firm's trade well together. Mr. Saunders is doing the eastern portion of Toronto, and Mr. Hoar the western, with good results.

The Canada Gazette of Saturday last contained an order-in-Council that metallic copper, the exclusive product of Canadian ores, shipped out of Canada by the producers for the purpose of being smelted, such product being returned to Canada direct to the producers of the ores, may, until 1st July, 1894, be admitted into Canada under such regulations as the Minister of Trade and Commerce may prescribe, on payment of duty on the cost and charges to the producers of the ores of or for the smelting.



MONTREAL MARKETS.

MONTREAL, April 7th, 1893.

The pig iron market continues steady and stocks have been further reduced during the week, sales are reported of car lots of Carnbroe at $19 and Langloan at $21. Orders are being booked for spring delivery at about the following figures. Summerlee and Garsherrie at $18.40 to $18.50 and Ayresome at $17.75 to $18.

BAR IRON A fair business is reported in bar iron at about $1.90 to $2.05.

TIN PLATES There is nothing new to note concerning tin plate, the idea being still about $3.20 to $3.25, whilst charcoal is moving slowly at $3.75 to $4.25.

CANADA PLATES—There is nothing new to note concerning Canada plate, which are still being moved in a small way at $2.50 to $2.60.

OTHER METALS—Copper is quoted at 13¼ to 14c. and ingot tin at 23 to 23½c., but the market is devoid of any new feature.

LEADS AND PAINTS—There has been a brisk movement in these lines during the week owing to the fact that the lower freight rates came into force on Monday last. The general tone of the market is healthy and prices are steady. We quote choice brands of paints, Government standard, $5.25; do. No. 1, $4.87½; do. No. 2, $4.50; do. No. 3, $4; dry white lead, 5¼c.; red led, pure, 4½c.; do. No. 1, 4¼c., with 2½ per cent. off these prices for ton lots.

OILS—Sales of linseed oil are reported at 65 cents for boiled and 62c. for raw in small quantities, round lots being quoted at 61c. for raw and 63 to 64c. for boiled. Fish oils are quiet and prices do not show any change, 40 to 41c. being still about the idea for Newfoundland cod and 38 to 39c. for Gaspe.

GLASS—Glass is dull and unchanged at $1.35 for first break, with other grades in proportion.

CEMENT Indications are that the spot stocks of cement will be pretty well exhausted before the opening of navigation. There is a brisk demand owing to the continued open weather, and prices are firm at $2.45 to $2.65, while several large orders have been booked for spring delivery at about 35c. per cask under present quotations. Fire bricks are moving freely at firm prices, $19 to $24 being about the idea of holders.

NAVAL STORES—A little better movement is noted in ship chandlery, but business is still small and unimportant. Spirits of turpentine is receiving some attention, but there is not enough doing to warrant any change in the tables. We quote:—Turpentine, 56 to 57c.; resins, $2.50 to $5, as to brand; coal tar, $3.75 to $4; cotton waste, 5½c. for colored and 7 to 10c. for white; oakum, 4½ to 7½c., and cotton oakum, 10 to 12c. Cordage, sisal at 9¾c. for 7-16 and upwards, and 15c. for deep sea line. Pure manilla, 12c. for 7-16 and upwards, and 13c. for smaller sizes.

PETROLEUM A better demand is noted for petroleum. The American agents have reduced their prices and owing to competition among grocers Canadian oil can be bought at a lower figure in jobbing quanties. We quote:—Canadian, 12 to 12¼c. at shed in Montreal for round lots, and 12½ to 13c. for small quantities. American petroleum, 18 in car lots, 19c. in 10 barrel lots, 19¼c. in 5 barrel lots, and 19¾c. for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c.; Canadian benzine, 10½c. Petrolea; 12½c. Montreal.

TORONTO MARKETS.

TORONTO, April 7, 1893.

Since the spring rates came into force considerable activity has been experienced in the trade, and shipments for the past week have been very heavy. As a result of this increased activity the trade is experiencing a good deal of difficulty in executing orders. The improvement exhibited is general, and particularly for such articles as harvest tools, and spades, shovels, lawn mowers, ice-cream freezers, horse pokes, cut and wire nails. Ship chandlery is still moving out in fair quantities, although the bulk of the business seems to be about over. Payments seem to be fairly satisfactory and are improving. Fewer complaints are heard regarding the condition of the roads. The long-expected spring activity seems to have fairly set in, and the jobbers and also the country merchants who have been in town during the week are in good spirits.

Meetings have been held during the week in Montreal by the manufacturers of bar iron, barbed wire and wire nails. It is not expected however that any change will take place in nails, manufacturers holding that present prices are only about sufficient to pay expenses and interest upon capital invested. In bar iron however there are some who anticipate lower prices. Regarding barb wire, HARDWARE was informed that Manitoba and Northwest Territories will be placed on the same footing as Ontario and the East. At present the buyers in that territory have to pay the freight, while those down here do not. According to HARDWARE'S informant this anomaly will no longer exist, the manufacturers having decided to pay the freight when shipping either to the East or to the West.

WIRE—Trade is opening up well for wire, particularly for oiled annealed, in lots of one and two ton lots. Prices are unchanged. It is understood that galvanized wire is being brought in from the States. This seems to be about the only kind arriving from this source.

NAILS—A good movement is reported. While it is expected that the nail manufacturers will follow the example of the bolt and nut men and not change prices, it is expected those who have been occupying a place on the preferred list will be taken off and that all dealers will be placed on an equal footing in this respect.

ROPE—No special features to note, a fair amount being sold at unchanged prices.

CHAIN—Prices are unchanged, although there is if anything a steadier feeling than a week ago on account of the strike in England, it being the opinion that should it continue values will appreciate. Trade at the moment is quiet.

TOOLS Owing to the quiteness in the building trade there is not much demand for mechanics' tools. In fact the same applies to builders' hardware in general. The manufacturers' of harvest tools are unable to keep up with the demand. Demand is also good for spades, shovels, rakes, hoes, lawn mowers, etc.

CUTLERY—Import orders are being placed, but it is yet too early to expect many sales.

TINWARE—Business in this line does not seem to be falling off yet. Demand is especially good for milk can fixtures and trimmings.

HINGES—The price of screw hooks and hinges, as fixed by the manufacturers and announced last week is as follows: 12 inch and under are quoted at 4¼c.; 14 inch up to 20 inch, $3.75; 22 inch up, 3¼c. a pound.

METALS—There is a slightly unsettled feeling regarding what action the manufacturers may take at their meetings regarding certain lines. This however will be but of a momentary character, and cannot possibly last more than a few days. Trade otherwise is fairly brisk in metals and is regarded as fairly satisfactory, although no particularly new features have developed during the week. There is a brisk demand for ingot copper, and galvanized iron sells well. Some large sales are also reported in zinc spelter.

PIG IRON—Not much enquiry and actual business is confined to a few small lots of the soft grades. Prices remain as before at $23 to $23.50 for Southern and Seimen's and at $24 to $24.50 for Summerlee.

Rogers, Brown & Co., Buffalo, report the Toronto pig iron market as follows: No new features have developed in the market during the past week. Consumption is very heavy, but competition is remarkably keen with both sellers and purchasers. In order to get business, the necessity for low prices with melters of pig iron has been so pronounced that the influence of it through buyers has a tendency to stifle any advance, however slight, unless it should be founded on the only sure basis of such an advance, the excess of consumption over production. We quote for cash f. o. b. cars Toronto in bond, 1X Foundry Strong Coke Iron Lake Superior ore, $15.70; 2X Foundry Strong Coke Iron Lake Superior ore, $14.70; 2 Foundry Strong Coke Iron Lake Superior ore, $14.20; Jackson County Silvery 1, $18.00 to $18.30; Jackson County Silvery 2, $17.30 to $17.80; Lake Superior charcoal, $18.20; Southern Soft 1, $14.10 to $14.35; Southern Soft 2, $13.85.

BAR IRON—No large quantities going out and market is a little unsettled pending the result of the meeting of the manufacturers. Prices remain unchanged at $2.05 hundred pound basis f. o. h. Toronto, Montreal or Hamilton; 5c. more f. o. b. London.

TIN PLATES—Stocks are beginning to arrive and prices are unchanged.

SHEET IRON—No special features to note. Just the quiet trade doing that is usual at this time. Prices, as before, range all the way from 2⅝ to 3¼c. according to size and quality.

CANADA PLATES—Trade is still dull for stove piping, but the demand is good for roofing purposes. All dull is being held at $2.65, half-half at $2.75, and all bright at $2.80 to $3 per box.

GALVANIZED IRON—Demand continues good in this line at unchanged prices. Queen's Head and Gordon Crown brands are quoted at from 5 to 5¾c.

INGOT TIN—Demand is good but prices are not any higher, 23½ to 24c. obtaining.

INGOT COPPER—Stocks are ample and back orders are now being filled. Demand is brisk and prices unchanged at 12⅞ to to 13c. for good qualities.

ZINC SPELTER—Some large sales are reported to have been made and prices are unchanged at 4¾ to 5¼c.

ZINC SHEET—Inactive, with prices unchanged at from 6 to 6½c.

SOLDER—Quiet and unchanged, prices ranging from 16 to 19c. according to quality.

LEAD—Continues quiet and unchanged at 3¼ to 3½c. for pig.

ANTIMONY—Nothing new in this line, and prices are unchanged at 13½ to 14c. for Cookson's and 13 to 13½c. for other kinds.

PAINTS AND OILS—Business is reported to be even better than last week, and the demand seems to be well distributed. Payments are fair. Demand for white lead seems to be gradually working up to its normal condition, and prices are unchanged at the 5¼c. basis. Demand for prepared paints continues good at $1.10 to $1.20. Trade is fairly satisfactory in both dry colors and in colors in oil. Demand for varnishes continues good at from 55c. for brown Japan up to $2 for pure orange shellac. Linseed oil is going out freely at from 61 to 63c. for raw and at 64 to 66c. for boiled. Turpentine still sells well at 55 to 57c. It is reported somewhat easier in the South but there is no change here; in fact no change is probable till June, when the new crop is due. Spring shipments of castor oil are in and there is a brisk demand. Merchants who were fortunate enough to have booked their orders for arrival have the advantage over those who did not, as the prices has advanced considerably. Cod oil quiet and unchanged at 48c.

GLASS—Demand good and prices unchanged at the $1.25 basis. Spring orders are said to specify more double diamond than is usual.

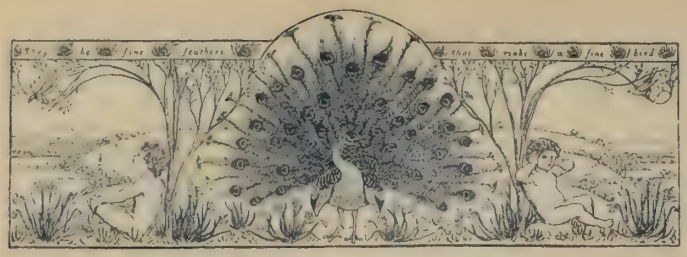
PETROLEUM—Trade is about of the usual spring character, but the margin of profit has been so narrowed down by competition that that trade ere long will look for a reaction. We quote Canada refined oil 13 to 13½c., carbon safety 17½ to 18c.; Canada water white, 19c.; American water white, 21 to 22c.; photogene, 25c.

OLD MATERIAL.—Offerings are more liberal but there does not seem to be any corresponding increase in the demand. Prices are unchanged. We quote No. 1 heavy cast scrap 65 to 70c. per 100; No. 2, including sheet iron, hoop iron and mixed sreel, 20 to 30c.; new light scrap copper, 8 1-2c; heavy scrap copper 9½c.; old copper bottoms, 8c; light scrap brass 5½c.; heavy yellow scrap brass 7½c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1¾ to 2c.; scrap zinc, 2½ to 2¾c.; scrap rubber, 2½ to 2¾c.; country mixed rags, 80 to 85c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.

SEEDS.—Orders for red clover, alsike and timothy are numerous but small individually, buyers still pursuing a cautions course. Prime red clover is quoted at $8.85 to $8.94 and extra choice at $9 to $9.15. Alsike runs all the way from $7.05 for good to $8.40 for fancy. Timothy sells at $2.52 to $2.57 for prime to choice, and $2.59 to $2.64 per bushel for choice.

The growth of the manufacture of prepared paints in this country has been rapid. Ten years ago it was little heard of. To-day it is classed among the important industries of the country, and bids fair to relegate dry colors to a minor position. This spring the activity in this line is marked, and some of the manufacturers have been at their wits' end trying to keep up with orders.

White enameling works have been established at Dubuque. It is said to be the first of the kind in the United States, and the New York Press credits the McKinley Act with being its father.



TRADE CHAT.

THE Kemp Manufacturing Company have received a permit from the City Commissioner for the addition of a substorey and for making alterations to their factory at Gerard and River streets. The cost of the improvement is placed at $8,000.

Toronto has been anxious for the establishment of a rolling mill, and now that the desideratum is likely to be secured the residents of one part of the city are objecting to its being located in their neighborhood.

H. S. Howland, Sons & Co. have just received a full line of Askham's table and dessert cutlery, fine in quality and finish. This particular line of goods has an excellent reputation.

A large stock of glass, fourth quality, all sizes, has just been received by H. S. Howland, Sons & Co.

H. S. Howland, Sons & Co. report that business is 100 per cent. better than for the corresponding period of last year.

Stewart & Wood report trade larger and more satisfactory than ever before, and that if there are any specialties it is in the way of Alabastine and Champion mixed paints.

The Montreal Patent Keg & Barrel Co., manufacturers of the patent veneer nail kegs and barrels, have been obliged to increase their facilities for turning out stock, the demand for their goods having more than doubled since the commencement of the year. They are now running their works night and day to keep their orders supplied.

The prospect for a good season in Portland cement and general builders' and contractors' supplies, is better than it has been for some years, and although prices are low the outlook is favorably for a good volume of business. W. McNally & Co., Montreal, have some very large orders already booked for forward delivery to the trade and public works.

The S. S. Smokeless Powder Co., of London, England, have appointed the wholesale hardware house William Darling & Co., Montreal, their sole agents for the Dominion. They will hold a stock in magazine near Montreal and solicit the trade.

H. S. Howland, Sons & Co. have received a large consignment of garden and sheep shears, and they report that all back orders will now be promptly filled.

M. & L. Samuel, Benjamin & Co. report a big demand for lawn mowers.

The sales of Shepard's Lightening Freezers are rapidly increasing in Ontario, and now they are beginning to find their way into the Province of Quebec.

Large sales of Goodhue belting are reported by H. D. Simmons, the western agent.

H. S. Howland, Sons & Co. have just received a consignment of improved fence pliers, in 8, 9 and 10 inch.

The Stuart & Peterson Co., manufacturers of hollowware and specialties, have removed their factory to Burlington, N. J. The new property embraces 410x200 feet and the foundry is claimed to be the best equipped in the United States. The new site is from Philadelphia, twenty-seven minutes by rail and forty-five minutes by boat. The firm's new catalogue is ready and will be mailed on application.

PERSONAL MENTION.

J. J. Moorhouse and W. V. Reynolds, of the Keeley Mining Company of New York, are in the city viewing the prospects for creating a branch of their industry at Ashbridge's bay.

George B. Shaw, who has been in the employ of A. C. Leslie & Co. for some months, is now on the road for that firm. He is at present doing the western part of the province.

J. L. Drainie, a progressive Fergus hardware merchant, was in the city this week. He anticipates a good spring trade in his part of the country.

J. Reith of Grand Valley, — Wallace of Cambray, J. N. Davies of Lakefield were among those who were seen touring the warehouses Wednesday.

Henry S. Hergert, price-fixer at M. & L. Samuel, Benjamin & Co.'s, has been confined to his home for about ten days with a severe cold.

H. H. Freeman, an old and well-known hardware man, formerly with the firm of McNab, Marsh & Coen of this city, and latterly with W. H. McNab of Milton, has purchased a stock of hardware and has entered upon what his friends hope will be a successful business career in Milton, where he is well and favorably known.

HARDWARE FAILURES.

Thanks to the courtesy of Mr. T. C. Irving, superintendent of Bradstreet's agency in this city, HARDWARE is able to furnish its readers with a tabular statement showing the number of failures that took place in the hardware trade in Canada during 1892, together with the causes and the assets and liabilities. If there is one lesson more than another to be learned from the report it is the fallacy of starting into business with insufficient capital, out of a total of 30 failures in the trade last year over two-thirds being due to deficiency in this respect. The figures outside this particular reflect rather favorably upon the class of men who are in the hardware trade, incompetence and inexperience being only the cause of two failures each and extravagance only one.

CAUSE.	NO.	ASSETS.	LIABILITIES.
Incompetence....	2	1,400	2,500
Inexperience.....	2	3,125	6,500
Lack of Capital..	22	135,530	270,280
Extravagance.....	1	2,600	6,500
Disaster.....	3	21,861	54,000
Total.....	30	164,516	339,780

BAR IRON REDUCED.

Since the form containing the market reports was closed we have received a telegram from Montreal announcing that the manufacturers have decided to do what was anticipated they would—reduce the price of iron—the base price now being $1.95.

TOPICS OF THE MOMENT.



AGREEMENTS between manufacturers may be all very well when they do not go too far. But I maintain that they have gone too far in this country, said a well-known wholesaler to me the other day as he tilted himself back in his chair and threw his pen testily on the desk. "Things have now reached a stage when a boy—aye an automaton, by Jove—can just as well buy and sell as an experienced man, the price of everything being fixed. When a traveller of some of the factories comes into my place and I ask him what he can sell me such and such a line for, the answer I usually get is: 'O, the same price—the association price.' The representative of a rolling mill was in my place the other day and he remarked: 'Mr. Blank, I'm about sick of the business. A certain price is fixed for about everything I handle. I am not allowed to use any discretion. All I have to do is to peddle my samples around. Why man alive, anybody could do that. In fact, between you and me and the gatepost I think the firm is losing money by keeping me on the road. A cheap and inexperienced man would serve them just as well.' I told him I thought so too.

"Then there is another thing that I think is bearing unduly harsh upon us jobbers, and, of course the retailers too," he continued, shuffling around in his chair, "and that is the tariff on bar iron. I believe that the rolling mills are entitled to a certain measure of protection, but I maintain that they are getting too much of it. They had 5 per cent. before the National Policy came into force, 17½ per cent. for the first nine years after, and now it is up to something like 55 per cent."

"Yes, and what is more they pay us just what they choose for our scrap," remarked a scrap man. "The Canadian rolling mills pay us about $2 a ton less than do the Americans for theirs, and yet they realize from $8 to $10 a ton more for their bar iron. But then I don't know that there is anything wrong about it. We would I suppose do the same thing were we in their shoes," he added consolingly.

I came down town the other morning with the accountant of a wholesale house. We men often dwell upon the incessant clatter of women's tongues, but after all I think that when we get together in twos and threes we do our share of talking. Anyhow my friend and I fell to gossiping about the imperturbability of this and that man and of the need of this characteristic in business. "But, after all,' 'added my companion, "there is just a possibility of it being carried too far. At least we think so, yes, and we know it is sometimes. For instance, we have customers whom we cannot offend try how we will. And sometimes we try pretty hard. I mean those fellows who are bad pay or don't pay at all. Goodness me! sometimes I send out letters that would, you would fancy, make the receivers get on their high horses in a minute, but, bless your life, you might just as well throw water on a duck's back for all the effect it seems to have. And the answers we get from some of these people! Why they are so bland and suave that a person reading them, provided he had not seen ours, would imagine we had sent out well a specie of love letter. Yes, siree, beware of the business man you cannot offend. I know we are."

"Why is glass dearer in Montreal than in Toronto? Well I'll tell you," said a local dealer to me a few days ago. "It's because the dealers down there have it more their own way than we have up here. I mean that the competition is not so keen. That's why.

Mr. T. G Dexter, buyer for H. S. Howland, Sons & Co., usually has a bright look in his dark eyes and a smile on his well, features. But the other afternoon, when I rambled into the warehouse of the firm, he seemed in more than usually good spirits. He was surrounded by Mr. Fred. Howland and Mr. H. J. Simmons, who looks after the Rodgers' razor in Toronto, and was complacently rubbing his chin. "O, I just had such a glorious shave," I heard him remark as I approached. "You know I am very hard to shave. Well, to-day, when I was going through the usual operation I was surprised to find that it did not hurt so much as usual. In fact I did not feel the razor going over my face. In surprise I turned to the barber and asked him what was the reason. 'O, I've got a razor here that is a perfect beauty. I bought it this morning for 50 cents from a fellow who was hard up, and now I would not sell it for $5,' he explained. 'What make is it?' I asked. 'Elliott's C and C,' he replied. And—

"Which I suppose H. S. Howland, Sons & Co. handle," I broke in, seeing what he was coming to.

"By Jove, you are right," he replied with a laugh, bringing the palm of his hand down on the counter with a bang.

Mr. Simmons laughed, Mr. Howland laughed and we all laughed together.

"It is not generally known," remarked a gentleman interested in the Ontario nickel mines, "that a Torontonian named How has invented a nickel steel armor plate which is claimed to be able to resist a much heavier force than the 10½-inch plates recently tested by the United States naval authorities, while it is not at the same time half as thick. Mr. How is getting sample plates made at Carnegie's, and he is over in Cleveland looking after it now. It seems that the great power of resistance is on the surface of the plate, which is sort of carbonized on one side. The principle Mr. How has adapted is to carbonize both sides of the plate, thus making the two surfaces of equal strength and leaving the centre to act as a sort of cushion. He also makes a wire that has greater tensile strength than the ordinary wire. He also possesses the secret of increasing the strength of iron wire by subjecting it to a certain nickel treatment. O, I tell you, great things are in store for the nickel of this country," he added enthusiastically.

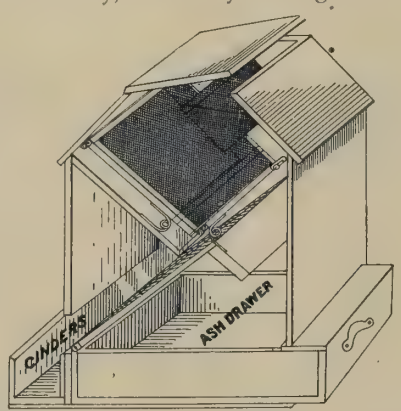
"We are having an enormous run on calks for lumbermen's boots," said a hardware man to me a few days ago. "I never saw anything like it before. And to me it is an indication that we are going to see a pretty brisk lumber trade this year. Anyhow, what else could it mean. If more calks are being used, there must be more men employed and if more men are employed why there must be more business doing," was the way he reasoned it out.

"No, I do not expect a good building trade in Toronto this season," remarked Mr. Ben. Brick, the well-known contractor to me as he scraped his foot on the curb at King and Victoria streets. "The fact of the matter is that there is not much work being let and for the little that is to be done there are plenty who are ready to do it for next to nothing. There, that is about the situation in a nutshell," concluded he as he made for the door of the Builders' Exchange.

RAMBLER.

A UNIQUE SIFTER.

ECONOMY in fuel is something that nearly everybody aims to practice, be he householder or manufacturer. A simple way of doing this, is by utilizing the cinders. All recognize this, but comparatively few practice it. The difficulty is the inconvenience of present methods of separating cinders from ashes. The common way of doing it is by the ordinary sieve, which has been improved of late years by the addition of a handle. Not only is this method irksome but it is disagreeable, the person sifting being usually enveloped in a cloud of dust. Contrivances have been invented to overcome the difficulty, but many of them have been poor attempts and few of any real advantage over the old-time sieve they were meant to supercede. But it's a long lane that has no turn. M. M. Vardon, of 67 Yonge street, this city, has recently invented what seems to be the long-sought-for desideratum. If it is he has rightly named it the Climax Self-Acting Cinder Sifter. At any rate it is the climax of all inventions of the kind, and the accompanying cut gives an idea of the manner of its construction. There is no shaking, no crank to turn, no dust. In fact there is "no nothing," as the small boy would say, in the way of disagreeableness or of labor. A child is just as capable of using it as an adult. The sifting can be done in less time than it takes to explain how it is done. The ashes are simply poured in at the top and the vibrating screens and dividers separates the cinders from the ashes without causing any dust. The illustration shows one side removed, giving an interior view. As will be seen, the vibrating screens are arranged to work in conjunction with the dividers, the coal and cinders passing from one to the other until they reach the cinder drawer thoroughly screened, the ashes and dust passing into the ash drawer. The drawer, holding a week's ashes, has only to be withdrawn and emptied into the scavenger cart, or the sifter can be so placed against the lane fence that the ashes will fall into the lane.



Mr. Vardon has already received a number of letters regarding the merits of this sifter. One from R. G. Barrett of 187 Bloor street east, this city, states that it does all that is claimed for it. "I had my man who attends to my furnace," he adds, "put the ashes that had accumulated since Oct. 1892, to March 11, 1893, through the sifter, and the saving of cinders and coal therefrom will amount to over two tons in weight.

It is understood that Mr. Vardon is ready to give live, energetic men the sole right to handle the Climax in their respective towns.

THE A. R. WOODYATT CO., GUELPH, ONTARIO.

THE history of the A. R. Woodyatt Co., manufacturers of lawn mowers and general hardware, whose advertisement appears on another page is one of progress and enterprise. Starting six years ago in the premises of the old Guelph Novelty Co., with the determination to build up their business by the excellency of their goods, and by straight business methods their success has been phenomenal until now their goods occupy the first place in the markets of the world, both for excellency of design, finished workmanship, and quality of material. This is particularly the case with their lawn mowers which have already attained a world wide reputation, and which find their way into every corner of the globe.

Of course like every successful concern they have many imitators, but as they bring out some new improvement each year, we would advise intending purchasers to be sure and get the current year's machine. This year they are building two mowers.



THE WOODYATT, LAWN MOWER.

This is a high class machine with 10½ in. wheel, encased gear, long compression bearings, cold rolled steel shafting, and crucible cast steel knives, rolled to special section, and properly tempered thus enabling the knives to hold a keen cutting edge much longer than any other mower on the market in fact a machine that for durability efficiency and ease of working cannot be surpassed,—and their last year's improved Philadelphia, which was such an extraordinary success that it has been determined to keep it on the market, to meet the demand for a mower, which shall be cheap in price, and yet thoroughly reliable, and guaranteed to give good satisfaction.

This firm also manufacture sad irons, saw sets, sliding door hangers, hinges and latches, tree pruners, etc., besides doing large quantities of contract work.

Their works are replete with the very latest machinery, and their hands are all skilled workmen, thus placing them in a position to turn out all work promptly, and of the very best quality.

Their goods are handled by all the leading wholesalers.



AN ILLUSTRATED LIE.
"No hurry, madam; we'll wait for the next train."

SPECIMEN COPY OF GUARANTEE FURNISHED EACH CUSTOMER.

GUARANTEE

FROM THE

Toronto Cutlery Company

M. MAYER, PROPRIETOR, 65-67 YONGE ST.

Toronto, 189

To M

We hereby authorize you to WARRANT *every Knife bought of us bearing the brand of Messrs. Joseph Allen and Sons, Sheffield, Eng.*

TRADE MARK

NON-XLL

JOSEPH
ALLEN & SONS
SHEFFIELD, ENG.

We agree to REPLACE *any Knife found soft or not tempered to hold an edge.*

We do NOT *warrant them against mis-use or breakage,* EXCEPT *from* FLAWS.

Each blade is made of Wardlow's best Cutlery Steel, and HAND *hammered from the bar.*

Respectfully,

TORONTO CUTLERY COMPANY

CITY OF TORONTO CANADA

Signed

Witnessed

WEBBER PRINTING CO., 50 LOMBARD ST., TORONTO

SPECIMEN COPY OF GUARANTEE FURNISHED EACH CUSTOMER.

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BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

OUR SALES OF
"BURHAM" Portland Cement
For the past 8 months have been
25,499 CASKS.
"BURHAM" Brand outranks all others
Try it and be convinced. . . . .
Sole Consignees for Canada,
McRAE & CO., OTTAWA

MUNN'S LIQUID GLUE
IS THE BEST.
Kennedy Bros., Agents
101 Bay Street, TORONTO.

Established 1864.
CLARKSON & CROSS,
CHARTERED ACCOUNTANTS
NO 26 WELLINGTON ST. EAST
E.R.C.Clarkson,F.C.A.
W. H. Cross, F. C. A.
Edward Still.
John F. Helliwell.
TORONTO, ONT.

Excellent Quality! Reasonable Price!

ADAMS-MARS
BEST.
GALVANIZED SHEET IRON. SP

SHEET STEEL
BRICK
ABSOLUTELY FIRE PROOF.
METALLIC ROOFING Co
CATALOGUE FREE M'F'RS TORONTO

CURRENT MARKET QUOTATIONS.

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	24, 25
Strip "	25, 26

Tin Plates—*Charcoal Plates, Bright.*

	Per box
M.L.S. equal to Bradley	
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 25 4 50
I.X., "	5 25 5 50
I.X.X., "	6 25 6 50
I.XXX., "	7 25 7 50
D.C., 12½ x 17	3 75 4 00
D.X.,	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be urchased of 25c. box.

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65, "	

Tinned Plates

72x30 up to 24 gauge	6¼ 6½
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$2 05	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
1-inch	13½

Steel Boiler Plate.

¼inch	$2 45
16 "	2 35
¾ " and thicker	2 25

Sheet Iron.

1 to 20 gauge	2⅞, 3
22 to 24 "	2⅝, 2⅞
26 "	2¾, 3
28 "	3 , 3¼

Canada Plates.

Blaina	½ bright	2 75	
Abercarne		2 75	
Lion			

Iron Pipe.

Wrought 62½ p. c. to 62½ p. c. and 5 p.c.
Galvanized, 37½ to 40 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5¼
26 gauge, "	5¼, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5¼, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅝ 5
" 5-16 " "	4½ 4¾
" ⅜ " "	4⅜ 4⅝
" 7-16 " "	4¼ 4½
" ½ " "	3⅞ 4
" ⅝ " "	3½ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 14 0 14½
Lake Superior	0 13 0 13¼

Bolt or Bar.

Cut lengths, round, ½ to ⅞ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20 0 22
" 35 to 45 " "	0 19 0 20
" 50 lb and above per lb	0 18 0 19

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 05 0 05½
Domestic "	0 04¾ 0 05

Zinc Sheet.

5 cwt casks	0 06 0 06¼
Part casks	0 06¼ 0 06½

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, per square ft, by roll	0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04⅜ 0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 17 0 19
Standard	0 16 0 18
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½ 0 14
Other makes "	0 13 0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per lb	5 25
No. 1 Do "	4 87½
No. 2 Do "	4 50
No. 3 Do "	4 00

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
Venetian Red (R.C.2) " "	1 50
Venetian Red, (best) "	1 80 1 90
English Oxides per cwt	3 25
American " " "	2 25
Canadian " " "	1 75
Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure, 8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03¾

Varnishes (in bbls).

No. 1 Furniture, per gal	0 60
Extra "	0 70
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	0 95
Pure Orange Shellac "	2 00
Hard Oil Finish "	1 30

Linseed Oil (in bbls)

Raw, per gal	0 61 0 63
Boiled "	0 64 0 66

Turpentine (in bbls)

Selected Packages, per gal	0 55 0 57

Castor Oil.

Best, per lb	0 08½ 0 09

Cod Oil.

Cod Oil, per gal.	0 48

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet makers	0 17 0 18
White	0 16 0 17
London Town	0 7½ 0 08½
Gelatine	0 22 0 27
Stripped	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis.40 to 45 p.c. Amer-
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

The JAMES ROBERTSON CO'Y Ltd.,

MANUFACTURERS OF AND DEALERS IN

METALS

PAINTERS, PLUMBERS AND TINSMITHS SUPPLIES.



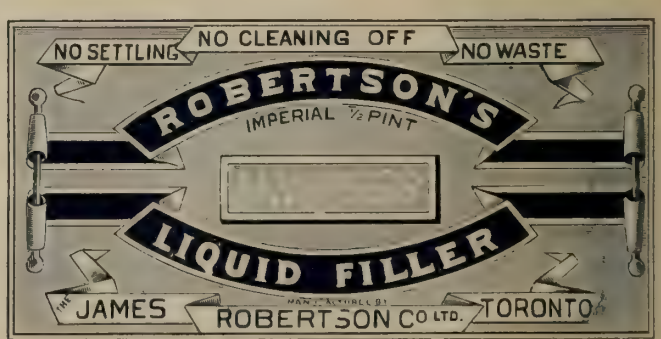




We guarantee the White Lead contained in this package to be Chemically Pure, ground from best English Dry White Lead in Refined Linseed Oil. We will give $25.00 for each and every case proved otherwise.

James Robertson Co





TORONTO

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50,50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 5 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " ....

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, eacn 2 00 5 00

House

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 30 to 35 per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... ... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Heuis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 25

Butts—*Brass*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... ..... 0 05 0 06
Crayon, per gross 0 14 0 18
Chisels—*Socket, Framing and Firmer*
American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... .... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 45 to 47½ p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 56		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.

st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05
Screw and Strap, per lb .. 0 03½ 0 04½
Per doz. sets
Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.
Per doz. pairs
Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

THE LONDON HORSE POKE.

DURABLE  STRONG

Some of the Advantages of the London Horse Poke over all others.—No wooden pins to break or loose. No wire spring to rust or get out of order. The London Poke is the only one made with iron bolts, which cannot get lost or broken in shipping. It is the only adjustable Poke made to fit any size horse from a Pony to Clydesdale.

Send for Sample Order. **BOWMAN, KENNEDY & CO., London,** Western Agents

KEMP MANUFACTURING CO., TORONTO, ONT.

HEADQUARTERS FOR ALL KINDS OF

WARES MADE FROM SHEET METALS

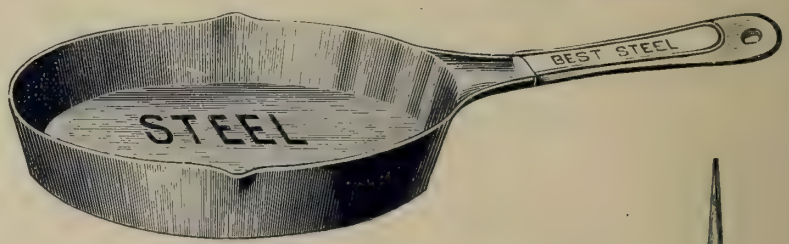
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Steel Sinks



Copper Kettles



Steel Spiders



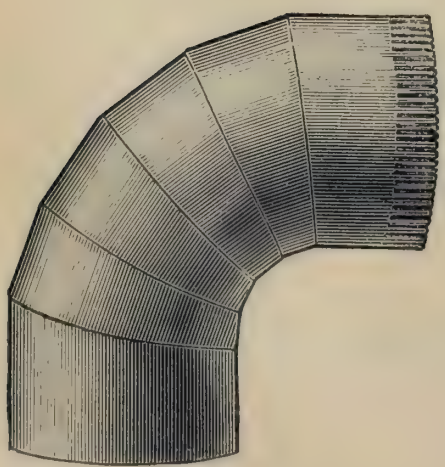
Tornado Oil Cans



Coal Hods



Machine Oilers



Elbows



Onyx Enamelled Ware



Galvanized Buckets

Wrought Hooks and Staples, Amer dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 30 per doz.
ronze, Berlin, per doz .. 2 75 3 25
ronze, Gem, " 6 00 9 00
" " 8 75 10 00
hutter, porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   Basis—50 to 60 dy..... 2 30
   40dy..... 2 35
   30 dy..... 2 40
   20, 16 & 12 dy..... 2 45
   10 dy..... 2 50
   8 & 9 dy..... 2 55
   6 & 7 dy..... 2 70
   American Pattern Only
   from 4 to 5 dy 2 90
   3dy. (lath)..... 3 30
3. Canada Pattern Only
   from 4 to 5 dy 2 80
   3 dy. (lath)..... 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz..... 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Nails.

Galvanized, per doz..... ... 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Star, R & L Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p. c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3¼ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	22	25
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 85
" N P. " 1 00 1 10

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.

Hack, complete, each.... 1 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P,, 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia ¼ gross boxes..... 3 25
" ½ and ¼ gross boxes per gross net cash..... 12 00

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 57½ per cent.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ per cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application.
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Iron and Steel, annealed, annealed and oiled, galvanized 20 per cent. dis
Bright coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4½ 4¾
" 4 " 4 & 6 " }
" Plain twist, 2&3 wires 4½ 5
" Steel thorn and ribbon..... 4½ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 80 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 0
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

The Old Wooden Bucket Must Go

Indurated Fibre Ware.



No Hoops, No Joints, Cannot Leak, Swell, or Water Soak.

The E. B. Eddy Co.
Mammoth Works
Hull, Canada.

We manufacture all kinds of Paper suitable for the Hardware Trade.
Send for Samples.



The F. F. Dalley Co. of Hamilton, Ltd.

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."

BRITISH SHEET GLASS
P.B.

These words and brand are on every box. None genuine without this Trade Mark. We warn our friends against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS, KNIVES, FORKS, SPOONS.

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

NEW YORK ALUMINUM BEARING METAL CO.

NEW YORK OFFICE, N. E. Cor. Washington and Cortlandt Sts. CHICAGO OFFICE, 12 Pacific Avenue.
MONTREAL OFFICE, H. McLaren & Co., Agents.

MANUFACTURERS OF

ALU

TRADE MARK.

"Genuine Babbit," - -	Price	30c.	per lb.	f.o.b.	New York
"Champion Metal," - -		25c.	"	"	" "
"Aluminum Bearing Metal,"		18c.	"	"	" "
"Big 4 Babbitt," - -		14c.	"	"	" "
"Pyramid Metal," - -		10c.	"	"	" "
"Mystic Metal," - - -		8c.	"	"	" "

CLOSE FIGURES MADE ON LARGE ORDERS OR CONTRACTS.

Our metals are superior to any like Babbitt Metals in the market. We Solicit Your Orders.



CROWN STOVE MAT.

SCORCH PROOF.

This useful article will be fully appreciated after one trial. All kinds of cereals, milk, chocolate, etc., may be cooked in ANY UTENSIL without the least danger of scorching, if used on this mat. It is unequalled for toasting bread.

DIRECTIONS.

Place mat on top of stove, range, or open-grate fire, and put utensil upon it. If it becomes soiled it may be cleaned by heating it red hot. Do not wet or scrape it.

Peerless Enamelled Ware,
White Enamelled Ware,
Retinned Ware,
Japanned Tinware,
Pieced Tinware,
Galvanized Iron Ware,
Wire Goods.

German, English and American Specialties in Metal Goods.

Thos. Davidson & Co.,

MONTREAL.

Established 1880 **DOMINION WIRE MANUFACTURING CO.** Incorporated 1883 Limited

OFFICES: 185 ST. JAMES ST., MONTREAL
27 FRONT ST. EAST, TORONTO

F. FAIRMAN, President.
J. COOPER, Vice-Pres.
J. C. McCORMICK, Sec.Treas.

WORKS: AT **LACHINE,** NEAR **MONTREAL**

Manufacturers of

IRON, STEEL, BRASS AND COPPER

MARKET WIRE OF IRON AND STEEL,
Bright, Annealed, Oiled, Coppered, Galvanized, Tinned.

ALSO

Copper, Brass and Brass Spring.

Wire

FOR ALL PURPOSES.

SPECIAL WIRE OF IRON AND STEEL,

Tinned — For Bookbinders', Bottlers' Broom and Mattress Makers' use.

Coppered Spring — For Mattress Makers' and Upholsterers' use.

Nail, Rivet and Bolt Makers' Wire.

ALSO

WIRE NAILS, JACK CHAIN, **STEEL and BRASS** WOOD SCREWS, CRESCENT COAT HOOKS,

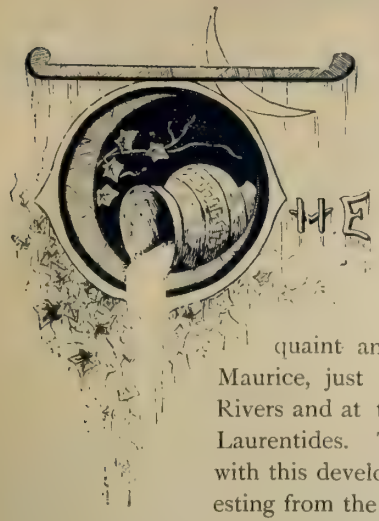
STEEL SPRING COTTER PINS.

2 and 4 Point "Lyman" Barb Wire, 2 and 3 Wires Plain Twist, Thorn and Ribbon, Fencing and Staples for Same.

- - - AND - - -

Galvanized Telephone and Telegraph Wire,
Pure Copper Wire for Electrical Purposes.

AT RADNOR FORGES.



THE PROVINCE of Quebec is in many ways quaint and old fashioned, but the demands of modern requirements are every day leading to a more complete development of her ample natural resources. A development of this sort is at present going on in the quaint and picturesque county of St. Maurice, just north of the city of Three Rivers and at the base of the world famed Laurentides. The circumstances connected with this development are all the more interesting from the fact that it had its inception more than a century ago at the hands of the governors under the French regime. From that time until within a few years ago the proprietors were content to jog along in an old fashioned way. The consequence was that little advancement or improvement was made. In 1889, however, a company was formed under the title of the Canada Iron Furnace Co., and once it took hold there was a change, the result of which is that the manufacture of charcoal pig iron from bog ore promises in a very short while to be one of the leading industries of the Province.

It is about the works of this company that HARDWARE proposes to write and, with this object in views, its representative paid Radnor, where they are situated, a visit a short time ago. It is on a branch of the C. P. R., near Three Rivers, and has in it the making of a model industrial community, and when the intentions of the Canada Iron Furnace Co. are carried to completion it will be a regular minature "Pullman" in the heart of the old fashioned habitant country.

Since the company has taken hold of the works, the English speaking population has increased to a percentage of 75 to 100, and quite a colony of Swedes have settled in the community, they being skilled workmen in the production of charcoal iron. The company, together with its men, has put up a handsome little Episcopal church, stained glass windows and all; has erected a school house, and established a French school for the workmen speaking that language. It is expected that a Foresters benefit association and a recreation hall and reading room will be instituted shortly. About 200 men are employed in the manufacture of the pig iron proper, and these and their families are housed in the roomy and convenient cottages of the company in the village.

After inspecting the cottages, the church and school, the writer turned his attention to the furnace proper, and the interesting process of converting the bog ore into pigs of charcoal iron, or to make use of the company's well known brand C. I. F. pig. For two years after they acquired the property the new proprietors operated the antiquated stone stock of a capacity of four and a half tons per day, experimenting the property more than anything else to see what its possibilities were. Once these were ascertained the development of the entire property was proceeded with by systematizing the collection of ore and wood, establishing ore depots, wood camps, charcoal-kilns, etc., at the most desirable points throughout the territory controlled by them, and finally building at Radnor a modern blast furnace, plant complete in all the necessary details and capable of producing every day from 40 to 50 tons of high class charcoal iron. The advantages of the site are unsurpassed, as it is splendidly situated in the very centre of the ore fields and in close touch with the wood limits not only of the St. Maurice river but of the vast territory extending to the north and south of the river, which is as yet primeval forest, affording practically an unlimited supply of charcoal required for their process. This process is an interesting one to watch, and the writer spent some time doing so. After the charcoal has been dumped into the large hopper which feeds the furnace, followed by a train load of broken limestone, which is used to flux the ore, and lastly from a shed adjoining the hopper, a train load of almost chocolate colored ore is dumped in and spread with a cone at an equal depth all over the bottom of the hopper. For the space of a second or so there is no apparent change, but then there is a burst of flame



OLD ST. MAURICE FORGES.

BOWMAN, KENNEDY & CO.

WHOLESALE

HARDWARE AND SPORTING GOODS

180 to 182 York Street, - - London, Ont.

THE DAISY



BARREL CHURN

No. 1—	9 gal.,	churn 1 to 4 gal. .	$	8 50
" 2—15	"	" 2 to 7 " . .		9 00
" 3—20	"	" 3 to 9 " . .		10 00
" 4—25	"	" 4 to 12 " . .		12 00

Larger sizes made to order.

HORSE POKES



ECLIPSE

CHAMPION, TORONTO, DICTATOR,
ECLIPSE, LONDON, I.X.L.

See discription of the new London Poke on page 51.

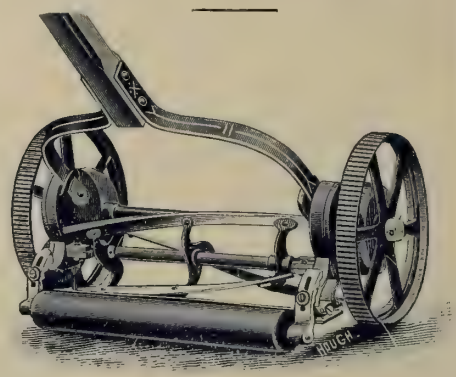
LAWN MOWERS

1893

. . PHILADELPHIA IMPROVED . .

7½ inch Wheel, 4 Cutting Bars.

12	14	16	18 inch
$4.40	$4.65	$4.90	$5.40 list

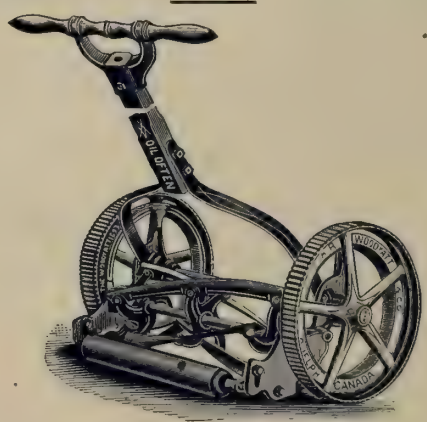


1893

AULD JUNIOR

10½ inch Wheels, 3 Cutting Bars.

14	16	18	20 inch
$5.50	$6.00	$6.50	$7.00 list



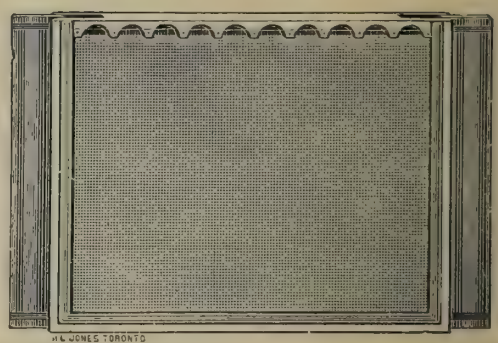
1893

A. R. WOODYATT

10½ inch Wheels, 4 Cutting Bars.

12	14	16	18 inch
$6.75	$7.00	$7.50	$8.25 list

EMPIRE



WINDOW SCREENS

With Patent Fly Escape.

No. 2 —23¼ in. high, 24 in. wide, extends to 30 in.
No. 3—23¼ in. high, 30 in. wide, extends to 36 in.
No. 4 23¼ in. high, 35 in. wide, extends to 41 in.

Made of hardwood, oil finish, with extra strong springs, to hold Screen in place outside of lower sash.

SCREEN DOORS

On same principle as Window Screens described above. Openings for flies are at centre and top bats.

No. 2 . . . . . 2 ft. 8 in. by 6 ft. 8 in.
No. 3 . . . . . 2 ft. 10 in. by 6 ft. 10 in
No. 4 . . . . . 3 ft. by 7 ft.

Flush pattern, both sides finished alike, made of selected well seasoned pine, stained or oiled, mortised, not dowelled, extra strong.



SCREEN DOOR SPRING HINGES

Ideal, Stearn's, Wrought, Sampson.

WE SELL TO THE TRADE ONLY.

Ask for Prices when in the Market for above or any other lines of Hardware.

and the entire contents of the hopper disappear. In a place below the molten metal is run off at regular intervals from the mouth of the furnace down a groove, from which it overflows into side grooves of the regulation length of a pig of iron. When it has cooled the article is ready for the market. The iron so turned out is, as everyone knows, of special value in the casting of car wheels and other malleable iron work, the C. I. F. brand gaining in favor every year with iron makers generally. The iron is divided into ten grades, from which can be selected material for the finest stove plates, car wheels, rolling mill rolls, chill plates, etc.

The buildings, works, etc., and other appliances required in the process are of the most modern design. There is a furnace stack 40 feet high, 9 feet diameter at the top, and a crucible 5 feet diameter, with four tuyeres 3½ inches diameter, the crucible and bosh of the stack from mantel ring down being encased and protected with a Russell Co. Wheel and Foundry Co.'s water jacket, and the furnace top with a bell and hopper of a capacity of 25 bushels. The hot blast is of the pipe pattern, with a combustion chamber below 24 feet in length, 18 feet high, and 9 feet 6 inches wide, with 68 openings between the combustion chamber and pipe chamber above. The steam power is supplied by four boilers of the latest pattern, all being connected with a brick chimney 75 feet high; each is bricked separately and arranged to fire with either wood or gas, the latter connection being so made that boilers can be worked in batteries of two each or more. In addition there is water power supplied from a head of 25 feet, with a "New America" wheel of a capacity of 65 horse power. The blowing engines are the "New Weimar," 16 x 48 x 30, set upon a solid stone foundation, and are provided with a patent water heater and a Scanlan patent wind receiver and heater capable of raising the temperature of wind about 200 degrees Fah. before entering the hot blast stove. There are also auxilliary engines of the horizontal type, which are completely equipped and ready for work should an accident occur to the regular engine, the whole being set up in an engine house isolated from the latter and the boiler house. The steam and force pumps are on a par with the other appliances and are so connected that they can be used either on the furnace water jackets or for general fire purposes or to feed the boilers. All the suction pipes, etc., in connection with the works are laid through a stone tunnel which leads from the engine-house to the river, and are always beyond the action of frost and arranged so that repairs can be made at any time. The hoisting power consists of a crane-pattern double cylinder engine, connected with two cages having a lift of fifteen feet from floor of weigh house to floor of top house. The charcoal kilns consist of eight rectangular kilns with a capacity of 55 cords each, and three beehive kilns of the same capacity at Radnor, and fourteen beehive kilns of a similar capacity at Grande Piles, making a total capacity of 1,375 cords. The company has others in course of construction. The charcoal is made and supplied from pits in the approved Swedish manner, and since the new furnace was blown in the daily output has averaged 25 tons. With the new blowing apparatus this will be increased to the full capacity above mentioned of 40 tons.

The question of ore supply, an equally interesting topic as the process of conversion into pig iron can appropriately follow. Investigation carefully carried on by practical men, under the immediate direction of the officials of the Company, and verified by actual work in the field, has proved beyond a doubt that there is not only an abundant supply of ore in sight to last for many years to come, but that it is steadily growing, and new discoveries are being made daily. The virtues of the ores of the St. Maurice are well known. These ores of course vary in analysis, but the supply is so large that the Company are able to make such selection from the various deposits as to be able to produce fixed results. The Company have their own laboratory, and a practical chemist is permanently employed in the selection of ores, and the analysing of the furnace product. Supplies can be procured from both sides of the river St. Lawrence, on the south shore at Gentilly and Becancour on the north, at Champlain Pointe du lac Louoraie, St. Felix de Valois, Joliette, and in the parishes near the forges. Large quantities are taken from Turtle Lake, another property of the company, by means of a dredge. The company, as already stated, has got the matter of ore collection down to a system, and when the men who raise the ore and get out the cordwood ore computed with the 200 actually engaged in the manufacture proper, there force of employes approaches to within the vicinity of 800 to 1000 according to the season.

In addition to the ore from its own territory the company has also made experiments with a magnetic ore procured in the vicinity of St. Jerome, north of Montreal, and contemplate using it also.

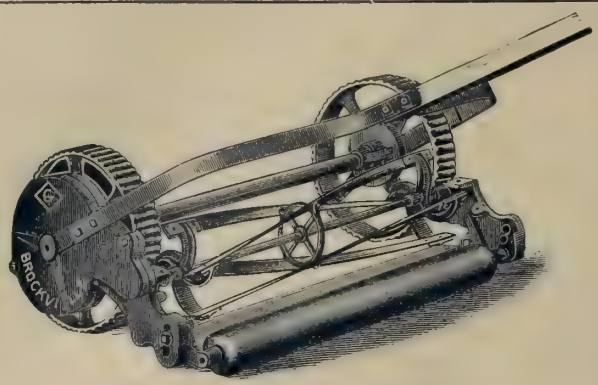


View of Old Stone Furnace at Radnor.

..Brockville Lawn Mowers..

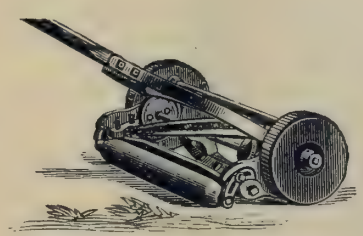
EIGHTEENTH SEASON

THE STANDARD FOR EASY RUNNING, DURABILITY AND HANDSOME APPEARANCE



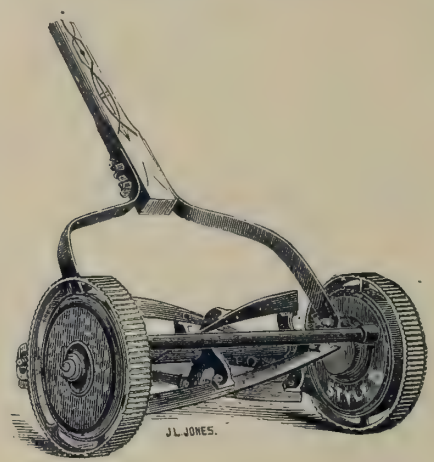
"PENNSYLVANIA"

Eight inch Wheels. Four Blades.



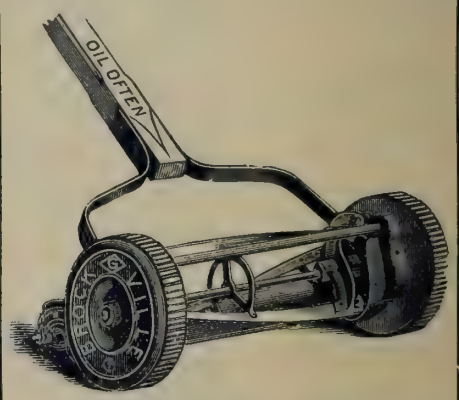
STYLE H —3 Blades.

Open Cast Wiper. High Speed.



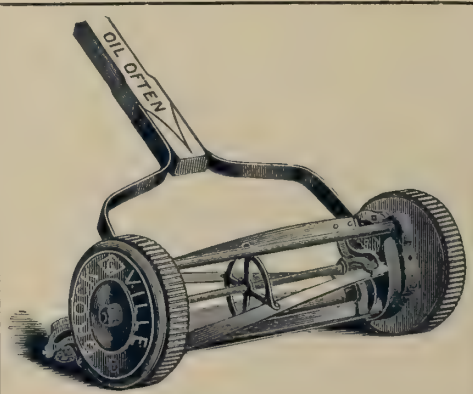
"STYLE B FOR 1893"

Eight and one quarter inch Driving Wheels. Four Blades. Improved Gearing. Finished in Terra Cotta and Dark Green.



STYLE S—3 Blade.

Seven inch Driving Wheels. Riveted Wiper.



STYLE S -4 Blade.

Seven inch Driving Wheels. Riveted Wiper.

California Lawn Sprinklers,
Garden Forks,
Garden Trowels,
Garden Shears.

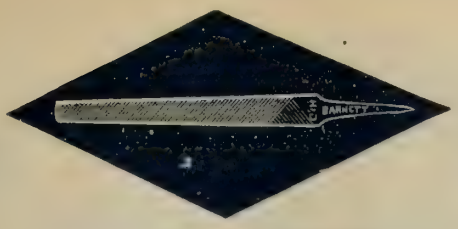
Horse Lawn Mowers,
Lawn and Garden Rollers,
Lawn Rakes,
Garden Hose Reels,

THE JAMES SMART MFG. CO., Limited

HARDWARE MANUFACTURERS,

BROCKVILLE, ONTARIO, CANADA

BLACK DIAMOND FILE WORKS,



21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

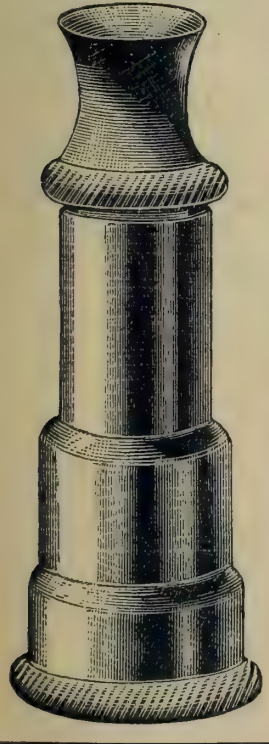
—MANUFACTURERS OF—

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES.
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
CLIMAX SAWFILES. LIGHTNING SAWFILES.

—AND—

EVERY OTHER DESCRIPTION OF SAW FILES.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

••

IS THE SIMPLEST HOSE PIPE ON THE MARKET

••

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it

It is impossible for this pipe to get out of order

Give it a trial and you will use no other.

Hamilton Brass Manufacturing Co.

HAMILTON, ONT.

THE ONTARIO TACK CO.

MANUFACTURERS OF

WIRE NAILS

TACKS, SHOE NAILS, ETC.

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SP

HOYT'S STANDARD BABBITT METAL

Wm. Darling & Co.,

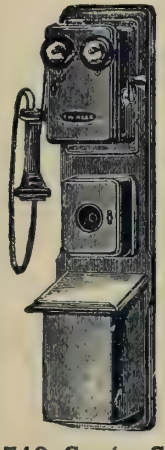
30 ST SULPICE ST.,

Montreal--Agents

ORDER BY LETTER. ONLY ONE PRICE.
TERMS 4 MOS OR 3%.

BABBITT METAL.

Gen.	Extra	00	1	2	3	4 A	4
27½	22½	18c.	14	12	9½	8	6½



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FOR

Main Lines
Warehouses
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Send for new 32 page Catalogue of Telephone Testimonials.

T. W. NESS

Manufacturer of Telephones, Etc.

749 Craig Street, - MONTREAL.

H. Boker & Co.

are famous for their fine quality

Razors, Scissors

—AND—

Pocket Cutlery

TRADE  MARK.

(TREE BRAND)

FOR SALE BY LEADING WHOLESALE HOUSES.

THE METALLIC ROOFING CO. of Canada, Limited.

Manufacturers of Fire Proof Building Material

"Eastlake" Patent Steel Shingles
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Pressed Standing Seam Roofing
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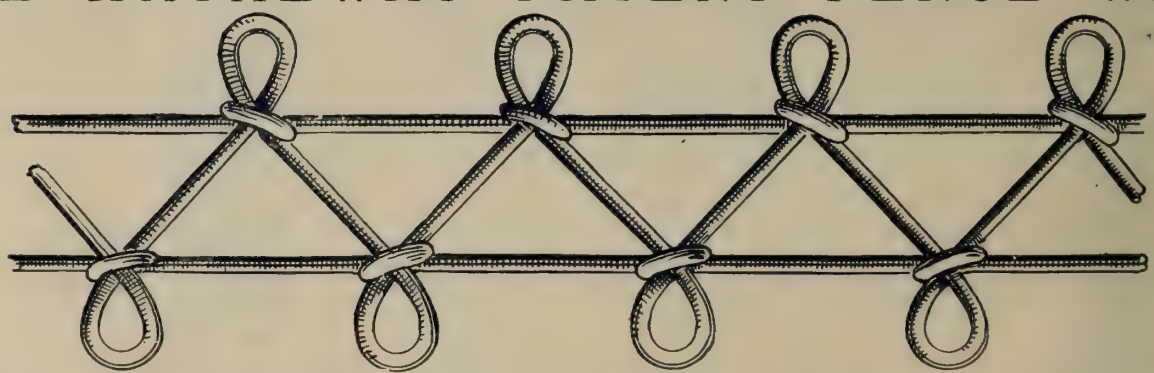
The "OWL" brand of "LOCK SEAM" Roofing for flat roofs has no equal. We manufacture a greater variety of metal Shingles than any other establishment in the world. - - - - - - - - -

BEWARE OF CHEAP IMITATIONS.

Factories--Toronto, Ont., and Montreal, Que.

Send for Catalogue and Price List.

THE HATHEWAY PATENT FENCE WIRE.



THIS cut shows exact size of wire. The handsomest, the strongest, most humane; the cheapest fence in the market; suitable for farm, field, garden, lawn or trellis work. Being wide, stock will see it before running into it; should they happen to, they will not be torn all to pieces as from barb wire. Will not sag and get out of shape, as it is firmly braced with the cross wire. Takes less strands to make a fence than any other wire—consequently cheaper. The wire splices itself, thereby saving time and material. Put up in nice Spools of about 65 and 115 feet and sent to any part of the Dominion Manufactured by

THE COLLINS M'FG CO., 84 Adelaide Street East, Toronto.

PATENT APPLIED FOR.



THE DOME BOTTOM TEA KETTLE.

We claim four advantages for this Kettle:

1. Made out of 16-oz. Copper, when other makes are only 14-oz.
2. Much stronger made in this shape.
3. Being spun the Copper is not stretched as in the case of stamping.
4. It boils the water in about half the time of an ordinary kettle, EFFECTING A SAVING OF ABOUT 50 PER CENT. OF FUEL.

MANUFACTURED BY

The Collins Manufacturing Co.,

84 Adelaide Street East, Toronto.



"Tickled to Death."

THERE is an end to all good things. We must therefore close this pleasant, though somewhat lengthy, chat on trade matters right here; otherwise we cannot be out at the time promised. Now that you have read this number through, what do you think of it? Are you "tickled to death," like these coons above? There are some good things in it, are there not? Yes! Well, don't you think it would pay you to subscribe and read it regularly? It will only cost you about 17c. a month, or two dollars a year, to do so. Our subscribers almost to a man tell us that they make more out of one number than would pay a year's subscription four times over. What do you think of the advertisements? Some of them are as interesting as the editorial pages. If you happen to remember, you might just mention that fact to the advertisers, it will please and be of value to them. But, first of all, just send in your subscription to THE HARDWARE MERCHANT.—if you have not already done so. Well, good day!



"By Jove! I forgot to send my subscription to THE HARDWARE MERCHANT."

WALTER WOODS & CO.

WHOLESALE

Wooden Ware,
Willow Ware,
Brooms, Brushes,
Cordage, Twines,
Wrapping Paper,
Paper Bags,
AND GROCERS' SUNDRIES.

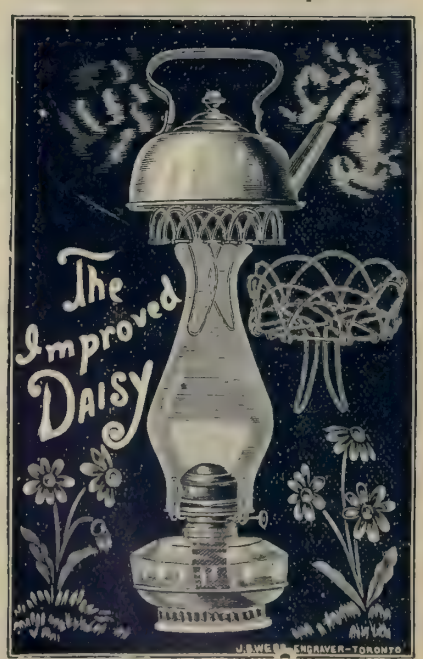
Oak Churns, Butter Tubs, Butter Bowls.

HAMILTON, - - ONTARIO.

Daisy Lamp Attachment,

FOR HEATING FOOD OR WATER ON TOP OF A LAMP.
Retail Price, 10c.

Patented June 1887 and Sept. 1889.



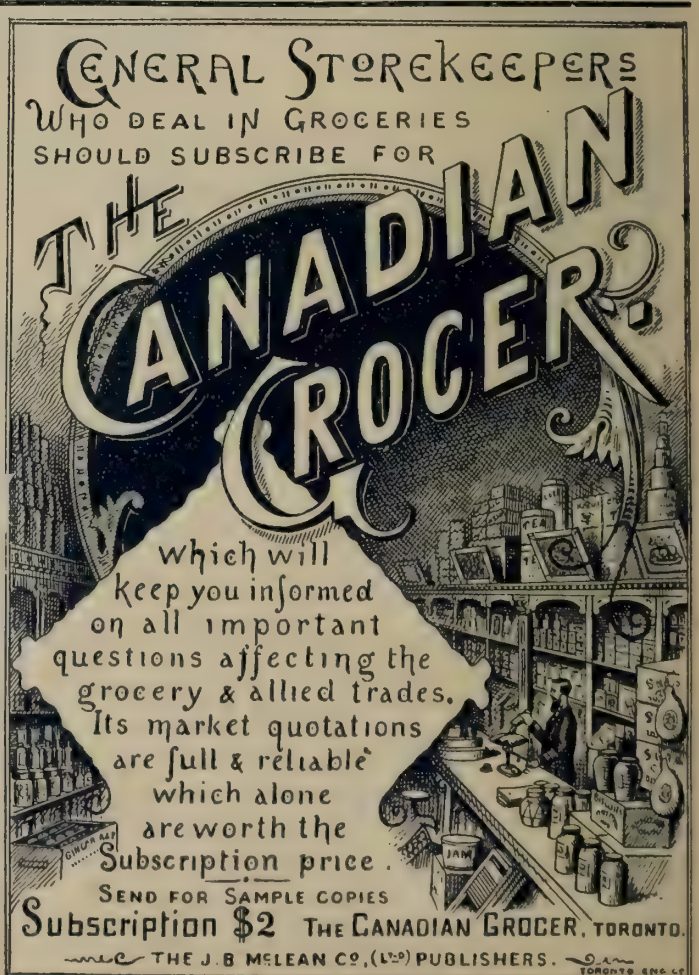
CAN BE PLACED ON ANY SIZE OR SHAPED LAMP GLASS without any danger.

WARRANTED not to cause smoke or any disagreeable smell when lamp is burning. Every dealer should carry them in stock.

To be had from
THOS. DAVIDSON & CO., Montreal, Que.,
SAMUEL, BENJAMIN & CO., Toronto,
E. T. WRIGHT & CO., Hamilton,
JAMES C. TAYLOR, Hamilton, or from
CASSGREEN M'F'G. CO., Toronto, Ont,

PRICES ON APPLICATION. Sole Patentees and Manufacturers.

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which will keep you informed on all important questions affecting the grocery & allied trades. Its market quotations are full & reliable which alone are worth the Subscription price.

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Subscription $2 THE CANADIAN GROCER, TORONTO.
THE J. B. MCLEAN CO., (LTD) PUBLISHERS.

POINTERS FOR THE PROGRESSIVE.

BUILDING paper manufacturing has become quite an important industry in this country and it is still growing. Occupying a place among the manufacturers of this line is the firm of J. W. Patterson & Bro., of this city. The variety of goods they turn out is large. There is, for instance, building paper, roofing felt, carpet felt, roofing pitch, coal tar, roof paint, ready roofing, Portland cement, plaster of Paris, water lime, etc. The factory is situated at 297-303 Front street east, and the firm has a branch office at 47 Murray street, Montreal.

The march of improvement is not confined to any one article or thing. Instances of this are to be seen every day, but Warren's Cheese Vat Faucet may be at the moment cited. The faucet is easily applied and the properties claimed for it are that the whey will run faster and drain out more closely than if taken out of vat in the old way. It has also the advantage of being out of the way of any one working around the vat. Cap on bottom with leather washer is an extra precaution to prevent the possible loss of curd, and without the washer it can be used to check the flow of whey and make to run more slowly. H. & J. Warren, of Sterling, are the manufacturers.

The attention of the hardware and supply trade is directed to Dodge Wood Split Pulley Co.'s advertisement in another column of this issue. This popular specialty is now being carried in stock by many of the leading hardware houses throughout the Dominion, and no doubt there are many others who could with profit to themselves and convenience to their customers, add the "Dodge" pulley to their stock. The company issue both a handsome framed show-card and a comprehensive catalogue. It offers special inducements to the trade, and gives special attention to all legitimate houses interested. It solicits correspondence.

Among the many prosperous firms of the city may be mentioned The Weather & Water Proof Paint Co. of Can. (Ltd.) Last autumn the business was commenced at 124 Richmond street east. Already it has been forced to extend its premises, and now occupies 122 and 124, which is bristling with activity. Some five years ago an English scientist re-discovered an old secret known to the ancient Egyptians for making the most durable paint possible. This he improved upon, making it more adapted to modern exigencies. This process he patented, and soon large factories were established in Australia, Mexico, and the United States. The paint has wonderful wearing qualities, is exceedingly adhesive and finishes with a gloss almost equal to varnish. On woodwork, iron, brick or plaster it works equally well. It does not crack, peel or blister. Canvas and muslin painted with it hold water for months and yet retain their pliability. It is made in all colors and at prices as low as is consistent with a really good paint. It is claimed that its great covering capacity makes it the cheapest paint in the market. The Weather and Water Proof Paint Company of Canada (Limited), are sole manufacturers for the Dominion.

The safety barbed wire manufactured by the Safety Barb Wire Co., at New Toronto, is claimed to be the best for fencing purposes on the market. It has several points of excellence, the principle one being perfect safety to stock. The company states that so far it has not heard of a single case of an animal being hurt to any extent where safety wire was used. The business of this company has been one of rapid stride from the beginning, the business of 1892 being double that of 1891. Their new factory at New Toronto is a perfect model and is held to be one of the best of the kind in Canada. They have lately added to their extensive works a complete wire nail plant, and are putting on the market a wire nail of a high grade, as they are determined to be as successful in this line as they have been in barb wire. The firm's prospects seem bright.

Toronto Smelting and Refining Works whose advertisement will be found in this issue, make a specialty of all grades of solder and babbitts, and it will be advantageous to the trade to write for their quotations. They also buy all kinds of old metals and metal drosses.

A description of a recently patented invention will be noticed in our advertising columns for bridling oval, round and flat paint brushes of all kinds. The manufacturers, Messrs. Chas. Boeckh & Sons, of Toronto, claim in this one of the most important inventions in brushes ever introduced, giving as it does to the practical mechanic, as well as to the amateur painter, a brush which is ready to be put into use and a bridle which can easily be removed or put on. A brush that is not bridled cannot do satisfactory work on accouut of the bristles spreading, and hitherto only a practical mechanic could properly bind up or bridle a brush with twine, and even then good work could not be claimed for it, as the twine and bristles swell and destroy the elasticity of the brush. The flexible bridle, which is neat in appearance and easily applied, overcomes these difficulties, and the result is a perfect working and even wearing brush. It is so simple in construction that it can be taken off or put on in a moment, thus giving the painter an opportunity to clean out the brush at any tlme without the loss and expense of re-bridling as in the old-fashioned way with twine. The manufacturers can supply any size or quality of these brushes with bridles attached, and their goods should be kept in stock by every first-class hardware and paint and oil dealer.

A neat and unique fence that sells at a reasonable price is a good thing for progressive merchants to keep in stock. The Hatheway Patent Fence Wire is of this character. It is manufactured by the Collins Mfg. Co., of this city, and an idea of what it is like can be obtained by glancing at the cut on page 62 of this issue. This firm is also advertising something unique in the way of a dome bottom tea kettle which is claimed to boil water in about half the time of an ordinary kettle.



MAKE MONEY SELLING . . **Bicycles** AS A SIDE LINE . . .

WE have published a 48-page book, containing 75 illustrations. It describes fifteen different Safety Bicyles, listing from $24.50 to $160.00. We will send it free, with wholesale discount sheet, on receipt of your business card.

T. W. Boyd & Son,

Established 1845. 1683 NOTRE DAME ST., MONTREAL

J. L. GOODHUE & CO.,

DANVILLE, QUE.,

Manufacturers of Leather Belting,

LACE LEATHER, Etc.

Dynamo Belts, for Electric Light and other purposes, made to order at short notice, and of unsurpassed quality. Send for Catalogue and see testimonials.

A full Stock of our "Standard," "No. 1," and "Trade" Belting kept at our Toronto Office, 85 York Street.

H. D. SIMMONS, Agent.

Shepard Hardware Co.

Manufacturers of Hardware Specialties, House Furnishing Goods and Toys,

BUFFALO. N. Y.,

Samson Spring Hinges,
Blind Hinges,
Gate Hinges and Latches,
Tinners' Stoves,
Gas Stove Broilers,
Stove Lid Lifters,
Toy Banks,
Toy Pistols, Etc., Etc.

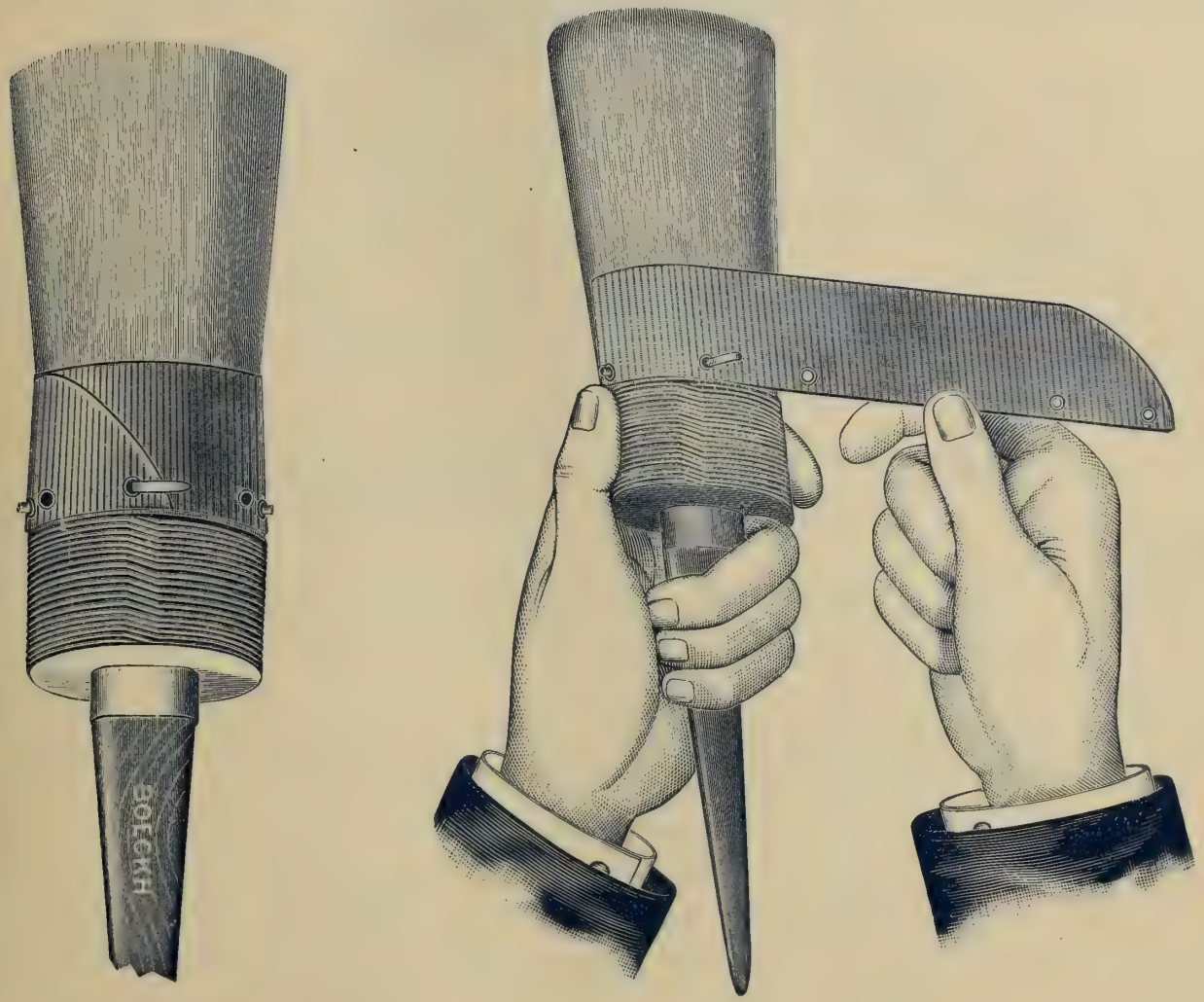
CANADIAN OFFICE---85 York Street, Rossin House Block, Toronto.

H. D. SIMMONS,
AGENT.



BOECKH'S

. . Flexible Bridled Brushes . .



Practical Painters and all who use Brushes, have long felt the need of a first class adjustable **Bridle** for Round, Oval and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that this invention is a practical success.

The above cut will show how to remove and replace the Flexible Bridle.

The Flexible Bridle will be found of great advantage in Flat Paint and Kalsomine Brushes, preventing the bristles from spreading and the liquid from running down the handle when doing overhead work.

READY FOR USE, TIME MONEY AND LABOR SAVED

We will be pleased to answer any enquiries regarding this important improvement in Painting Brushes, and a full descriptive circular also illustrated price list will be mailed on application.

CHAS. BOECKH & SONS,

BRUSH MANUFACTURERS

OFFICES AND WAREHOUSES :

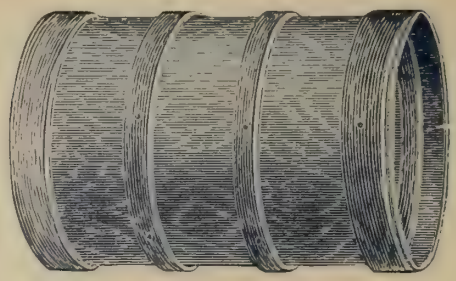
80 York St., 12 Clarence St.,

FACTORIES :

158 to 168 Adelaide St. West,

TORONTO, CANADA.

ORDER YOUR **NAILS** Wire . . . Cut . . . Horse Shoe



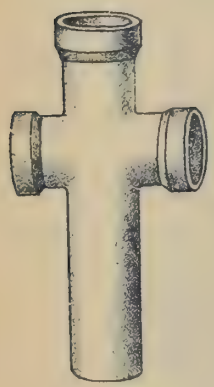
IN **PATENT KEGS**

Cost no more than in Common Kegs. The strongest, handiest, cleanest, neatest, and best store package in use. Made in one solid piece, lined with strawboard. No staves to get loose or break, No shrinkage or falling out of heads.

Supplied by Graham Nail Works, Ontario Lead and Barb Wire Co., Safety Barb Wire Co., Toronto; Parmenter & Bulloch, Gananoque; and Peck, Benny & Co., Pillow & Hersey Co,, Montreal.

Portland Cements

Best English and Belgian Brands.





Keene's Fine, Superfine, and Parian Cements.

Sewer Pipes—Scotch and Canadian, all sizes up to 24 inch diameter.

Calcined Plaster—Nova Scotia Brands.

Fire Clay—Scotch and American.

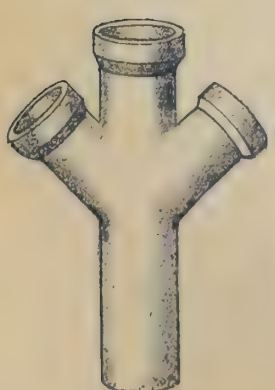
Cupola Daubing Mixture—For Cupola Linings.

Kaolin—For Furnace Work.

Flue Linings, Chimney Tops, Gas Retorts, Scotch Derricks and Cranes, Building Sandstones, Mortar Colors, Vitrified Coach and Stable Bricks, Navvy Wheelbarrows, Enamelled (Porcelain) Fire Clay Sinks, Foundry Wheelbarrows, Coal Barrows.

. . . AND . . .

General Builders' Contractors' and Founders' Supplies.





We handle more than one-third of the total importations of Cement into Canada, and carry the Largest Stocks, and most expensive Range of Good Brands.

W. McNALLY & CO.

MONTREAL.

CHARLES D. CHOWN

MANUFACTURERS' AGENT

KINGSTON

The **MILLER KEYLESS LOCKS,** for which he is the Agent for Canada, are made for all purposes **Stores, Offices, Residences, Chests, Gymnasium, Lockers, &c.** They are in use in the Montreal and Kingston Y.M.C.A. Gymnasiums, who have re-ordered since the first lot was put in. The Manufacturers claim to furnish Locks for all purposes that defy the skill of lock experts. Why be longer annoyed with keys? Drop a card for Catalogues and Prices.

He is also Agent for a number of **Canners' Lines,** that he has been instrumental in arranging for their manufacture in Canada, and solicit correspondence in regard to same.

Miller Keyless Locks, for all purposes . .

These Locks compare in security and durability with the best Key-Locks; as the Yale, &c. They stand unrivaled and alone, constructed on a new principle; there is no other Lock with which to compare them.

Architects and Dealers in Locks can receive Catalogue and Prices by dropping a card to

Chas. D. Chown,

KINGSTON, ONT.,

Manufacturers' Agent for Canada

To CANNERS of FISH, FRUIT, VEGETABLES, PAINTS, Etc.

I solicit your correspondence in the following Machines and full outfits for **Making Cans,** including the Clark system of **Coal Oil Burners for Soldering, Patent Continuous Feed Green Corn Cutting Machine. Merrill & Soule's Corn Cooker, Sham Chests or Retorts for cooking canned goods, Boilers, Engines, Copper Kettles and work of all kind.**

CHAS. D. CHOWN,

Manufacturers' Agent

KINGSTON, ONT.

ESTABLISHED 1855.



Wm. Croft & Sons, Toronto.

Headquarters for Fishing Tackle.

Hardware Merchants will benefit by ordering direct from us, even if their trade in this line be limited; there are possibilities of it being increased.

Our stock is the most complete in the Dominion, and includes everything appertaining to fishing. Seine Twine a specialty. Get our prices before ordering. Mail Orders promptly attended to.

WM. CROFT & SONS, 37 Colborne St., Toronto, Ont.

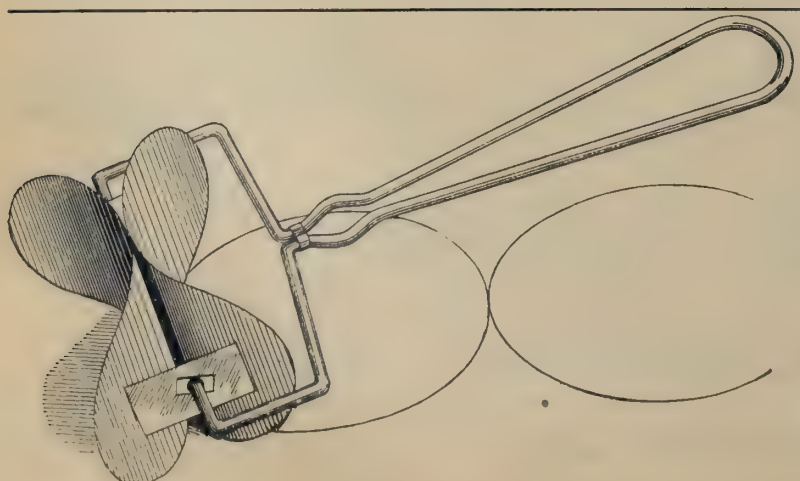
TO THE TRADE

WE have goods that will interest you, please you, make lasting customers and money for you.

We are adding so many new and special lines that we cannot have CATALOGUE READY before MAY 1ST. In the meantime advise us of your requirements and we will send you cuts and prices that will astonish you.

Don't place your orders until you see our NOVELTIES.

CLARE BROS. & CO., Preston and Winnipeg.



Sales Will Pay Your Rent

Every Housekeeper, Hotel, Baker and Restaurant should try the **Rotary Biscuit and Cake Baker.**

$15.00 A GROSS.

TRADE SUPPLIED BY

M. M. VARDON, 67 Yonge Street, Toronto.

SOLE AGENT FOR CANADA.

Toronto Smelting and Refining Works

FRANKEL BROS., Props.

Bar Tin, Bar Lead,
Type Metal, Zinc.

Solder
. . AND . .
Babbitt

Smelters of all Kinds
Metal Drosses . . .

We are the only Establishment in Canada making a Specialty of the above Articles.

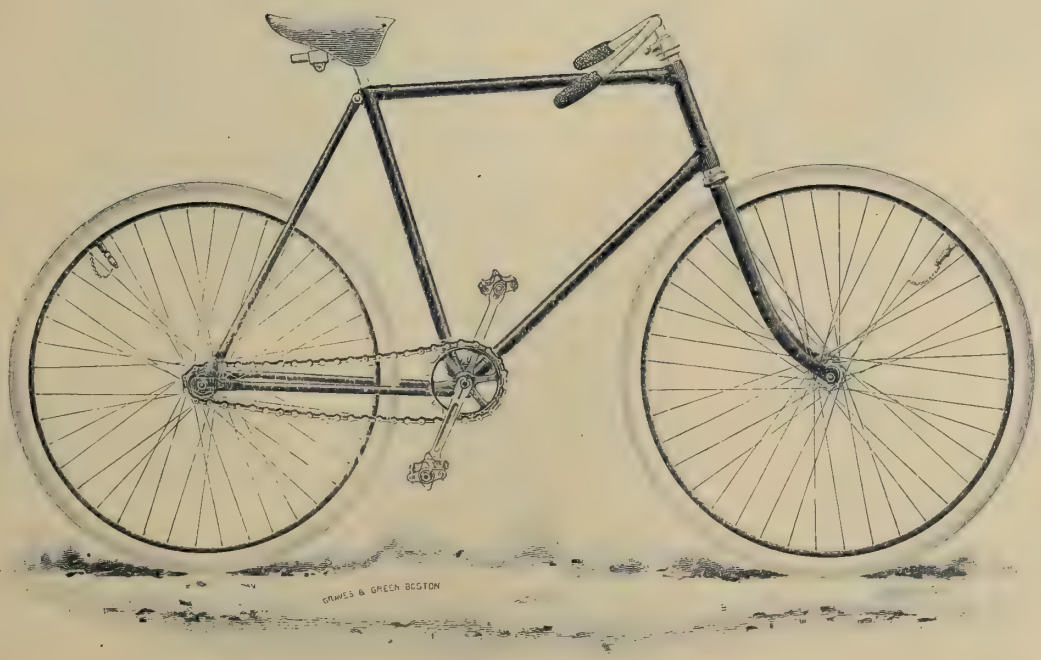
92 and 94 Queen St. East, - TORONTO

When writing refer to this Advertisement.

"REMINGTON"

AMERICAN RATTAN CO., TORONTO, ONT.
CANADIAN AGENTS

Strictly
High .
Grade.



We are Largest Manufacturers in Canada
. . in . .

Boys' Wheels
Girls' Tricycles
Children's Carriages
Reed and Rattan Goods

Catalogues to Trade

AGENTS WANTED IN UNOCCUPIED TERRITORY

A. C. Leslie & Co.

Montreal
AND
Toronto.

. . MANUFACTURERS' AGENTS . .

IRON AND STEEL

OF ALL KINDS.

"Whitecross" Co'y Wire,
"Lysaght's" Galvanized Iron,
"Allaways" and other brands Tin Plates,
"Manor" Tin Sheets,
"Carron" and "Ayresome" brands Pig Iron.
Anvils and Vises,
Cutlery, Spoons.
"Jessop's" Standard Tool Steel in Store.

Why don't you sell . . LAMPS



You sell Chimneys! You sell Burners! You sell Wicks! You sell Coal Oil! Why don't you sell Lamps? We mean nice Lamps? They are just as staple and a good profit!

WE HAVE SOME NICE JOB LOTS JUST NOW.

The very thing to make a trial with. Write for particulars.

Gowans, Kent & Co.

TORONTO
and
WINNIPEG

A GREAT SAVING OF MATERIAL AND LABOR

BOSTWICK PATENT



Extensively used by Builders.

Recommended by Architects.

Fire, Rat, Vermin
and
Lightning Proof.

The Canadian Pacific Hotel, Quebec, is lathed throughout with this Celebrated Fire Proof Lathing.

Illustrated Pamphlet and Sample Free.

Bostwick Metal Lath Co.

118 ST. PETER STREET, MONTREAL

T. A. MORRISON, Sales Manager.

E. ROBERTSON & CO.,

JOHN STREET, HAMILTON,

Machinists and Hardware Specialty Manufacturers, Sheet-Metal, Stamp-Work, Etc.

If you have some Patent Novelty you want manufactured write us FOR PRICES AND PARTICULARS.

"THE GUTTA PERCHA CO.'S"

MAMMOTH BELT ORDER.

MANF'D BY The GUTTA PERCHA & RUBBER MF'G. Co. OF TORONTO LTD. 61 & 63 FRONT ST W.

FOR The CANADIAN PACIFIC RY ELEVATOR AT FORT WILLIAM ONT



TOTAL WEIGHT 20,004 LBS.

SAWMILL -:- ELEVATOR -:- THRESHING

SUPERIOR BELTING

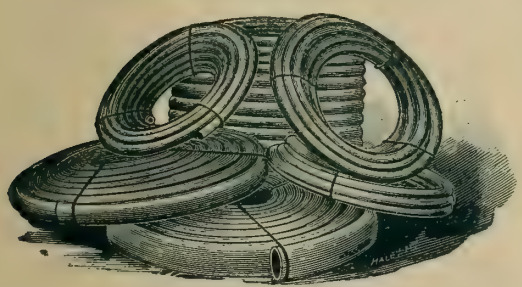
ORIGINAL CANADIAN MANUFACTURERS OF

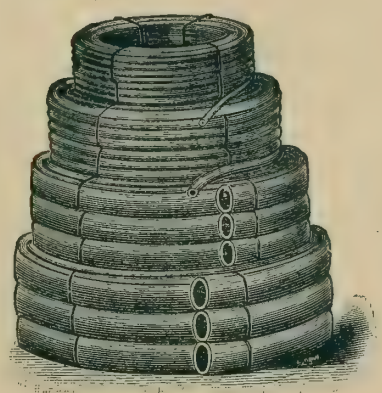
WARRANTED

SEAMLESS TUBE HOSE

ALSO

DOUBLE TUBE--HAND MADE

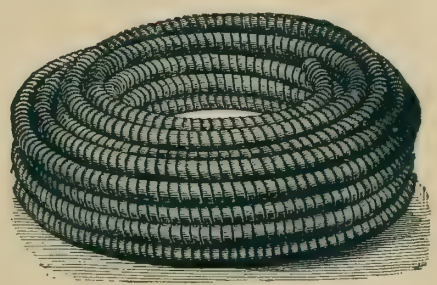




"KINKPROOF" HOSE

COPYRIGHTED

WIRE WILL NOT UNWIND

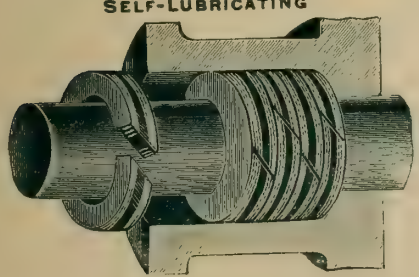


GARDEN HOSE, STEAM HOSE, FIRE HOSE, BREWERS' HOSE, AIR HOSE

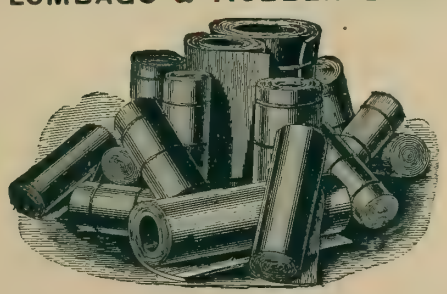
PACKINGS

"GUTTAPERCH" RING

SELF-LUBRICATING

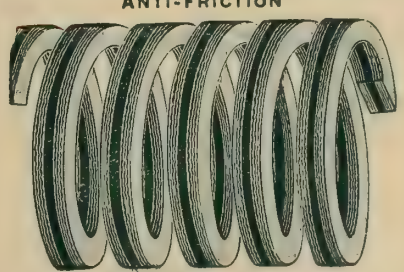


PLUMBAGO & RUBBER SHEET



"GUTTAPERCH" SPIRAL

ANTI-FRICTION



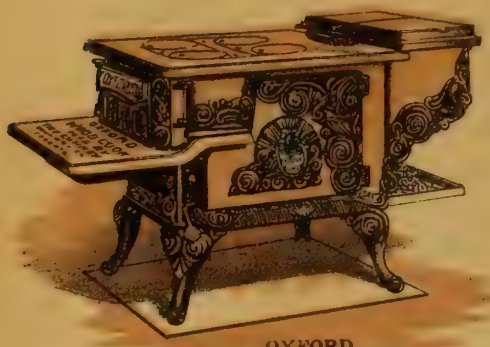
WRITE FOR DISCOUNTS

THE GUTTA PERCHA & RUBBER MFG. CO. OF TORONTO, LTD.

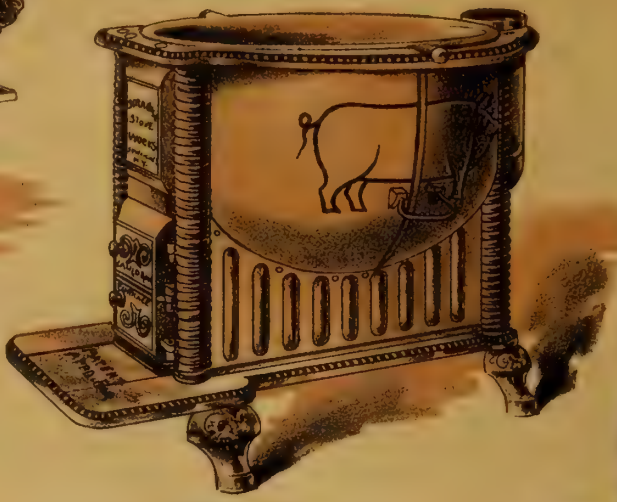
61 & 63 Front Street West, -:- Toronto, Ont.

5 OF OUR NOVELTIES

THE LARGEST LINE OF MODERN GOODS IN THE WORLD.



OXFORD
WOOD COOK EXTENSION.



OXFORD HOG
IMPROVED CAULDRON FURNACE.



WASP.



OXFORD OAK.



OXFORD BOX.

THE GURNEY FOUNDRY CO. *TORONTO.*

McARTHUR, CORNEILLE & Co.

MANUFACTURERS & IMPORTERS OF

WHITE LEAD, COLORS
GLASS, VARNISHES, OILS,
CHEMICALS & DYE STUFFS.

EXCELLENCE OF QUALITY — CROWN DIAMOND — WARRANTED — TRADE MARK REGISTERED

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CHARLES TURNER & SON, London, Celebrated English Varnishes.

JOHN LUCAS & CO., Philadelphia, Renowned Imperial French Green.

JOHN W. MASURY & SON, New York and Chicago, Superfine Coach Colors and Pure Colors Ground in Oil.

SISSONS, BROTHERS & CO., Hull, ... Metallic Oxides, &c.

St. DENIS DYESTUFF AND CHEMICAL CO. (Late A. Poirrier) Paris, Celebrated Aniline Dyes, Archil, Cudbear, Alizarine, &c.

NEW YORK AND BOSTON DYEWOOD AND CHEMICAL CO., Dyewoods, Extracts, &c.

BRITISH ALIZARINE CO., London, ..., ... Alizarine.

MILLET EXTRACT CO, Millerton, .. Extract Hemlock Bark.

SUCCESSORS TO D. A. McCASKILL & CO.

D. A. McCaskill. James S. N. Dougall.



MANUFACTURERS OF

VARNISHES JAPANS & COLORS

OUR VARNISH

WAS AWARDED THE GOLD MEDAL OF MERIT AT THE JAMAICA EXHIBITION IN 1891.

THE BRONZE MEDAL AT THE COLINDERIES IN 1887, AND SILVER OR BRONZE MEDALS AT ALL CANADIAN EXHIBITIONS.

They Have Stood the Test of Time and Competition Throughout the World.

ALL THE CANADIAN RAILROADS AND CARRIAGE BUILDERS FIND THEM THE BEST AND USE THEM.

OUR ZANZERINES ARE UNSURPASSED FOR INSIDE OR OUTSIDE HOUSE DECORATIONS, AND ARE USED BY THE LEADING ARTISTS IN CANADA.

McCASKILL, DOUGALL & Co.

MONTREAL.

CANADIAN
HARDWARE
AND METAL MERCHANT

VOL. V. TORONTO, APRIL 15, 1893. No. 15.

NEW YORK ALUMINUM BEARING METAL CO.

NEW YORK OFFICE, N. E. Cor. Washington and Cortlandt Sts. CHICAGO OFFICE, 12 Pacific Avenue.
MONTREAL OFFICE, H. McLaren & Co., Agents.

MANUFACTURERS OF

ALU
TRADE MARK.

"Genuine Babbit," - -	Price	30c.	per lb.	f.o.b.	New York
"Champion Metal," - -		25c.	"	"	" "
"Aluminum Bearing Metal,"		18c.	"	"	" "
"Big 4 Babbitt," - -		14c.	"	"	" "
"Pyramid Metal," - -		10c.	"	"	" "
"Mystic Metal," - - -		8c.	"	"	" "

CLOSE FIGURES MADE ON LARGE ORDERS OR CONTRACTS.

Our metals are superior to any like Babbitt Metals in the market. We Solicit Your Orders.

You are safe with

Adamant



Used Them.

Its great reputation has not been made by chance. It has been earned by merit and is increasing year by year.

THE SUCCESS OF

Adamant . . Floor Paints

Is the result of long study with the view of producing a paint in every way adapted to floors. **Adamant Floor Paint Dries Quickly** and will give a **Hard Solid Surface** that will wear and look well. We claim that our Floor Paint is also the most economical of any from the fact that one gallon will cover a greater surface, and do it more thoroughly than any other.

WALTER H. COTTINGHAM & CO., - - MONTREAL

RICE LEWIS & SON, LTD.

FINE MECHANICS' TOOLS - -

Lathes, Bench Vises, Screw Plates, Chucks, Drills, Reamers, Etc.

HOUSE FURNISHINGS - -

Success Water Filters, Agate Ware, Puritan Cookers, Iron and Brass - Bedsteads, Etc.

RICE LEWIS & SON, LIMITED,

TORONTO.

BOOTH'S COPPER RANGE BOILERS

Best Workmanship.



Test Guaranteed.

26. 27. 27½.

IMPORTANT NOTICE.

Consequent upon the ordinary Range Boiler failing to fill the demands of the Trade, we are making a special Copper Range Boiler, Extra Heavy, of the best Lake Superior Copper, flat bottom, top and bottom Double Riveted, with a guaranteed Hydraulic Test of 200 pounds.

This Boiler is known as

"Booth's 27½ Copper Range Boiler,"

and meets the requirements as called for in the specifications of our leading Architects.

Correspondence solicited and Price Lists on application.

THE BOOTH COPPER CO.,

Coppersmiths, 165 York St., TORONTO, ONT.

GEO. BOOTH, Proprietor, formerly Booth & Son.



Onyx Enamelled Steel Ware

SOMETHING ENTIRELY NEW!
SUPERIOR IN QUALITY!

SEND FOR CATALOGUE

Kemp Manufacturing Co.

TORONTO

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, APRIL 15, 1893 No. 15

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

HEAD OFFICE: - - 10 Front St. E.
MONTREAL OFFICE: - 146 St. James St. E. Desbarats, Manager.
NEW YORK OFFICE: Room 41, Times Building. Roy V. Somerville, Manager.
EUROPEAN BRANCH: Canadian Government Offices, 17 Victoria St., London, S.W. R. Hargreaves, Manager.

Toronto's civic fathers have for some weeks been wrestling with propositions for establishing rolling mills and blast furnaces here. A few weeks ago a number of local capitalists offered to lease the old Parkdale pumping station for the purpose of establishing a rolling mill there. Now, Parkdale is known as the "Flowery Suburb," and when the proposition was mooted some of the residents in the neighborhood immediately sprang to arms. Headed by some of the aldermen in the west and assisted by some of the aldermen in the east who desired to see the works located in their part of the city, they waged a warfare so active that Monday last the council threw out the report of the special committee recommending the granting of the lease. South Parkdalians will now get their lake breezes uncontaminated except for the occasional whiffs that may reach them from passing trains.

* * *

The proposition regarding the smelting works comes from the Ontario Iron and Steel Company. They offer, on condition of getting 150 acres of the now unreclaimed Ashbridge's marsh and a bonus of $75,000 in cash, to establish a blast furnace here. Mr. Robert Jaffray is one of the active promoters of the scheme. Everybody in the city desires to see a blast furnace located here, but where the difference of opinion comes in is in regard to the considerations asked by the company in order to be induced to locate here. Fault is even found with the amount of land asked for, notwithstanding that it is practically all now under water, and hints are thrown out that the motive for desiring so much is speculation. The proposition of this company was also taken up Monday night, with the result that it will be submitted to the people, only so amended that the land grant be placed at one hundred instead of 150 acres.

* * *

If report be true, the Rothschilds and the Standard Oil Company are getting their heads together with a view to controlling the oil business of the world. Asia, Russia, Japan and the Straits Settlements are to be allotted to the well-known bankers, while the rest of the globe is to be appropriated by the big American Oil Trust. As large quantities of petroleum are shipped to the far east from the United States independent exporters on this side of the Atlantic take more than a passing interest in the alleged apportionment. Last year a total of some $11,359,965 cases of oil a total of 11,359,965 cases of oil were shipped to Eastern ports. The Rothschilds already control the Russian output, but the amount they have hitherto sent to the East has only been something over two million cases annually.

* * *

The list of necessaries is gradually being extended by recruits from the list of luxuries. Tobacco is one of the latest articles to be transferred, Comptroller of Customs Wallace having decreed that it properly belongs to "ships' stores," and may in consequence be entered free of duty ex-warehouse.

* * *

The New York World has entered upon a crusade against the big trusts that have developed of late years in the United States. It first turned its search light upon the Sugar Trust. Next it exposed to view the workings of the Cordage Trust, and after that came an expose of the Lead Combine. Each article is of considerable length, and each starts off with extracts from the Democratic National Platform and from President Cleveland's inaugural address, in the one of which combinations are denounced and rigid enforcement of the law against them urged, and in the other of which the evil is recognized and the duty of the Federal Government in the premises acknowledged. The cordage business of the United States, according to The World, means the manufacture of the hemp product into about $20,000,000 worth of cord and rope. Until 1887 the cordage manufacturing industry engaged about fifty plants in the United States and about a dozen in Canada. In that year four of the large companies in New York formed a sort of combination and manipulated the prices of hemp and cordage. In 1890 a new trust was formed upon the lines which brought it more nearly within the law of corporations. The National Cordage Company issued $15,000,000 of stock, of which but $5,000,000 was preferred. The capital has since been increased to $25,000,000. The law requires the publication of an annual report, and that for 1891 showed that the trust had made $1,406,313 on its goods, and had paid for them $1,300,000 in dividends. This means 8 per cent. on the preferred stock and 10 per cent. on the common stock. The promise for dividends for 1893 is at the rate of 2 per cent. quarterly on the preferred stock, or 8 per cent. per annum, and 3 per cent. quarterly, or 12 per cent. per annum on the common stock. This is upon a basis of a total capitalization of $15,000,000, the $10,000,000 having been added recently. This $10,000,000 was in the nature of a dividend.

* * *

The Lead Trust was formed in 1887, the appraised value of the twenty companies then included being $20,000,000.

The Trust upon this basis issued stock to the amount of $89,000,000. Within a short time eleven additional companies had been bought in, paying for them in stock. The National Lead Company was organized under the laws of New Jersey in December, 1891. It consisted of the same companies, the only difference being in the name and in the management. The trust certificates were called in, and the capitalization changed from $89,000,000 to $30,000,000. "But even $30,000,000 is a vast amount to pretend to put into a concern that does only $9,000,000 business yearly," sarcastically remarks The World. The first annual report, issued in December, 1892, showed that the trust had earned during the year $1,906,986, and had increased its plant and other investments about $300,000. A table is adduced by The World showing the relative market price of white lead and pig lead since 1887, when the trust was formed, up to 1892, and from this is gathered the fact that while the manufactured article was 68 cents dearer in 1892 than five years previously, the raw material was 30 cents cheaper. The World concludes each article with an appeal to Attorney-General Olney to enforce the law and break up the trusts.

* * *

The announcement made by the Medical Health Officer of this city that he proposes to institute a vigorous inspection of the business part of the city should induce all concerned to anticipate him by giving their warehouses, yards and back lanes a thorough overhauling before the advent of his minions. Damp and unhealthy cellars and warehouses, defective plumbing and drainage, and leaking gas pipes, dirty yards and lanes, are what should be especially looked after, for it is these things particularly that Dr. Sheard specifies as needing attention. The matter requires immediate attention. Spring is with us, and summer will soon be here, and—as long as the disease lingers at shipping ports—there is a possibility of cholera accompanying it. Admirable preparations are being made by the federal and provincial health authorities to keep the disease outside of the country, and while they are on guard at the portals it is the duty of all inside to see that nothing is allowed to exist upon which germs may subsist and thrive should they escape the vigilance of the health officers at the ports of entry

* * *

The question of compulsory early closing is a delicate one. Even if men realize that a certain course or action they are taking is wrong they object to being made do what somebody else conceives to be right. It may not be a good trait but it is human nature. Persuasion has a greater force with the average man than coercion. But in the matter of keeping a store open till a late hour every night, the law will have a difficult task to make a man believe that it is a misdemeanor against society and should be punishable by either fine or imprisonment. Excessively long hours are no doubt injurious to the health of the storekeeper and to his clerks, who are, against their wills, compelled to share them with him. And it might be argued from this premise that the Government, whose office it is to protect the health as well as the property of the subject, should step in and compel a stricter observance of the laws of Nature. There is evidently some sense in this line of reasoning, but after all the desideratum of early closing will be secured with less friction and more satisfactorily by persuasion and example than by coercion. It has already accomplished much, and it is destined to accomplish a good deal more.

* * *

One of the drawbacks to an extended trade between Canada and other portions of the British Empire has been the lack of efficient ocean service. The fast service put on the Pacific by the Canadian Pacific Railway Company is already proving fruitful of good results. Now, information comes from Ottawa that arrangements are about completed for better service between this country and Australasia. Huddart, Parker & Co. ,an Anglo-Australian steamship firm, having agreed with the Canadian Government to supply a monthly service between Vancouver and Sydney. Two steamers, each of 3,300 tons, and capable of carrying 130 cabin passengers, will be placed on the route. May 10 is the date on which the first steamer will sail. The steamship company is to get a subsidy of £25,000 per annum. The arrangement is for one year, and is subject to renewal for three years. The boats will touch at the Hawaiian Islands on both inward and outward trips. An opportunity will now be afforded of testin the possibilities of trade extension between Canada and Australia, the two greatest offsprings of the motherland. So far this trade has been of a limited nature. Last year Australia took, all told, less than half a million dollars' worth of goods from us, while our purchases, on the other hand, from them were still smaller, being only $264,701. In lumber, laths ,deals, and such articles alone they took nearly that much from us. Among other things we sold them $89,276 worth of canned salmon, $900 worth of soap, $923 worth of oil cake, $21,825 worth of organs, $8,025 worth of pianos, $1,532 worth of whiskey, $4,408 worth of coal. Australia and New Zealand took between them agricultural implements to the value of over $66,000. Our purchases in Australia were practically confined to wool, out of $264,701 total imports all but $685 being in that article. And of this balance $550 was settlers' effects, $135 books, $43 watches, $21 post office parcels, $18 jewelry. The result of the new service will be awaited with general interest, for all lines of trade are more or less conccerned in its success.

* * *

If there is one thing more than another that is essential to success in business it is system. A man mal have capital, experience,adaptability,and yet if he lacks in this one particular he will either in time fail or drag out an existence till the end of his day like an antiquated old hulk that, through fortunate circumstances, has been enabled to reach its final anchorage without going to the bottom. System means a place for everything and everything in its place; a time for everything and everything done on time. From Monday morning to Saturday night a set time should as far as possible be set for the performance of every duty, be you clerk or storekeeper. Fifty per cent. more work can be accomplished with system than without it,and that too with the expenditure of proportionately less energy. It is, in a word, the lubricator that facilitates the performance of the round of dialy business. Wthout it all is "fuss and feathers," and the consequent friction wears out before their time numbers of active business men, while those who are without either system or active temperaments become coated with rust and at last crumble away.

A DROP IN WHITE LEAD.

White lead is lower. The edcit announcing it was issued a few days ago. It was only about six weeks ago, it will be remembered that the manufacturers formed what is known as the Dominion Paint Grinders' Association, whose object was to put an end to the reckless cutting then obtaining and to advance prices. The advance took place, and was on the basis of 5 1-4c. a pound.

Between the time when the forming of the association was first mooted and its consummation was a period of several weeks. The wherefore of this has already been pointed out by HARDWARE. This period of suspense was taken advantage of by the speculative as well as by the legitimate dealers. Men who had been in the habit of doing little or nothing in white lead suddenly became large purchasers. When the advance in price was announced these jumped into the market and undersold the association. This would have been bad enough at any time, but its aggravation was increased by the fact that a good many of the dealers who were in a position to do so had previously laid in large stocks. Under such conditions the members of the association naturally found themselves handicapped, and inuendoes were thrown out here and there that some one or more parties to the agreement were not keeping it. Be that as it may, it is well known that white lead could be obtained below the association price, while it was evident, judging from the new competitors that were appearing in the field, that the trade was likely to diverge into other than the regular channels. Illegitimate channels is the term grinders apply to it.

Last week the members of the associaton were called together to consider the situation, and to devise ways and means of stopping up the channels that threatened to again bring about the demoralized state of trade that existed some months ago. Notwithstanding the condition of affairs it is understood that some of the members were strongly in favor of maintaining the association price of 5 1-4c. But they were in the minority, and it was decided to reduce the basis to 4 3-4c. At this price it was felt that they would be in a position to fight a good fight and drive undesirable competition from the field.

The price as now fixed is likely to obtain for some time, and when, in the order of things, an advance does again take place it will scarcely be marked. The association has realized that sharp advances afford the speculative opportunities to get in their fine work, and its members are in future likely to be governed by this knowledge. The associaton is said to be now stronger than at any time since its formation.

DECLINE IN TURPENTINE AND OIL.

The dealers in turpentine and linseed oil announce this week a decline of 1c. a gallon in both commodities. This decision was arrived at at a meeting held in this city Friday last.

The reason assigned for the drop in turpentine is not that stocks held here are large. On the contrary they are decdedly light. But because of the fact that heavy stocks are held in England and on the continent. For some time past the producers on this continent have been making large shipments to England with a view to maintaining prices here. and they succeeded, too, for a time. But now the English market will absorb no more, and the milder weather, and consequent freer run of the sap in the South put another weapon in the hands of the bears. The only thing that would possibly warrant an advance in the price here now is the fact that local jobbers have not anything like their usual quantity on hand, all anticipating the arrival of the new crop within the next two or three weeks.

The price of linseed oil the world over is governed by the Calcutta market, and there, as in England, values are easy. On the local market prices are easy at the decline, but the feeling here is that while the weakness may increase, it would be scarcely warranted in the face of the higher freights existing on oils from England.

THE MISTAKES OF THE PAST.

In writing of the mistakes of the past that I would avoid if I was to begin anew my business life, much that will be mentioned might be considered personal to my own case, says a correspondent of Metal, but I will endeavor to make it a record of what might occur to others also. My first mistake was to remove from a store that then appeared too distant from the centre of trade. By this error my expenses were doubled, with but little increase of trade, and now the original location is central, and the property,which could have been mine then for three thousand dollars, is worth twenty thousand dollars to-day.

I will offer it as my advice to any new beginner to carefully select his first business house, and remain in it as long as he does business, owning it when he can, and improving it as his means and business permit. It is a standing advertisement to be identified for a life time in one location.

I made a mistake in not giving more care and study to the new methods of business that constantly came up during my business career. I started with stoves and tin-ware, and when hot-air furnaces began to come into sale, did not see that they would be an important element for work and profit. My customers had trusted me to do work and put in my bill when it was done, and I looked upon a contract as a needlessly sharp competition. I confined my stock to what seemed to me legitimate goods, and lost the sale of many articles that I could have kept as well as not,and had to see the dry goods dealers selling tinware before I got my eyes opened about it. I put in guess work years before I had a set of drafting instruments, and had to learn in my fortieth year what I should have known at twenty-five about the architectural part of sheet metal work. I made stove pipes with my own hands when I should have made skylights with others' hands and my brain and enterprise.

Another serious mistake was in working too many hours, by which I was devoting time needed for rest and health to business, resulting in much more loss than gain in recovering from broken health and an endangered life. A mistake that cannot be too carefully guarded against was entering into partnership without proper study of character and capacity and suitable papers defining the duty of each party, amount to be drawn, and other restrictions for pleasant and successful relations. I made inventions which led me to sell out an established business on two occasions, that I might devote my entire time to them, and, while the profits exceeded what I was making before for a time, resulted in the end in a loss that might have been avoided if I had kept my store and given less time to the patents.

It was a mistake for me, after leaving the bench and having a practical knowledge of the trade, to have a workshop where it was not convenient to step in often and personally see what was being there. If I were to start anew I would not sell on credit as I did, and spend valuable time in collecting accounts. Charging goods, etc., ordered by responsible parties who prefer monthly settlements is not like trusting out goods to those who, by asking credit, admit that they cannot pay for what they want.

I made the too common mistake of thinking I was entitled to have many luxuries and pleasures that could have been dispensed with, because I worked hard and attended to my business and earned them ; whereas I should have first have secured a surplus of capital to carry me over dull seasons, and owned my store and residence before I put on style or spent a dollar needlessly. I do not wish to inculcate a miserly spirit, but real happiness calls for independence and freedom from care.

The Controller of Customs has decided to add coal oil and tobacco to the articles mentioned in the departmental circular of March 19, 1894, as being properly "ship stores," which may be entered free of duty ex warehouse.

THE MANUFACTURERS' MEETINGS.

The various associations of heavy hardware men have been holding their meetings in Montreal during the past week, and, although they have not wound up all their business, they have settled on the basis of prices for several leading lines for the next quarter, which HARDWARE'S Montreal correspondent is enabled to give. The meetings were attended by Messrs. Doolittle, of the Ontario Rolling Mills Co.; MacMaster, Montreal Rolling Mills Co.; Hersey, of Pillow, Hersey & Co.; Peck, of Peck, Benny & Co.; Fairman, of the Dominion Wire Co., in fact, all the leading manufacturers and rolling mill masters in Western Canada. Representatives of the rolling mills in St. John's, N.B., and other points down below were not present at the first conferences, but as the prices issued do not apply to their section their presence was not necessary. A conference with them is to be held, however, when several matters pertaining to their district are to be discussed—in relation to bar iron, etc.

The changes in the various card rates for Ontario and Quebec, with one exception, were not specially important. This exception was bar iron, and when the announcement was made that the price had been marked down 10c. the general expression among the trade was that the makers had been wise in their generation. There had been general and widespread discontent at the advance made earlier in the season, but the action of the makers would go towards convincing consumers that the association was not disposed to be extortionate.

As to the causes which had led to the action no one will speak definitely, but some iron brokers in Montreal say that it is just as well that the price was put down now as later, for they hold that down it would have to come anyway. Some say the higher price was too near the cost at which English bar could be laid down to be pleasant, and probably this may have had its influence, for English bar could be laid down here at $2.07, but the recent reduction dismisses all possibility of serious competition from this direction. The card rate now is $1.95, with a drawback of 5c. in the case of car lots, and 10c. for 100 ton lots, provided that quantity is taken inside of a year. This rebate represents the profit allowed to jobbers. The former division of territory into districts holds good.

In other lines, as we have said, the changes are not important, but there has been some readjustment of discounts in connection with tacks which it may be interesting to give. Prices are reduced on the following lines: Trunk nails, 1-2 to 1 inch, 65 per cent.; 1 1-4 inch, 60 per cent.; cheese-box tacks, 62 1-2 per cent.; trunk tacks, 57 1-2 per cent. Cut and wire nails are not changed, but coated nails are 10c. per 100 pounds net over bright nails. It is understood that some complaints with regard to the actions of the Maritime Province men over selling nails in their section have to be dealt with at the conference which is to be held with them. No actual charge of infraction of the agreement is made, but it is understood that something very closely approaching it is to be investigated.

Wire is unchanged, and so are horseshoes, while the meetings in regard to track bolts, railway spikes, etc., have not yet been held, but no radical change in connection with them is anticipated.

TOPICS OF THE MOMENT.

A new and revised list on binder twine will be issued Monday or Tuesday next. "Well," replied one who seems to have had a peep at the inside to a question of mine, "there will probably be a reduction in price, but it is not likely to be to the extent that the trade anticipate."

* * *

"The prepared paint manufacturers busy? Well, I should say we are," said one of them to me, as with a worried look on his face he reached over his desk and picked up a bundle of letters and post-cards, at the same time remarking: "Why, we are working every night, and don't even allow our men to go out for supper, but bring it in to them, and still we cannot keep up with our orders. Here are people writing and asking why we we have not shipped their goods, if they are shipped, or whether we intend shipping them. We were never so busy before," he concluded, tilting his hat back and swinging around on his chair to his desk.

* * *

I had a talk a few days ago with an oil man regarding the new regulations. "The reduction in the flash test to 90, a decrease of five degrees, will, I fancy, enable us to make a better oil, for you know the greater the test that is applied, the greater is the proportion of the illuminating quality that is taken away. Then the danger to the public is not going to be increased to any extent. You know if a lamp becomes overheated it would only be the matter of a moment or so for it to step from the 90 to the 95 degree of heat, or before it would explode. Oh, yes, American oil coming into this country in bulk will undoubtedly be finally barreled."

RAMBLER.

AID FOR SMELTING WORKS.

A deputation waited upon the Ontario Government Wednesday, asking for the establishment, by Government aid, of a customs smelter at or near Sudbury, its capacity to be not less than 100 tons a day. The deputation consisted of Ex-Ald. Flett. H. Lowndes, J. W. Cheeseworth, W. L. Cheeseworth, John Drynan, J. M. Might, F. R. Powell, Arthur Harvey, W. S. Thompson, P. Thompson, A. W. Murdock, H. A. Hilyard, J. Critchley, J. L. Cockburn, James Proctor, R. H Ahn, William Gordon, Mr. Walton, Joseph Taylor, J Loughrin, M.L.A.

Ex-Ald. Flett referred to the report of Washington mining experts, who, sent out by the United States Government in 1890 to spy the land, had returned to tell their employers that 650 billions of tons of ore were above the surface of the ground in the two districts of Algoma and Nipissing alone. Since that time nickel and other valuable deposits had been discovered. In Algoma four or five large companies had monopolized the ground. They were supported by foreign capital and had expended a large amount for smelting works. But quite naturally they would crush and treat their own ore only. The small Canadian holders were thus prevented developing their properties. From $100,000 to $150,000 was required to be expended before they could get any returns from their investment. This they were unable to do, and accordingly asked for Government assistance. A customs smelter at Sudbury, where these men of limited means could bring their grists of ore for treatment and refining, would be a great stimulus to the opening up of these partially or entirely undeveloped holdings. It would give employment to at least 1000 men.

H. A. Hilyard, Secretary of Commercial Mining Company, presented a plan showing the acquirement and erection of a customs smelter extending over three years. In the first year $14 900 would be spent, in the second a second and third smelter would be erected and elevated track built and shunting engines purchased for a total of $99,000, and the additional expenditure in third year would make the aggregate cost of a complete smelter and plant $291,625 A company had been formed who would subscribe one-half the capital if the Government supplied the remainder. The plan with a number of letters from English capitalists bearing on the subject Mr. Hilyard left with Sir Oliver at the latter's request.

Hon. A. S. Hardy said that much depended on the reliability of the directorate when the Government was handing over any money.

Sir Oliver said: "We recognize the great importance of the subject you are urging and will give it our close attention. We will endeavor to do something in this direction."

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"Samson" and Jones Spades, Shovels and Scoops.
"Rixford's" Harvest Tools.
"Hartz" Steel Tackle Blocks.
U. S. Navy Oakum.
Nicholson's Files and Rasps.
Wostenholm's I. X. L. Pocket Knives.
Joseph Elliots' celebrated T. & C. Razors and Table Cutlery
Joseph Rodgers Table and Pocket Cutlery.
Askham's, Ellin's, and German Cutlery.
Pullman Sash Balances.
Toronto, Hamilton, Montreal and Bull Dog Wire Nails.
Toronto, Hamilton and Montreal Cut Nails,
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Etc., Etc. . . . . .

SOLDERING METAL FOR ALUMINUM

An ingenious plumber in Norway claims, says the London Plumber and Decorator, to have realized the much-felt desideratum of a soldering metal for aluminum. It consists of combining cadmium, zinc, and tin, mixed in substantially the following proportions: Fifty parts of cadmium, 20 parts zinc, and the remainder of tin, the zinc being first melted in any suitable vessel, the cadmium is added to this, and then the tin in pieces—the mass to be well heated, stirred and poured. The proportion of the various ingredients may be varied in accordance with the use to which the substance is to be put. Thus, where a strong and tenacious soldering is required, a very large proportion of cadmium may be used; where great adhesion is desired, a large proportion of zinc would be essential, and, in case of an attractive and durable polish being sought, a greater per cent. of tin would be called for. The alloy produced in this manner, independent of its use as a solder for aluminum—is light in weight, and capable of taking a very considerable polish; and, though as a soldering metal it can be satisfactorily employed for a variety of the ordinary metals, experience shows it to be of special adaptation to aluminum.

ARTIFICIAL MARBLE.

In nature, marble is made out of chalk by water, which precolates through the chalky deposits, dissolves the chalk, particle by particle, and crystalizes it, mountain pressure solidifying it. It has been found that similar results may be accomplished by chemical means. First, slices of chalk are dipped into a color bath, staining them with tints that will imitate any kind of marble known. For this purpose the same mineral stains are used as are employed in nature. For example, to produce counterfeit "verde antique," oxide of copper is utilized. In like manner, green, pink, black and other colorings are obtained. Next, the chalk slices go into another bath, by which they are hardened and crystalized, coming out to all intents and purposes real marble.—Science Siftings.

RAPID GROWTH OF MALLEABLE IRON.

The rapid increase in the capacity of malleable iron foundries through extensions of old plants, and the building of a number of new ones, in the past few years, is noted by the Iron Age, and is attributed mainly to the expansion of the business of agricultural implement manufacturers, who are heavy purchasers of malleable castings. But the consumption of malleables has also increased in many other directions, and large establishments are to be found that do not to any considerable extent depend on the agricultural trade. The growth of the manufacture of small wares, in almost infinite variety, is proceeding at a rapid rate, and for many of these malleable castings are demanded. Makers of coke pig iron are attacking with considerable success this last stronghold of charcoal iron, which has hitherto been deemed indispensable for malleable castings. Special qualities of coke pig iron are being made for this purpose, and it is asserted that the percentage of coke iron used has not reached its limit.

DRAWERS INSTEAD OF SHELVES.

The hardware store of Mr. M. Weichel is one of the sights of the village. Though formerly considered one of the best stores of its kind in this section of the country, the recent improvements have largely added to its attractiveness, and place it at the head of them all. Between 700 and 800 drawers have taken the place of the open shelves. They completely fill one side of the store, and the upper ones are made accessible by a very ingenious sliding ladder. The drawers appear in highly polished natural wood, while the partitions between them and the other woodwork are painted a bright red. The woodwork was done by Mr. Charles Ruppel and the painting by Mr. Isaac Musser. Each drawer has a sample of its contents fastened outside, and the whole makes a very pleasing effect. As one of Mr. Weichel's customers remarked the other day: "Mr. Weichel could put up a sign, 'What you don't see, we haven't got.'"—Elmira Signet.

THE INCREASED DEMAND FOR PHOSPHATES.

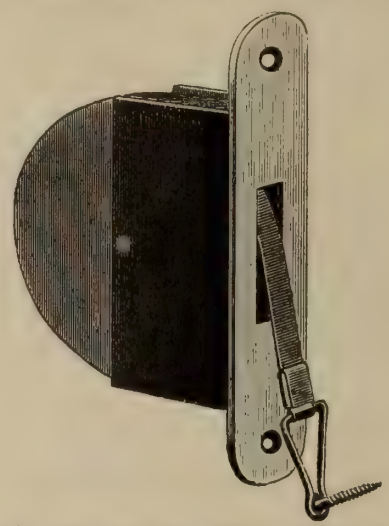
The Charleston News and Courier reports an interview with a gentleman who has been identified with the phosphate and fertilizer industry of the Carolinas for nearly a quarter of a century. He said that the business done by fertilizer manufactories this year has obliterated all traces of the depression in last year's trade. He could mention a good many phosphate works located in various sections which had been unable to meet their orders during the season. More than one firm had sold in advance all the output of their plant at prices which were eminently satisfactory. The railroad returns showed that the tonnage of this season had been a large one, and there was a general brightening up in phosphate circles all along the line.

The gentleman referred to called attention to the fact that the territory which is demanding the materials is steadily expanding. He had seen orders for goods which came from sections of the South and West, which had never before used a ton of phosphates, and he had letters from gentlemen in the far Southwest, who are looking toward building works, because they recognize the constantly increasing demand for the phosphate. He thought it was only a question of a short time before the revival of the business would bring into existence other works in the up-country of this State. A syndicate at Blacksburg had already been formed for the purpose of establishing a large plant, and he was confident that its erection was only a matter of a short time.

The Carnegie Company is discharging its foreign employes by thousands, and is importing Southern negroes to do the unskilled work in and about its mills. The Atlanta Constitution does not think the experiment will prove a success, and is of opinion that the negroes will again drift back to the South.

A HANDY SASH BALANCE.

The accompanying cut is that of the Pullman Window Sash Balance. The balance is not what might be called new on this market, having been introduced here something like a year ago, but it has not been pushed much yet, and is consequently not generally known to the trade The frame is of steel and the tape of aluminum. The tape is controlled by an automatic interior air-brake. The balance here shown is known as the side balance. There is also a top balance. It is claimed for the balances that they can be adapted to old as well as to new



work; can be used many places where weights and cord cannot. They are easily applied, run noiselessly, and have an attractive appearance, and last much longer than cord. It is claimed that, when the cost of boxed frames is taken into account, that the balance is cheaper than the ordinary weights.

A UNIQUE MOTIVE POWER.

Accounts come from Germany that Krupp, the famous gun maker, is now building a number of experimental engines to test a novel idea. A German inventor has taken patents on the utilization of the general principle that finely divided carbonaceous matter floating in the air readily explodes. He proposes to grind coal to an impalpable powder, and after introducing the dust floating in the air into the cylinder of an engine, explode it, the idea being to follow very much the same lines which are being so thoroughly developed in the use of gas in engine practice. Naturally, the first question which has risen has been how to get rid of the ash. Krupp is reported to have stated that his experience in gun manufacture convinces him that this is not a serious obstacle. The advantages which would grow out of a direct utilization of mineral fuel as mined are very obvious. While modern practice converts only 10 to 15 per cent. of the heat energy stored in coal into power at the crank shaft of a steam engine, it is believed that no less than 75 to 80 per cent. could be maid available by the direct combustion of fuel through explosion of coal dust.

GLASSWARE AT THE WORLD'S FAIR

HARDWARE is in receipt of a handsome lithograph from Gowans, Kent & Co., of this city, of the World's Fair Building of the Libbey Glass Co., who have acquired the right to manufacture and sell American glassware within the grounds of the Exposition. At an expense of $100,000 the Libbey Glass Co., with its usual push and enterprise, have erected and equipped one of the most complete, beautiful and largest glass factories ever erected for exhibition purposes. It has the capacity of accommodating over 2,000 people at any one time. Mr. D. L. Stive, of Toledo, one of the foremost architects in the United States, designed and superintended the construction of the building and saw that every detail necessary to making it the most complete of its kind was carried out. Entering the main doorway the visitor finds in the glass house or "Blowing room" an immense glass melting furnace in full operation, with brisk "gathering boys" thrusting long irons into the white hot mouths of the crucibles, and by their own dexterous twist bring forth the hot waxy glass which they quickly hand to the "blower," who blows and fashions it into shape, producing entirely by the eye an exquisitely proportioned piece of ware. At another "pot" we see a boy gather from the crucible a huge piece of molten metal, drop it into a mold standing on a press, the presser pulls the lever down, drops the "plunger," and before you know it, out comes a World's Fair souvenir. In fact, every method of the glass blower's art is to be seen in this department, and many will linger to watch the interesting operations. In the glass cutting department some 40 skilled cutters will be constantly at work cutting the most intricate and beautiful patterns on the various pieces of glass. Those who have never been fortunate enough to see the process of glass cutting will not only find this branch most interesting but very instructive.

Adjoining this cutting room will be the decorating room, where a number of skilled decorators will be found busily engaged painting the most beautiful designs upon all manner and shapes of useful and ornamental pieces of glass, after which they are placed in the firing kilns and fired. Directly opposite these rooms are to be found the glass spinning and weaving rooms, where will be seen the novel sight of glass being woven into fabrics of every conceivable kind—beautiful colored napery, lamp mats, necktles, baskets, bonnets and hats, all made from woven glass. Space forbids a further mention of the extent of this firm's factory, suffice it to say that all visiting it will be amply repaid for their trouble and come away with a more extended knowledge of this particular industry. Gowans, Kent & Co. are to be congratulated on their good fortune in being appointed agents for such a progressive factory, said to be the foremost of its kind on the continent.

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

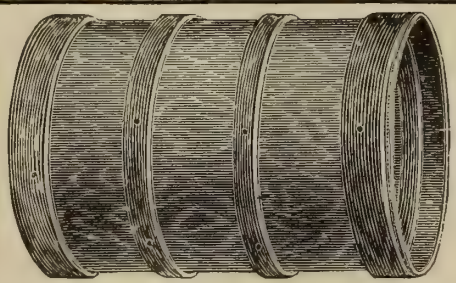
ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."

BRITISH SHEET GLASS
P.B.

These words and brand are on every box. None genuine without this Trade Mark. We warn our friends against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

ORDER YOUR **NAILS** Wire . . . Cut . . . Horse Shoe



IN **PATENT KEGS**

Cost no more than in Common Kegs. The strongest, handiest, cleanest, neatest, and best store package in use. Made in one solid piece, lined with strawboard. No staves to get loose or break, No shrinkage or falling out of heads.

Supplied by Graham Nail Works, Ontario Lead and Barb Wire Co., Safety Barb Wire Co., Toronto; Parmenter & Bulloch, Gananoque; and Peck, Benny & Co., Pillow & Hersey Co,, Montreal.

BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

SOME GREAT MISTAKES.

It has been written that "man is prone to error as sparks to fly upward." Again it has been written that "to err is human; to forgive, divine." Errors of judgment may be classed in the same line with mistakes in action the two terms being, for practical purposes, synonymous, the former often controlling or bringing about the latter?

In every sphere of life man is continually making mistakes, not wilfully, but as an attribute of the imperfections of his human nature. Were it possible for a person to become so perfect in all things and all ways as to make no mistakes, this world would not be a fit abiding place for him; he could neither feel at home nor sympathize with his fellow mortals. Mistakes will be made as long as the human family exists, and the only wise course is to "make the best of it" when they occur.

But there are different kinds of mistakes. Some are due to indifference as to resultant consequences, many to carelessness in the performance of allotted duties, others to selfishness, which unwittingly causes one to disregard the rights and welfare of others so long as his own ends are gained, and there are also what may be called dishonest mistakes, and many other causes might be assigned for their occurrence besides that quality in the human animal through which they inevitably will happen.

If we could at all times "see ourselves as others see us" we might be able to avoid some of the mistakes which—whatever may be the cause—we are continually making, and we might also be more tolerant of those made by others. It is an easy matter for us to see wherein errors are committed by persons whom we know or of whom we read, and we are prone to wonder how they could have been so short-sighted; and it is not infrequently the case that when such mistakes affect us to even an unimportant extent, we are apt to show less leniency than we should, particularly becaus,e under the same or similar circumstances, we might have erred to even a far greater degree.

One great mistake 'made by many a business man is in acting on the principle of "going it alone" in all things, heeding not the probable and actual benefits he might derive from association with others who are in pursuit of the same objects he hopes and expects to attain. This is a selfish mistake, induced by the fear that by joining hands with his fellow tradesmen he might not secure all the benefits such a course would bring about,and he therefore loses a great deal that will always accrue from united effort. This narrow-minded policy keeps many a man from joining the ranks of mercantile organizations, and, while conscious that he is deriving benefits from the work done by the few, he makes the mistake of forgetting the fact that his welfare could be still greater enhanced by acting on the principle of helping himself by helping others.

A great mistake is made by certain employers, and others having the charge of men, in supposing and acting on the principle that their whole duty is performed when they pay those men so much money for so many hours' labor. In their eyes the workmen are only so many machines, and frequently are not treated with the same care and consideration given to the more valuable tools. If one of the human machines leaves or dies, it costs nothing to fill his place, and if he, unfortunately, makes a mistake the error is looked upon as an almost unpardonable crime But the laborer is not a fool, and under conditions as above noted, will take no pains to advance the interests of his "master," and sometimes —either intentionally or otherwise—will do great damage to the standing and reputation of the selfish employer, which would not be the case were he treated as a reasoning being. The human machine can talk.

A great mistake is made by the mechanic or laboring man who takes employment and acts on the principle of giving just as little as possible of his brain and muscle for a stipulated price. As the workman soon "gets onto" the selfish and one-sided policy of his employer, so the latter will not be long in finding out the bad qualities of his employe. Such a short-sighted workman soon becomes known to have acquired habits of indifference concerning his duties, and it will only be as a lastresort that he will be given employment anywhere.

The list of avoidable mistakes, of which the above are the merest samples, might be greatly extended, including one of the greatest of which many parents are guilty, viz., allowing the child "born with a silver spoon in his mouth" to grow up with the impression that his future is provided for, and that he will not have to depend upon himself and his own exertions to make his way in the world. This is one of the saddest mistakes anyone can make, and that it is a very common one is shown by the crowds of well-to-do idle young men to be seen at the resorts where fast men "most do congregate" in every city in the land.

It is possible to avoid many mistakes we make; it is right to look leniently upon those made by others. But inexcusable mistakes, of which there are many, and some of which are referred to herein, should neither be committed nor tolerated. At the same time, it must be remembered we are all human, imbued with all the imperfections of humanity, and that, first of all, we should pluck the beam out of our own eye before looking for the mote in the eye of our neighbor.—Merchant Sentinel.

HONESTY AND THOROUGHNESS.

A gentleman who is at the head of one of the largest commercial houses in New York, on being asked the question, What trait in a boy's character will be of most value to him in after life, replied:

"Honesty first, then thoroughness. The great value of thoroughness is understood and appreciated by just about one or two young men out of every ten in business life to-day. The tendency with the average young man is to 'rush' things, to get a thing through, no matter how it is done. It is the end he seeks, forgetting that some people are apt to examine into the means by which some ends are attained. It is not at all surprising why some young men do not succeed in business when we see the methods they adopt to attain success. They want large salaries, good positions, but short hours and little to do, and even that little they will not do well. If there are two Americanisms that have wrought more evil than any other, it is the one of 'Oh, it is good enough!' and the other of 'It will do,' when a thing is about half or three quarters done. Rapid work is never creditable where it is but half done. Far more apt is it to act just the reverse than the worker imagines, and the young man whose only recommendation is that he is able to get through with 'a pile of work' by such methods, has in him the making of a very poor business man. The successful business men are most careful about small things, and they often look for the smaller traits in their clerks in forming opinions of their characters.

"Thoroughness applies to the largest enterprises as well as to the smallest routine detail of office work. Slip-shod methods are never identified with success. Patience, perseverance and thoroughness are the levers of business progress. 'Rushing' a thing never pays. We regard men of quick or early successes sometimes, and say that 'he rushed into success,' when the fact is, that no man ever rushed into success that is a success. Behind every successful career is always found work, and hard work, work born of accuracy and thoroughness. However much to the public the successful man may sometimes seem to have been made in a day, there is always a story to every success. To one story there may be more chapters than to another, but the story as a whole is always the same, and two chapters one is pretty sure to find in the book of every successful life are headed 'Honesty' and 'Thoroughness.'"

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton. Ontario.
SP

SITUATIONS VACANT.

WANTED—HARDWARE TRAVELLERS with good connections in Lower Provinces and in Ontario. None but first-class men need apply. H. S., GAZETTE Office, Montreal.

SITUATION WANTED.

CLERK—EXPERIENCED IN HARDWARE business desires situation. References. Address: Reliable, Hardware Office.

SITUATION WANTED AS HARDWARE Salesman by reliable young man, who can invest if necessary one or two thousand dollars in good business. Good bookkeeper, excellent testimonials, moderate salary—C.H. Hardware Office. 17

BUSINESS CHANCES.

Advertisements inserted under this heading one cent per word each insertion.

CREAM SETTER CAN—AUTOMATIC SKIMMER; township rights, $6; exhibitor World's Fair. Tyndale, 171 Oak st., Toronto. 14

WANTED TO BUY A SMALL STOCK OF Hardware in some good live Western Town.—Address giving particulars The Hardware Office. 16

FOR SALE—STOCK OF GENERAL HARDware, paints, oils, stoves, &c. Business established 25 years. Value about $3,500. Address, Estate J. Cameron, Beaverton tf.

WANTED—WILL EXCHANGE FIRST class Real Estate in live Western Town for a stock of Hardware. Stock invoice four to six thousand dollars.—Address The Hardware Office 16

TRAVELLER—EXPERIENCED—WANTS situation. Practical stove and furnace man. Has had also a good experience in hardware, paints and oils. Address W. B., HARDWARE Office. 14

FOR SALE—GOOD PAYING HARDWARE Stove and Tin business. Last year's turn over $12,000. Stock, etc., under $3,000. Smart town, brick store, modern improvements. Satisfactory reasons for selling. Would prefer to sell out for two or three years. Don't write unless you mean business. Address T., HARDWARE OFFICE.

COUNTRY BUSINESS FOR SALE.—A FIRST-class general store business. Good locality, old established stand. No other store within eight miles. Is now doing an excellent business. Open for sale for one month from date only. Only responsible parties need apply. A splendid opening. Applications to be made by letter addressed to COUNTRY STORE, Drawer C, Picton, Post Office.

C. C. HARRIS

Manufacturer of MIXED METALS, BABBIT, SOLDER, WIRE SOLDER, SHEET METAL, ELECTROTYPE and TYPE METAL.

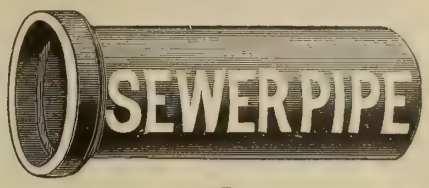
All metals guaranteed. Special discounts to manufacturers on yearly contracts.

Cor. Wickson Ave. and Yonge St. Toronto.

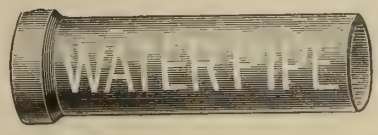


ASK FOR THE GRAHAM NAILS.

Hamilton and Toronto



—AND—



HEAD OFFICE: HAMILTON, CANADA

¼ the PRICE of Iron. Write for Discounts

READY MIXED PAINTS

TRADE 

MARK

Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

Manufactured by **A. RAMSAY & SON** MONTREAL

The James Robertson Co'y, L't'd

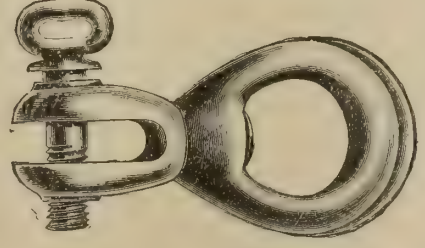
MANUFACTURERS OF

Hardwood Filler, Liquid Filler,
Oil Wood Stain, Steel Color Paint,
Iron Filler, Ready Mixed Paints,
Superfine Coach Colors, White Lead,
Varnishes, Oils, Etc.

TORONTO

THE WHITMAN & BARNES MFG. CO.

Canadian Branch: St. Catharines, Ont.



This new **Swivel Clevis** can be attached to any Plow Clevis, used in place of Shackle or End Clevis.

MADE OF MALLEABLE IRON.

ALLIGATOR WRENCHES



Write us for Description and Prices

TRADE CHAT

A. R. McKinley & Co.'s window shade factory, this city, was destroyed by fire Monday night. Loss about $40,000, insurance $25,000.

A recent Customs ruling states that cash registers by whatever name known are dutiable at 35 per cent. under items 406 or 488 of the tariff.

It is understood that Grange Supply Co. is to move from its present premises in Colborne street to the building vacated some time ago by the Coffee House Association in King street, adjoining St. James Cathedral.

It is not likely that Montreal will have a provincial exhibition this year, the Quebec Government having stated that it will not be able to make a grant. Last year the Government made a donation, but even with that there was a deficit of $5,000.

W. S. Hooper, manager of the Dominion Express Company's office in St. John, N. B. has been missing since Tuesday week. When last seen he was en route to the States. The Express Company say his accounts are all right.

It has been found, says a writer in the Industrial American, that covering a wooden door with tin proves more fire-proof than an iron door. Wood cannot burn unless exposed to the atmosphere. Placing a piece of wood in an air-tight tube, the tube may be heated almost red hot without more than charring the outside of the wood.

The Minister of Trade and Commerce has received a despatch from the British Government, stating that the Spanish Government has decided that the direct trade between the Spanish Antilles and Canada is now placed on the same footing as that between these colonies and the United States. This despatch does not define whether it applies to the import trade as well as to the export trade, nor does it intimate whether Cuba is included in the arrangemeut.

The foreign trade returns of the Argentine Republic for the last year show merchandise imports valued at, gold, $91,400,000, and exports at $112,700,000. Compared with the previous year this is an increase of 36 per cent. in imports and 13 per cent. in exports. The customs revenue amounted to, gold, $92,200,000, an increase of 75 per cent. over 1891. The total trade with the United States amounted to $12,200,000, against $7,600,000 in 1891; with Great Britain, to $55,000,000, against $45,100,000.

Some conception of the traffic carried on in refrigerated meat between New Zealand and Great Britain may be gathered from the following figures: For the last half of 1892, 32,180,583 pounds of mutton, 687,002 pounds of lamb, and 890,134 pounds of beef were shipped for this trade. For the whole of 1892 the figures are: Mutton, 80,585,750 pounds; lamb, 10,975,799 pounds, and beef, 6,075,008 pounds. In 1891 the export from the colonies was still larger, amounting to 86,282,935 pounds of mutton, 12,068,308 pounds of lamb, and 11,847,839 pounds of beef.

Letters patent of the province have been issued incorporating Robert Gardner, manufacturer; James C. King, founder; Edward Langley Bond, insurance manager; David S. Walker, hardware merchant; William Gibbon Pullan, merchant; Joseph Ney Babson, manufacturer; David Seath, accountant; Evangelist Beausoleil, mill owner; and Arthur M. Perkins, agent, all of Montreal, for the purpose of manufacturing all kinds of coopers' stock, staves, headings, barrels, casks, kegs, boxes and all lines connected therewith, by the name of "Montreal Stave and Barrel Company," with a capital stock of $12,000.

The duty on mining machinery caused a lively and prolonged discussion at the quarterly meeting of the Quebec Mining Association, held in Montreal last week. S. P. Franchot, of Buckingham, presented the report of the deputation which had interviewed the controller of customs on this subject. It was shown that the law provided that when an importer "made oath" and swore that the machine he had bought was not made in Canada, then that machine should be admitted free, but it appeared that the customs officers did not always accept the sworn statement of the importer. Worse than this, the deputation were met in the customs department with a list of machines made in Canada that comprised all and every class and kind of machinery known to the mining world. The strangest thing, it was alleged, about this list was that it was on its face avowedly prepared by an interested Canadian firm of manufacturers. It was eventually decided to appoint a committee of four mining men and four manufacturers to draft as nearly as possible a correct list of machines made in Canada.

INSURANCE RATES IN MONTREAL

The fire underwriters in Montreal have made a wholesale advance in insurance rates recently, rates to retail dealers having been marked up 40 per cent. The insurance men hold that in addition to a fire service that is decidedly wanting in some respects, retail men in Montreal do not insure heavily enough. They insure up to perhaps fifty per cent. of their stock, and if a fire occurs they, so the underwriters say, depend upon getting the salvage, which is very often great. Thus they not only have the goods that are damaged, but the full amount of their insurance, and thus a fire is frequently a very profitable piece of business. The cause of the rise in rates is the heavy losses incurred in the retail trade recently, both on the above account and the fact that the fire brigade is not being handled properly. The insurance men want the retailers to insure their stock, not for fifty per cent., but for eighty per cent., and they declare that if the latter will not do so, they will charge them much higher rates than forty per cent. over the present rates.

SHIPMENTS OF OIL.

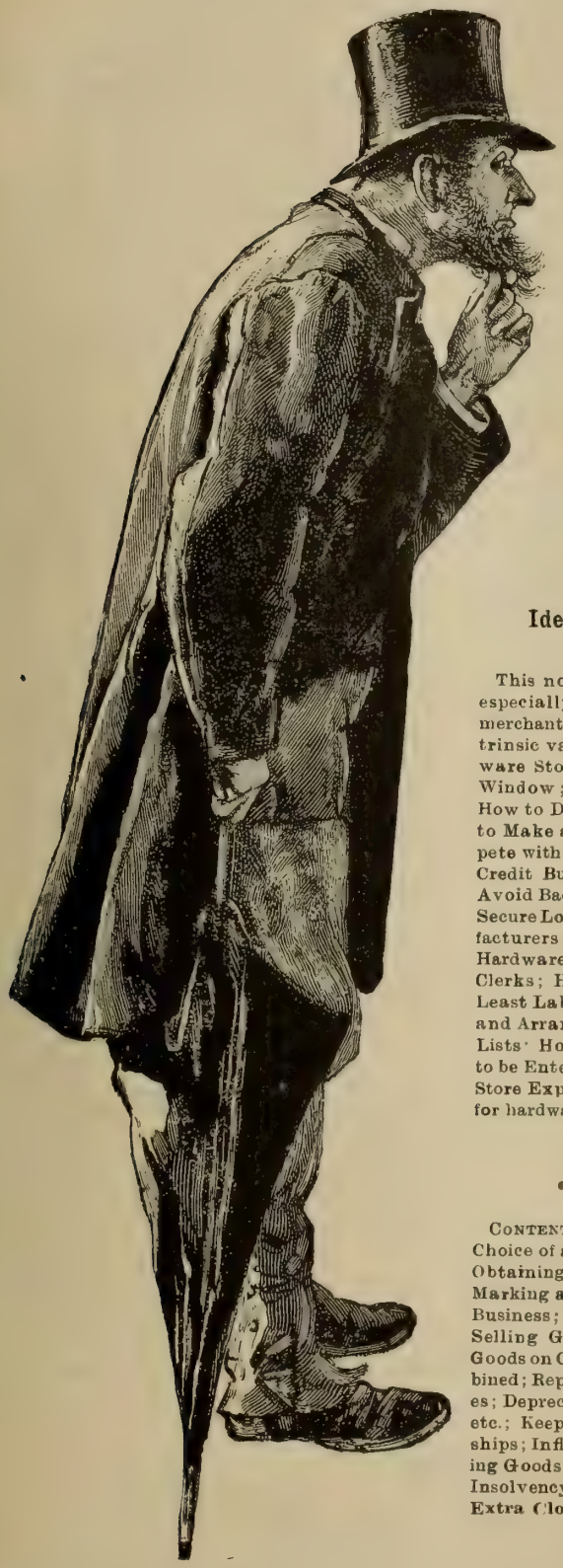
Petrolea Advertiser: The shipments of crude and refined, reduced to crude equivalent, which left here over the lines of the Grand Trunk and Michigan Central railways, for the month ending March 31st, 1892-93, are as follows:

	Crude.	Refined.	C Equiv.
Grand Trunk Railway—			
	13,966	13,650	48,091
Michigan Central Railway—			
	3,925	8,755	25,812
	17,891	22,405	73,903

	1892			1893		
	Crude.	Ref'd.	Crude Equiv.	Crude	Ref'd.	Crude Equiv.
Jan.	17,441	24,751	79,218	23,671	28,834	96,756
Fdb.	14,557	18,073	59,759	22,905	19,809	77,073
Mar.	16,570	19,469	65,217	17,891	22,405	73,900

THE PLATE GLASS TRADE.

For a long time this trade has been in a very unsatisfactory condition. The rapid progress made by this and other cities in the Dominion during the past few years, and the general desire that the many new buildings erected should be of the best possible character greatly developed the trade, and led to large expenditures in its prosecution. But the reaction which invariably follows all periods of remarkable progress soon came. For some time now the building trade has been in a most unsatisfactory condition, and, as a consequence the demand for plate glass has not only decreased, but has led to most severe competition among the firms engaged in it. Step by step have prices been lowered, and the plate glass trade has become a most unprofitable one to those interested in it. In order to place the trade in a healthy condition and allow for a fair return on the capital required to carry it on, it has been deemed advisable to minimize expenses by the amalgamation of several of the largest firms engaged in it, and application has been made to the Dominion Government for a charter to establish The Consolidated Plate Glass Company, of Canada, Limited, with its headquarters in Toronto. Branches will be established in other cities, and the authorized capital for a start is placed at $250,000. One feature of vital interest to the trade, and which this corporation are fully alive to, is that they announce their intention of dealing only with the regular hardware and painters' trade. At present nearly, if not all, the plate glass importers will sell to anyone. With business on a better basis there will be less competition, and they can afford to select customers and ensure to them a profit. The consolidaton of interests, with its consequent reduction of working expenses should be in the interests of the community generally, for a country can only progress as its business prospers on sound principles. Similar corporations have been formed in New York and Boston with good results, and the strongest opponents in these cities, finding that in no sense is such a corporation formed as a combine to reap exorbitant prices from the trade or the public, are now among their warmest supporters, and find it to their interest to be so.



It is more honorable to have built a dog-house than to have dreamed of building a palace. . . . . .

BOOKS FOR BUSINESS MEN.

Ideas for Hardware Merchants.

By D. T. MALLET.

This novel book is the only book ever written especially for hardware men, and every hardware merchant will find it of decided help and of intrinsic value. It tells How to Advertise a Hardware Store; How to Dress a Hardware Store Window; How to Select Seasonable Goods and How to Display Them to Best Advantage: How to Make a Success with Hardware; How to Compete with "Department Stores;" How to Turn a Credit Business into a Cash Business; How to Avoid Bad Debts and Increase Trade; How to Secure Low Quotations from Jobbers and Manufacturers; How to Arrange the Fixtures in a Hardware Store; How to Treat and Manage Clerks; How to Keep Your Accounts with the Least Labor; How to Systematize Your Business and Arrange Its Details; How to Arrange Price Lists; How to Meet Close Competitors and How to be Enterprising; How to Properly Proportion Store Expenses, and thousands of practical hints for hardware merchants. **Paper cover, $1.**

How to Keep a Store.

By SAMUEL H. TERRY.

CONTENTS: The Selection of a Business; The Choice of a Locality; On Buying a Stock of Goods; Obtaining Credit on Purchases; Examination, Marking and Arranging of Goods; Advertising a Business; Employment of Clerks; The Art of Selling Goods; Selling Goods for Cash; Selling Goods on Credit; Selling for Cash and Credit Combined; Replenishing Stock; Settling for Purchases; Depreciation of Goods; Losses by Fire, Theft, etc.; Keeping Accounts; Expenses; Co-partnerships; Influence of Social Life on Business; Buying Goods at Auction; Investment of the Profits; Insolvency; Business Qualifications, etc. **12 mo, Extra Cloth, $1.50.**

Tea and the Science of Blending.

CONTENTS: Early History of Tea; Tea Statistics; China, Indian, Ceylon, Java and Japan Teas, describing each variety, make and liquor; Indian Tea Districts, describing each district; Manufacture of Tea; Points on Blending; Specimen Blends, with Comments, etc., etc. **$1.**

Building Business.

By N. C. FOWLER.

Nath'l C. Fowler, jr., the eminent advertising doctor and expert at business, has written a book all about advertising in daily papers, weeklies, magazines, religious and agricultural papers, in street cars, signs, lithographs, novelties, calendars; about cuts and how to use them; window dressing; store decoration; points on selling; keeping accounts; everything about publicity and business outside, written from the merchant's standpoint—a book worth its price to the man who spends $25 for printing, and the more to the extensive advertiser and merchant; 177 great advertisers answer the vexed questions of advertising, presenting individual and collective opinion of positive value—most important chapter written. **Cloth $3.75, half leather $4.50, full leather, $5.**

Self Instruction in Practical Business Qualifications.

By CHAS. S. MCNAIR.

Size, 8½ x 11 inches, 256 pages. **$2.50**

How to Sell Goods.

By B. F. CUMMINGS.

A Prize Essay, **10c.**

METHOD IS THE SECRET OF SUCCESS.

The Publishers of this paper have arranged to accept and transmit to the U. S. and Canadian publishers, orders for these books. Money should be sent by P. O. Order or register letter to

THE J. B. MCLEAN PUB. CO., LTD.
10 FRONT ST. EAST,
TORONTO.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below, and in our Prices Current, necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, April 14, 1893.

HARDWARE.

The reduction in freight rates led to considerable activity on account of orders which had been placed in anticipation, and the pushing forward of goods on this account have kept the various jobbing houses here very busy throughout the past week. The fact that the various manufacturers' associations have been holding their quarterly meetings here during the past two weeks has operated to a certain degree in preventing business in some lines, as buyers were holding off to see what would turn up. Beyond a reduction of 10 cents in bar iron, however, the changes are not of an important character, and now that the thing is settled jobbers generally anticipate an increased demand. That it will come, the business that has been done in lines of hardware not affected by the meetings in question seem to infer, for all the houses have been decidedly busy, and once the roads, which are neither fit for wheeling or sleighing in some sections, are settled a good general all round movement is predicted in hardware. In heavy material business is still somewhat backward in the way of cost and freight business, for the reason that the opening of navigation promises to be very late this spring, and nothing in this position of primary markets seems to warrant any urgency about placing orders. There is no serious complaint about remittances, which seem to be favorable on the whole.

No change in the basis of value for wire was decided upon at the association meeting, and business in it been fair during the week, the movement involving some considerable quantities.

Makers report some good orders for cut nails on the regular basis, and jobbers also have been moving some good orders. There was no change in the basis of price decided upon at the meeting held here this week, the old agreement being ratified. Wire nails also remain as before, but for coated nails the basis now is 10c. per 100 lbs. nett over bright.

Tacks have been quiet and some readjustments of the discounts was decided upon at the association meeting Trunk nails ½ to 1 inch, 65 per cent. off, 1¼ etc., 65 per cent. off, cheese box tacks 62½ per cent. and trunk tacks 57½ per cent.

Horse shoes remain as before, the makers ratifying former rates at the quarterly meeting. Trade has picked up a little both on jobbing and wholesale account, jobbers reporting a good demand while makers say that orders are fair.

Track bolts, railway spikes, etc., have not been dealt with yet by the makers, but it is not considered likely that any radical change will be made.

General lines of shelf goods more especially locks, bolts, etc., have been moving freely on city account during the week, and other lines not touched upon by makers have been quite active. In tools business is brisk for harvesting implements, but other lines are quiet.

PIG IRON.

There has been little or no change in pig iron for spot business, the only stock offering being some Longloan and Carnbroe. The former has sold in a small way during the week at $21 and the latter at $19. Very little business is doing for importation, as buyers are backward, nor is there any change to note in the basis of value in this connection. Summerlee is quoted at $18.50 to $18.75 for spring delivery, but we cannot cite any transactions.

BAR IRON.

The chief feature in bar iron has been the reduction in price of 10c., the basis now being $1.95 instead of $2 05, with the usual drawback of 5 and 10c., which is governed by special conditions. Business is not brisk, and although there have been reports of cuts below the former standard basis, makers deny positively that they had to adjudicate upon any infraction of the agreement at the quarterly meeting.

TIN PLATES.

Tin plates show no change, and there is very little doing in the way of forward delivery. Spot prices are $3.20 to $3.25 for coke.

TERNE AND CANADA PLATES.

Canada plates and ternes are precisely the same. Canadas are quoted at $2.50 to $2.60, and ternes at $7.25 to $7.75.

SHEET IRON.

Sheet and galvanized iron furnishes nothing special. Some small lots of the latter were moved during the week at former prices to roofers here.

COPPER.

There is a scarcity of copper to note here, but prices are not changed on this account, business transpiring at 12½ to 13c.

TIN.

Tin is quiet and unchanged at 22½ to 23c.

PAINTS, ETC.

There has been a good business in leads during the week, also considerable activity in varnishes. We quote the old basis: Choice brands of paints, Government standard, $5.25 ; do. No. 1. $4.87½ ; do. No. 2, $4.50 ; do. No. 3 $4 ; dry white lead, 5¼c. ; red lead, pure, 4½c. ; do. No. 1, 4¼c.. with 2½ per cent off these prices for ton lots.

OILS.

The oil market is firm on some lines, notably seal oil, on which it is impossible to give a reliable quotation. Linseed is somewhat easier, at 63c. for boiled and 60c. for raw in round lots. Fish oils are unchanged.

GLASS.

There is no change in glass, but business has been a little better during the week. We quote $1.35 for first break and so on. Putty in bulk is unchanged at $1.90.

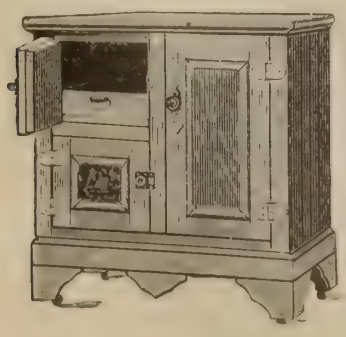
CEMENT, ETC.

Cement is in fair demand for present delivery and stocks are being reduced considerably, for owing to the number of outside works going on the demand is much better than usual for this season. Prices are firm at $2 45 to $2.65.

PETROLEUM

A fair movement is reported in petroleum at last week's quotations, but business is by no means brisk. Canadian benzine is ¼c. higher. We quote as follows: Canadian 12c. to 12¼c at shed in Montreal for round lots and 12½c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c in 10-barrel lots, 19¼c. in 5 barrel lots, and 19¾c. for single barrels, 2 per cent. off for cash ; American benzine, 23 to 25c. ; Canadian benzine, 10¾c. Petrola ; 12¾c. Montreal.

Refrigerators



Hardwood, Lined Galvanized Iron, Patent Locks, Four Sizes

These are **highly finished** and each season has shown an increasing demand. This year we are also **making a cheaper line** in above style, so as to meet all requirements.

Milk, Delivery and Creamery Can Trimmings.
All Sizes Body Stock for Cans and Cheese Vats.
Galvanized Iron Eave Troughs in 8 foot lengths.
Lithographed Tea Caddies and Signs.

We make and Supply everything used in the Stove and Tinware Trade.

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

TORONTO MARKETS.

TORONTO, April 14, 1893.

HARDWARE.

Trade is active. It is apparent in all branches, and around the warehouses all in hurry and bustle. Both manufacturers and jobbers appear to have much more business on hand than they can conveniently handle. In some lines orders placed with manufacturers in January last are still uncompleted. If anything the demand is principally for harvest tools, lawn mowers, screen doors and blinds. Wire is also going out rapidly, particularly annealed and oiled, and supplies are now sufficient for the demand. Orders are being placed for spring shipment of cut nails, and prices are unchanged. There has been some change, however, in wire nails. Rope in the smaller sizes is beginning to move, and chain is arriving more freely.

As HARDWARE anticipated they would, the manufacturers of barbed wire have announced that in future they will pay the freight on barbed wire to the North-west the same as has hitherto been done in Ontario and Quebec. It is said they have been induced to do so by the competition that has arisen from factories starting up in Manitoba.

No complaints are heard regarding payments, a continued improvement being reported.

WIRE is going out rapidly. There is no scarcity, and no difficulty is experienced about shipments, several manufacturers holding stock here now. Annealed and oiled is the most enquired after.

NAILS.—There is no change. The manufacturers have not yet met, but are expected to the latter part of the month. The trade, however, does not anticipate any change. All the orders are now being placed for spring shipment.

WIRE NAILS.—The manufacturers in this branch have advanced the price of blue wire nails 10c. per cwt. over all bright. A change is also announced in the discount on clout and trunk nails (black and tinned), trunk tacks, cheese box tacks. The discount rate now reads: Clout and trunk nails, black and tinned, 4-8 to 1 inch, 65 per cent.; ditto, 1 1-4 to 2 inch, 60 per cent.; channel nails, 5c. per lb. off list.

ROPE.—Demand is over for the larger sizes; in the smaller sizes, used for plow lines, etc., the trade is just beginning to open up. Cotton is quoted 4 to 5c. a pound lower.

CHAIN.—There is no change at the moment. Demand is fair. Supplies are arriving, and all back orders are being promptly filled. The strike in England has not interfered with prices here whatever it may have done over there.

TOOLS.—The demand for garden tools is reported to be in excess of anything the trade has experienced, and it is with difficulty that the orders can be supplied. Manufacturers say they are working night and day, and then cannot keep pace. One house reports that orders placed in January last have not been completed yet. Much the same applies to harvest tools.

TINWARE.—Demand for milk can trimmings continues to slacken off, and that materially, but cans made up are being asked for.

METALS.

There is a more settled feeling since the manufacturers, as announced in last week's HARDWARE, decided to reduce the base price of iron to $1.95. This, together with the lower freights ruling, has helped to stimulate trade, and the volume of business is this week somewhat heavier, although it does not appear to have extended to pig iron. Bar iron is moving freely, and a scarcity is reported in Canada plates. There is not much of interest to note in other lines.

PIG IRON.—There is no special feature to note, and wants are confined to small quantities for machinery purposes. Carnbroe and Summerlee seem to be out of the market, while Seimen's is quoted at $22, and soft southern at $19.

Rogers, Brown & Co., Buffalo, report the Toronto pig iron market as follows: Nothing of interest in the pig iron market has occurred during the week. There is a steady and apparently increasing demand, but as yet it is hardly sufficient to take up the slack of the past three months. Prices remain unchanged. We quote for cash, f.o.b. cars Toronto in bond: No. 1X foundry strong coke iron Lake Superior ore, $15.70; No. 2X foundry strong coke iron Lake Superior ore, $14.70; No. 2. foundry strong coke iron Lake Superior ore, $14.20; Jackson County silvery, No. 1, $18 to $18.30; Jackson County silvery, No. 2, $17.30 to $17.80; Lake Superior charcoal, $17.70; Southern Soft, No. 1, $14.10 to $14.35; Southern soft, No. 2, $13.85.

BAR IRON.—Demand for iron is good. Large quantities are moving out, and manufacturers are taxed to their utmost to keep up. The base price is now quoted at $1.95 to $2, delivery as before. There has been a slight change in the discount on iron pipe, but the smaller sizes remain as before.

TIN PLATES.—Demand for tin plates are about as usual, and prices are unchanged.

SHEET IRON.—A good movement is reported at prices ranging from 2 5-8 to 3 1-4c., according to size and quality.

CANADA PLATES.—Scarce, but shipments are arriving. Prices are unchanged, all dull being held at $2.65, half-half at $2.75, and all bright at $2.80 to $3 per box.

GALVANIZED IRON.—Trade good. Stocks are plentiful and prices unchanged at 5 to 5 3-4c. for Queen's Head and Gordon Crown brands.

INGOT TIN.—Nothing special to note. The usual trade is being done, and prices are unchanged at 23 1-2 to 24c.

INGOT COPPER.—Is in demand at 12 7-8 to 13c. for good qualities.

ZINC SPELTER.—Not much doing. Those who wanted it bought large lots and this stopped the supply; 4 3-4 to 5 3-4c. is the idea

ZINC SHEET.—Is just arriving, but the demand if of course seasonably light. Prices are unchanged at 6 to 6 1-2c.

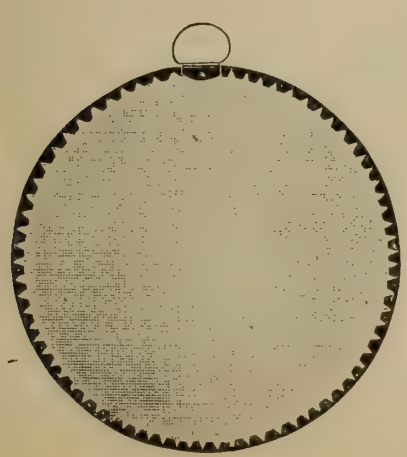
LEAD.—Not much doing, and pig is unchanged at 3 1-4 to 3 1-2c.

ANTIMONY.—A good deal is moving in this line at 13 1-2 to 14 for Cookson's, and at 13 to 13 1-2c. for other kinds. These prices, however, would be shaded for large quantities.

PAINTS, OILS AND COLORS.

The activity announced last week is more pronounced this week, and both manufacturers and jobbers are behind with their orders. Although city trade is quiet, the volume of business, taken on the whole, is heavier than for some years, the demand from the country being remarkably brisk. Prepared paints are particularly in active request. Linseed oil is 1c. lower in sympathy with the weakness in outside markets. We now quote raw at 60 to 62c. per gallon, and boiled

HAYES' PATENT
MANUFACTURED BY
METALLIC ROOFING CO.
TORONTO
ILLUSTRATED CATALOGUE FREE
STEEL LATHING



CROWN STOVE MAT.
SCORCH PROOF.

This useful article will be fully appreciated after one trial. All kinds of cereals, milk, chocolate, etc., may be cooked in ANY UTENSIL without the least danger of scorching, if used on this mat. It is unequalled for toasting bread.

DIRECTIONS.

Place mat on top of stove, range, or open-grate fire, and put utensil upon it. If it becomes soiled it may be cleaned by heating it red hot. Do not wet or scrape it.

Peerless Enamelled Ware,
White Enamelled Ware,
Retinned Ware,
Japanned Tinware,
Pieced Tinware,
Galvanized Iron Ware,
Wire Goods.

German, English and American Specialties in Metal Goods.

Thos. Davidson & Co.,
MONTREAL.

MARKETS—Continued.

at 63 to 65c. The maximum figures are for outside points, freight allowed. Demand for linseed oil is good. Turpentine is weak, and also 1c. lower at 54c. Toronto and 56c. outside points, freight allowed. The association basis of white lead has been reduced 1-2c. to 4 1-2c. a pound, and there is a fair business being done. In colors in oil and dry colors business is seasonable but featureless. Varnishes are in good demand at steady prices. Castor oil is in good demand and held higher at 9 to 9 -12c. Cod oil remains quiet and firm at 48 to 50c.

OLD MATERIAL.

Receipts are still on the increase, and demand continues good at unchanged prices. We quote No. 1 heavy cast scrap 65 to 70c. per 100; stove cast scrap, 40 to 45.; No. 1 wrought scrap, 50 to 60c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c.; new light scrap copper 8 1-2c.; heavy scrap copper, 9 1-2c.; old copper bottoms, 8c.; light scrap brass, 5 1-2c.; heavy yellow scrap brass, 7 1-2c.; heavy red scrap brass, 8 1-4 to 8 1-2c.; scrap lead, 1 1-4 to 2c.; scrap zinc, 2 1-2 to 2 3-4c.; scrap rubber, 2 1-2 to 2 3-4c.; country mixed rags, 80 to 85c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.

GLASS.

Demand continues fair on the basis of $1.25 for first break. There are no great stocks in yet, but further shipments are due next month.

HIDES, SKINS, WOOL, TALLOW.

HIDES.—The market continues much about the same, car lots of cured going out at 5 1-4c., No. 1 cows' is quoted as before at 4 1-2c.

SKINS.—Calf skins are unchanged at 9c. There is a fair demand, and they are going away well, but dealers complain that the margin of profits is unsatisfactory. There are not many sheepskins coming in, but quite enough for the demand. Prices are unchanged at $1.25 to $1.50.

WOOL.—There is nothing doing in fleece, because there is none to sell, but in other kinds the demand is moderate, although for small quantities. We quote pulled wools at 21 to 21 1-2c. for supers and at 26 to 27c. for extras.

TALLOW.—There is really nothing being done in tallow. Dealers are paying 6 1-2c. and selling at 7 to 7 1-4c. Rough is quoted as before at 2 1-2c.

SEEDS.

There is a good jobbing demand for all kinds, but principally for red clover, alsike and timothy. There is no material change in red clover, but prices are very firm and stocks are running low. Alsike is becoming comparatively scarce, and prices of all grades are about 2c. per bushel higher, timothy steady and unchanged. Prime red clover is quoted at $8.85 to $9.00, and extra choice at $9 to $9.15. Alsike runs all the way from $7.05 for good to $8.50 for fancy. Timothy sells at $2.52 to $2.60 for prime to choice, $2.60 to $2.65 per bushel for choice, and $2.75 to $2.90 for unhulled flail threshed.

PETROLEUM.

The Petrolea Advertiser, in its weekly report, says: "The oil market at present is very dull and will continue to be dull for the next two or three months, as is usual at this season of the year. Refiners take this opportunity of shutting down their stills and cleaning up their yards. Most of them have a sufficient stock of refined oil on hand to supply their customers while their works are being put in thorough repair to get ready for the fall trade. If there is any disposition manifested by the refiners to reduce the price of crude oil during the next three months, we would advise the producers to hang on to their oil and not accept any reduction in price whatever, as we predict a larger demand for Canadian oil this fall than ever we had before in the history of the trade." It quotes crude at $1.18 per bbl.; refined, 10c. in bbls, and 7 1-2c. in bulk.

Following are the quotations in Toronto: Canada refined oil, 13 to 13 1-2c.; carbon safety, 17 1-2 to 18c.; Canada water white, 19c.; American water white, 21 to 22c.; photogene, 25c.

TORONTO MARKET NOTES.

Large sales of Graham nails are reported.

Turpentine and linseed oil are both 1c. cheaper.

The iron basis is now $1.95 to $2, delivery as before.

Stewart & Wood expect another shipment of glass about May 1.

White lead is quoted 1-2c. lower, being now on the basis of 4 3-4c.

Manufacturers are unable to keep up with the demand, and they are working night and day, too.

Discount on clout and trunk nails has been increased 2 1-2 and 5 per cent., according to size.

The manufacturers of barbed wire have placed Manitoba on the same footing as Ontario and Quebec regarding delivery.

A. C. Leslie & Co. have just received a shipment of cutlery containing the new patterns in table and pocket knives.

Manufacturers have advanced the price of blue wire nails 10 cents per hundred pounds over the price of ordinary bright.

M. & L. Samuel, Benjamin & Co. report that they are unable to specify any one line to which they desire to draw the attention of the trade this week, so busy are they.

H. S. Howland, Sons, & Co. have got out a neat letter order sheet. On the outside of the cover is a sample sheet, while on the inside is given a list of articles for the purpose of jogging the retailer's memory. The sheet has been copyrighted. Those of their customers who have not yet received one will be supplied immediately on notifying the house. The first order received was for a car lot.

AMERICAN MARKETS.

New York, April 14.

PIG TIN.—The London market is still somewhat of a conundrum to the average operator, but the peculiar movements in prices suggest that manipulation on the American end of the line is still the cue to operations, or, at least, that this is still the pivotal point. In any event the fact remains that prices for prompt delivery and near and distant future are moved about in an erratic manner in London, while future deliveries are held at a premium in the New York market, calculated to facilitate the unloading of clique holdings here.

Local operators not only raised the level of prices for prompt and near future deliveries, but a certain interest bid stiffly on the more distant futures, and displayed the degree of nerve that has frequently been attributed to players who would bid high as long as they had a shadowy chance of winning.

COPPER.—The local market remains bare of new or interesting feature. Orders came this way slowly, and, to all accounts are invariably for unimportant quantities. The offering does not appear to be particularly urgent, yet sufficient to indicate that there is rather annoying accumulation of supplies somewhere,and that the restriction upon output, under the gentlemen's agreement, is still ineffective, except perhaps in checking a sharp decline in values. As matters stand, it is easier to buy than to sell Lake Superior ingot at 11 1-2c., and in the instance of ordinary casting copper anything above 10 1-2c. is strictly the exception. London cables reflected a somewhat unsetled condition of affairs in the foreign market. Thus early quotations on merchant bars were £44 12s.6d. for prompt and £45 for future delivery, while the closing showed a rise of 5s. The reported sales in London were 250 tons for prompt and 450 tons for future delivery.

PIG LEAD.—There were some additional sales of common domestic at 4.15c. in single carload lots, but orders and offerings have fallen off to rather small dimensions, and for the present, it looks like a "Micawber" market, with little or nothing in the situation that would afford hesitant buyers a great deal of satisfaction. To the contrary, bids of 4.15c. are not as attractive at the moment as they were 24 hours ago, and sellers at 4.17 1-2c. are inclined to be shy. St. Louis wired an advance to 3 7-8c there. London cables again quoted £9 15s. for soft Spanish.

SPELTER.—Western brands were quoted at 4.30c. to 4.35c. delivered at this or common Eastern point. Superficially, the market looked firm, but local demand was quieter, and transactions were confined chiefly to single carload lots. St. Louis quotation was 4.05c. London cabled £17 15s. for good merchant brands. The production of zinc ores in Missouri last week was 7,103.390 pounds, making a total of 89,858,570 pounds since January 1st. Average quality was lower, however, and the average price dropped to $21 per ton in consequence.

TIN PLATE.—Arrivals continue liberal, but the greater portion of stock coming forward goes in delivery on old contracts However, there is some accumulation, and prices for spot goods are softer, although showing no radical change. Future shipments are held quite firmly.

H. D. SIMMONS,

Manufacturers' Agent,

85 York St., Toronto, Rossin House Block.

REPRESENTING—

Peck, Benny & Co., Montreal.
Alex. McArthur & Co., Montreal.
J. L. Goodhue & Co, Danville, Que.
Shepard Hardware Co, Buffalo, N.Y.
Belgian Syndicate, Montreal.
Globe File M'fg Co., Port Hope.

Telephone 2164.

Two-ply Twisted Fence Strand

GALVANIZED FENCE STAPLES,
OILED AND ANNEALED FENCE WIRE.

Manufactured by

Write for Catalogue and Price-list.

THE B. GREENING WIRE CO., Ltd., HAMILTON, ONTARIO.



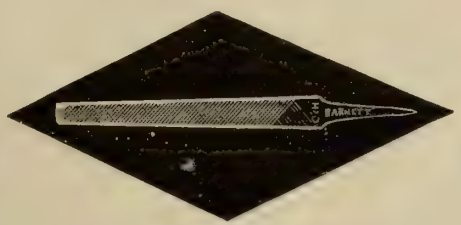
A. B. JARDINE & CO.

HESPLER, ONT.

- Blacksmiths' Tools
- AND
- Tube Expanders

Send for Catalogue and Price List

BLACK DIAMOND



FILE WORKS,

21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

—MANUFACTURERS OF—

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES.
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
CLIMAX SAWFILES. LIGHTNING SAWFILES.

—AND—

EVERY OTHER DESCRIPTION OF SAW FILES.

The Old Wooden Bucket Must Go

Indurated Fibre Ware.



No Hoops, No Joints, Cannot Leak, Swell, or Water Soak.

The E. B. Eddy Co.
Mammoth Works
Hull, Canada.

We manufacture all kinds of Paper suitable for the Hardware Trade.
Send for Samples.

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISE.

A. B. Baxter, general store, Canning, has assigned.

William Ritchie, lumber merchant, Three Rivers, has assigned.

C. Cook, general merchant, McGregor, Man., has been granted an extension.

Mary A. Corbett, general merchant, Harbor Au Bouche, Que., has assigned.

The sheriff is in possession of the hardware business of W. A. Seawright, Dundalk.

Elisha Moore, of Eel River, and Michael Poirier, of Petit Richer, general merchants, are asking extensions.

Bowles Bros., general merchants, Windsor Mills, Que., are asking their creditors to accept 40 cents on the dollar.

SALES MADE OR PENDING.

Frank Saforcade, general merchant, Victoria, B.C., is advertising his business for sale.

The general stock of L. Deslets, St. Clotilde de Horton, has been sold at 70c. on the dollar.

The general stock of D. Sinclair, Alvinston, has been sold. So has that of Heintzman & Gaiser, Shipka.

The stock of J. Hawke, hardware and house furnishings, this city, whose assignment was recently announced, is to be sold by the sheriff Monday next.

FIRES.

J. L. oGoheen, general merchant, Norham, has been burned out.

H. A. Manning, hardware, Coldwater, has been partially burned out.

F. A. Corrigan, general store, Whitemough, Man., has been burned out.

Bruce R. Baldwin, general merchant, Dxville, has been burned out. Insured; stock partly saved.

F. Farley, tinsmith, Farnham, Que., has been burned out. Stock partially saved, no insurance.

The loss from the destruction of Neil McCahill & Co.'s flour mill, Forest, Ont., is estimated at $24,000, to meet which there is an insurance of $15,500. The mill had a capacity of 200 barrels a day, and in the mill and storehouse were stored 900 barrels of flour and about 5,000 bushels of grain.

Fire broke out Saturday morning in the Patrons of Industry store at the village of Dutton, and in two hours destroyed $50,000 worth of property, including the Windsor hotel, J. Price's general store, Patrons of Industry, McPherson & Drake's general store, Dutton post office, Opera house, Mechanics' Institute, Davis' tailor shop, and F. Miller's tailor shop. Mr. Leitch, who owned most of the buildings, suffers a heavy loss. Nothing was saved, as an explosion of gunpowder shortly after the fire commenced demolished the greater part of the block. The buildings were all two-storey brick, erected about a year ago.

CHANGES.

W. Kyle, carriage maker, Kingston, is out of business.

Daniel Campbell has succeeded W. Duncan, blacksmith, Varna.

W. G. Knowlton, shingle mill, Eel River, N.B., has sold out.

Finlay & Rysden, hardware, Kingston, have sold out to E. M. Cox.

W. A. Fraser & Co., general merchants, Yale, B.C., have sold out to L. Johnston.

Thomas Abbott, blacksmith, Harrietsville, has been succeeded by L. Kreigger.

Daniel Burke, general merchant, Braemar, has sold out to J. Hodge.

J. J. Dodds, general merchant, Caledon, has been succeeded by J. W. Falconer.

Alfred Callender has purchased the Canton post office, and in connection with it he intends to open up a general store.

Renwick & Homer, blacksmiths, Nanaimo, B.C., have sold out to Donaldson & Mancer.

Wilson Bros. & Co., foundrymen, Victoria, B.C., have been succeeded by the Victoria Iron Works Co.

W. Abbot, blacksmith, Everton, has been succeeded by W. Lorce. Alfred Hawes, in the same line of business, in the same place, has sold out to a man named Hasking.

PARTNERSHIPS FORMED AND DISSOLVED.

The Warren Scale Mfg. Co., of Montreal, will be dissolved May 1.

Cameron & Cunningham, blacksmiths, St. John, N.B., have dissolved.

Mathieu & Tremblay, hardware merchants, Montreal, have dissolved.

The Carey Serving Wire Process Co., of Montreal, is making application for incorporation.

G. Gill and J. Kirk have been registered proprietors of the firm of George Gill & Co., saw filers, etc., Montreal.

William and Joseph J. Bateman have been registered proprietors of the firm of W. Bateman & Co., engineers, Montreal.

DEATHS.

James L. Duchernin, shipbuilder, St. John's, Nfld., is dead.

James Connors, of W. Wormwith & Co., manufacturers, Kingston, is dead.

BOARD OF TRADE TALK.

Prominent members of the Board of Trade are strongly opposed to the scheme to form a wheat pit in connecton with the Montreal Board of Trade.

The Vancouver Board of Trade has elected these officers for the year: J. C. Keath, president; G. R. Major, vice-president. The following were elected to the council: W. F. Salsbury, W. Godfrey, H. T. Ceperley, W. Skene, J. C. McLagan, F. C. Cotton, Thomas Dunn, H. Bell-Irving, G. I. Wilson, F. Cockburn, R. H. Alexander, E. J. McFeely, J. W. Campion, C. E. Tisdall and F. Cockburn. A. H. B. Macgowan was elected secretary of the Board.

James W. Leonard, Charles Marriott and Henry N. Baird are the latest additons to the membership of the Toronto Board of Trade.

Senator Sanford has been appointed by the Hamilton Board of Trade to represent it at the World's Congress of Commercial Houses to be held this summer at Chicago.

The Hamilton Board of Trade has decided to petition the Ontario Government against granting a bonus to the Arnprior railway on the ground that it would be an injury to the western portion of the province to build a railway east from Georgian Bay or west from Ottawa.

W. J. REID & CO.

IMPORTERS AND DECORATORS OF

Crockery China and Glass.

LAMPS A SPECIALTY.

All glass, Vase, and Library Lamps, in every hue and design.

Our travellers will call upon you shortly with samples.

LONDON AND BELLEVILLE.

MIDDLEMEN'S PROFITS IN OIL.

Referring to the charge of J. H. Fairbanks that middlemen who handle oil have been taking undue profits, C. W. Irwin, in a letter to The Globe, says: "So far as this blooming village is concerned, we are over 200 miles from Petrolea, and in order to get to this point are obliged to take our oil supply over no less than two railways, at a cost in freight alone of $45.80 per car, increased by at least 25 cents in connection with the return of each empty barrel. As for myself, I have in my own business handled annually about 150 barrels of oil, and this for several years past, at a cost of from 10 1-4 to 13 cents per gallon for common oil at Petrolea, and, after adding freight, I sell it here by the barrel at from 12 1-2 to 15 cents, and I retail common oil at 15 cents, and the best Canadian water white at 25 cents. There are in Arthur at least three dealers in the article, including myself, who, for some time past, have been advertising oil for sale at 12 1-2 cents. I therefore fail to understand Mr. Fairbanks' reasons for complaining, or putting the blame on the retail dealers. Why not commence at the source in order to remove the complaint to which he refers, by commencing at the fountain head, the refiners, where they could, if so inclined, reduce the price? The keen competition among the retailers will cause them to follow suit. Better still, let the refiners manufacture a better quality of oil, as after all the quality is the chief cause of complaint, and it is only with good oil that they can expect to keep the American material out of the Canadian market."

The brass manufacturers of Canada had a meeting at the Palmer House Wednesday. The members made some changes in the classification of brass work, and decided to establish the association on a firmer basis. Business was reported to be in a fairly healthy condition.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

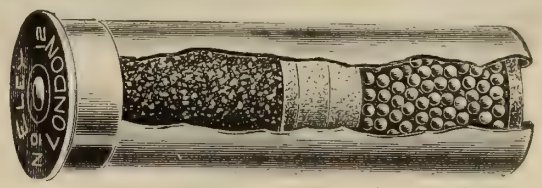
WESTERN BRANCH :

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

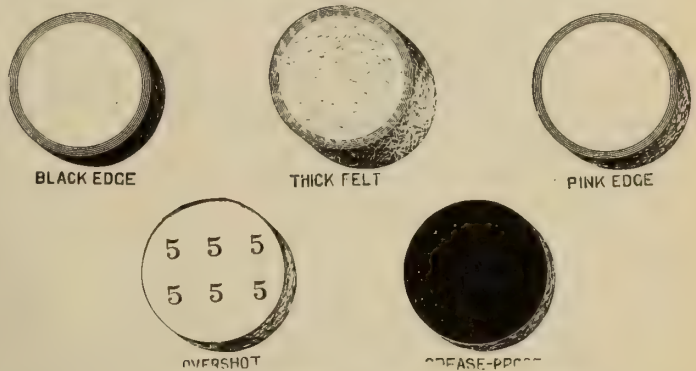
. . ELEY'S . .

CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. **Wholesale Only.**

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

Spades and Shovels.

Harvest Tools, "Montana" Brand

"Iwan's" Post Hole Diggers and Drain Cleaners.

Vaughan's Post Hole Augers.

Jones' Draining Tools.

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, Toronto.

ENGLISH HOUSE: SAMUEL, SONS & BENJAMIN,
164 Fenchurch St., London, E.C



A GREAT LOSS?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

MR. T. W. NESS.

T. W. Ness is one of our largest dealers in telephones and general electric supplies. He has recently supplied the town of Granby with a lot of telephones as the company there is adding extensively to its telephone exchange. The increasing business of the Citizens' Co. at Waterloo has also led to a demand for telephone supplies, and among other articles Mr. Ness is supplying them with a lot of "head" receivers for their operators. In Chicoutimi, also, where Messrs. Gray & Co. are putting in an extensive telephone system, the complete outfit is being procured from Mr. Ness, the instruments being all fitted to connect with a central exchange, like the regular Bell offices.

A large exhibit of telephones, switchboards, transmitters, receivers, and annunciators has been prepared for the World's Columbian Exhibition at Chicago by T. W. Ness. Part of this was in the Herald window at the time of the recent fire and narrowly escaped being destroyed.

Mr. Ness has also furnished Messrs. Walker, Sons & Co., of Walkerville, Ont., with a large number of Standard Telephones for their exchange.

FOUNDRY MEN AND OLD METAL.

It is surprising how few foundrymen there are in New England who really know the science of re-using old metals to the best advantage. There is hardly a foundryman anywhere but uses more or less old metal, yet its employment in the advantageous way is not as scientific as it might be. The average foundryman buys a lot of composition bolt or heavy copper or brass in running lots, the same lot generally containing a great many qualities of metal. In composition, for instance, it may contain steam valves, which are made for great strength, and it may contain composition which has very little of this character, the purpose of its manufacture being appearances. In the latter case it may contain a large percentage of lead, which, of course, weakens it. Although composition is sold in two grades, choice and ordinary, it still contains a large variety of stock in each grade. An old dealer says that a few of the most expert foundrymen who learned their business in the old times when a workman in a foundry learned the various branches, instead of one, as now, are in the habit of going into a store and picking out what they know to be first-class stock. Knowledge is power with them, as they know who makes certain metallic articles and of what stock they are constituted. When they pick out what they want for use they are able to make their castings with but little experimenting, and to the satisfaction of their customers, as they can give practically an exact duplicate of goods made previously. With them the use of old metals is a science, the greater knowledge of which gives a man an advantage over his poorer equipped competitor.—Boston Commercial Bulletin.

COWAN & BRITTON

GANANOQUE, ONT.

Nails, Hinges AND Buts

Manufacturers of every description of these goods.



JOSEPH RODGERS & SONS LIMITED.

CELEBRATED CUTLERY : : :

STILL LEADS THE WORLD.

OUR REGISTERED TRADE MARK

GRANTED IN 1764, IS STAMPED ON EVERY ARTICLE.

AGENTS:

JAS. HUTTON & CO.

MONTREAL AND TORONTO.

SHIPPING A FACTORY ACROSS THE ATLANTIC.

There was loaded at New York the other day the entire plant and equipment for the Steel Clad Bath Co.'s English factory. The great presses and rolling machines were made in this country (some of them in this city) and were consigned to the company there, and will be erected immediately on arrival, under the superintendence of Mr. James Hutchinson, formerly of the Toronto company, who left on the 25th ult., via the New York, for Liverpool.

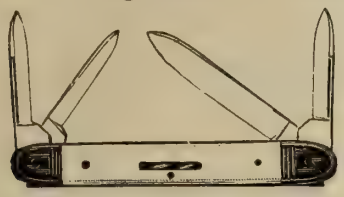
The Toronto factory is at present being enlarged to accommodate the growing needs of the business, and the company are considering plans for a large three story building in Detroit. The exhibit at the World's Fair will be representative of the three different factories, viz., Canada, United States and England.

The C.P.R. exposition train, which recently passed through here, contained a beautiful specimen of their work in its bath-room of the cafe car.

TORONTO CUTLERY CO.,

M. MAYER, Propr.

65 and 67 Yonge Street, - TORONTO



Carry the most complete assortment of Cutlery in all branches of the Line.

Brands which we warrant:

Non-XLL Pocket Knives.
Imperial Razors.
T. C. Co. Scissors and Shears.



S.S. SMOKELESS POWDER is the best. Made by the Smokeless Powder Co, of London, Eng. A stock kept in Montreal. 25 lb. Drums, 2 lb. Cannisters, ½ lb. Cannisters. Send for Prices. **WILLIAM DARLING & CO, Wholesale Hardware Merchants, 30 St. Sulpice Street, Montreal.**

A FEW REASONS WHY

You should Keep your Stock fully Assorted With

Boeckh's Superior Brushes

They are always reliable and as represented.
They are guaranteed in every particular by the manufacturers.
They are made of the very best material and workmanship
They are sold at closest possible prices.
They are finished and put up in neat and attractive shape.
They are well known throughout the Dominion and are popular with all classes of consumers.
They are handled by all leading Hardware and Paint and Oil trade.

See that the name "BOECKH" Is on every brush.

Boeckh's Flexible Bridled Brushes.

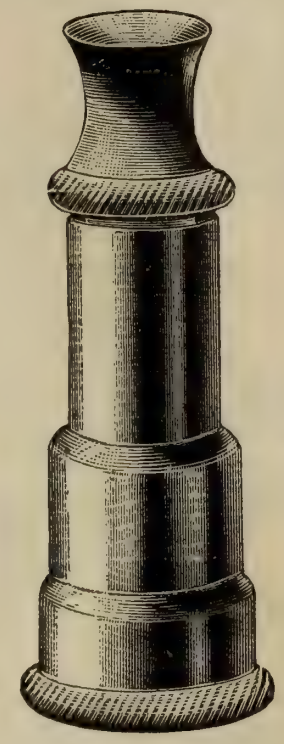
Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

TORONTO, - CANADA.

Hamilton Brass Manufacturing Co.



THE IMPROVED "GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it

It is impossible for this pipe to get out of order

Give ita trial and you will use no other.

Hamilton Brass Manufacturing Co.

HAMILTON, ONT.



No. 107. Cup.

SILVERWARE

Manufactured by

THE TORONTO SILVER PLATE CO.

Is Artistic in Design, and Guaranteed as to Quality

Factories and Salesrooms:

570 KING STREET WEST, TORONTO, CANADA

E. G. GOODERHAM, Manager. JNO. C. COPP, Sec.-Treas.



ROTARY BISCUIT AND CAKE CUTTER.—The most rapid Cutter made. It saves time and labour, and helps to make kitchen work a pleasure. Works easily and cuts clean. It is the fastest-selling kitchen utensil on the market to-day. Trade supplied by M. M. Vardon, Sole Agent for Canada, 67 Yonge St., Toronto.

Patented May 1892.



All kinds of Office and Store Fittings and Furnishings



TELEPHONES

FOR

Main Lines
Warehouses
Colleges
Banks

Send for new 32 page Catalogue of Telephone Testimonials.

T. W. NESS

Manufacturer of Telephones, Etc.

749 Craig Street, - MONTREAL.

FIRE BRICK
FIRE CLAY.

Scotch . . English or American

GAS RETORTS
GAS WORKS SUPPLIES

Write for Prices to

The Colman-Hamilton Co., Ltd.

44 Price Street, TORONTO

Also for Sewer Pipes, Invert Blocks, Flue Linings, Portland Cement, Calcined Plaster, Keen and Roman Cements, Etc.

Phone. 3763 Mention this Advt.

H. Boker & Co.

are famous for their fine quality

Razors, Scissors

—AND—

Pocket Cutlery

TRADE MARK.

(TREE BRAND)

FOR SALE BY LEADING WHOLESALE HOUSES.

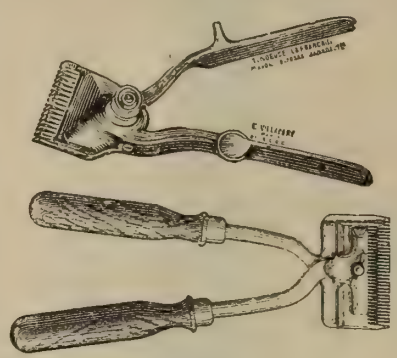


"BUILD TO-DAY THEN, STRONG AND SURE, WITH A FIRM AND AMPLE BASE."
—Longfellow.

DO YOU?

WISH THUS TO BUILD, an advertisement in the CONTRACT-RECORD, TORONTO will bring you tenders from the best contractors.

VILLADERE'S POPULAR CLIPPERS



PAINCHAUD, SQUIRE & Co.,

Agents for Canada MONTREAL.

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,

Agents.

MONTREAL AND TORONTO.

Plate Glass

ALL SIZES IN STOCK.

MANUFACTURERS OF

STAINED GLASS FOR EVERY PURPOSE.

McCausland & Son,

72, 74, and 76 KING ST W., TORONTO.

Telephone 1112.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT

Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,

Managing Director and Treasurer

THE BEST English Sporting Gunpowder

USE THE

"ALLIANCE"

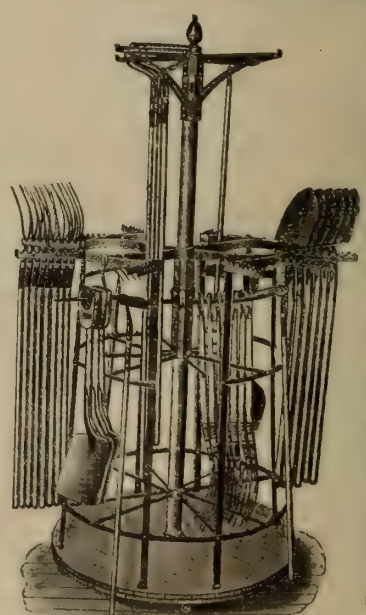
PRIZE POWDER

—Made only by—

Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.

Always obtainable from

Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.



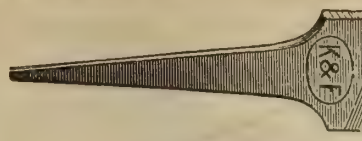
Herrick's Patent Tool Rack.

PATENTED MAY 2nd, 1889.

This rack solves the problem. Just what every hardware man requires. Easily holds 204 Tools and 88 Handles, or all the Tools any dealer in Canada could want to retail from. Write for full descriptive circular and prices.

KYLE & BARNETT,
MITCHELL, ONT.

OFFICES: 100-102 Reade St., New York, U.S.A.



KEARNEY & FOOT CO

WORKS: Paterson, New Jersey, U.S.A.

Manufacturers of FILES AND RASPS.

Superior quality fully guaranteed.

CAPACITY OF WORKS: 1,200 doz. per day.



Illustrated Catalogue Price Lists mailed on Application.

PLEASE MENTION THIS PAPER WHEN WRITING US. Agents, M. & L. Samuel, Benjamin & Co, Toronto.

The castings in this machine are of the very best quality of iron.

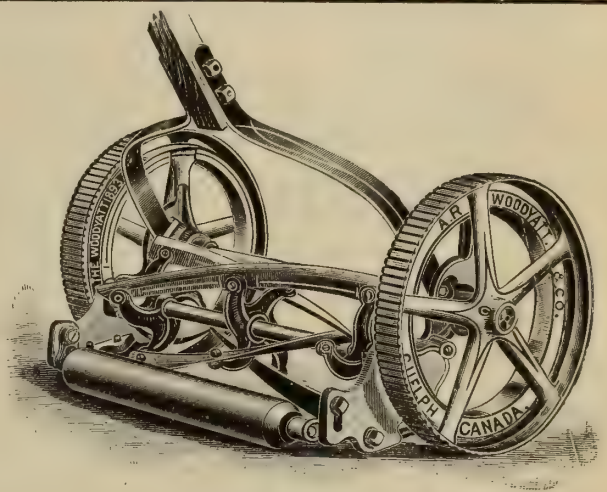
. . 1893 . .

THE "WOODYATT" LAWN MOWER

Light, Durable, and Efficient.

Now On Sale by all Wholesalers.

A. R. WOODYATT & CO. GUELPH, ONT.



Wm. Clendinneng & Son.

Iron Founders and Stove Manufacturers

Makers of the "Etna" Hot Water Boilers, Soil Pipe and Fittings, Stable Fixtures, Machinery, Builders and Special Castings

WRITE FOR ESTIMATES

WORKS: Cor. William and Inspector Sts.,

OFFICE and WAREHOUSE: 145 to 179 William Street

MONTREAL

BUYERS OF CUTLERY

WILL find it to their interest to see our samples before placing Spring orders. A choice assortment in stock of Jas. Rodgers & Co.'s and E. M. Dickinson's goods at special prices.

A. C. LESLIE & CO., MFRS. AGENTS,
MONTREAL and TORONTO

OUR SALES OF
"BURHAM" Portland Cement
For the past 8 months have been
25,499 CASKS.
"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,
McRAE & CO., OTTAWA

MUNN'S LIQUID GLUE
IS THE BEST.
Kennedy Bros., Agents
101 Bay Street, TORONTO.

Established 1864.
CLARKSON & CROSS,
CHARTERED ACCOUNTANTS
NO 26 WELLINGTON ST. EAST
E.R.C.Clarkson, F.C.A.
W. H. Cross, F. C. A.
Edward Still.
John F. Helliwell.
TORONTO, ONT.

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.
CALVANIZED SHEET IRON. SP



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS.

METALS.

Tin.

Lamb and Flag—
56 and 28 lb ingots, per lb .. 24, 25
Strip " 25, 26

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
M.L.S. equal to Bradley		
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 25	4 50
I.X., "	5 25	5 50
I.X.X., "	6 25	6 50
I.XXX., "	7 25	7 50
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box.

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets ..	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.	....	13 00
" " I.X.	....	16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65, "	

Tinned Plates

72x30 up to 24 gauge	6¼	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb ..	$1 95	....
Refined " " ..	2 35	2 65
Horse Shoe " " ..	2 60	2 75
Band " " ..	2 50	2 60
Hoop " " ..	....	2 60
Swedish " " ..	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼inch	$2 45
16 "	2 35
¾ " and thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2⅞, 2¾
26 "	2¾, 3
28 "	3 , 3¼

Canada Plates.

Blaina	½ bright	2 75 ....
Abercarne		2 75 ....
Lion		....

Iron Pipe.

Wrought 62½ p. c. to 62½ p. c. and 5 p.c.
Galvanized, 37½ to 40 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅝ 5
" 5-16 " "	4¼ 4⅝
" ⅜ " "	4⅛ 4⅜
" 7-16 " "	4¼ 4½
" ½ " "	3¾ 4
" ⅝ " "	3½ 3⅝
" ¾ " "	.... 3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	.... 1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S	"	0 14 0 14½
Lake Superior	"	0 13 0 13½

Bolt or Bar.

Cut lengths, round, ¼ to ⅞ in	$0 22 $0 25
" round & square	
1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20 0 22
" 35 to 45 " " "	0 19 0 20
" 50 lb and above per lb	0 18 0 19

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 05 0 05½
Domestic "	0 04¾ 0 05

Zinc Sheet.

5 cwt casks	0 06 0 06½
Part casks	0 06½ 0 06¾

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, per square ft, by roll	0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04⅝ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 17 0 19
Standard	0 16 0 18
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½ 0 14
Other makes "	0 13 0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per lb	4 75
No. 1 Do "	4 50
No. 2 Do "	4 25
No. 3 Do "	4 00

Prepared Paints.
(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00

Colors in Oil.
(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.c	cwt	1 35 1 40
" " (J.F.L.S.) "	"	2 75
Venetian Red (R.C.2) "	"	1 50
Venetian Red, (best) "	1 80	1 90
English Oxides per	cwt	3 25
American "	"	2 25
Canadian "	"	1 75
Paris Green, per lb	0 13	0 15
Burnt Sienna, per lb	0 08	0 08½
Burnt Umber "	0 05	
do pure	0 08	
Drop Black "	0 09	
Chrome Yellows "	0 12	
" " Lemon pure,		
8 lb. tins, per lb	0 19	
Chrome Greens "	0 12	
Golden Ochre	0 03¾	

Varnishes (in bbls).

No. 1 Furniture, per gal	0 70
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	2 00
Hard Oil Finish "	1 30

Linseed Oil (in bbls)

Raw, per gal	0 60	0 62
Boiled "	0 63	0 65

Turpentine (in bbls)

Selected Packages, per gal	0 54	0 56

Castor Oil.

Best, per lb	0 09	0 09½

Cod Oil.

Cod Oil, per gal	0 48	0 50

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet makers	0 17	0 18
White	0 16	0 17
London Town	0 7½	0 08½
Gelatine	0 22	0 27
Stripped	0 16	0 17
Coopers	0 17	0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50, 50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, eacn 2 00 5 00

House

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 30 to 35 per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex ....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 25

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... ..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 45 to 47½ p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.25	....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb . 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05
Screw hook and hinge—
6 to 12 in., per set 0 00 0 04½
14 to 20 in., " 0 00 0 03½
21 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

THE LONDON HORSE POKE.

DURABLE



STRONG

Some of the Advantages of the London Horse Poke over all others.—No wooden pins to break or loose. No wire spring to rust or get out of order. The London Poke is the only one made with iron bolts, which cannot get lost or broken in shipping. It is the only adjustable Poke made to fit any size horse from a Pony to Clydesdale.

Send for Sample Order. **BOWMAN, KENNEDY & CO., London,** Western Agents

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 30 per doz.
ronze, Berlin, per doz .. 2 75 3 25
ronze, Gem, " 6 00 9 00
ass " 8 75 10 00
hutter, porcelain, F. & L. screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)
1. Either Canada or American Pattern.
Basis—50 to 60 dy..... 2 30
40dy..... 2 35
30 dy..... 2 40
20, 16 & 12 dy..... 2 45
10 dy..... 2 50
8 & 9 dy..... 2 55
6 & 7 dy..... 2 70
American Pattern Only from 4 to 5 dy 2 90
3dy. (lath)..... 3 30
3. Canada Pattern Only from 4 to 5 dy 2 80
3 dy. (lath)..... 3 20
Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross
Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Nails.

Galvanized, per doz..... ... 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	18	20
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.
Hack, complete, each.... 1 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen..... 1 25

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Snaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross	7 50	12 00
Dessert " ..... "	21 00	.....
Table " ..... "	30 00	30 00
Dessert Forks.... "	24 00	.....
Medium " ... "	27 00	.....
Table " ... "	36 00	.....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 65 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 51½ per cent.
Channel nails 5c. lb. off list.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz.	$2 75	$5 50
English Pat. Leather	5 50	9 75
Chesterman's, each	0 90	2 85
" steel, each .	0 80	8 00

Thermometers.

Tin case & dairy, dis. 75 p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz ..... 1 [illegible] 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9

Twines.

Bag, per lb	0 12½	0 20
Wrapp'g, mottl'd, pr. pack.	0 50	0 60
" cotton, per lb ..	0 18	0 20
Mattress, per lb	0 33	0 45
Staging "	0 27	0 35
Broom "	0 30	0 55
Binding, flax, per lb	....	.....
" jute "	....	.....
" Blue ribbon	.....	0 12½
" Red cap.....	.....	0 11½
" Crown.....	.....	0 10½
" Silver Composite	0 09	

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Iron and Steel, annealed, annealed and oiled, galvanized 20 per cent. dis
Bright coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart	} 4½	4¾
" 4 " 4 & 6 "		
" Plain twist, 2&3 wires		
" Steel thorn and ribbon.....	4¾	5
"Lock Barb," 4 point	....	0 04½
Ditto Glidden 2 point	....	0 04½
Galvanized Barb, "Lyman," 2 to 4 points.....	.....	0 04½
Steel staples	0 04½	0 04½

Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 80 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.

Tower's Engineer, each ..	2 00	3 00
" S., per doz.....	5 80	7 0
G. & K.'s Pipe "	....	6 00
Burrell's " each	....	3 40
Pocket, per doz.....	1 25	2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR HOLLOW WARE.

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS, KNIVES, FORKS, SPOONS.

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

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Why Handle Kalsomines?

Fifty per cent. Profit to the Dealer on . . **ALABASTINE**

All Dealers who are in the trade for money should handle the best Wall Coating on earth—Cold Water Alabastine.

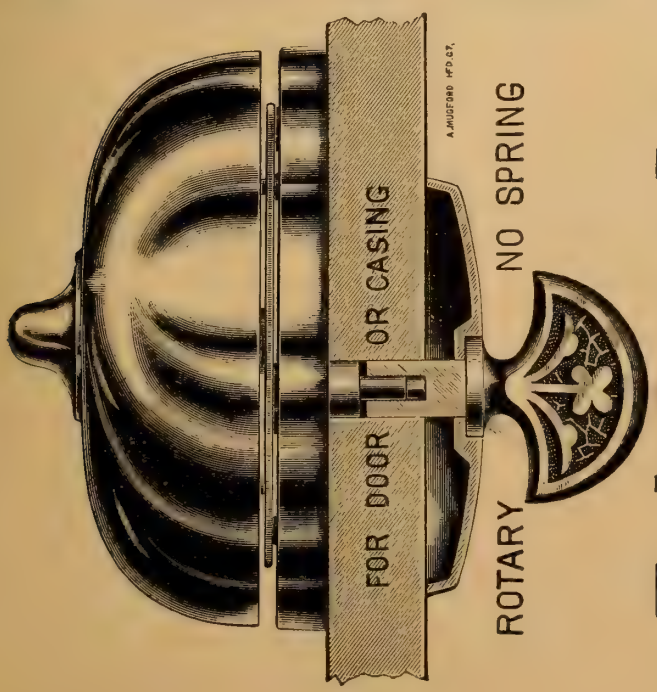
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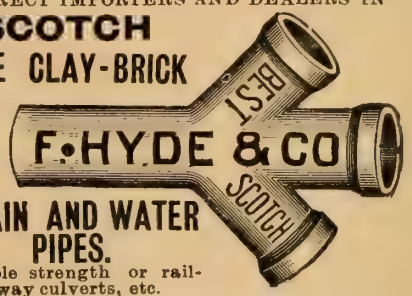
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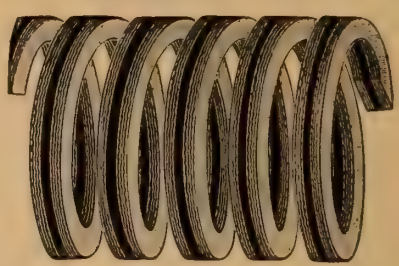
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VOL. V. TORONTO, APRIL 22, 1893. No. 16.

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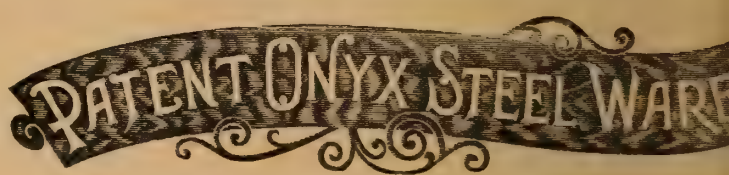
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Published Weekly. $2.00 a Year.

Vol. V. TORONTO, APRIL 22, 1893 No. 16

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

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The collection of accounts is one of the banes of a hardware man's life. Disagreeable as the duty may be, it must be performed. Just as a continual supply of water is necessary to the boiler, so prompt collection of accounts is necessary to the business. And destruction is no more likely to follow the absence of the one than that of the other. How to secure the desideratum is the trouble. It is all very well for people to tell you to collect your accounts when they are due, but to pursuade those in debt to you to meet their obligations is quite another matter. In the last issue of N. Y. Metal there appeared some half dozen communications dealing with this important subject. "Go over your ledger the first of every month and take off every account," writes one; "after this has been done select out the different classes under the following heads: (1) Local accounts for city collector. (2) To draw on the 10th. (3) Those not due. (4) Those long past due. Make note on statement of your intention to draw on the 10th, and write a good, strong appeal to those long past due. Have a collection book ruled to order, and enter every statement in this book, with names and amount of statement opposite, having the book ruled so you can make notations how you intend handling the statements. Certain ones, 'Draw on the 10th,' 'Gave to city collector,' 'Have written,' etc.; then let the proper ones go by mail. Keep this collection book up by marking 'Paid,' any of the accounts as remittances are received, and when the 10th of the month arrives those marked to draw on that date, send draft forward, provided you have not received any advice to the contrary, noting on collection book that you had done so, and when your bank advises you that certain drafts have been paid, mark collection book 'D.P.,' meaning draft paid." Should the draft be returned he writes a courteous letter and announcing that another draft will be made on the 15th should remittance not be received before that date. This attempt failing a second letter is indited, in terms a little more decisive, expressing terms of surprise, and intimating that unless the account is paid by the end of the month more stringent measures will be used. "Should this second letter fair," he adds, "I go to my attorney and have him write the third letter, stating that I have placed the account in his hands for collection, etc. Nine times out of ten this brings the money. It don't make any difference to me with my customers. I make no discrimination unless for some very special reason. I follow the rule mentioned previously, and, generally mentioned previously, and, generally speaking, with satisfactory results, and have escaped many close calls, where the other fellow got caught. When you state you will do so and so with your customers, do it every time, and establish a precedent, as methods of this kind are invaluable. It matters how good a customer may be, if he does not pay his accounts I don't want him on my books. 'Short credit makes long friends.' If you have slow payers keep everlastingly after them. It's much harder to pay to-morrow than to-day." Another correspondent favored personal solicitation. "After calling on them the first of the month," he writes, "I commence the siege. I never give them a chance to tell me to call next week, or that they will call at the store, but dodge in on them, speak of the bill, and from the expression of the face, take my cue and quickly get away only to call again the next day, and especially if I can find this person with an office full of people or in a crowd. Never call this kind of a person out of a crowd to dun him, for then he has you at an equal advantage. He flatters himself that the crowd may think you want to borrow a dollar. But approach him direct, quickly, and politely, wearing a "Bill Nye" smile, and, if possible by your remark flatter his promptness to make payment, etc. This, about the second time, will catch a check." Asking for instalments is the course another claims to have followed with profit. "Promptness and perseverance" is recommended by still another. "Approach him occasionally in a friendly manner, and suggest quietly that a little on account would be a great accommodation," is the advice given by a New York man; "not that you would like to press him, but you are always glad to see him come into the store and trust you are not asking too much, and if it is not convenient not to trouble himself." A sixth would ask a slow-paying customer for a note, while a seventh would enclose a stamped and self-addressed envelope, and at the end of the month would send a bill reading something like this: "Amount of bill to date, ten dollars. I have enlarged my stock and your inspection is desired. Hoping to receive an early call, I am, etc." The course recommended by the first correspondent is doubtless the best. It is the least troublesome, and is doubtless the most effective. At the same time it might not be adaptable to all cases. But out of the systems here briefly outlined HARDWARE'S readers will doubtless glean something that will assist them in the collection of slow-paying accounts.

* * *

Canada has no reason to be ashamed of her railway growth. The "Railway Statistics of the Dominion" for 1892,

just issued by the Government demonstrates this if nothing before ever did. We started off in 1837 with 16 miles of railroad. For ten years the mileage remained stationary at that figure. In 1847 it was 59 miles. Three years later it was 71 miles, but it was not till 1852 that substantial growth set in. In that year the total mileage was 212. The following year it had doubled. The thousand mile mark was passed in 1856, and the two thousand mile mark four years later. The increase in the mileage during the next ten years was slow but steady. But in 1875 it took a new lease of life and started off with a bound, the mileage in that year being 4,826, against 2,642 the previous year. The period between 1875 and 1892 was marked by the most active building operations in the history of the country. In 1885 we could boast of having the Canadian Pacific Railway, and over 10,000 miles of railway, and in 1892 the total mileage in the country was 14,588. For present requirements this is generally conceded to be sufficient, and the only undertaking of any importance that is at all mooted is the building of a road to Hudson's Bay. Of the railways in operation the Canadian Pacific heads the list with, including branches, 5,533 miles, while the Grand Trunk of course comes next with 3,157 miles. The Intercolonial stands third with 1,141 miles.

* * *

The amount of capital paid on the railways of the country is $844,991,750. Of this amount $195,039,963 consists of Government and municipal loans, bonuses, etc., promised to railways completed and under construction. The bonded debt is $305,120,199, or $20,519 per mile. The working expenses are $36,488,228, and the net earnings $15,197,540. Passengers carried 13,533,414, freight handled 22,189,923 tons, and train mileage 44,448,468. With four exceptions all the roads are of the 4 ft. 8 1-2 inch gauge. Of the exceptions, two use the three-foot gauge, one the 3 ft. 6 inch, and the other, the Carillon and Grenville, runs on a 5 ft. 6 inch gauge. It may interest some to know that the number of ties used per mile of railroad ranges all the way from 1760 to 3,168, although 2,640 is the number found on most lines. It is curious to note that the line using the widest gauge uses the smallest number of ties per mile. In number of engines the Grand Trunk leads with 722, the Canadian Pacific coming next with 572. The .GT.R. has also many more passenger and freight cars. In train mileage the trunk line again leads the transcontinental road, the figures being 16,741,890 and 14,294,974 respectively. In regard to passengers carried the figures stand 5,899,096 for the G.T.R. and 3,150,684 for the C.P.R., and the former handled double as much freight as the former, the figures being 8,249,038 and 4,058,575 tons respectively. In the matter of speed of passenger and freight trains the advantage is again in favor of the older company. But when it gets down to the matter of earnings, either gross or net, the younger company wins hands down, the figures being: Gross earnings, C.P.R., $20,789,104; G.T.R., 17,761,696; net earnings, C.P.R., $8,347,977; G.T.R., $4,971,459; proportion of earnings to working expenses, C.P.R. 167 per cent., G.T.R. 139 per cent.; earnings per train mile, C.P.R. $1.45, G.T.R. $1.06; cost of operating per train mile, C.P.R. 87.03c., G.T.R. 76.39c. In this connection it might be mentioned that the cost of operating the Intercolonial was 73.13c. per train mile. Out of 13,533,414 passengers carried on the Canadian railways in 1892 it is gratifying to note that only 14 were killed, a small percentage indeed when the carelessness that characterizes a good many passengers is also taken into consideration with the number carried. But taking passengers, employees and others all told the total number killed was 233, while in addition to this 879 were injured. Stepping off moving trains seems to have caused the most deaths among passengers, while collisions, run-offs, and falling from cars caused the greatest number of deaths among employees. Coupling cars was as usual responsible for more injuries to employees than anything else.

* * *

"Talk about looking for the pot of gold at the foot of the rainbow," says Robert Louis Stevenson in effect in one of his recent productions, "but if you want something that will employ you for the rest of your life just start out to look for a soft job." There is a good deal of truth in this caustic remark of the well-known novelist. Some men seem to be born with silver spoons in their mouths and ease and comfort, apparently at least, accompanies them through life. But the very large majority of mankind have to roll up their sleeves and fight their way. And, after all, are not the latter class most to be envied! At any rate they are the most worthy of being emulated. The man who is compelled to hew his way through the undergrowth of competition, adversity, etc., to the garden of ease and affluence beyond is the superior intellectually, morally, physically or any way else you choose to take it. Rubbing against the world sharpens a man's wits, broadens his sympathies and his views, and better qualifies him for the duties of citizenship. Hard work is the price of success in any sphere in life, be it mercantile, professional or mechanical. Any young men who possesses this desirable characteristic and the qualification of continuity is reasonably sure of success in attaining his object. One condition is necessary. He should choose that trade or calling for which he is most adapted. Much depends on adaptability, for the better a man is fitted to follow a certain avocation the greater will naturally be the measure of his success. But even should a man make a mistake in selection, pluck and perseverance will largely counteract it and ensure a measure of success at least. No, soft jobs or fortunes do not come, like the winds. Men must go after them; and hills many will they be compelled to climb before they obtain the desideratum. The men who have been—some of them for years—sitting in the valley, doing next to nothing, waiting for soft situatons with big salaries attached to come down to them are likely to wait till the Grim Reaper comes along and garners them in.

* * *

Somebody has said that carelessness is at the bottom of every accident. It might with equal truth be applied to fires other than those caused by incendiarism. Through lack of proper oversight on the part of the manufacturer a stove, furnace or flue is allowed to go out with a defect in it, and some day the building is discovered to be on fire. The bricklayer improperly builds a chimney, and one day the roof or garret is found to be in a blaze. Inflammable material is left too near the fire-place and this results in the brigade being called out on another occasion. Other causes of fire through carelessness are seen in the handling of oil and in the allowing of oil, rags, waste and dirt to accumulate in heaps about the premises until spontaneous combustion ignites them.

Last month the total loss by fires in Canada and the United States was the largest ever recorded. This, together with the fact that last year was a trying one for the fire insurance companies, is leading underwriters to seriously consider the advisability of advancing rates. In some places they have already decided to do so, notably Montreal for instance. There the increase to retailers is something like 40 per cent. But to whatever extent may the fires there be traceable in the first instance to carelessness, it is felt by the insurance men that the losses have been a good deal heavier than they would have been had there been an efficient fire brigade. Higher rates of insurance means an addition to the cost of doing business. This, in these days of keen competition and small profits, is anything but desirable. If business men in Montreal or in any other city, town, or village want low rates of insurance they not only need an efficient fire brigade but they need to exercise greater care in guarding against outbreaks on their own premises. The greater the vigilance exercised the fewer fires will there be. It must be remembered that there is an acturial science in fire insurance as well as in life insurance, and as the ratio of fires falls, the rates must in time, follow. Oliver Wendell Holmes says that once upon a time it was arranged that every man annd woman in the world should, at a given time, send up a simultaneous shout. Had the intention carried the noise would undoubtedly have been great. But if all the business men in the country were to simultaneously adopt measures for guarding more thoroughly against fire there would be a surprising falling off in the number of fires and in the losses resulting therefrom.

* * *

A notable feature about the fires that have occurred of late has been the number of sufferers that carried no insurance whatever. Storekeepers there always have been, and storekeepers there always will be, who will seemingly trust all to Providence and nothing to the fire insurance companies. But fire seems to have visited a good many more of them during the past month or so than formerly. The proportion, however, may not have been any greater, the larger showing being possibly the result of the increased number of fires. In some instances where a conflagration had visited a place, among those burned out were two, three and four merchants who carried no insurance on their stocks. Others, and some of them fairly well established firms, had carried insufficient insurance and were compelled to assign. Every merchant should not only insure his stock but do so to the extent of 60 per cent. of its value. Unless he has capital enough to liquidate every indebtedness, should his stock be destroyed, it is little short of criminal for a business man to neglect to properly insure.

IRON MEETINGS CONCLUDED.

The iron manufacturers concluded their quarterly session at the Windsor Hotel on Thursday and Friday of last week, but, as HARDWARE anticipated, no further important change transpired in addition to those already given in these columns last week. As intimated then, representatives of the rolling mills in the Maritime Provinces who did not attend at the earlier meetings of the session came up to confer with their colleagues later, but, as far as can be learned, nothing important transpired beyond a readjustment of the price ruling for bar iron in the Maritime Provincces to bring it into proportion with the altered western basis. The price down below is now $2.05, with drawbacks in the case of quantity as for Ontario and Quebec, but not of so material a kind, as the quantities usually dealt in down below are not as large as in the western sections. The matter of nails, as previously intimated, was also brought up, but it is understood that the reported infractions were satisfactorily explained.

In connection with the gathering, the report referred to exclusively by HARDWARE some time ago about an American syndicate being anxious to secure control of the various iron and rolling mills in Canada, was received with all sorts of embellishments, but it was learned on pretty good authority that the matter had not advanced beyond the stage of pure conjecture as yet. The Western ironmasters all disclaimed any knowledge of the matter, but three of the Maritime Province men, Messrs. J. O. Robertson, of the Portland Rolling Mills Co., St. John, N.B. and Geo. Ketchum and E. J. Moore, of the Coldbrooke Rolling Mills Co., of the same place, said that they had been approached by some American parties, as had other iron men down below. No definite figure had been mentioned, however, and the matter was not a practical possibility with them as yet.

Another story is to the effect that the Americans want the Canadians to name a figure, but if they do the matter is being kept as close as the proverbial bivalve guards his secrets.

THE WHITE LEAD MATTER.

The recent drop in white lead and the peculiar position of affairs which led to it is the cause of more than the usual amount of dissatisfaction among lead dealers in Montreal. They hold that a drop in the price of lead at the present time is, under the existing condition of affairs, abnormal, for the tendency of dry lead is exactly the other way, cable advices to agents in Montreal on Wednesday stating that the corroders were advancing their values all round. Considering this, and the fact that color makers, until the recent agreement came into force, were doing business on a very close margin, if not at a loss, it is not surprising that disappointment should exist. That it does among the trade in Montreal is undoubted, and as they feel assured that the present peculiar position of affairs will only be temporary. They believe that the heavy contracts made ahead by one firm were largely instrumental in inducing the circumstances which led to the decline, and that when these run out prices will again advance. Accordingly there is a strong disposition towards a conservative course of business by sellers of lead.

MONTREALERS DON'T KNOW.

A despatch from Toronto published in a daily Montreal contemporary to the effect that there was a movement on foot for the formation of a combination or agreement of some sort among the hardware trade occasioned considerable talk in Montreal during the week, and HARDWARE'S correspondent tried to find out if there was anything in it. He could get no verification of the report, however, although the statement was reported to have been made by a Montreal man in Toronto. Mr. Jas. Crathern, of the big firm o fCrathern & Caverhill, did no tknow anything about it, nor did Mr. Angers, of the firm of Frothingham & Workman. Another hardware man said he could not see any use in a combine unless about the matter of terms to be allowed to buyers. Some arrangement in regard to this might be beneficial to the trade, but he had heard of no move in the matter. Of course there might be some advantage in an understanding on some of the staple lines, for, although the manufacturers provided penalties in the case of cutting, etc., by jobbers, some of the latter had ways of evading these, known only to themselves. For instance, in the case of barbed wire, it was supposed to be only sold 60 days in consideration of a certain price, but he had no doubt at all that four months was given on it in a bill of goods, and that similar infractions occurred in connection with other lines. He had heard of no move of the kind mentioned, however, and there had been so many attempts before that he would only believe it when it was an accomplished fact.

WHY TIN RUSTS.

Pure tin is not affected at ordinary temperatures, but as soon as a portion of the tin is removed by injury so as to expose even a tiny speck of iron surface, corrosion at once sets in and proceeds very rapidly. The reason of this is an electrical nature, that is, iron and tin together form what is called a "galvanic couple," which will decompose the water charged with carbonic acid deposited upon them from the air; oxygen and hydrogen gases are liberated, and the iron, having the greater affinity for the oxygen, is the metal attacked, in particular, such corrosion is very rapid when the exposed iron surface comes in contact with water highly charged with carbonic acid, as in a mineral water factory.—Mineral Water Review.

'TIS A PLEASURE TO READ IT.

In these days, when commercial questons are so often viewed in the light of extreme partyism and discussed in the heat of party fire, it is a pleasure to read calm and unbiased opinions like those recently expressed by the N. Y. Commercial Bulletin on trade relations between the United States and Canada.

"There are intimations that the importance of more intimate commercial relations between this country and Canada is appreciated by the present Administration, and has already received some consideration from it," it begins. "The destruction of the commercial barriers between the two nations and the creation of a great and active market would be an immense commercial achievement,and as a political stroke would rival if not surpass the Louisiana purchase. On our side of the line the greatest obstacle to more intimate commercial relations with the Dominion is to be found in the belief that while Canada would be a desirable market for our manufactured goods, she would pour across the boundary crude products to an extent that would drive American farmers out of their business. The American farmers' fear of Canadian competition has been played on for years by politicians, and yet year after year Canada goes on buy far more of our agricultural products than we buy of hers, and our farmers do not discover that Canada is the second or third best customer we have.

"It was even deemed necessary for the farmer to exclude Canadian barley and eggs three years ago in singular oblivion to the immense quantities of corn, wheat and provisions which Canada annually buys from us. In the fiscal year 1892 the breadstuffs sold to Canada amounted to $11,401,494, while the amount we bought of her was only $3,673,343, a condition of trade that ought to make the American farmer content to see the barriers somewhat reducduced, if not entirely removed. The only two large items in our breadstuff imports from Canada, were wheat and barley, both of special varieties, grown little or not at all here, and imported because of their quality, and not because of their cheapness. The wheat and flour we sold Canada were worth nearly seven million dollars, the corn nearly two millions and the rye over two millions.

"Much greater was the disparity between our exports and imports of provisions. Of provisions, dairy products and eggs we sold to Canada $4,443,076, and bought of Canada $595,891 worth. Of all the items in this schedule, the only one of which we imported any considerable quantity from Canada was eggs. All the provisions we bought of Canada amounted to less than $57,000, and the butter and cheese we bought were less than $27,000, while the quantity we sold was worth $1,237,910. In the matter of vegetables and seeds, the trade was more nearly even, but the balance in our favor was about $200,000. The aggregate of all these food articles exported by us to Canada in 1892 was $16,855,054, while the amount imported from Canada was only $5,079,615. And yet the farmers along our northern frontier have been told till many of them believe it that Canadian competition would ruin them. tI is mainly this mistaken notion that, as to our people, prevents a commercial arrangement that would be of great value to us and of incalculable value to Canada."

PROTECTION AGAINST BURGLARY.

Chief of Police Grasett has issued a circular drawing the attention of business men to an electric call system in connection with the police department of the city. These signal boxes cost about $50, and the expense of maintenance will reach $25 per year, which will be the only charge made to those who have the system put in their place of business. It is proposed to confine this protection to the district bounded by Simcoe, College, Carlton, Sherbourne and Esplanade streets. A working sample box has been placed in the chief's room at police headquarters, where it may be seen by those who desire to have it established. Several gentlemen connected with the different financial institutions inspected it Tuesday and were much pleased with the idea. Subscribers will have to sign a three years' contract when making their agreement. The system is to be run in connection with the present police electric patrol system under Patrol Sergeant Peckham, and the box may be placed in any part of the building protected. Within the signal box is the same arrangement as in the police patrol boxes, minus the telephone. There are five different signals, as follows: Police waggon, thieves, riot, test and fire. The machine will always be set for a fast call, and all that will be necessary to have the patrol wagon and some men on hand in about two minutes will be to press the buton. Connected with the main box in each office will be a series of wires with small electric buttons under the edge of the counter in different parts of the building, so that it would require a half regiment of robbers to raid a bank. To prevent false alarms by persons thoughtlessly pressing the buttons, they are made double, so that it is necessary to take hold and squeeze them. When an alarm is sent it registers the number of the box on the chemical register at police headquarters, so there will be no mistake by men going to the wrong place. It will be the duty of some person in each office to place the pointer on the "test" branch and send a signal once each day to make sure that the line is in working order. The cost of this extra protection to business men is almost exactly the price of the machine and the cost of attention by the telephone company, who look after the police telephones.

COPPER PLATING SHEET ZINC.

According to the Metallarbeiter the copper plating of sheet zinc for building purposes has recently been tried with considerable success, and the process can be especially recommended where mechanical wear takes place. The zinc combines very well with copper. The electrolytic method of copper plating is advantageously used, but the zinc may be coated with copper by ordinary means. In the first place the sheet zinc is cleaned with soda from any adhering dirt and grease, and is also purified by a weak acid bath from the covering of zinc oxide. There are then dissolved in 24 parts of water 1 part of refined verdigris and 12 parts of cream of tartar; the mixture is heated to boiling point, after which 3 or 4 parts of Spanish white are added. The Spanish white is here decomposed and is precipitated as lime tartrate. The dark blue liquid is poured off and filtered, and can be used either as a bath for the sheet zinc or for the production of a copper plating paste. The first mode of application is better, as the fluid forces its way into the corners and angles of the zinc articles and is uniformly distributed all over. If it be desired to coat an immovable zinc object with copper, the article, after being cleaned, is painted with the copper solution and a chalk compound, and, after drying, it is brushed. This very simple operation would also prove of value for architectural purposes, namely, where it is desired to remedy the generally unpleasing effect of zinc ornamentations.

THE BRITISH TIN-PLATE INDUSTRY

A tabular statement showing the exports of tin and terne plates from Great Britain from 1862 to 1892, inclusive, has just been issued by Bradley & Burch, of London. The statement shows a remarkable development of the British tin-plate industry during that period. The total exports in 1862 reached 1,000,437 hundredweight. In 1892 they were 7,911,600 hundredweight. The shipments of the previous year, however, were the highest on record—namely, 8,967,580 hundredweight. During all these thirty years the United States took by far the greater proportion of the British tin plate exported. In 1891, 6,502,860 hundredweight, or more than four-fifths o the total exports, were shipped to this country. Last year this proportion was somewhat reduced, being 5,569,580 out of a total volume of 7,911,600 hundredweight of exports. It is shown in these tables that the home consumption of tin plate in Great Britain has grown in the last eight years from 1,750,000 to 2,600,000 hundredweight. There are now in England and Wales, it is stated, 100 tin-plate works in existence, comprising 509 mills; and of these mills 409 are in operation, with an estimated productive capacity of 10,500,000 hundredweight per annum. In view of these facts and figures, it is small wonder that British manufacturers of tin and terne plates view with apprehension the growth of the industry in this country.—Metal Worker.

WIRE

Bright, Galvanized, Annealed,
Oiled and Annealed,
Barb, Plain Twist and Buckthorn.
Barbed Wire Staples.
Bokers' New Improved Fence Plyers,
Etc., Etc.

H. S. HOWLAND, SONS & CO.,

WHOLESALE HARDWARE

37 Front Street West, - - TORONTO

Carriage Paints . . .
Superfine Coach Colors
Varnishes . . . . .
Linseed Oil . . . .
Turpentine . . . . .

Our Pure Prepared Paints
Are the
STANDARD CANADIAN MAKE
EVERY PACKAGE GUARANTEED
SPECIAL ATTENTION AND PROMPT SHIPMENT.
THE TORONTO LEAD & COLOR CO. LTD
14 16 18 & 20 PEARL ST
TORONTO.

White Lead . . . .
Colors in Oil . . . .
Oil Stains . . . . .
Harness Oil . . . .
Carriage Top Dressing
Etc., Etc. . . . . .

THE HARDWARE MAN.

The typical hardware man, says The Ironmonger, is quite a different personage from his neighbor in business—the grocer, the tailor and the jeweller—and all because of this reflex action of the man and his occupation. The grocer appeals to the stomach of his customer, the tailor and the jeweller to his vanity, and the dry goods merchant to the artistic tastes of his customer's wife. But there is something dreadfully earnest about the hardwareman's pursuit. His business is not on the gay and frothy side of life. His wares represent civilization. He traffics in the implements whereby nature is subdued. Power, conquest, multiplication of strength, progress in enlightenment, dexterity in acton, constitute the stock in trade that passes over or around his counter at every sale. Metal implements that are tools of strength, forged in glowing heat, beaten into shape under tremendous pressure—these are the wares he handles. Consciously or unconsciously the typical hardware dealer imbibes the spirit of his goods. There is something rugged and sterling in his make up, a trace of the General Grant. The fiber of his personality is that of unyielding metal. It commands respect, repels invasion, and overcomes obstacles. The grocer is suave and cheery, harmonizing himself with the appetite of his customers. The tailor is wrapped up in the contemplation of the fit of his garments. The mind of the dry goods merchant runs to feminine fineries and laces. The hardware man is made of sterner stuff. He represents the accumulated material forces of the ages.

ONTARIO'S MINERAL EXHIBITS.

Iron Age, during the course of its remarks regarding exhibits at the World's Fair, says: "The mineral exhibit from Ontario, Canada, will consist of 1,600 samples of ore from all parts of the province, and five carloads of it were shipped from Toronto last week and one carload from the Sudbury district. This latter car contains nickel alone, and there is one solid chunk of pure or refined nickel which weighs 4,600 pounds. The mineral displays altogether will exceed 100 tons in weight. One of the most artistic as well as attractive and unique displays in the Ontario court will be entirely prepared by Indians of the reserve in the counties of Brant and Haldimand. This will consist of a monument or trophy entirely made of pieces of timber comprising 13 varieties, and all of which have been prepared and fitted without the use of saw or other utensils except a jackknife. Yet the timbers are squared and moulded with a perfectness that could not be excelled by the most elaborate machinery, and the pieces are polished by the hands of the Indians. Surmounting the timbers forming the base of the trophy will be five wooden columns elaborately decorated by carvings of native birds and animals, all being done with a jackknife. On the top of each column will be a small belfry, and above all a large belfry. The entire work is the result of six years of labor of two or three educated Indians. The sides of the base will be richly inlaid with various specimens of wood. In the mineral section some delay has occurred by the necessity of strengthening the floor. One specimen of rich iron ore will weigh over 10 tons. In every department these exhbits of Ontario will be complete, and for their arrangement and care a force of more than 60 men will be continuously employed during the fair."

TRADE CHAT

A man is generally ironed to stay, but a vehicle is ironed to go.

Woodstock Board of Trade has adopted a resolution in favor of excluding American silver from the country.

The Belleville Bridge Company have signed the contract for an iron bridge at Delhi. The bridge is to be opened June 20th.

Pontypool, Ont., boasts of having a merchant who runs a barber shop, general store, auction mart, besides other et ceteras.

A company has been formed with a capital of $200,000 to purchase all the mica and phosphate properties in the Ottawa district.

The old furniture factory in Bowmanville has been purchased by a Kingston company, who will at once put it in shape for the resumption of business.

The necessary machinery for the Hensall foundry has been placed in position during the week. The proprietor, Mr. Robt. Bell, expects to have everything in running order by the first of May.—London Advertiser.

A piece of petrified wood, weighing 814 pounds, is reported to have been recently unearthed near Elkton, Ohio. According to geologists who examined the nature of the petrification its formation is believed to date back 3,500 years by the most conservative calculation.

The value of pig iron produced in the United States is now greater than the value of gold, silver, and copper combined. The value of the coal produced is greater than that of pig iron. The value of the silver product is less than one-sixth of the value of the other minerals named.

The bill promoted by the St. John Tax Relief Association has passed the New Brunswick Legislature. It reduces the number of aldermen to thirteen, to be elected by the city at large. To become law the bill must be endorsed by a majority of the ratepayers at a plebiscite to betaken in September.

Petroleum recently sold at 68 1-8 on the Pittsburg market, which is the highest point reached for more than a year. The cause of the advance was a heavy speculative demand, the result of a strong bullish feeling based on reports of the activity of the Standard Oil Company in buying up oil territory.

An anomalous condition of affairs exists in building association circles in Cincinnati. There are some 400 associations there and an unusual rush of new members has been the rule for the past three months. At the same time the demand for money has almost entirely ceased, and there are several hundred thousand dollars of idle money in the treasuries.

The citizens of Vancouver, B.C., have expressed their willingness to grant a wire and nail factory exemption from taxes for ten years if it will start up there.

A battalion of infantry carries 150 picks, 150 shovels, 10 spades, 25 axes, 50 billhooks and 4 crowbars. An engineer company has 130 picks, 130 shovels, 6 spades, 81 axes, 13 hand-saws, 4 cross-cut saws, 40 billhooks, 13 crowbars and 2 heavy hammers.

The City Commercial Travellers' Association has decided to hold its annual excursion July 17th to Niagara Falls and Buffalo. The excursionists will go from Queenston Heights to the Falls by the eleectric railway, and from there on to Buffalo by the Michigan Central railway.

On account of the removal from Hamilton to Toronto of the machine shop in connection with the engineering department of the Grand Trunk seventeen men were discharged on Monday. Hereafter all the frog making and switch work, which has been done in Hamilton ever since the old Great Western was opened, will be done in Toronto.

The Niagara Railway Suspension Bridge Company, from which the Grand Trunk Railway Company leases privileges to cross the river at Niagara Falls, has decided to make a survey for a new steel arch bridge to replace the present structure. The arch contemplated in Engineer Buck's survey will be 600 feet across. It will provide for a double railway track, a roadway for horses and pedestrians, and for an electric railway.

Some Yonge street merchants have been done up in a clever way by an innocent-looking young man. His scheme is to order goods and have them sent c.o.d. to some address. He meets the messenger at the door, takes the parcel, as he says, to his mother's apartments upstairs, and never comes back. On investigation it is found he is a stranger to the premises and has gone.

The wholesale merchants of Winnipeg have organized a strong Jobbers' Union, and regular monthly meetings have been held for some time. It was initiated during the agitation for a reform in the system of taxation. The object of the union is to act in concert on all questions and matters affecting the general wholesale trade, but in no case to conflict with the Board of Trade. The officers of the season are: President, Mr. J. H. Ashdown; first vice-president, Mr. R. J. Whitla; second vice-president, Ald. Bole; secretary-treasurer, Mr. S. A. D. Bertrand.

One of the most remarkable discoveries of modern times, and one whose use it is hardly possible to foresee at the present time, is the fact that a vacuuum practically cuts off the transmission of heat. Radiant heat has long been supposed to follow laws similar to light and to be transmitted through space in the same way. The fact that heat does not radiate from a high vacuum works a revolution in one department at least of theoretical science.—N.Y. Metal.

If the enameline made each day was placed in a straight row, the packages touching together, the row would extend three miles. About 100 tons of tin-plate and 1,200,000 feet of lumber are used annually for boxing and shipping cases.

A new method of securing cheap electric light from refuse has been exploited in England. A company has been formed in London, under the name of the Refuse Disposal Company, with the object of handling the dust refuse of cities and utilizing it, through the medium of destructors of their own design, for electric lighting purposes. It is claimed that 20,000 tons of house dust, treated according to their system, may be made to produce as much as 5,600,000 indicated horse-power.

TARIFF REFORM.

The Dominion Government is about to take up the question of tariff reform. Mr. Foster, the Minister of Finance, has forwarded communications to the different boards of trade in the country, stating that he desires to meet representatives of the different industries and confer with them on the subject of an adjustment of the tariff. These industries are to present their case to the Minister of Finance, who will probably be accompanied by the Minister of Customs. The Montreal Board of Trade has already made the desired arrangement and the Toronto Board has a notice on the blackboard calling attention to the Finance Minister's request. The Minister of Finance does not propose to meet any gentleman who may come forward with a complaint regarding the tariff. That would take up too much time, he says, and end in nothing. Mr. Foster's idea is that each industry should appoint delegates fully empowered to state their case, these delegates to meet the Minister. Each industry will see the Minister separately, and it will probably take several days before the conference is ended. The conferences will be private, and only the delegates appointed by the trades will be permitted to talk to the Minister.

HARTZ STEEL TACKLE BLOCKS.

In the special number of HARDWARE issued two weeks ago it was stated that H. S. Howland, Sons & Co. were the sole agents in Canada for the Hartz block. This was an inadvertence. The firm of Rice Lewis & Son (Ltd.) also handled this same block, having done so for some years. HARDWARE regrets exceedingly that the mistake was made.

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

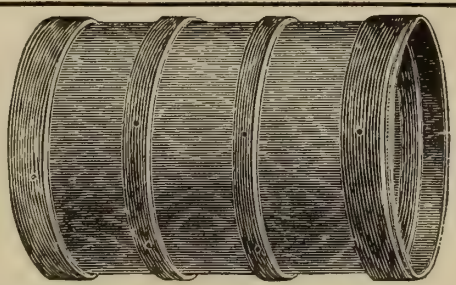
ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."

BRITISH SHEET GLASS
P.B.

These words and brand are on every box. None genuine without this Trade Mark. We warn our friends against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

ORDER YOUR **NAILS** Wire . . . Cut . . . Horse Shoe



IN **PATENT KEGS**

Cost no more than in Common Kegs. The strongest, handiest, cleanest, neatest, and best store package in use. Made in one solid piece, lined with strawboard. No staves to get loose or break, No shrinkage or falling out of heads.

Supplied by Graham Nail Works, Ontario Lead and Barb Wire Co., Safety Barb Wire Co., Toronto; Parmenter & Bulloch, Gananoque; and Peck, Benny & Co., Pillow & Hersey Co,, Montreal.

BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

WASTE IN THE STORE.

By W. T. Warsop.

This is a subject worthy of attention, as the losses which occur to the dealer in the course of the year, from what may be termed waste, are considerable.

One of the first items is overweight and measure. Good weight and measure may be due the customer, but need not run to excess, and the salesman who makes a practice of throwing in a little more after weighing correctly is working against the interests of his employer, and if continued in will easily lose from 1 to 2 per cent. of the net profits for him. Very often this overweight and measure are given by salesmen who are not accustomed to weigh and measure goods, and it would be to the merchants' interest to give them a few lessons to perfect them in weighing and measuring goods.

Let them take 100 pounds of some article and weigh it up in 2, 3 and 5 pound packages so carefully as to make the requisite number of pounds. I think the result will surprise them. Omission to charge goods sold on credit is something that has cost most dealers quite a sum during their business career. Various reasons would doubtless be given for this should the salesman be questioned, but a very common reason is because it is not quite convenient to step to the desk to make the charge.

This could be corrected in great measure if the salesman was obliged to carry a memorandum book for that purpose in his pocket, and to make the charge in same so that it will not escape his attention until he shall have an opportunity to report or make charge himself on the proper book.

Neglect to charge goods will also occur when the customer uses a passbook; the charge often made on the passbook is neglected on the store book. The way to avoid this is to make the original charge on either of the books mentioned before, then copy same into the passbook.

Losses occur from neglect to keep books posted. A customer calls for the amount of his account, the merchant turns to his account on the ledger and gives him the amount, but finds in a few days (or sometimes weeks) in posting that there are a few more items that should have been added to his account, and these items, if small, are often lost, as the customer, if spoken to about it, refuses to pay, or does so unwillingly, or his trade may be lost because the customer is not a regular one.

There are many instances, too, when a thoughtless clerk has purloined from his employer goods for his own use. At first it may be a trivial matter, a cheap rule, pocket knife, or other small article, but if the practice is not stopped it soon ends by his taking something of more account. Merchants should insist upon being consulted when clerks want goods, and should, if the goods are to be charged or paid for, attend to the matter personally.

Many merchants lose because of failure to mark goods, thinking they can remember the cost price. The custom of not marking goods is a poor one, for if the proprietor should remember prices himself (which is doubtful) they are very apt to be offered for sale by a salesman who is obliged to guess at the price, and many times does not get cost for the goods. The best plan is to have all goods marked, either on the article, box, package, or by price lists put up in some convenient place. Losses will sometimes occur by not collecting for all goods sold for cash. Several articles may in turn be wrapped up as they are purchased, and the clerk in adding up the amount of the purchase overlooks some of the articles, thus failing to get pay for them. This would not happen so often if each article was itemized separately in figuring up the amount after which the goods should be counted and checked off. Many salesmen use goods about a store as if they cost nothing, and new tools are allowed to become soiled, packages of goods opened and part used and part left to spoil, such as paint, colors; putty left to become hard; glass left where it is liable to get broken, and are wasteful in many other ways. Merchants should insist upon order in the store and should be consulted in regard to the use of new tools and goods liable to become damaged, as all goods of this character, if they are not entirely spoiled must be sold at a sacrifice. Goods are often stolen when placed outside the store and are neglected until darkness comes on. A practice should be made of bringing in all goods that are set out each day at an early hour.

Loss sometimes occurs because invoices of goods are not looked over by the purchaser There is willful waste in salesmen throwing in with goods to be fastened, a handful of screws, bolts or nails because it is too much trouble to count them.

Hardware merchants are sometimes censured because they will not lend tools that persons wish to borrow. Unfortunately he cannot say he has none, for all all around, displayed to good advantage, are saws, hammers, axes, wrenches, screwdrivers, squares, pliers, bits, braces and numerous other things which the borrower wants to use, will not injure and will return in a minute! Some of these may be lent, but should be charged to the person and marked loaned, and if not returned to be paid for the same as if purchased.

The article of mica is often sold at a loss as it is bought by weight and sold by the light. A good way to arrive at the cost and selling price is to take each package upon arrival and split it into sheets of the right thickness for use, throwing out any which may be too thin or broken, then weigh and count, dividing the cost per pound by the number of lights.

There are losses from goods bought by weight and sold by measure, such as oil, and if the dealer will take the trouble to measure a barrel of linseed oil he will find it often run short from 3 to 5 gallons if a clean measure of standard size is used. This measure is a loss to him unless he uses a measure that will hold just the number of pounds he buys for a gallon, which is, I think, 7 1-2 pounds.

The losses that occur from shoplifting by those who visit the store in the guise of customers are considerable. This class of thieves succeed best in stores where there is not much attention paid to customers. The incomer should be promptly met at the moment of entrance and not left to wander about the store from one article to another; by so doing losses in this way would in many instances be avoided.

The losses I have mentioned many merchants fail to take precaution against or make allowance for them in their calculations as to their present worth. It frequently happens that when the year expires, inventory taken and accounts made up, the business, which seemed so flattering, is unexpectedly found to be unprofitable, or showing a profit much less than was expected. Future prosperity will greatly depend upon the discovery of the discrepancy between calculated and actual results.

Many small merchants use the money drawer as their privtae purse, taking from it whatever cash may be needed, and also take for their use articles kept for sale, and often neglect to make any charge of them. To such dealers, "Waste in the store and how to avoid it" is a subject which I am safe in saying would be of little interest.

A deputation from the ratepayers association called on the Mayor of Toronto to urge that the city should be assessed only every five or ten years instead of yearly, and that real property should not be unjustly discriminated against by exempting personality, but that it should be taxed for its face value wherever found, and pay 30 per cent. instead of 10 per cent. as it does now.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton. Ontario.
SP

SITUATION WANTED.

CLERK—EXPERIENCED IN HARDWARE business desires situation. References. Address: Reliable, Hardware Office.

SITUATION WANTED AS HARDWARE Salesman by reliable young man, who can invest if necessary one or two thousand dollars in good business. Good bookkeeper, excellent testimonials, moderate salary—C.H. Hardware Office. 17

BUSINESS CHANCES.

Advertisements inserted under this heading one cent per word each insertion.

WANTED TO BUY A SMALL STOCK OF Hardware in some good live Western Town.—Address giving particulars The Hardware Office. 16

FOR SALE—STOCK OF GENERAL HARDware, paints, oils, stoves, &c. Business established 25 years. Value about $3,500. Address, Estate J. Cameron, Beaverton tf.

WANTED—WILL EXCHANGE FIRST class Real Estate in live Western Town for a stock of Hardware. Stock invoice four to six thousand dollars.—Address The Hardware Office 16

FOR SALE—GOOD PAYING HARDWARE Stove and Tin business. Last year's turn over $12,000. Stock, etc, under $3.000. Smart town, brick store, modern improvements. Satisfactory reasons for selling. Would prefer to sell out for two or three years. Don't write unless you mean business. Address T., HARDWARE OFFICE.

COUNTRY BUSINESS FOR SALE.—A FIRST-class general store business. Good locality, old established stand. No other store within eight miles. Is now doing an excellent business. Open for sale for one month from date only. Only responsible parties need apply. A splendid opening. Applications to be made by letter addressed to COUNTRY STORE, Drawer C, Picton, Post Office.

Plate Glass

ALL SIZES IN STOCK.

MANUFACTURERS OF

STAINED GLASS FOR EVERY PURPOSE.

McCausland & Son,

72, 74, and 76 KING ST W., TORONTO

Telephone 1112.



ASK FOR THE GRAHAM NAILS.

Hamilton and Toronto



—AND—



CO.

HEAD OFFICE: HAMILTON, CANADA

¼ the PRICE of Iron. Write for Discounts

READY
MIXED PAINTS

TRADE 

MARK

Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

Manufactured by A. RAMSAY & SON
MONTREAL

IT WILL MAKE NO DIFFERENCE

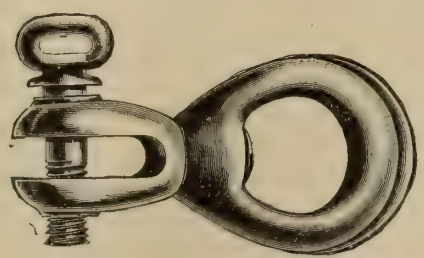
We beg to advise our customers that the fire which occurred Sunday morning will not interfere with our business. The fire was confined to our LEAD WORKS building. We have arranged to CONTINUE OUR USUAL LINES.

Yours Respectfully,

The JAS. ROBERTSON CO.,
(LTD.)

THE WHITMAN & BARNES MFG. CO.

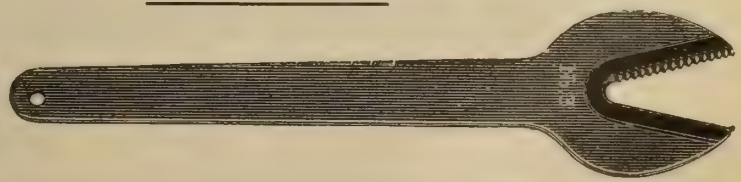
Canadian Branch: St. Catharines, Ont.



This new **Swivel Clevis** can be attached to any Plow Clevis, used in place of Shackle or End Clevis.

MADE OF MALLEABLE IRON.

ALLIGATOR WRENCHES



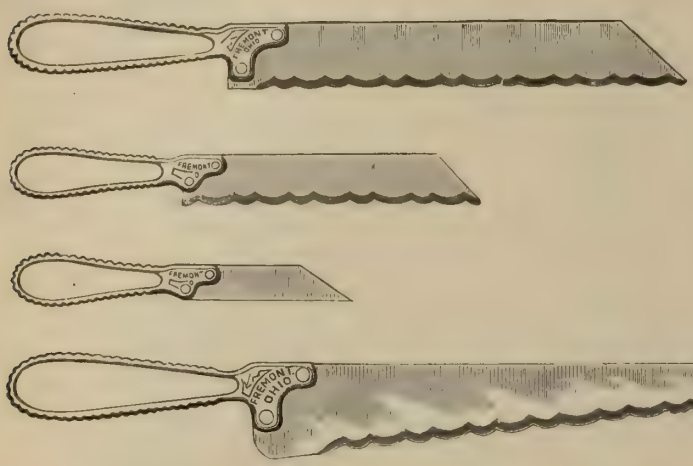
Write us for Description and Prices



We beg to call your Attention to our New Patented

BREAD, CAKE AND PARING KNIVES.

Which we are now placing upon the market, and with which we are supplying **A Long Felt Need to Housekeepers.**



Cut herewith represents our Bread Knife, which as will be observed has a scolloped or serrated edge, as has also the Cake Knife, which adds greatly to the cutting quality of the knives, and is therefore a vast improvement over the knife with a plain, smooth edge. With the Bread Knife, warm bread can be cut as easily as cold, always leaving a nice even surface to the bread. It is also found quite useful in slicing ham and all kinds of meat. Our Cake Knife is far superior to anything heretofore used, and the crowning point is, that cakes with frosting can be cut with exact nicety, by simply drawing the knife across the frosting with a slight pressure, which will cut it without breaking or cracking it in the least. Both our Bread and Cake Knife are highly polished and finished, and are therefore ornamental, and can be used with the finest table-ware. In our Paring Knife we claim a superiority over anything that has yet been upon the market and only ask you to give it a trial to be convinced. It is made strong and durable, having a malleable iron handle, as have also the Bread and Cake Knives, and in consequence will not rot or wear out when left lying in water. These knives are made from the very best of steel, and warranted to give perfect satisfaction.

Manufacturers of

FINE SCISSORS. SHEARS and **RAZORS AND TINNERS' SNIPS**



Prices Furnished on Application.

AGENTS WANTED IN EVERY LOCALITY.

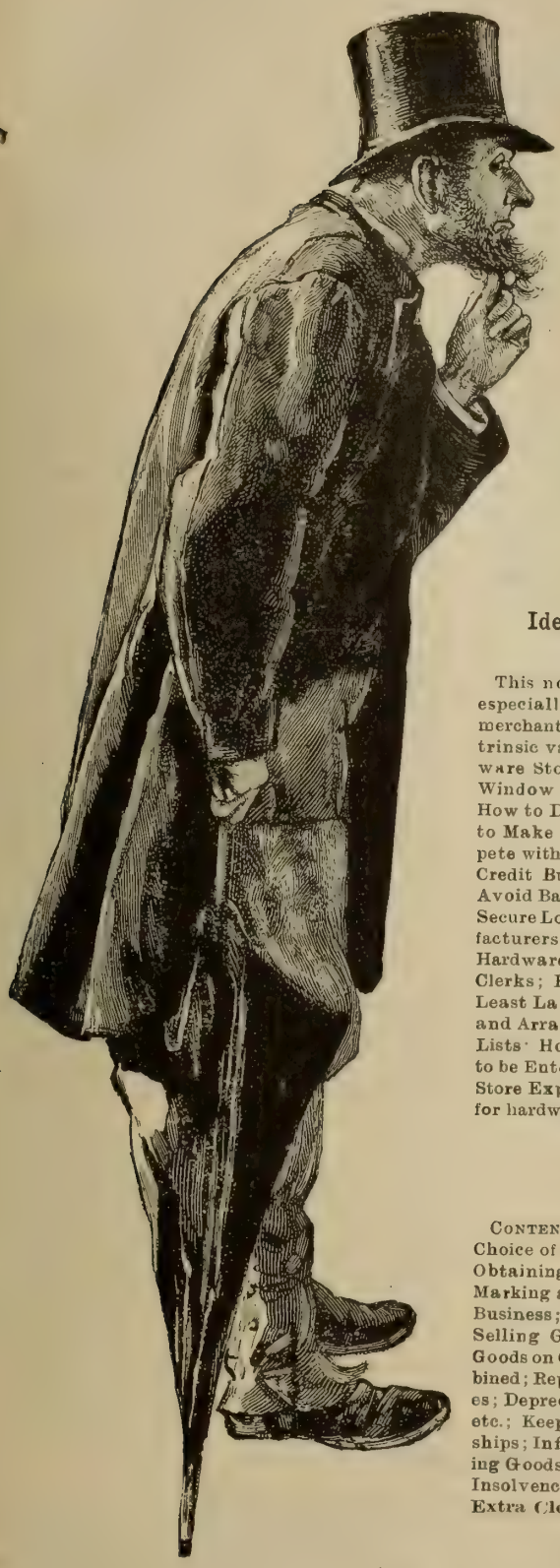
THE CLAUSS SHEAR CO.

Factory: Fremont, Ohio, U.S.A.

BRANCH OFFICES: 100 Chambers Street, New York City.
Kansas City, Mo.
Westfield, Mass.
Chicago, Ill.

FOREIGN OFFICES: London, England, 55 Holborn Viaduct, E.C.
Melbourne, Australia.
TORONTO, CANADA.

Stock carried at all these Points.



It is more honorable to have built a dog-house than to have dreamed of building a palace. . . . . .

BOOKS FOR BUSINESS MEN.

Ideas for Hardware Merchants.

By D T. HALLET.

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10 FRONT ST. EAST,
TORONTO.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below, and in our Prices Current, necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, April 21, 1893.

HARDWARE.

The week has furnished a fair degree of activity, but the fact of a rather backward opening of navigation has been a drawback to a certain extent, for although the houses report good orders for shipment after the opening matters in the meantime are not so brisk as they were at the same time last season. The conclusion of the association meetings last week has removed the uncertainty that influenced some buyers, and consequently orders have been a good deal freer for many of the staple lines. No further changes are to note in addition to those noted last week, except that the price of bar iron in the Maritime Provinces has been modified so as to bring it into proportion with the western basis. For importation business in all lines of heavy material continues backward, and we have nothing special to note in this respect. Reports regarding payments seem to be favorable on the whole.

Jobbers report a good demand for wire for future shipment, and makers also claim to be satisfied with the business they are doing.

There is no change in nails, but they share in the general demand and contribute considerably to the orders for general supplies of hardware that are being received. The uncertainty about locks, etc., being removed now and the basis fixed for the next quarter, causes jobbers to do more business in them, both for prompt delivery on city account and for future shipment to the country.

Horse shoes and horse nails share fairly in the general demand.

PIG IRON.

There has been very little doing in pig iron either on spot or to arrive, for buyers show no disposition to operate at all, nor does the position of affairs at primary markets call for any special urgency about securing supplies ahead. For importation the price we gave last week of $18.75 for Summerlee still holds good, and Langloan is held at $20.50 to arrive.

BAR IRON.

The reduction in bar iron already referred to has led to a more settled feeling, and makers here report more disposition for business on the part of jobbers. The latter also say they have been receiving more enquiries for shipment after the opening of navigation. We quote the basis of $1.95

TIN PLATES.

Tin plates are quiet and unchanged, and very little is doing either for spring delivery or from stocks in store here. Buyers will only operate in a very cautious way, but the tone of values continues steady, the basis of valuation for business to arrive being about the same as for business from stock already on spot. We quote coke ex store $3 20 and charcoal $3.75 to $4, and some few orders for round lots to arrive at within a fraction of these prices laid down by the earlier boats.

CANADA PLATES.

The feeling on Canada plates is very steady, and there is no anticipation of lower prices for the first deliveries in the early spring. In fact it is considered unlikely that they will be bought for importation at any less figure than a year ago. The range is $2.50 to $2.60, some small lots moving this week at that price.

TERNE PLATES.

Terne plates furnish no special feature, spot quotations remaining unchanged at $7.25 to $7.75.

SHEET IRON.

There have been some lots of galvanized iron moved during the week, but business is quiet. Sheet iron has been bought in a moderate way for spring delivery at about $2.40 to $250 for No. 28; 10c. less for No. 26 and $2.60 for No. 20 and heavier grades.

COPPER.

Copper continues scarce and steady here despite an easier feeling elsewhere. We quote 12½ to 13c.

TIN.

Tin is about the same, the quotation remaining at 22½ to 23c.

MISSCELLANEOUS.

Sheet zinc and spelter are unchanged, while antimony, etc., etc, is the same way.

LEADS AND PAINTS.

A satisfactory spring business is being done in this line. Sellers are operating very cautiously on the reduced basis in white lead, for they hold that the present position of affairs is only temporary. Prices are about ¼ to ½c. lower than they were or 50c. per 100 lbs.

OILS.

Linseed oil is in steady demand and cable advices from England speak of a steady feeling. We quote spot prices 60c. for raw and 63c. for boiled, but it is said that business for importation has been done for less money. Fish and other oils are much the same.

GLASS, ETC.

There is a little better enquiry for glass for future shipment at the old basis—viz., $1 35 for first break. Putty in bulk moves steadily at $1.90.

NAVAL STORES.

Spirits of turpentine has undergone no material change during the week and none is expected, last sales being reported at 56 to 57c. in jobbing lots. We quote:—Turpentine, 56 to 57c.; resin, $2.40 to $4 50; coal tar, $3.50; pine pitch, $2.50; pine tar, $3.50 to $3.75; cotton waste, colored, 5¾ to 6½c.; do. white, 8 to 10c.; oakum, 5½ to 7½c.; cotton oakum, 10 to 12½c.

CEMENT, ETC.

Cement has been in good demand for delivery from stock during the week and prices remain firm at former quotations. We quote $2 45 to $2.65; firebricks in fair demand at $19 to $24.

PETROLEUM.

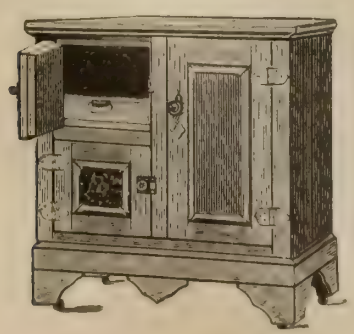
A very fair demand is reported for refined petroleum for this season of the year. While 12c. is the nominal price for round lots of Canadian, sales are reported considerably below this figure, the refiners having started in to cut right and left. We quote as follows: Canadian 12c. at shed in Montreal for round lots and 12½c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c in 10-barrel lots, 19¼c. in 5 barrel lots, and 19¾c. for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c.; Canadian benzine, 10¾c. Petrola; 12¾c. Montreal.

MONTREAL TRADE NOTES.

Mr. Thorpe of Pilkington & Co. reports some good orders for plate glass on city account recently.

W. H. Cottingham of W. H. Cottingham & Co., reports that business for future delivery is good and that when navigation

Refrigerators



Hardwood, Lined Galvanized Iron, Patent Locks, Four Sizes

These are **highly finished** and each season has shown an increasing demand. This year we are also **making a cheaper line** in above style, so as to meet all requirements.

Milk, Delivery and Creamery Can Trimmings.
All Sizes Body Stock for Cans and Cheese Vats.
Galvanized Iron Eave Troughs in 8 foot lengths.
Lithographed Tea Caddies and Signs.

We make and Supply everything used in the Stove and Tinware Trade.

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

MONTREAL Markets Continued.

opens the average will if anything exceed that of last year.

The Canada Iron Furnace Co. speak of good orders for spring shipment west of their C. I. F. charcoal pig.

A broker here has been making sales of linseed oil to arrive at 58c. net for raw and 61c. for boiled laid down here.

Wm. Clendinneng & Son are putting through some large lots of soil pipe, fittings and builders castings to builders here.

Stocks of cement here are very small and with the strong probability of a late opening of navigation they may be all exhausted before spring supplies come in.

Dealers and jobbers generally in hardware and heavy material are impatiently awaiting the opening of navigation. They have a lot boat orders to fill.

Miller Bros. & Co. have secured the contracts for the elevators for the new Frontenac Hotel (C.P.R.), Quebec, and Victoria Hospital in Montreal. Two passenger elevators and one freight elevator will be placed in each of these buildings.

The Canada Paint Company, of Montreal and Toronto, have secured a capital position for their exhibit at the World's Fair in Chicago. In addition to the natural products from their celebrated magnetic oxide mines at Malo, Que., a full range of their manufactures will be shown in a very attractive manner. The exhibit, which has been on view in Montreal for a few days, is now being carefully packed, and will go forward in a special car very shortly, accompanied by one of the officials of the company.

Messrs. Wm. Clendinneng & Co., of Montreal, are merging their business into a joint stock company, with the name of "The Wm. Clendinneng, Son & Co., Ltd." The capital stock is $500,000. The following names appear as the promoters: Wm. Clendinneng, Esq., Wm. Clendinneng, jr., Esq., Erastus W. Wilson, Esq., Frank Brown, Esq., Ulric Beaupre. The company will absorb the present business of Messrs. Wm. Clendinneng & Co., and also that of the Canada Pipe and Foundry Company.

TORONTO MARKETS.

TORONTO, April 21, 1893.

HARDWARE.

Trade does not on the whole exhibit the same activity that characterized it last week. A good trade is doing nevertheless and travelers in some instances report that they have not had a better week for some time, although the roads are not yet in anything as good a condition as desirable. A pleasing feature of the situation is the continued improvement in the matter of payments. Quite a demand has sprung up for sheepshears, spring latches and sun latches (nob and latch combined). Garden and harvest tools are still characterized by a good deal of activity. There is also a good enquiry for churns, water filters, sash weights and wheelbarrows. Demand continues brisk for annealed and oiled and galvanized wire. Nails, both wire and cut are moving freely for the season, and the manufactures are still experiencing some difficulty in keeping pace with the orders. Shipchandlery is in good request and there is a fair movement in tinware. Plumbers supplies are quiet. There have been a number of country merchants in Toronto during the week and they all seem to anticipate a brisk summer trade both with builders and agriculturalists.

NAILS—The manufacturers have met, and, as anticipated, decided to make no change in the price of cut nails. Large quantities are still being shipped, and the manufacturers are behind in executing orders. Wire nails are also in good demand at unchanged prices.

SHIPCHANDLERY — Trade fairly good. Rope, in small sizes, is in good demand, and a number of anchors are moving out. Chain, in the smaller sizes, is also selling well.

TOOLS—Demand for garden tools seems to be greater than the manufacturers can at the moment supply. Much the same applies to harvest tools, numbers of orders in this line being unfilled.

TINWARE—There is a large demand for galvanized pails, of the English pattern principally.

PLUMBERS' SUPPLIES—Business in this line is slow in consequence of the quietness in building operations.

METALS.

There has been no special developments in this line. The movement is fairly good, particularly in bar iron, which, since the reduction in price, people have begun to take hold of more freely. Stocks of tin plate are arriving. Sheet tin is in good demand and some gauges are lower. In Canada plates there is not much doing. Ingot tin is lower, in sympathy with the American market. Ingot copper is unsettled. Sales of antimony are light, and there is not much doing in pig iron.

PIG IRON—Trade is quiet in this line. A few lots of Siemen's have sold at $21 direct shipment from the works, and more enquiry was heard but no transactions resulted therefrom. Ordinarily Siemen's is quoted at $22 and soft Southern at $19.

Rogers, Brown & Co., Buffalo, report the Toronto pig iron market as follows: Several contracts of considerable size are pending with a continuation of quite a run of small orders. Prices show no improvement. We quote for cash f. o. b. cars, Toronto, in bond: IX Foundry Strong Coke Iron, Lake Superior ore, $15.70; 2X Foundry Strong Coke Iron Lake Superior ore, $14 70; 2 Foundry Strong Coke Iron Lake Superior ore, $14.20; Jackson County Silvery 1, $18.00 to $18.30; Jackson County Silvery 2, $17.30 to $17.80; Lake Superior Charcoal, $17 70; Southern Soft 1, $14.10 to $14.35; Southern Soft 2, $13 85.

BAR IRON—There is quite a demand at the new basis of $1 95, the purchases being more free. The change seems to have effectually stopped the importation of the English artiele.

TIN PLATES—Are arriving and demand is about as usual.

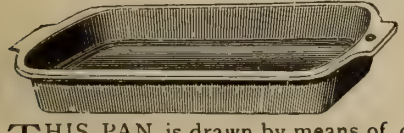
SHEET IRON—Demand is good. There is a slight drop in price and we quote $2 75 up to 20 gauge. The reason the 20 gauge and under is higher in proportion is owing to the tariff regulations.

CANADA PLATES—Stocks are very light, but supplies are coming forward now. There is not much enquiry and prices are unchanged, all dull being held at $2.65, half-half at $2.75, and all bright at $2.80 to $3 per box.

GALVANIZED IRON—This commodity is coming out freely and prices are unchanged

EASTLAKE
MANUFACTURED BY
METALLIC ROOFING CO
TORONTO
ILLUSTRATED CATALOGUE FREE
STEEL SHINGLES

"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

MARKETS—Continued.

at 5 to 5¾c. for Queen's Head and Gordon Crown brands.

ZINC SHEET—Is arriving and the demand there is for it is light. Quotations are fractionally lower, at 5¾ to 6c. for 5-cwt. casks, and at 6 to 6¼c. for part casks.

LEAD—Dull, with prices unchanged at 3¼ to 3½c.

ANTIMONY—Sales are light and prices unchanged, at 13½ to 14c. for Cookson's and at 13 to 13½c. for other kinds, but these prices would be shaded for large lots.

INGOT TIN—There is a steady demand, especially for tinning purposes, and prices are higher in sympathy with the United States market. We now quote 24c. a pound.

INGOT COPPER—Demand is good at unchanged prices. We quote 12⅞ to 13c. for good qualities.

ZINC SPELTER—There is no particular demand for this at the moment, large buyers having been supplied. We quote 4¾ to 5¾c.

PAINTS AND OILS.

Trade shows a slight falling off, and it is all the more noticeable in consequence of the rush which characterzed the previous week's business. Business however is still fairly good. In prices there is absolutely no change to note. White lead, contrary to the rule in most other lines, does not exhibit any falling off. On the contrary the movement is, if anything, larger. A good many seem to be of the opinion that the recent drop will be only temporary, and they are buying a little more freely in consequence. The basis of 4¾c. still obtains. The activity noted for some weeks past in prepared paints still continues. In dry colors and colors in oil there is just a fair seasonable trade doing. A good business is reported in varnishes. Linseed oil and turpentine are, comparatively speaking, quiet, retailers evidently looking for a further drop. Spring stocks of castor oil are arriving, and demand continues good at unchanged prices.

GLASS.

Trade is active at the $1.25 basis. Further shipments are expected to arrive next week.

OLD MATERIAL.

The market remains in much about the same position as it has for some weeks back, and prices rule as before. We quote the following quotation:—No. 1 heavy cast scrap 65 to 70c. per 100; stove cast scrap 40 to 45c.; No. 1 wrought scrap 50 to 60c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c.; new light scrap copper, 8 1-2c.; heavy scrap copper 9½c.; old copper bottoms, 8c; light scrap brass 5½c.; heavy yellow scrap brass 7½c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1¼ to 2c.; scrap zinc, 2½ to 2¾c.; scrap rubber, 2½ to 2¾c.; country mixed rags, 80 to 85c. per 100 lbs; clean dry bones, 50 to 60c. per 100 lbs.

HIDES, SKINS, WOOL, TALLOW.

HIDES—Are in good demand, but it is difficult making buff selections owing to there being so many seconds and grubby hides. For good selections 5¼c. is the idea, but car lots would probably go at ¼c. less, with a large proportion of No. 2 selling at 75c. to $1 per cwt. lower.

SKINS—Calfskins are considerably weaker, and in the United States have taken a drop of fully 1 to 1½c. a pound. If this state of affairs continues there will be a decline of 1c. on this market; 8 to 9c. is now the ruling price. Sheepskins are merely nominal, but for good fresh skins $1.35 to $1.45 is being paid.

WOOL—There is a scarcity of good white wool for blanket purposes and it is likely that many of our manufacturers will be short before the new clip comes in and will have to use the imported article, such as white East Indian. The mills seem to be pretty well supplied in fine wools, and are not willing to pay the advance asked just now, preferring to first work their stocks down. Fleece wool is nominal at 17 to 19c., clothing 25 to 26c., Canada South Down 27 to 28c.; white Indian, suitable for blankets, 17 to 19c., gray East Indian 11 to 13c., B. A's white clothing 32 to 34c., cross breeds 26 to 28c., Canada extra 26 to 27c. Canada super is scarce and good selection would readily fetch 23c.

SEEDS.

Alsike is still in good demand for the United States market, and there is considerable difficulty experienced in filling these orders; in fact in some instances jobbers are actually unable to do so. In other seeds, such as red clover and timothy, the demand is not so urgent as it was, although prices are well maintained. Since last week's snow fall country dealers have been placing fewer orders. Prime red clover is quoted at $8.85 to $9, and extra choice at $9 to $9.15. Alsike runs all the way from $7.05 for good to $8 50 for choice. Timothy sells at $2.52 to $2.90 for prime to choice, $2.60 to $2 65 per bushel for choice, and $2.75 to $2 90 for unhulled flail threshed.

PETROLEUM.

The Petrolia Advertiser in its weekly report, says: "The volume of business on the Exchange lately has been of the lightest, and the price might as well be stereotyped, so regular is the quotation, $1.18. There is an increased inquiry for refined oil, and for the balance of the season the leading refiners will be kept busy. There seems to be a general feeling among the manufacturers that, taking the whole situation into consideration, from this time forward the business will demand the best energies of the trade, and all look forward to a good fall business." Refined, 10c. in barrels, and 7½c. in bulk.

Following are the quotations in Toronto: Canada refined oil, 13 to 13½c.; carbon safety, 17½ to 18c.; Canada water white, 19c.; American water white, 21 to 22c., photogene, 25c.

TORONTO TRADE NOTES.

Rice Lewis & Son report an extensive sale of the "Success" filter.

Stewart & Wood state that their trade with British Columbia is largely increasing.

The North Toronto Council, headed by Reeve Doige, were touring the warehouses Thursday, buying water works' supplies.

H. S. Howland Sons & Co. report large sales of barn door hinges and tracks. This firm also reports its stock of lawn mowers complete and that all back orders will be filled this week.

M. & L. Samuel, Benjamin & Co. report the sale of "Daisy" churns to be in excess of the previous year, and that difficulty is experienced in securing enough to supply the demand.

Rice Lewis & Son have had a big run on their special line of sash weights. One day this week they received an order from one purchaser for seventeen tons. It might be well for the trade to enquire as to prices.

Toronto Smelting and Refining Works report a brisk business in solder and babbitt lines. A great many firms who were in the habit of making their own solder find it to their advantage to place orders with them.

The Gurney Foundry Company have received an order from T. P. Phelan for one of their John Bull double oven steel ranges for the new steamer Chippawa. This same firm has also received the contract for supplying the radiator for the new C.P.R. hotel at Quebec. The order calls for 400 radiators.

The Gurney Foundry Co.'s exhibit for the World's Fair was shipped Wednesday. It comprised an Oxford double crown boiler for large work; an Oxford direct draft for residences; the "Defiance" for laundries, conservatories or places where small heaters are required; in radiators there were the Dado, Bundy single loop, the Rugby, the Gurney, and the Rudiey Quintet, the loop on which is the largest in the World, being 47 inches high and containing 13 square feet. The exhibit is one of which Canadians may feel proud.

AMERICAN MARKETS.

New York, April 21.

PIG TIN.—The situation is practically the same as it has been for several days past. In other words, it is a purely manipulated market, and the manipulation is so plain that regular operators as well as outside speculators move with more than ordinary caution, leaving the burden of carrying stock on the shoulders of what remains of the "bull" interest. London again sent quotations that tended to darken rather than throw any light upon the situation, but kept in prominence that future deliveries are still at a considerable discount there while commanding a stiff premium on this side of the Atlantic.

The recorded sales in London were 50 tons prompt and 60 tons futures. In the local market prices were a shade lower, with sellers early in the day at 20 3-4c. for spot, 20.80c. for April, 20.85c. for May, 20.95c. for June, 21 1-4c. for July, 21 1-2c. for August, and 21.40c. for September delivery. The sales reported included 10 tons at 20.90c. for June delivery.

COPPER.—Particulars as to recent transactions in Lake Superior ingot are still closely guarded. It is admitted that some good-sized blocks have been placed recently, and intimated also that the price was not above 11 1-4c. As a matter of fact the surface indications were that the deals were put through at a lower rate. On the Metal Exchange sellers offered May delivery at 11.30c., June at 11 1-4c., July at 11.20c., and August

WE CAN SELL YOU

Solder and Babbitt

Cheaper than You can Make It

TORONTO SMELTING and REFINING WORKS

FRANKEL BROS., Props.

92 and 94 Queen St. East, TORONTO.

Daily Capacity 10,000 Pounds.



H. D. SIMMONS, Manufacturers' Agent,
85 York Street, TORONTO.

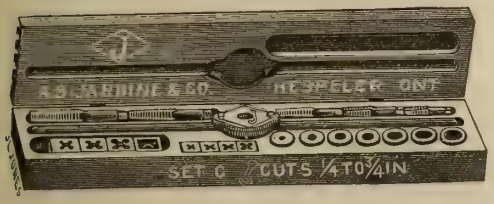
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Coppered Steel Spring. Tinned Mattress Wire. Broom and Brush Wire. Hay Baleing Wire. Flat Wires. Soft Coppered Wire.

Write for Catalogue. We guarantee the quality of all our Wire.

Manufactured by

The B. GREENING WIRE CO., Ltd.,
HAMILTON, ONTARIO.



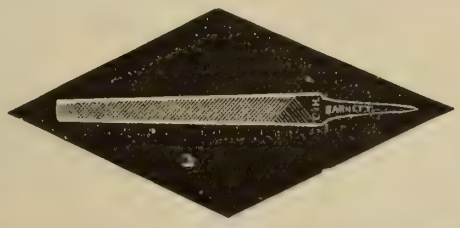
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- AND
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BLACK DIAMOND FILE WORKS,



21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

—MANUFACTURERS OF—

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES.
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
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—AND—

EVERY OTHER DESCRIPTION OF SAW FILES.

The OLD WOODEN BUCKET MUST GO

Indurated Fibre Ware.



NO HOOPS, NO JOINTS, CANNOT LEAK, SWELL, OR WATER SOAK.

The E. B. EDDY Co.
MAMMOTH WORKS
HULL, CANADA.

We manufacture all kinds of Paper suitable for the Hardware Trade.
Send for Samples.

MARKETS—Continued

at 11.15c. Casting copper remains at about 10 3-8 to 10 1-2c., with business and demand slow. London cables quoted merchant bars at £44 12s. 6d. for prompt and £45 for three months' future deliveries.

PIG LEAD.—Demand is a trifle slow at the moment, and the offering is moderate also, making altogether a virtual stand-off. As far as surface appearances go, however, the market has not suffered from the effect of a few days of dullness. In any event, bids of less than 4.15c. seem to be invariably passed, while offerings below 4.20c. are few and far between. The St. Louis telegrams to the Metal Exchange quoted 3.90 to 3.92 1-2c. there, and London cables quoted £9 15s. for soft Spanish.

SPELTER.—The market is very firm at the advance noted yesterday; so firm, in fact, that St. Louis quotations to the Metal Exchange were marked up to 4.15 to 4.20c., and public bids made of as high as 4.35c. There was a possibility of an odd carload or two being picked up in the East at 4.40c., but offerings were moderate, and holders generally stiff at 4.45 to 4 1-2c., delivered for prompt or near future shipments. London cables repeated the somewhat familiar quotation of £17 12s. 6d. there for good merchant brands.

ANTIMONY.—Outside of routine distribution there is little movement, but prices remain quite steady at 10 1-8c. for Hallett's, 10 1-2 to 10 5-8c. for Cookson's, and 10 3-8 to 10 1-2c. for LX.

TIN PLATE.—Deliveries from current arrivals supply consumers' wants to a great extent, and business is, therefore, of moderate volume at the moment. Demand is spiritless also. The moderate business passing is at practically the same prices that have ruled for some time past.

PIG IRON.—There was some further cleaning out of second-hand lots of practically boycotted iron, leaving very little of the same on sale at the present time. In the past this particular iron graded No. 1 foundry, but it has latterly passed out as No. 2 X foundry at $14 to $14.25 delivered. The removal of this weak spot is not with benefit to the market, superficially at least, but that all the soft spots are not eliminated is nevertheless the fact. In any event, southern brands are sold quietly at prices a shade below popular quotations, and it is an open secret that guarantees made some time ago by sellers of certain northern brands are being given in the form of rebate from nominal prices at which invoices were originally billed. This rather unpleasant feature is accompanied by slowness of demand, and just enough accumulation of stock in some quarters to keep the general market in rather soft condition. Scotch pig iron remains almost stationary in price, and meets with little or no sale except in small parcels for near future delivery. Importers quote at $21.50 to $22 for Coltness, $21 to $21.50 for Summerlee, $20 to $20.50 for Carnbroe, and $19.50 to $20 for Eglinton.

OLD MATERIAL.—Fully 500 tons of car wheels have been sold recently at about $14.50 delivered on the line of the New York Central Railroad. Apart from this no business of interest comes to notice, and the general situation is much the same as it has been for several weeks, with demand slow throughout. Current quotations are $16.50 to $17 for iron tee rails, $14 to $14.50 for steel, $16 for No. 1 wrought scrap iron, $12.50 to $13 for machinery cast scrap, and $13 to $13.50 for car wheels.

MANUFACTURED IRON AND STEEL.—The steel rail market remains in statu quo. Orders come forward slowly, and they are invariably for small lots. Prices for heavy sections stand at $29 f.o.b. mill, but on light sections there is still considerable irregularity, with competition from the Carnegie establishments important in that connection.

Structural steel orders come forward slowly, and the demand is quiet for this stage of the spring season. Desirable speculations that come upon the market are competed for keenly, and low prices rule throughout. Ordinary merchant iron and steel moves out fairly in ordinary jobbing quantities, but large orders are conspicuously absent, and prices continue low.

Soft steel, in the form of billets, rods, etc., finds irregular sale, and, now that manufacturers are more anxious for new orders, the tendency of prices for future deliveries is somewhat in buyers' favor.

PERSONAL MENTION.

M. C. Drew, of Burk's Falls, was in Toronto this week. He handles hardware and reports trade fair in his district.

Mr. Fairbairn, late of Boston, is going on the road for Messrs. Clendinneng & Co., of Montreal. He will cover the ground west of Montreal.

J. S. Weichel of Elmira was in the city Thursday. His father, M. W. Weichel, has one of the best appointed hardware stores west of Toronto.

Among the buyers who have been on the street during the week are: R. Y. Blyth of Bellwood, H. Westcott of Beaverton, Mr. Calhoun of Magwood & Calhoun, of Lindsay, Mr. Robson of Ayr, R. Bingham of Stayner.

James Chalmers, of St. Mary's, was in the city a few days ago. He says that trade is a little slow at the moment, owing to the spring being backward. Prospects for the agricultural and building trade in the neighborhood of St. Mary's are good, and there is a brisk enquiry for barbed wire and contractors' supplies.

Mr. Graham, of Graham & Son, Inglewood, was touring the warehouses this week. He reports building trade prospects good.

A DESIDERATUM IN KNIVES.

A desideratum long sought by the housewife was a knife whose keenness was so versatile that it would cut bread hot as well as cold, that would plow through the icing of a cake without smashing it into fragments, and that could be relied upon under all conditions. The long-felt want was at last supplied by the Clauss Shear Co., of Freemont, O., for their new patent bread, cake, and paring knife will do all that the most fastidious could demand. The reason that this knife superceded anything hitherto attempted is that the edge is serrated. It cuts hot bread just as well as it does cold, and when it cuts the latter no crumbs are afterwards found on or under the table for either the poor man or his dog. Crumb-making is not in its line. While the thinness with which it will cut ham depends on the steadiness of the nerves of the person in whose hands the knife may be. The knives are made of the best material, are well finished, and an idea of what they look like may be obtained from a glance at the illustrations on page 10, this issue. The manufacturers are desirous of securing canvassers with a view to getting the knife introduced, and thus create a trade for the hardware dealer. The firm has a branch office in Toronto.

C. C. HARRIS

Manufacturer of MIXED METALS, BABBIT, SOLDER, WIRE SOLDER, SHEET METAL, ELECTROTYPE and TYPE METAL.
All metals guaranteed. Special discounts to manufacturers on yearly contracts.
Cor. Wickson Ave. and Yonge St. Toronto.

COWAN & BRITTON

GANANOQUE, ONT.

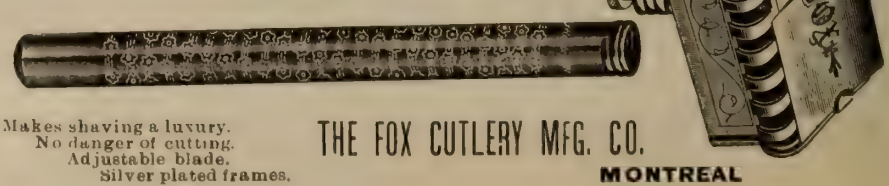
Nails, Hinges AND Buts

Manufacturers of every description of these goods.

THE FOX SAFETY RAZOR

Cut 1 3 Size.

The Finest and most Practical in the World. – Every Man His Own Barber



Makes shaving a luxury.
No danger of cutting.
Adjustable blade.
Silver plated frames.

THE FOX CUTLERY MFG. CO.
MONTREAL

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

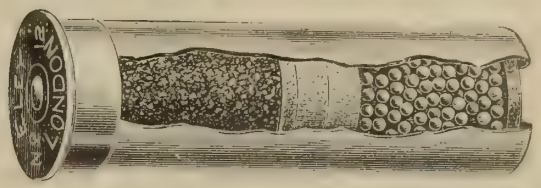
WESTERN BRANCH:

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

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CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. **Wholesale Only.**

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

Spades and Shovels.

Harvest Tools, "Montana" Brand

"Iwan's" Post Hole Diggers and Drain Cleaners.

Vaughan's Post Hole Augers.

Jones' Draining Tools.

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, Toronto.

ENGLISH HOUSE: SAMUEL, SONS & BENJAMIN,
164 Fenchurch St., London, E.C

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES

H. Steinkoff, general merchant, Morden, Man., has assigned.

Magson & Gray, general merchant, Kingsey Falls, have assigned.

R. T. Gray & Co., general merchants, Duntror, have assigned to H. Y. Telfer.

W. A. Seawright, hardware merchant, Dundalk, has assigned to W. J. Wardell.

Frank S. Taggart & Co., firearms, etc., Toronto, has assigned to E. R. C. Clarkson.

John Partridge, blacksmith, Chatsworth, is offering to compromise at 10 cents on the dollar.

J. B. Montambeau, general merchant, Bastican, Que., is offering to compromise at 40 cents on the dollar.

A. G. Barton, general merchant, Balgonie, Man., has assigned. So have Rogers & Douglass in the same line of business at Elkhorn.

Demand of assignment has been made on Talbot Evariste, general merchant, Fraserville, Que. A like request has been made by the creditors of Fee & Martin, furniture dealers, Montreal.

A. Kern, general storkkeeper, Waterloo, has assigned to Henry Barber & Co. The liabilities and assets are nominally the same and amount to $8,000. A meeting of creditors will be called for next week.

The firm of Carbonneau & Co., traders, Montreal, has filed an assignment in the insolvent court at the demand of Boyd & Co., liabilities between $5,000 and $6,000. Chas. Eugene Carbonneau has also assigned at the demand of A. G. Jones, with liabilities of $3,000.

The Ontario Coal Co., of Toronto, has been left in a tight place by the failure of Yates & Lewis, of Rochester and Buffalo, and H. H. Warner, of Rochester. The Molsons Bank is a creditor for something like a quarter of a million, and the Ontario Bank is said to be owed about $100,000. For this money they hold the paper of the Ontario Coal Company. The Ontario Coal Co. will continue in business for the present at least and an effort will be made to pull through. The commercial agencies have withdrawn the firm's rating.

PARTNERSHIPS FORMED AND DISSOLVED.

Penny Bros., general merchants, Carbonear, Nfld., have dissolved.

Buchanan & Co., general merchants, Saltcoats, Man., have dissolved.

Guirette & Fauleux, builders, Montreal, have assigned.

Coulon & Leveil, silver platers, Montreal, have dissolved.

Waller & Downer, plumbers, Victoria, B. C, have dissolved.

G. W. Robinson & Co., general merchants, Cartwright, Man., have dissolved, A. Laughlin continuing.

Wheeland & Secord, carriages, Brantford, have dissolved. Wheeland retires and a Mr. Perley is admitted.

A partnership has been registered in Montreal between Joseph Jean and Henri Thibault as plumbers.

Wm. McIntosh, wholesale saddlery hardware, are retiring from business, and stock is being sold by auction.

A co-partnership has been formed by Geo W., Frederick A., and Geo. A. Bockner, planing mill, West Lahave, N.S.

A number of Montrealers are seeking incorporation as the Trojan Coupler Company, limited, with a capital stock of $300,000.

U. Bail and J. E. Sabourin, have been registered as proprietors of the firm of Bail & Sabourin, general merchants, West Shefford, Que.

The Northern Graphite Company, limited, is another concern which Montreal capitalists are furthering. The capital stock is placed at $95,000.

A partnership has been registered in Montreal between Alphonse de Liguore Quesnal, glass miller, and Charles Alfred Sharpe, clerk, as dealers in paints, oils and glass.

A. F. Savaria & Co., general merchants, Waterloo, Que., have dissolved, and a new firm, retaining the old name has been organized. The new firm consists of A. F. Savaria and Zoel Hudon.

Messrs. John White, ex-M.P, of Roslin; Robert Thomson, Hamilton; John Davidson, of Barrie; T. J. Hamill, J. S. Hatton, of Toronto; W. Bell, of Guelph, and others have been incorporated as the Toronto and British Columbia Lumber Company with a capital stock of $1,000,000.

Letters patent have been issued incorporating Edward Gurney, of Toronto, iron founder; Frederic Massey, of Montreal, merchant; Wm. Henry Carrick, of Toronto, iron founder; F. F. Skinner, Toronto, accountant; Thomas Busteed Alcock, of Toronto, iron founder, and Robert James Lockhart, of Montreal, agent, for the purpose of carrying on the business of founders, manufacturers and merchants in metals throughout the Dominion of Canada, by the name of "The Gurney-Massey Company" (limited), with a total capital stock of $50,000, divided into five hundred shares of $100.

SALES MADE OR PENDING.

W. Geiss, machinist, Hamilton, is advertising his business for sale.

The stock of W. Ritchie, lumber dealer, Three Rivers, is to be sold April 25.

The general stock of J. Charbonneau, Ste. Therese, is to be sold by auction April 25.

Mrs. P. Kearney, general store, Rixton Falls, Que., is advertising business for sale.

M. A. Fraser & Co., general merchants, Yale, B.C., have sold out to R. L. Johnston.

The stock of E. Blanchard, plumber, Montreal, has been sold at 78 cents on the dollar to Sequin & Watt.

Frank B. Polson and James B. Millar have become the purchasers of the equity of redemption of the Polson Iron Works property, including the dry dock at Owen Sound and the works in Toronto. The mortgage encumbrances upon the property amount to $200,000. Messrs. Polson & Millar had tendered an amount less than that sum, which was refused by the Master-in-Ordinary for the one now accepted, which is $500 in access of the amount. The purchasers have agreed to indemnify the estate and Assignee Clarkson from all liability.

CHANGES.

W. S. Myers, gasfitter, Halifax, N.S., is out of business.

Robert Ollett, wagon maker, West Lome, has sold out to Mr. Cahill.

Wesley Jackson, general merchant, Melita, Man., has removed to Reston.

William Fuller, sawmill, Ettrick, Ont., has been succeeded by G. S. Kennedy.

H. A. Scarlett, hardware merchant, Blyth, Ont. has sold out to George Denstedt.

Renwick & Horne, blacksmiths, Nanaimo, B. C., have sold out to Donaldson & Maneer.

Thomas Walsh & Co., painters, Halifax, have been succeeded by Thomas J. Walsh, Jr.

Henry Pullan was succeeded to the estate of W. Pullan, foundry and scrap iron, Toronto.

Dunn & Thompson, agricultural implements, Madoc, have been succeeded by Thompson & Robertson.

The estate of Wilson Bros. & Co., foundry, Victoria, B.C., has been succeeded by the Victoria Iron Works Co. (Ltd.).

DEATHS.

A. Gates, of the firm of A. G. Gates & Sons, lumber dealers, Weymouth, N.S., is dead.

Daniel McEwen, founder of McEwen's Foundry, Kingston, aged 83 years, is dead. He had been a resident of Kingston for almost half a century. He was a Congregationalist. One son, John McEwen, Collingwood, survives.

FIRES.

The Alvin Brush Co., Simcoe, has been burned out.

W. N. Carter, shingle mill, Fesserton, burned out.

N. G. McKechnie's sawmill, near Durham, has been destroyed by fire; loss $5,000, insurance $1,000.

John Milne & Sons' planing factory at Huntsville has been burned. The loss is about $12,000, insurance about $8,000.

The premises of the James Robertson & Co. (Ltd.), King street west, Toronto, was gutted by fire Sunday last, there being little of the factory besides the walls left standing. The loss is estimated to be in the neighborhood of $40,000. The principal damage was to the lead works. The firm carried $95,000 insurance, of which $35,000 was on the burned lead works.

The old Christie foundry building on Baker street, Owen Sound, now occupied by M. E. Bebee as a harness factory and implement wareroom, was damaged by fire the other day. Insurance on building $1,600, which will about cover the loss. On the stock there was an insurance of $1,000, which will also cover the loss. A defective chimney is the supposed cause.

Granby, Que., has been visited by a $50,000 fire. Among the sufferers was W. D. Bradford, general merchant. The whole of his stock was destroyed, but he was well insured.

Magee Mfg Co.

LONDON, ONT.

Manufacturers of all kinds of

Lumber and Log Rules Counter Measures, etc.

IMPROVED

Eclipse Horse Poke

Navey Barrows . .

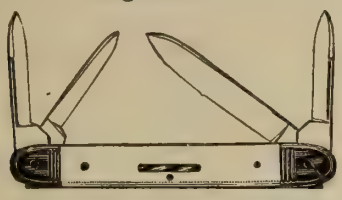
OF ALL DESCRIPTIONS

Special Lines Made to Order.
Write for Prices.

TORONTO CUTLERY CO.,

M. MAYER, Propr.

65 and 67 Yonge Street, - TORONTO



Carry the most complete assortment of Cutlery in all branches of the Line.

Brands which we warrant:

Non-XLL Pocket Knives.
Imperial Razors.
T. C. Co. Scissors and Shears.



S.S. SMOKELESS POWDER is the best. Made by the Smokeless Powder Co., of London, Eng. A stock kept in Montreal. 25 lb. Drums, 2 lb. Cannisters, ½ lb. Cannisters. Send for Prices. **WILLIAM DARLING & CO**, Wholesale Hardware Merchants, 30 St. Sulpice Street, Montreal.

A FEW REASONS WHY

You should Keep your Stock fully Assorted With

Boeckh's Superior Brushes

They are always reliable and as represented.
They are guaranteed in every particular by the manufacturers.
They are made of the very best material and workmanship
They are sold at closest possible prices.
They are finished and put up in neat and attractive shape.
They are well known throughout the Dominion and are popular with all classes of consumers.
They are handled by all leading Hardware and Paint and Oil trade.

See that the name "BOECKH" Is on every brush.

Boeckh's Flexible Bridled Brushes.

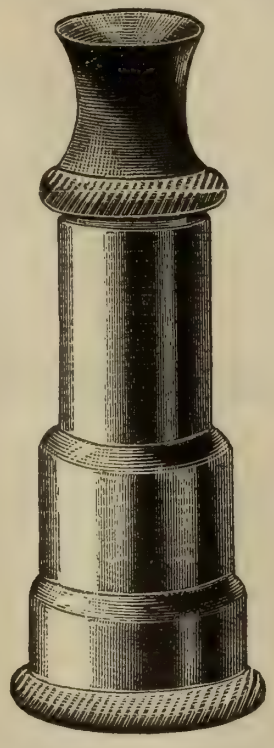
Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

TORONTO, - CANADA.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it

It is impossible for this pipe to get out of order

Give ita trial and you will use no other.

Hamilton Brass Manufacturing Co.
HAMILTON, ONT.



JOSEPH RODGERS & SONS LIMITED.

CELEBRATED CUTLERY : : :

STILL LEADS THE WORLD.

OUR REGISTERED TRADE MARK

GRANTED IN 1764, IS STAMPED ON EVERY ARTICLE.

AGENTS:

JAS. HUTTON & CO.

MONTREAL AND TORONTO.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C.I.F." THREE RIVERS

PLANTS AT

Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

THE BEST English Sporting Gunpowder

USE THE

"ALLIANCE"

PRIZE POWDER

—Made only by—

Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.

Always obtainable from

Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,

Agents.

MONTREAL AND TORONTO.



GREEK PATTERN SUGAR SHELL.

This represents one of the most popular patterns in the market. In buying Flatware, either direct or from your jobber, see that it is stamped TORONTO SILVER PLATE CO. Stamped in this way it is guaranteed as to quality.

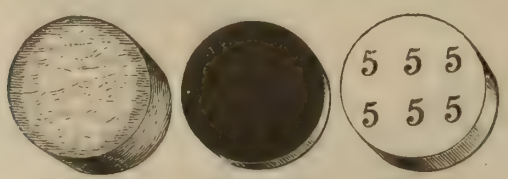
THE TORONTO SILVER PLATE CO.,

Manufacturers of Sterling Silver and Electro Silver Plate, - - - KING ST. WEST, TORONTO.

E. G. GOODERHAM, Manager. **JNO. C COPP, Sec.-Treas.**

The Best in the Market.

BALDWIN'S



THICK FELT. GREASE-PROOF. OVERSHOT.

GUN WADDING,

For SPORTING and other CARTRIDGES. Best Hair, and Brown Felt of uniform thickness; also Best Cloth, Field, Grey Felt, Black Grease-proof and Card Wads. Overshot Wads, printed name and number. Indented Wadding, suitable for muzzle loading guns.

To be had of all Jobbers and Dealers in Sporting Goods.

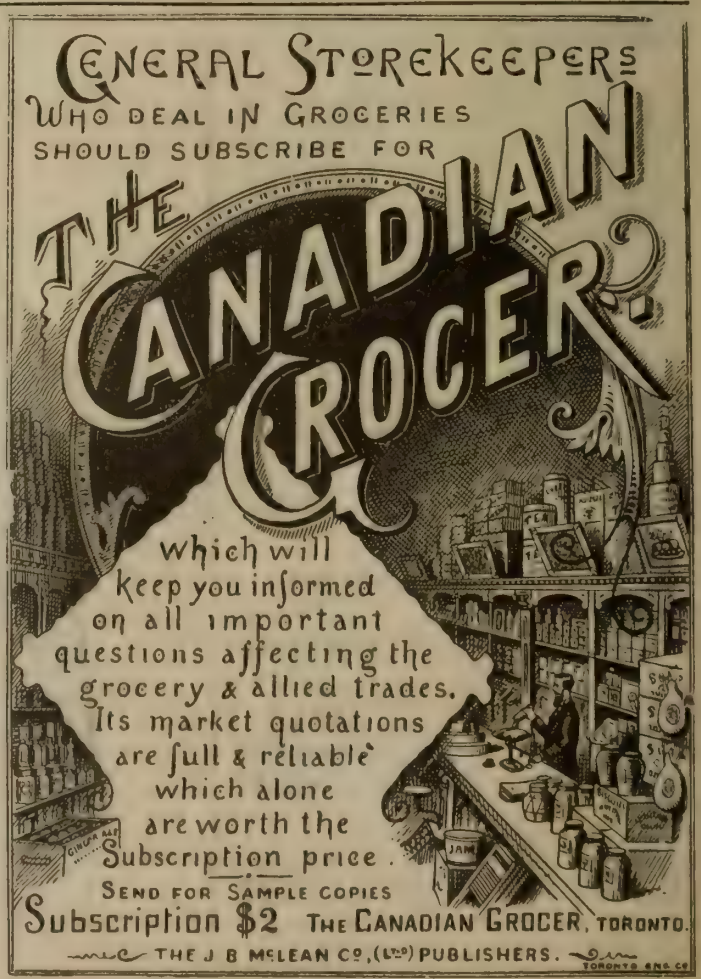
JAMES BALDWIN & SONS,

ORIGINAL MANUFACTURERS,

Morville Street, Birmingham, Eng.

Agent:—W. H. JAGGER,
131 Bay Street, TORONTO

Price Lists and Samples to the Trade Only.



OFFICES: 100-102 Reade St., New York, U.S.A.

KEARNEY & FOOT CO

WORKS: Paterson, New Jersey, U.S.A.

Manufacturers of FILES AND RASPS.

Superior quality fully guaranteed.

CAPACITY OF WORKS: 1,200 doz. per day.



Illustrated Catalogue Price Lists mailed on Application.

PLEASE MENTION THIS PAPER WHEN WRITING US. Agents, M. & L. Samuel, Benjamin & Co, Toronto.

The handle needs no adjusting for a child or grown person or for cutting down an embankment.

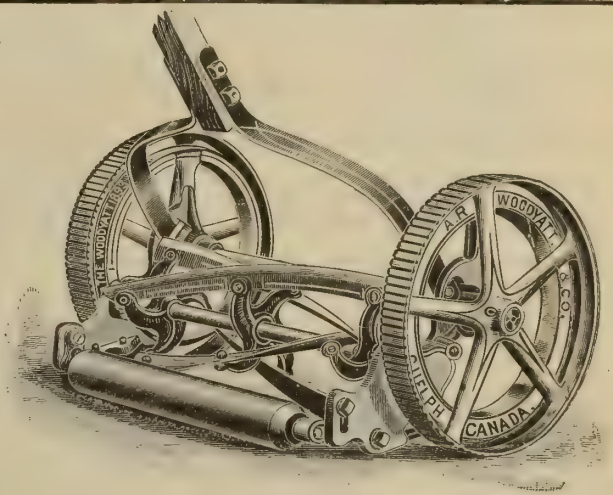
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THE "WOODYATT" LAWN MOWER

Light, Durable, and Efficient.

Now On Sale by all Wholesalers.

A. R. WOODYATT & CO. GUELPH, ONT.



Wm. Clendinneng & Son.

Iron Founders and Stove Manufacturers

Makers of the "Etna" Hot Water Boilers, Soil Pipe and Fittings, Stable Fixtures, Machinery, Builders and Special Castings

WRITE FOR ESTIMATES

WORKS: Cor. William and Inspector Sts.,

OFFICE and WAREHOUSE: 145 to 179 William Street

MONTREAL

BUYERS OF CUTLERY

WILL find it to their interest to see our samples before placing Spring orders. A choice assortment in stock of Jas. Rodgers & Co.'s and E. M. Dickinson's goods at special prices.

A. C. LESLIE & CO., MFRS. AGENTS,
MONTREAL and TORONTO

OUR SALES OF
"BURHAM" Portland Cement
For the past 8 months have been
25,499 CASKS.
"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,
McRAE & CO., OTTAWA

MUNN'S LIQUID GLUE
IS THE BEST.
Kennedy Bros., Agents
101 Bay Street, TORONTO.

Established 1864.
CLARKSON & CROSS,
CHARTERED ACCOUNTANTS
NO 26 WELLINGTON ST. EAST
E.R.C.Clarkson, F.C.A.
W. H. Cross, F. C. A.
Edward Still.
John F. Helliwell.
TORONTO, ONT.

Excellent Quality! Reasonable Price!



ADAMS-MARS
BEST.
GALVANIZED SHEET IRON. SP



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—		
56 and 28 lb ingots, per lb	24,	24½
Strip "	25,	25½

Tin Plates—*Charcoal Plates, Bright.*

M.L.S. equal to Bradley	Per box	
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 25	4 50
I.X., "	5 25	5 50
I.X.X., "	6 25	6 50
I.XXX., "	7 25	7 50
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

Cookley Grade—	Per lb.
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65.	

Tinned Plates

72x30 up to 24 gauge	6½	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼inch	$2 45
16 "	2 35
¾ " and thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2⅞, 2¾
26 "	2¾, 3
28 "	3 , 3¼

Canada Plates.

Blaina	½ bright	2 75
Abercarne		2 75
Lion		

Iron Pipe.

Wrought 62½ p. c. to 62½ p. c. and 5 p.c.
Galvanized, 37½ to 40 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4½ 4¾
" ⅜ " "	4⅜ 4⅝
" 7-16 " "	4¼ 4½
" ½ " "	3¾ 4
" ⅝ " "	3½ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 14	0 14½
Lake Superior	0 13	0 13½

Bolt or Bar.

Cut lengths, round, ½ to ⅞ in	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20 0 22
" 35 to 45 " "	0 19 0 20
" 50 lb and above per lb	0 18 0 19

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 05 0 05½
Domestic "	0 04¾ 0 05

Zinc Sheet.

5 cwt casks	0 05¾ 0 06
Part casks	0 06 0 06½

Lead.

Imported Pig, per lb	0 03½ 0 30¾
Domestic "	0 03½
Bar, 1 pound	0 05
Sheets, 2½ lbs, per square ft, by roll	0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¾ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)	0 17	0 19
Standard	0 16	0 18
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½ 0 14
Other makes "	0 13 0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per lb	4 75
No. 1 Do "	4 50
No. 2 Do "	4 25
No. 3 Do "	4 00

Prepared Paints.
(In ¼, ½ and 1 gallon tins.)

Pure, per gallon		$1 20
2nd qualities "		1 00

Colors in Oil.
(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.cwt	1 35	1 40
" " (J.F.L.S.) " "		2 75
Venetian Red (R.C.2) " "	1 50	
Venetian Red, (best) "	1 80	1 90
English Oxides per cwt		3 25
American " " "		2 25
Canadian " " "		1 75
Paris Green, per lb	0 13	0 15
Burnt Sienna, per lb		0 08½
Burnt Umber "		0 05
do pure		0 08
Drop Black "		0 09
Chrome Yellows "		0 12
" " Lemon pure, 8 lb. tins, per lb		0 19
Chrome Greens "		0 12
Golden Ochre		0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 70
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	2 00
Hard Oil Finish "	1 30

Linseed Oil (in bbls)

Raw, per gal	0 60	0 62
Boiled "	0 63	0 65

Turpentine (in bbls)

Selected Packages, per gal	0 54	0 56

Castor Oil.

Best, per lb	0 09	0 09½

Cod Oil.

Cod Oil, per gal	0 48	0 50

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet makers	0 17	0 18
White	0 16	0 17
London Town	0 7½	0 08½
Gelatine	0 22	0 27
Stripped	0 16	0 17
Coopers	0 17	0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer-
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50, 50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad. 0 85 1 60
" handled " ... 3 60 7 80
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... ..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 to 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 45 to 47½ p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10 p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]

Ordinary.

st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb . 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05
Screw hook and hinge—
6 to 12 in., per set 0 00 0 04½
14 to 20 in., " 0 00 0 03⅔
21 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

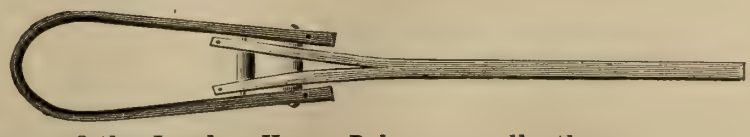
Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

THE LONDON HORSE POKE.

DURABLE



STRONG

Some of the Advantages of the London Horse Poke over all others.—No wooden pins to break or loose. No wire spring to rust or get out of order. The London Poke is the only one made with iron bolts, which cannot get lost or broken in shipping. It is the only adjustable Poke made to fit any size horse from a Pony to Clydesdale.

Send for Sample Order. **BOWMAN, KENNEDY & CO., London,** Western Agents

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 30 per doz.
ronze, Berlin, per doz .. 2 75 3 25
ronze, Gem, " 6 00 9 00
ass " 8 75 10 00
hutter, porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)
1. Either Canada or American Pattern.
Basis—50 to 60 dy 2 30
40dy 2 35
30 dy 2 40
20, 16 & 12 dy 2 45
10 dy 2 50
8 & 9 dy 2 55
6 & 7 dy 2 70
American Pattern Only from 4 to 5 dy 2 90
3dy. (lath) 3 30
3. Canada Pattern Only from 4 to 5 dy 2 80
3 dy. (lath) 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Nails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross 1 00 4 25
" Carpenter 2 25 3 60

Picks

Per doz 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis 15 to 17½ per cent

Plane Irons.

English, per doz 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz 1 35 2 00

Pruning Shears.

Per doz 4 00 5 50

Pulleys

Hothouse, per doz 55 1 00
Axle. 22 33
Screw 27 1 00
Awning 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

Per lb.

	Sisal.	Manilla.
7-16 in. and larger..	10	11	11½
¼, 5-16, ⅜ in.....	10½	10¾	11½	11¾
Cotton, per lb.....		18	20
Russia Deep Sea, per lb..		13½	16
Jute ..... " ...		08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.

Hack, complete, each 1 75 2 75
" frame only 75

Saw Sets.

Per doz 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz 3 25 4 00
Bench iron per doz 4 25 5 75

Scythes

Discount 40 to 45 per cent.

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Per lb 0 28 0 30

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Tea Spoons .....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
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Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
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Fence, galvanized, per lb 4¼ 4½
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No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

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Washita, per lb 0 25 50
Hindostan, per lb 0 06 07
" Slips, per lb 13
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
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Copper Nails, dis. 60 per cent.
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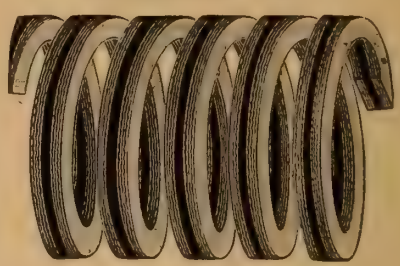
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VOL. V. TORONTO, APRIL 29, 1893. No. 17.

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. . HARDWARE . .

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Published Weekly. $2.00 a Year.

Vol. V. TORONTO, APRIL 29, 1893 No. 17

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

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Love of sport is one of man's prominent characteristics. A live and energetic hardware dealer can turn this to good account for himself; and now is the time for him to do so. He needs to select a well-assorted stock of sporting goods, and next display it in an attractive manner. The character of the goods he selects should be governed largely by the nature of his surroundings. The sporting tastes of young men in one country town often differ from those in another. What this taste is the local hardware dealer should ascertain. This, as a rule, it will not be difficult for him to do. This knowledge once acquired, the course to pursue is obvious. There is one thing that the dealer in about every town can depend on doing something in, and that is bicyles. These machines are becoming more and more the means of locomotion, especially in the larger towns and cities, where one can scarcely walk a block without seeing one or more flit past. Bicyles can be turned to good account for window dressing. By the aid of these machines, bats and balls, rifles and guns, and other sporting goods a unique and attractive display can be made.

* * *

Hardware dealers should handle bicycles. They are as much the part and parcel of his stock as is soap to the grocer. By a policy of indifference they have allowed a growing and already important branch of the trade of the country to fall into the hands of every Tom, Dick and Harry. The trade is not altogether lost to them; it has only extended into other hands, and by push and perseverence a good deal of it can yet be called back.

* * *

There is no telling when and where machinery is going to step in and supplant hand labor. During the last century its extension has become so rapid that there are comparatively few industries that has not got its machine of some kind. Now advices from Australia announce that it has been applied to sheep shearing. It was experimented with at a shearing of 50,000 sheep and satisfactory are said to have been the results. The power required is a 4-horse power engine to drive ten, a 6-horse power for twenty and an 8-horse power for thirty machines, the line shafting being required to make 400 revolutions to give the 2000 required in the flexible shaft. If somebody would now invent a machine to shear deadbeats of their gold—that is, those who have it—the average business man would be shorn of one of his biggest troubles.

* * *

The relative merits of coal and oil as fuel for boilers has been the cause of much discussion. A test was recently made in New Jersey in which oil was pitted against anthracite slack and Westmoreland coal. As a result it was demonstrated that if the oil be at 2.4 cents per gallon it would compete with coal at $3.95 per ton, at a test of 6,000 horse-power boiler plant. With coal at $3.10 per ton, and oil at 2.25c. per gallon,the coal was cheaper; and where, in the coal district, that fuel could be got at $1.50 per ton,and oil at 1.5c. per gallon, the oil cost one-third more than the coal. The theoretical evaporation of ordinary oil is about 21 pounds of water per pound of oil, and they have been experimentally able to get 16.7 pounds of water per pound of oil 63° B. in New Jersey, and in New England 17.8 pounds of water to steam at 90 pounds per pound of oil. It is explained that this evaporation is secured by that method by which the oil vaporized to gas in a retort is carried forward to meet warmed air at the burner. A much more efficient combination is thus obtainable than where the oil comes as a fluid to the furnace, and many of the difficulties connected with the fouling of the heating surface are said to be avoided.

* * *

Light stocks are not by any means always a preventative against a drop in price even if, in addition to this, the demand is fairly good. This is at the moment apparent in this province in the matter of turpentine. Stocks, particularly in Toronto, are decidedly light, and a fairly good quantity is moving, but notwithstanding these conditions, the Ontario Association, at a meeting held Friday, decided to drop prices two cents per gallon. And they were compelled to do so on account of the condition of the United States market, stocks there being large, while, in the South, prices had declined four to five cents a gallon.

* * *

Our cousins across the line are at the moment wrestling with three questions of financial and commercial import. They are the gold movement, tariff reform, and an adverse balance of trade. Canada is interested principally in the two first. The purely financial question began to look particularly grave about two years ago when the outflow of gold to Europe assumed such enormous proportions. That was in 1891, when from February to July over seventy million dollars' worth went out. Financial men felt a little uneasy then, but consoled themselves with the hope that it would about all return again when the demand set in for American cereals. To what extent these expectations were realized is a matter of history. To make matters still worse, the exports of gold during the twelve months ending with February 16th last was over 90¾ million dollars. Since then the outflow to Europe has continued. During the present month alone some ten millions has gone forth. As everyone knows the drain upon the U. S. Treasury is not on foreign account only. The ill-advised Sherman Silver Act of 1890 is re-

sponsible for much of the present unsatisfactory condition of affairs. By this Act the Government is committed to the purchase of $4,000,000 worth of silver bullion every month, payment in Treasury notes. The notes thus issued are virtually payable in gold. The law demands that the sum of $100,000,000 in gold shall be kept in the Treasury as a reserve fund. And this amount was stipulated because it was about one-third of what was believed to be the actual volume of the old legal tender notes outstanding. Owing to the rapidity with which the free gold—the sum over and above the $100,000,000—was going out it has been for time recognized that this reserve fund was in danger of being tapped, and various schemes were suggested for preventing this. Early last week Secretary Carlisle, in the hope of at least palming off the evil day, issued an order suspending the issuing of gold certificates. And such authorities as the N. Y. Bulletin expressed the opinion then that there would be enough of free gold to keep things going till September. But instead of there being sufficient for five months there was not enough for that many days, for on Friday last there came such a demand for the precious metal for export that not only was the free gold absorbed, but the reserve fund itself was drawn upon to the extent of two or three million dollars. Now that the inevitable has taken place the administration, it may be depended upon, will make a vigorous effort to provide a remedy. A special session of Congress is talked of and the prompt repeal of the herman Act expected. The situation is no oubt critical, but, at the same time, there not many who anticipate a financial disaster. Some go so far as to say that as the reserve was intended for such an emergency, it is only proper that it should be utilized at the moment, and they furthermore claim, as an evidence of the United States being able to meet her obligations, that there are $600,000,000 in gold in the country. This line of argument may be reasonable enough as far as it goes, but the financial world is at the moment looking upon the United States much in the same way as people usually do upon a bank that has found itself compelled to draw upon its reserve fund—with suspicion. Shortly before the Harrison Administration went out of office it for a time seriously considered the advisability of issuing bonds in order to avert a financial disaster; and now the question is again mooted. But the President and the Secretary of the Treasury have determined only to do this as a last resort. In the meantime the financial world awaits the outcome with much concern. The banking and mercantile interests of Canada became somewhat alarmed some months ago at the turn of affairs in the United States when the value of the silver dollar dropped to about 65 cents. At that time the banks here began to tighten their restrictions regarding American currency. And within the last few days a number of them have decided henceforth to receive silver certificates under the Sherman Act of 1890 for collection only and not on deposit.

* * *

Tariff reform during an election campaign and tariff reform during the process of actual reformation are two different things. This the Cleveland Administration is learning. Tariff reform means less money to run the Government with, and therein lies the difficulty in the present instance. The average duties collected under the McKinley Act are 50 per cent. Basing his estimate on this the retiring Secretary placed the receipts from customs for the coming fiscal year at $210,000,000. Now a 33 per cent. tariff would only yield $120,000,000. This would of course mean a deficit, something under all circumstances to be avoided. Under such conditions it is conceded a low rate of duty on goods now dutiable cannot yield sufficient revenue for the maintenance of the Government unless articles like sugar and tea, now on the free list, are taken therefrom and made dutiable. This would mean taxing the "poor man's breakfast table," something which would bring a hornet's nest about the ears of the Administration. Then it is generally conceded that wool, coal and iron will be placed on the free list, and although the loss of revenue from this source would not be large it would be something. Whisky is already taxed 90 cents a gallon, and no less an authority than Prof. David A. Wells holds the opinion that to increase this would stimulate fraud and reduce the visible production, and of course the revenue, from this source. It is held therefore, in order to secure the desideratum of a low rate of duties, that one or other of two things must be none —levy revenue duties or sugar and other free articles or to impose an income tax. The "looping off of the mouldering branches" of the United States tariff is made all the more difficult in consequence of the unsatisfactory condition of the treasury at the moment and a good many are of the opinion that the undertaking will have to be deferred for a year or more.

* * *

Regarding the adverse balance of trade in the United States. In spite of a McKinley Act, the disparity between imports and exports during the past eight months has been enormous. Taking March alone, the excess of imports over exports was never so large before. The exact amount is not known, but it is thought to be at least $90,000,000 for the month. For the eight months ending in February the excess of imports over exports was more than 150½ million dollars. The principal falling off in the exports has been in agricultural products, which were 76·37 per cent. of the total amount exported against 80 per cent. for the same period the year before. But disappointment is also expressed at the poor results obtained from an effort to push certain mannfactured articles. Produces of the mine, forest and fisheries show an increased percentage. The exports of breadstuffs decreased from $217,763,097 in 1892 to $138,916,537 in 1893. Manufactures of copper fell off about 3½ million dollars, sewing machines about 1½ millions, locomotives over a million. Leather, wool, raw cotton, carriages and horse cars, all show decreases. The increase in the total value of imports during the eight months was about $84,000. The free imports increased in eight months from $277,266,469 to $326,206,699, while the dutiable imports increased $246,511,277 to $281,620,443. The imports of coffee from Venezuela, Colombia and Hayti, dutiable under the President's proclamation, were $197,211 in February, raising the total imports for eight months to $2,673,809. One of the striking articles of import in the dutiable list during the past eight months has been potatoes, of which 1,835,681 bushels, valued at $4,780,-848, have been imported, against 63,044 bushels, valued at $36,785, during the corresponding eight months of the preceding year. The duty now assessed on potatoes is twenty-five cents per bushel, which has covered into the Treasury about $450,000 during the past eight months. The rate under the Act of 1883 was fifteen cents per bushel, which would have reduced by $180,000 the tax which has deen paid by consumers on the foreign potatoes imported to cover the shortage in American crop.

HARDWARE MEN AND THE TARIFF

Minister of Finance Foster has started out upon his tour of data gathering for the revision of the tariff. And by enlisting the co-operation of those most interested he has taken a wise course. As far as the hardware trade is concerned, the tariff in its relation to bar iron promises to receive the most attention. The Toronto Board of Trade pronounced in favor of a revision in this particular some two or three months ago, and a revision, too, that meant a lower rate of duty. Previous to the advent of what is commonly known as the National Policy, the duty was 5 per cent. For the first nine years after that the duty was 17½ per cent., while now it is something like 55 per cent. This a good many manufacturers consider excessive. This same class claim their cup of bitterness is increased by the treatment which they receive from the rolling mills in regard to scrap iron. The duty on wrought scrap is $2 a ton, and it is alleged that the rolling mills in order to keep the price of scrap down to a point consonant with their ipse dixit, import from the United States. Scrap men have but two alternatives—they must either accept the price the rolling mills choose to pay or keep their scrap product. They cannot get it into the United States. The tariff is too high. And to send it to England is of course out of the question. Some of the large producers of scrap feel strong on this point. And HARDWARE knows of at least one man who, rather than accept for his scrap what he maintains is less than its market value, is storing it, with, to his mind, the "full and certain hope" that either the Canadian mills will in time be compelled to give him a better price or that the United States tariff will eventually be lowered enough to allow him to get his scrap across the boundary line. There is another class who would rather that the duty on bar iron remain, as at present, at $13 a ton, but they would have the duty on scrap made prohibitory. The object these have in view is the extension of the home market for the product of the blast furnaces. As is well-known, a blast furnace that will turn out a uniform brand of pig iron has yet to be built. Every furnace produces more or less pig that is unsuited for foundry purposes. This residue, known as mill iron, is well adapted for the use of rolling mills, but if a market cannot be found for it, why of course a blast furnace cannot be run profitably. Last year the Canadian rolling mills imported something like 36,000 tons of wrought scrap, and the advocates of a prohibitory tax on the latter article point to these figures and in effect say: "There now, if there was a tariff such as we want the rolling mills would have been compelled to turn their attention to the home market and as there is not enough scrap to supply the raw material for making bar iron there would naturally be an enlarged demand for mill iron and of course in turn, a wider market for the product of the blast furnaces." Last year Canada produced 40,000 tons of pig iron and imported 70,000 tons. As a guarantee that the price of iron would not be unduly enhanced, they point to the duty of $13 a ton.

In the adjusting of a tariff there are many conflicting interests to be considered. One thing all concerned should bear in mind, at the moment, and that is that a revenue to meet the cost of Government must be raised somehow and that the more liberal the spirit of "give and take," the more easily will the work of revising the tariff be accomplished.

THE MONTREAL CONFERENCE.

The conferences between the representatives of the Federal Cabinet, the Hon. Messrs. Bowell, Foster and Ouimet and delegations from the various branches of the iron trade at Montreal have occassioned considerable interest in iron circles. Of course the consultations have been strictly private, but it is whispered around that the suggestions made to the Ministers with regard to the revision of the tariff have shown a wide divergence. Previous to meeting the Ministers on Tuesday, a preliminary gathering of the iron men was held on Monday to discuss matters generally and see of some agreement could not be arrived at with a view of some uniformity in the suggestions which should be made to. Members of each branch of the trade had their own ideas about the matter of revision, and it is understood that a lot of pretty hot talk ensued. Nothing definite could be learned about the matter, but there is no doubt that the rolling mill men would not be averse to some readjustment of the duty on puddled bars. Whether this would satisfy the promoters of Canada's infant pig iron industry is another matter, and it requires no seer to know what their answer would be to a suggestion of this kind. But they would no doubt like very much if their wishes were consulted to see the duty on scrap altered materially and hardly in a downward direction either. While the merchants and hardware dealers generally are, if their openly expressed opinion goes for anything, certainly not averse to a change in the duty on bar iron. Here again however the rolling mill men have their little objection to put in. It is generally thought that the various suggestions took lines somewhat like the above, and the prevailing opinion seems to be that there will be little or no alteration in the tariff so far as the clauses affecting iron are concerned, for it is generally admitted that the cabinet, if it tries to please everybody, will be very much like the man and the donkey in the fable.

The gentlemen who waited on Mr. Bowell and his confreres were Messrs. Ceo. E. Drummond, of the Canada Iron Furnace Co.; Patterson, of the Londonderry Iron Co.; McMaster, of the Montreal Rolling Mills Co.; Hersey, of Pillow, Hersey & Co.; Peck, of Peck, Benny & Co., and President Doolittle, of the Ontario Rolling Mills Co. The general hardware men were Messrs. James Crothern, A. S. Leslie, J. B. Learmont, C. Piche, and T. J. Drummond.

CLEANING CASTINGS.

Two methods of cleaning iron castings are in general use. One, which is applicable to small castings, consists in treating the pieces in a tumbling barrel, the knocking of the castings together serving to dislodge the sand attached to the castings, by removing the finer features and destroying the corners. The other method of cleaning castings consists in placing them for several hours in a pickle or acid bath (a mixture of one part of sulphuric acid to 10 or 12 parts of water); the acid attacks the surface of the iron and releases the scale. The sand blast has been suggested as a substitute for this latter method. It is said that it will readily remove the sand spots, leaving the castings in good condition. It would seem, however, that unless the bare portions of the castings are protected, the sand blast would attack the iron as readily as the scale. As it is obiously impracticable to protect the bare surface of the iron, it would seem that the sand blast method has very little of practical value.—Age of Steel.

OLD-TIME METAL TOOLS.

During a residence of two years in a tomb at Gizeh, Wilhelm M. FlindersPetrie collected evidence showing that the tools used in working 4,000 years ago were made with the jewelled cutting edges, as is the modern custom. He has given his reasons for coming to these conclusions, and proves in a very satisfactory manner that the pyramid builders used solid and tubular drills, straight and circular saws, and many other supposed modern tools in erecting that greatest of buildings. He also shows that their lathe tools were set with jewels and that they did work with them that would puzzle the modern artisan. In one place he found that the lines of cutting on a granite core made by a tubular drill form a uniform depth throughout, showing that the cutting point was not worn as the work advanced. The regular taper of the core would also go to prove that the drill was set with jewels on the inside and on the outside alike, thereby facilitating its removal. In some specimens of granite he found that the drill had sunk one-tenth of an inch at each revolution, the pressure necessary to accomplish this having been at least two tons. The capacity of the tools and the skill of the workmen are illustrated by the clean cut they made through soft and hard material alike, there being no difference in the width of the groove when it passes through soft sandstone and granite hard as iron. Nothing is known concerning the material of which their tools were made, nor how the jewels were set. The diamond was very scarce at that time, therefore the only logical conclusion is that they used corundum.—The Iron Industry Gazette.

PROMISCUOUS CHATS.

A young friend of mine started into the plumbing business for himself recently, but during the short time he has been a master plumber he has learned that it is not the apparently well-to-do that are the best paying customers. "When I first went into business," said he to me, "I felt quite pleased when this and that, to my mind wealthy man, came and asked me to do work for him. But I have learned a lesson now. Many of those whom I thought to be in good circumstances and whose patronage I was elated at obtaining I have found to be poor as church mice and not nearly as desirable customers as most workingmen. At any rate I know that some of them have never paid me a cent for work done. If they are not poor they are rogues, and they are the same if they are poor, for to ask anyone to do work which you know you can't pay for is dishonest, to say the least," he concluded, as he picked up a piece of lead pipe and threw it down with an impatient bang.

* * *

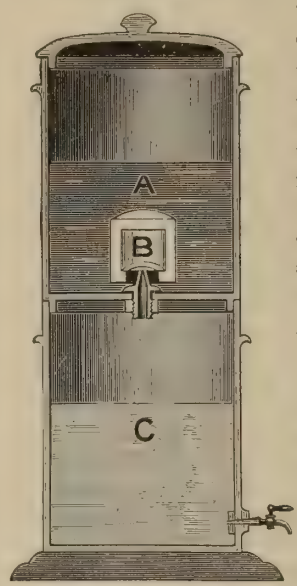
"It is surprising the number of defective and badly built chimneys there are," said Mr. W. H. Carrick, of the Gurney Foundry Co. to me the other day. "And it gives us no end of trouble. Did you ever notice in looking up a chimney that the corners are usually free from soot? This is of course in a properly built chimney. And when I say a properly built chimney I mean one that is square. You have probably noticed on cold winter mornings that the smoke usually comes from the chimney with a revolving motion. Well that means that the draught is good and the chimney square. Now it stands to reason that if the chimney is, say ten by six, that the circulation cannot be good. The occupant, of course, as a rule, knows nothing about this, and if his stove or furnace doesn't burn well he blames it on the manufacturer, seldom laying the charge to where it properly belongs—at the door of the builder of the chimney. In this way really good stoves and furnaces sometimes gets a bad name."

* * *

"Do the Patrons of Industry bother us much? Well, I should say they do," was the emphatic reply of a member of a well-known local hardware house the other day to a query of mine. "I don't believe there is a branch of trade that suffers more from them than does the hardware. Of course we can not prevent them or any one else from buying in the retail department, but we never allow them to trespass upon the wholesale department. And, what is more, we don't want to do business with any retail man who sells himself to them, for we know that if he stands by his agreement with the Patrons he cannot pay his creditors 100 cents on the dollar. On the other hand, if he fails to live up to his agreement he is not an honest man and would in consequence take an unfair advantage of us probably just as quickly as he would the Patrons. Consequently we don't want to do business with him in any case." RAMBLER.

A UNIQUE FILTER.

There are few of us who would care to do without our tea, coffee or cocoa, but after all who of us is there that does not like a copious draught of clear, cool, pure water. The great trouble however is in getting it pure. Filtration will secure it, provided you get a good filter. But the difficulty that arises here again is the securing of a filter that will be within the reach of all. In a word something that combines efficiency with cheapness. If all that is said about it is true the "Success" filter is "just what the doctor ordered." It is simple in construction as a glance at the accompanying cut will show. The section marked A contains the water as emptied into the filter, B is the filtering block and C the water after filtration. The success which has attended the "Success" is due to the character of the filtering block. It is a natural stone and is known by the name of Tripoli. It is quarried away down in South American. The trouble with such filtering substances as gravel, sponges and charcoal is that they absorb the impurities that they have drawn from the water percolating through them to the detriment of that which is still to come. With the Tripoli stone however it is different. All the impurities, it is said, remain on the surface, and can thus be wiped or washed off at will and without the least trouble. Down in New Orleans and other large cities in the South the Tripoli stone is termed the poor man's friend. And aptly is it applied, for the negroes and poorer class of whites in these places buy these blocks and insert in or over a hole punched in a barrel, giving them a filter first-class in every respect but appearance. The filter, as shown in the accompanying cut, retails for $5, and it is reported to be selling quite freely. Rice Lewis & Son, who handle this filter, states that a good many country hardware merchants prefer to buy the blocks seperate and make their own recepticles. By this means they are not only able to produce an effective and cheap filter, but there accrues to them a larger profit.



BONUSSING PIG IRON.

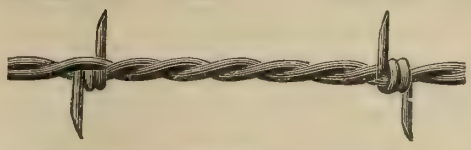
A deputation from the Canadian Manufacturers' Association, composed of Messrs. J. Bertram, president; J. J. Cassidey, secretary; R. W. Elliot, Herman Heintzman, F. Outram, W. K. McNaught, J. C. Copp, P. W. Ellis, Thomas Cowan, S. May, A. E. Kemp, E. C. Boeckh, C. R. Somerville, and J. P. Murray, waited on Sir Oliver Mowat, and Messrs. Hardy, Dryden, Ross and Bronson Monday last. They wanted a bonus of $2 per ton on the production of pig iron in Ontario, the bonus to continue for ten years, and no bonus to be paid if no production. Speeches were made by Messrs. Bertram, Cassidey, Elliot, Outram, McNaught, and Cowan. Many of the members of the Association, it was stated, were workers in iron, and they looked for the time when an iron furnace industry will be established in Ontario. They desired that the Government should do whatever they can towards encouraging the establishment of a blast furnace industry. The boundless mineral resources of the province were again referred to, and the uncertainty that had always surrounded the question was declared to be the salient reason that had thus far prevented the investment of capital. It was important to capitalists not only that assistance or inducements should be given them, but equally important to know how long the assistance or inducements would continue. It was explained that the deputation did not seek to have any particular locality favored, and the point was emphasized that no bonus was expected if no iron was produced. It was estimated that the yearly bonus would not exceed $100,000, whereas $200,000 was now expended on the imported article. The presence of great quantities of coal in the region of James' Bay and crude oil and natural gas in Ontario were mentioned as features favoring the smelting of the iron ore. Sir Oliver Mowat said the matter would continue to receive the earnest attention of the Government.

GENERAL STORE KEEPERS SAFE.

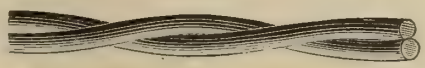
There was a hot debate in the Local Legislature Monday on the bill to amend the Pharmacy Act. The feeling against the bill ran high, and but for the joint efforts of the leaders on both sides of the House it would not have been given a second reading. The promoter of the bill, Mr. McKay, of Oxford, assured the House that the objectionable features, namely, the attempt to prohibit the sale of patent medicines by general storekeepers, had been expunged. Notwithstanding this reassuring intimation the majority of the House was evidently prepared to throw out the measure. There are several clauses whose meaning cannot be grasped easily by laymen. For instance, certain poisons and their products are to be scheduled, but these products include disinfectants, and perhaps many articles in household use. This partly explains why the opposition is persisted in—notwithstanding the attempts to meet it. The bill was referred to a special committee, and if it passes the House in any shape, which is doubtful, it will first be very much modified.

. . FENCE WIRE . .

A—4 Barbs, 6 inches apart . .
B—4 Barbs, 4 inches apart . .



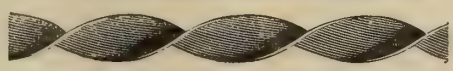
C—Plain Twist, 2 wires . . . . . .



D—Plain Twist, 3 wires . . . . .



F—Ribbon . . . . . .



G—2 Barb, 5 inches apart . . .
H—2 Barbs, 2½ inches apart .



I—2 Barbs, Flat Barb . . . . . .



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Etc., Etc. . . . . .

COUNTRY ROADS.

At the meeting of the Canadian Institute, of Toronto, on Saturday, Alan Macdougall, C.E., read a paper on road improvement. He pointed out that whilst the most careful attention had been paid to improving railway and vessel transport, so that freight can be carried at the lowest cost, no attention has been paid to road improvement. The condition of our common roads is what it was 30 years ago. In spite of the keen competition to which they are subjected farmers have not yet realized huw much they lose in taking a ton of produce to market over a bad road. Enormous sums are wasted every year in so-called roads repairs under the statute labor system. In any well-settled township the value of this labor ranges from $3,000 to $5,000 per annum, which if properly expended would be ample to make good roads and maintain them in good condition. Any movement for road improvement must strike at the abolition of statute labor and the introduction of more practical methods of management. The common road must be treated as a channel of commerce, farmers must pay attention to the economic questions involved in cheap transport, and remember that whilst they object to a slight increase in rates by railways they pay lavishly for transport over every mile of a bad road from the farm to the railway station. If it costs $1 to haul 100 bushels of wheat one mile on dirt roads, and by improving them the cost can be reduced to 20 cents per mile, the price of the wheat is raised accordingly. Many schemes have been proposed. The lecturer favored those which tended to put the construction of roads beyond the influence of local politics. He considers road construction companies composed of influential men in each country, with a well-qualified engineer, would construct good roads and give the best value for money expended; the stockholders all being in the country would have a personal interest in the judicious expenditure of the money, and the work would be carried out more thoroughly than under any of the systems now in operation. The cost of the improvements would be levied on the adjoining property on the local improvement plan, or under a clause similar to chap. 184, section 569, of the Municipal Act, which governs the procedure in drainage matters.

THE RIGHT KIND OF PROTECTION.

Dear HARDWARE,—In my opinion the right kind of "protection to home industries" is for Canadian dealers and consumers to buy the production of Canadian manufacturers and Canadian workmen, and particularly so when the Canadian manufacturers can place on this market as good an article at as low a price as can be produced elsewhere. A recent visit to the James Smart Manufacturing Co., at Brockville, was a revelation to me, and amongst their immense variety of manufactures perhaps the most noticeable to a close buyer is their make of steel butts with riveted and loose pin. The fact that this firm can compete in price and produce as good if not superior article should certainly induce all true Canadians to handle their goods. As one of the retail hardwaremen of Canada I propose hereafter to handle the Jas. Smart Co.'s steel butts and no foreign makes.

G. K. MACKEEN,
North Sydney, C.B.

TRADE CHAT

Three hundred tons of wire are used annually in the United States in the manufacture of hair pins.

A $100 burglary occurred on the premises of J. McKay & Co., general merchants, Lyndhurst, on Wednesday night.

England pays annually for foreign live animals £9,244,589, and for meat, poultry, eggs, butter and cheese, £43,329,207.

The British Columbia Iron Works have secured the contract for all the iron work in connection with the quarantine buildings at William's Head.

E. Leonard & Sons, of London, Ont., shipped three of their Leonard-Ball automatic engines of 15, 30 and 60 horse power to the World's Fair last week.

Thomas Stenton, of the William Hamilton Manufacturing Company, Peterboro', has been united in marriage with Miss Matie, sixth daughter of D. O. McDonald.

The foreign coal shipments from Nanaimo, B.C., during the month ending 31st March, 1893, and also during the corresponding month in 1892 were 65,870 and 56,068 respectively.

Out of a total of 74,000,000 bushels of grain shipped last year from the port of New York alone only the paltry aggregate of 175,000 bushels was carried across the ocean in vessels of American register.

The Dominion trade returns for the ninne months are very encouraging. The exports last month increased $2,500,000. For the nine months they are $4,060,000. The imports for the nine months show an increase of $6,021,000. In the same time the duty increased $1,318,000.

It is noticeable that while paper is very largely used at present in the manufacture of many articles sold by the house furnisher, such as pails, buckets, boxes, etc., heretofore known as wooden ware, wood pulp enters largely into the manufacture of the paper, and the articles remain woodenware still.

An establishment for the manufacture of Cans is about to be started at Margaree Harbor, C.B., under the management of John McQuarrie, of the firm of McQuarrie Brothers, lobster packers. This will no doubt be a good industry, as thousands of lobster and beef cans are imported annually.—Critic.

Building operations in Oshawa are likely to be more active this spring than for many preceding years. There is a general call for dwellings of about six rooms, and a number of such will soon be in course of erection. There are not half a dozen vacant houses in the town. Councillor Henderson is the originator of a commendable scheme for supplying citizens with cold spring water. The water will be conveyed probably by gravitation to two fountains in the business centre of the town. The McLaughlin carriage factory, which now employs nearly 150 hands, is running night and day, as are also the Oshawa roller mills.

To avoid misconception and to ensure uniformity in the collection of duty, collectors of customs have been instructed that paving blocks of stone, not further advanced than chipped or rough hammered, are properly dutiable under item 547 of the tariff at the rate of 20 per cent. ad valorem.

Depression of trade has somewhat reduced New Westminster, B.C., real estate values. The assessment of 1893 therefore shows a net reduction of $240,000. As, however, there is an increased total of 60,000 in tax exemptions, the real decline under the present assessment is only about $180,000, or about 3 per cent.

New South Wales is going into the manufacture of pig iron. Wallerawang is the particular site of the smelting works, where both mineral and fuel are said to exist in close proximity. The place is favorable situated, besides, being upon the Great Western line, about 100 miles from Sydney.

The electric light company at St. Catharines are extending their facilities for supplying the city with light. They have disposed of two of their old dynamos, and have bought a new one with double the capacity of the old ones and with all the latest improvements. They will also extend their wires as soon as they have the power house completed.

Some capitalists interested in the western part of the Province of Nova Scotia are applying for charter for an iron and coal company. They have abundance of iron ore on the line of the N. S. Central railway at Torbrook, and coal and limestone in convenient proximity. There is no good reason they should not hold their own with other parts of the province in this industry.

Prof. A. H. Church, of London, has succeeded in obtaining metallic copper from turacin, a crimson pigment yielded by the feathers of the turacin, an African bird. The average composition of turacin is: Carbon, 53.69 per cent.; hydrogen, 4.60; copper, 7.01; nitrogen, 6.96, and oxygen, 27.74 per cent. The amount of copper in the turacin of a single bird is not quite one-fifth of a grain.

J. J. Morehouse, the New York capitalist, was in Hamilton Friday and left a document which contains the final terms upon which the smelting works industry will be established there. Mr. Morehouse makes two propositions. The first one is that smelting works will be erected capable of turning out 200 tons of pig iron per day if the city will grant 70 acres of land, exempt from taxes, give water at cost, and that $50,000 worth of stock shall be subscribed in Canada. The second proposition is that steel works, giving employment to hundreds of men and boys, will be built there if the city grants a bonus of $50,000 to assist in erecting the works.

A German inventor has made a gauge glass which combines the qualities of glass having two co-efficients of expansion, which greatly reduces the initial strains. This glass heated to 400 deg. Fahr., will stand cold water without fracture, and when heated in oil to 420 deg., stood a plunge in cold water. These glasses have been tried in locomotives successfully.

It costs something to live and a good deal to die; in fact, everything costs, says a bright exchange. Someone estimates that getting born costs the people of the United States $250,000 annually; getting married, $300,000,000, and getting buried, $75,000,000. It might be added that getting drunk costs the people of the United States more than $900,000,000 annually, or over one and a half times as much as getting born, married and buried, and more than all the bread and meat consumed in the nation.

Mr. John Cameron, general agent of the McLean Company, trade journal publishers, Toronto, called on The Gazette on Tuesday. The company he represents are extensive publishers of journals devoted to the interests of the various branches of trade and supply information in the different branches of dry goods, hardware, etc., which proves of great value to dealers. The general agent is peculiarly adapted for his present calling, and is meeting with gratifying success.—Gazette, Picton.

The customs returns of the shipments of pig and manufactured iron and steel from the port of Middlesborough during March, compare favorably with the previous month, increases being shown in every direction, and the increase of 8,000 tons being shown in the total shipments of pig-iron and manufactured iron and steel. The total shipments of pig iron during the month were 75,000 tons, an increase of 25,000 tons as compared with the month of February, when the total quantity of pig-iron shipped coastwise and foreign amounted to 50,817. The increase in manufactured iron and steel was not so large as was the case in the shipments of pig-iron. The increase only amounted to some 4,000 tons on the preceding month, when the quantity shipped amounted to 23,394 tons. The total shipments of pig-iron and manufactured iron and steel amounted to 102,000 tons, as compared with 74,211 tons for the month of February. Comparison with the corresponding month of last year would be unfair, as at that period the Durham stoppage was greatly hampering the staple industry of Cleveland. The grand total of shipments for March, 1893, was 85,031.

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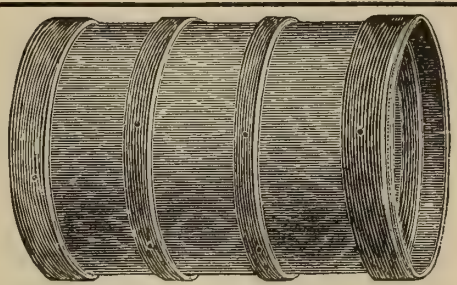
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Supplied by Graham Nail Works, Ontario Lead and Barb Wire Co., Safety Barb Wire Co., Toronto; Parmenter & Bulloch, Gananoque; and Peck, Benny & Co., Pillow & Hersey Co,, Montreal.

BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

MENDING FIREBRICK.

There are very few housewives, remarks The New York Tribune, who know that a simple cement may be made at home which whill successfully join broken firebrick so that they may be used for years. There are few things more unsatisfactory than modern fire linings. The bricks are easily cracked, and last but a few months, while in other cases they are often in use for years. It is a great mistake to allow the firebrick to get in bad order. There is an iron plate back of the firebrick in every stove, but this is easily burned through, and it costs a large sum to replace it. Therefore, it is a matter of moment whenever there is a crack in the firebrick of the stove, and it should be mended at once, or the broken brick should be replaced.

The cement to mend these bricks consists simply of powdered soapstone, which may be produced of a druggist, mixed with an even quantity of common salt and wet to a paste with water. This hardens very rapidly after it is put on, and, as the soapstone is proof, it is lasting. Do not substitute powdered pumice stone or rotten stone for it, as they will not last as long as soapstone, though various things, even sifted ashes, may be mixed with salt in this way, to form a temporary cement in case of energency. Some people prefer to line their stoves with potters' clay instead of brick, and it is said to answer the purpose very well.

PREVENTION OF RUST.

The prevention of rust on iron and steel may be accomplished in various ways.

1. In the German army oil of guttapercha is used for this purpose. It is applied with a flannel rag, and will stand for years. To take off this preventative, apply more of the oil, let it remain on the article from twelve to twenty-four hours, when both the old and the new application can be wiped off.

2. A solution of gutta-percha in benzine, of the consistency of cream, is a simple preservative against rust on metal. It can be applied with a brush, and as easily removed by the application of benzine.

3. Dissolve thirty grains of camphor with a pound of fat, remove the froth, and add graphite until it has attained the color of iron. Wipe the surface and then apply the mixture, and wipe off after twenty-four hours with a soft cloth. This will keep tools or polished iron or steel free from rust for many months.

4. To preserve polished iron surfaces from rust, melt together seven parts of tallow and one part of resin, stirring the mixture until it cools. Apply in a half liquid state; if too stiff, thin with benzine or petroleum. It preserves the polish, and can easily be removed.

5. To make a permanent preservative for iron or steel, it is best to use nothing but linseed oil, thickened with a pigment related to the metal itself, and native oxide or roasted oxide of rion is the best for the purpose. Boiled linseed oil will form a skin through which no oxidization can take place.

6. Slack a piece of fresh lime in a covered vessel with only water enough to make it crumble. While the lime is yet hot mix it with enough tallow to make it soft dough, and apply this mixture to polished surfaces. As it does not dry to any extent or become hard, it is easily removed.

Olmstead varnish or preparation has been in use for many years, and has proven itself perfect, especially for planed and ground surfaces, and on Russian iron, which are very sensitive to rust. It is made by melting first sixty grains of resin and then one pound of fresh tallow or other greece, when both are to be united. It must be applied while warm, and the surface must be perfectly clean before application. This can be removed without much trouble.—Iron Trade Advertiser.

EVOLUTION IN GLASS MAKING.

The change which is being made from pots and furnaces to tanks in window glass factories, is a matter in which hardware merchants who handle glass are interested. This movement on the part of manufacturers is not to be attributed to philanthropy, but to the necessity of cheapening their output, and of placing themselves on an equal footing with competitors. Tanks are of various sizes, but an idea as to the relative capacity of tanks and pots may be gained from the statement that the Western district has eight tanks with a capacity equal to 350 pots, and the Eastern district two tanks equal to 78 pots. In the first case one tank has about the capacity of 44 pots, and in the second case the capacity of 39 pots. A Findlay, Ohio, daily paper gives an account of a tank costing $18,000, which has been recently finished in one of the window glass factories in that city, and states its advantages over pots. The tank is 75 x 14 x 5 feet, and holds 400 tons of glass. It is fed continually, and the glass becomes gradually melted and purified while passing from one end to the other. Twenty-four blowers will be employed during the present fire, and arrangements have been made to increase the tank to a size sufficient to accommodate thirty blowers next year if desired, which is very probable. The advantages claimed for the tank are economy of fuel, economy of labor, improved quality of product, ease on the blowers, and a saving of the cost of pots, rendering the production cheaper and the profits correspondingly greater. As to economy of fuel, the proprietors claim a saving of a large per cent. In the tank there are used 32 3-4-inch burners, while the 10-pot furnace has 16 3-4-inch openings. Again, the open space, or space from the level of the glass to the roof of the tank, is one-half less than in a ten-pot furnace. It is easier on the men because they have the glass nearly on a level with themselves, and are not compelled to stoop, and the factory is much cooler. This factory used a ten and eight pot furnace last year, but with the increased capacity afforded by the tank and other corresponding improvements their output will be increased one-third, and will necessitate the employment of six more blowers and 50 more hands.—Iron Age.

THE PLATE GLASS COMBINATION.

The general tendency of business and manufacturing corporations appears to be towards a consolidation of interest, or to form a combine, as it is termed. The last proposed combination is that of the plate glass interest west of the Alleghenys, and which is expected to control all the product in that section. The past week the Crystal Plate Glass Company, with headquarters in St. Louis, have mailed a circular to its shareholders in which a proposition is made for the merging of three of the largest plate glass plants in the United States, namely, The Crystal Plate Glass Company of St. Louis, the Charlervi of Pittsburg,and the Diamond of Kokomo, Ind. It is proposed to sell these three plants outright to the National Plate Glass Company, recently incorporated under the laws of the State of Illinois, with a capital stock of $8,000,000, and this proposition, the circular states, will be voted upon by the respective companies April 20, 1893. In case the deal goes through, of which there is said to be little doubt, the National Plate Glass Company will control the entire output of glass west of the Allegheny Mountains, and with the control of this vast output in their hands it is said that the new company can easily pay 8 per cent. per annum upon its capital of $8,000,000. The Crystal Plate Glass Company of this city, which will go into the combine, is one of the most complete and extensive in the country. The company has been very prosperous since its organization, and has been paying dividends at the rate of 7 1-2 per cent. on a valuation of $2,000,000 for the plant. The last reported sale of the stock of this corporation was $165, and that is now freely bid, with none offered under $170.—St. Louis Republic.

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WIRE NAILS
TACKS, SHOE NAILS, ETC.
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SITUATION VACANT.

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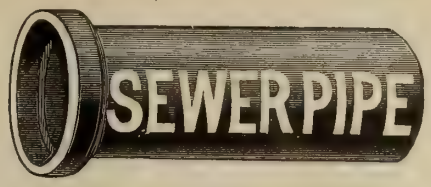
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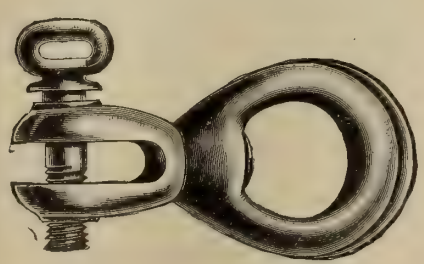
We beg to advise our customers that the fire which occurred Sunday morning will not interfere with our business. The fire was confined to our LEAD WORKS building. We have arranged to CONTINUE OUR USUAL LINES.

Yours Respectfully,

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THE WHITMAN & BARNES MFG. CO.

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This new **Swivel Clevis** can be attached to any Plow Clevis, used in place of Shackle or End Clevis.

MADE OF MALLEABLE IRON.

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Write us for Description and Prices

THE PORTLAND CEMENT INDUSTRY IN EUROPE.

The first known cement factory in England was at Northfleet, on the Thames; another was built about 1825. For many years the manufacture of Portland cement made no advance. Owing to the crude process used then, this new product was looked upon with great suspicion. In 1850 four factories only were engaged in the manufacture of Portland cement; but from 1860 this industry increased until the quantity manufactured in England exceeds 8,300,000 bbls. a year. The annual production of the most important English works are about as follows: White Brothers, 550,000 bbls.; Knight, Bevan & Sturge, 450,000; Lee, Sou & Smith, 450,000; Burnham, 450,000; Robins, 450,000; Johnson, 330,000.

The process of manufacture used in England is very much the same as it was 20 years ago. Few improvements have been realized. The raw materials used in England are chalk and clay, both very pure, and readily soluble in water. The quality of the raw materials is considered perfect, and this explains how with inferior methods of manufacture English manufacturers succeed in producing a satisfactory cement.

Only one quality of cement is made in English factories, and this includes the whole output of a kiln, less the unburnt clinkers picked by hand with more or less care. But there are different commercial qualities of cement according to the fineness of grinding. Until a few years ago the English cement was put on the market just as it comes from the mills. The sifting operation did not exist, and the result was that the cement usually left a residue of 15 and 20 per cent on the No. 50 sieve, and 25 to 30 per cent. on the No. 80 sieve. The progress in grinding made in other European factories has led English manufacturers to improve their own grinding facilities, but still the English cement, as a rule, is far from being as finely ground as the German and French Portland.

The manufacture of Portland cement was introduced in Germany by Mr. H. Bleibtreu, who, in 1852, established at Stettin the Zulchow works, which made from 25,000 to 30,000 bbls. a year until 1856. He built at about the same time another cement mill at Obercassel, near Bonn on the Rhine. These two establishments still exist, and produce yearly from 160,000 to 200,000 bbls.
from 160,000 to 200,000 bbls.

New works were built soon after, and there are now no less than 60 large Portland cement works; the annual production in Germany is about the same as in England, 8,500,000 bbls. The production of the most important German cement works is about as follows: Alsen & Son, Hamburg, 550,000 bbls.; Dyckerhoff & Son, Amoneburg, 500,000; Germania Cement Fabrik, Manske & Co., 450,000; Schilferdecker, at Heidelberg, 450,000; Mannheimer, at Mannheim, 450,000; Pommerscher, Guistorp, at Stettin, 400,000.

The development in Germany of the cement industry is not due, as in England, to the favorable quality of the raw materials; on the contrary, in many of the German works the materials used are difficult to handle, but German manufacturers have made great efforts to produce an article of reliable quality, and to develop in their works the most progressive methods of manufacture. They have organized themselves into a public association, they admit foreign manufacturers among them, and in their meetings they discuss questions relating to the manufacture and quality of cement. Thus the researches and studies made in one establishment serve all others. This association of manufacturers is one cause of the development of the cement industry in Germany during these last few years.

The works of Messrs. Dyckerhoff & Son, at Amoneburg, near Biebrick on the Rhine, were built in 1863; within a few years the annual production attained 100,000 barrels.; in 1883 the output was 400,000 bbls., and now the yearly production is 500,000 bbls. The raw materials used here are a nearly pure but very hard carbonnate of lime, which is found in the vicinity of the works, and a certain marl very rich in clay, which comes from Florsheim to the works by boat. These materials are often analyzed and the proportions of their admixture carefully determined. The laboratory of this establishment deserves special mention. Its installation is perfect, and the experiments which are made under the supervision of Mr. R. Dyckerhoff and Dr. Schuman have contributed a great deal in Germany to enlighten manufacturers and users on the properties of Portland cement.

In France the Portland cement industry did not grow as rapidly as in England or Germany. In 1880 the whole production hardly exceeded 750,000 bbls. a year; it is now, however, 1,800,000 bbls. It was only in about 1850 that Portland cement commenced to be used in France, when Messrs. Dupont & Demarie started the manufacture at Bulogne-sur-Mur in the North. They had previously spent several years in experiments to find out the best way to use the chalk marl in that vicinity, which is still the raw material they use. In a comparatively short time Mr. Demarle succeeded in finding a process so perfect that it is still followed, and the composition of the cement has not been changed.

The reputation of the cement manufactured at Bulogne is inferior to nine in Europe. The works of the Company of French Cements alone manufacture about 800,000 bbls. a year, being the largest of the kind in the world.

In Russia the first cement works were built at Polen in 1857. There are now 12 of importance; 8 of them make Portland cement, the others only natural cement. The total production of Portland cement in Russia is about 900,000 bbls. a year. The three largest works are: Schmidt, at Riga, 140,000 bbls.; Port-Kunda, Eshstand, 140,000; Grodziec, Polen, 140,000.

In Belgium there are four Portland cement works, making altogether about 800,000 bbls. a year, the largest being those of the Societe Anonyme de Niel, Ruppel, making 400,000 bbls. yearly.

In Italy the manufacture of Portland cement does not properly exist. Several works make a kind of natural cement by burning cement rock to a little higher point than common cement. The two largest factories are located at Cazale and Bergamo. In Switzerland there are several Portland cement works, but a so-called natural Portland cement is mostly what they manufacture. In Austria there are only a few establishments producing Portland cement, and their product has acquired little reputation. There are five Portland cement works in Denmark, and their output reaches 300,000 bbls. a year. In Sweden 4 factories annually produce 425,000 bbls. One establishment in Norway makes 80,000 bbls.

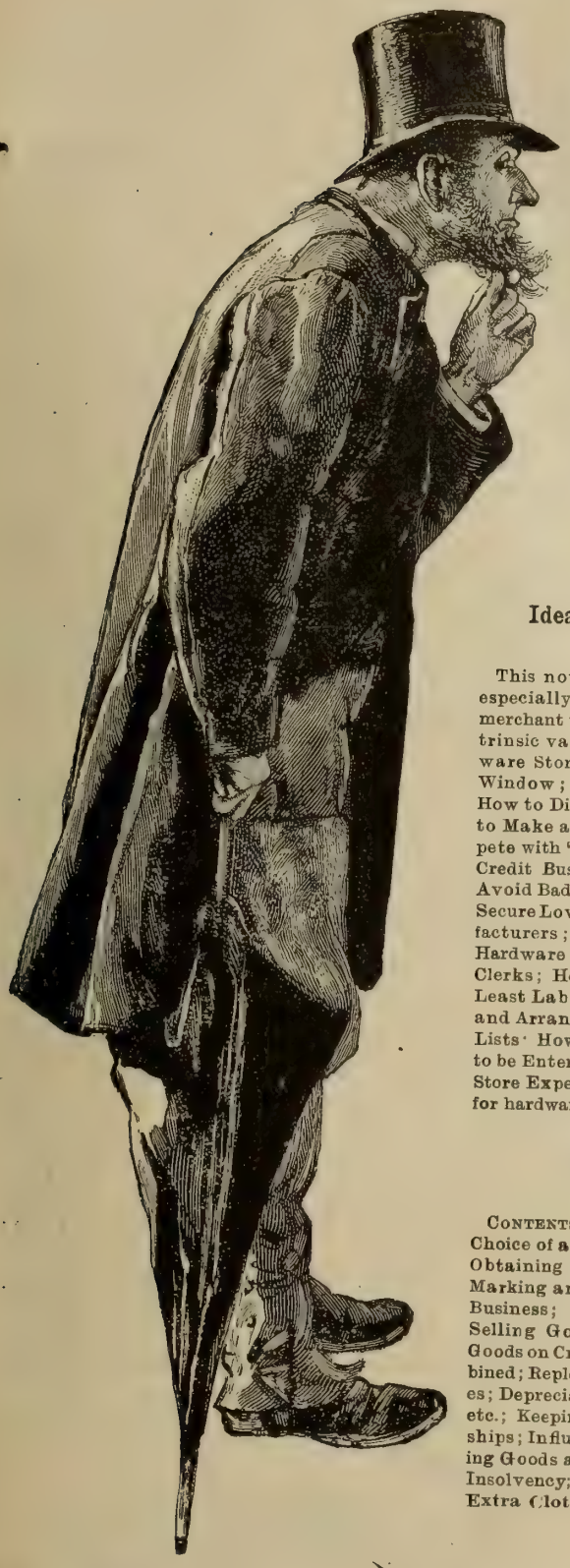
The total annual production of Portland cement in Europe is estimated at 20,000,000 bbls.—Engineering and Mining Journal.

MASONRY OF BOILER SETTINGS.

The brick work about boiler settings is, we fear, often very imperfectly laid. It is mostly done by contract, with no one to supervise it who understands the severe use to which it is to be put. The bricklayer, who may never have worked on a job of this kind before, builds good looking inside and outside walls, but the space between is apt to be filled with odds and ends in the most promiscuous manner. Furthermore, he puts the same joint in that he would use if he were building a house, and this is just what we do not want in a boiler setting, particularly in the fire-brick lining of the furnace. The joints throughout the setting should be thin, and the work should be done as faithfully inside as outside. Some sort of prepared fire-clay is used in laying the fire-brick, and it should be mixed up so thin that it cannot well be used with a trowel. Some mill owners who have had experience in this direction will not allow a trowel to be employed at all, but require the men to use iron spoons. The fire-bricks should be dipped in water as they are used, so that when they are laid they will not immediately "drink up" the water from the cement. They should then receive a thin coating of the prepared fire-clay or kaolin paste, and be carefully placed in position with as little of the kaolin or fire-clay as possible. Every sixth course, beginning with the grates, should be a row of headers, well bonded into the masonry behind. The headers are of little use unless they are well secured into the walls of the setting, for when the lower courses of fire-brick have burst away more or less, we have to rely on these headers to a considerable extent to hold the upper part of the wall in position. In repairing fire-brick linings, the lower courses, which burn out fastest, can be removed and replaced without disturbing the upper part of the wall; provided the headers are secure, while if they are not, the entire wall may have to be rebuilt, and this cannot be done without either removing the boiler or tearing down a considerable part of the setting.—Machinery.

Thieves visited McLaren's general store at McLaren's Depot, on the K. and P.R., on Saturday night and secured $1,000 from the safe, which was broken open with dynamite. They also carried off a considerable quantity of dry goods. The burglars then took a hand-car, ran it down to Sharbot Lake, and boarded the C.P.R. eastern express. They have not yet been traced further.

The secretary of the Toronto Board of Trade received a communication yesterday from the general manager of the Grand Trunk Railway, intimating that on and after the 14th of May, trains would be run from Toronto to Buffalo and back in connection with the New York Central connections, arriving at Buffalo at 11.50 a. m., and leaving same place at 6.30 p. m.



It is more honorable to have built a dog-house than to have dreamed of building a palace. . . . . .

BOOKS FOR BUSINESS MEN.

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This novel book is the only book ever written especially for hardware men, and every hardware merchant will find it of decided help and of intrinsic value. It tells How to Advertise a Hardware Store; How to Dress a Hardware Store Window; How to Select Seasonable Goods and How to Display Them to Best Advantage: How to Make a Success with Hardware; How to Compete with "Department Stores;" How to Turn a Credit Business into a Cash Business; How to Avoid Bad Debts and Increase Trade; How to Secure Low Quotations from Jobbers and Manufacturers; How to Arrange the Fixtures in a Hardware Store; How to Treat and Manage Clerks; How to Keep Your Accounts with the Least Labor; How to Systematize Your Business and Arrange Its Details; How to Arrange Price Lists· How to Meet Close Competitors and How to be Enterprising; How to Properly Proportion Store Expenses, and thousands of practical hints for hardware merchants. **Paper cover, $1.**

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Nath'l C. Fowler, jr., the eminent advertising doctor and expert at business, has written a book all about advertising in daily papers, weeklies, magazines, religious and agricultural papers, in street cars, signs, lithographs, novelties, calendars; about cuts and how to use them; window dressing; store decoration; points on selling; keeping accounts; everything about publicity and business outside, written from the merchant's standpoint—a book worth its price to the man who spends $25 for printing, and the more to the extensive advertiser and merchant; 177 great advertisers answer the vexed questions of advertising, presenting individual and collective opinion of positive value—most important chapter written. **Cloth $3.75, half leather $4.50, full leather, $5.**

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THE J. B. MCLEAN PUB. CO., LTD.
10 FRONT ST. EAST,
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MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below, and in our Prices Current, necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, April 28, 1893.

HARDWARE.

All the jobbing houses claim to have done a fair sorting up trade of late although the actual movement this week has been mainly restricted to city orders and goods for near-by points. Quite a quantity of material has been sold, however, for shipment by the first boats, and further orders in this connection have been reported during the week. In heavy hardware business for importation is backward, but values in this connection are shady, in fact, the general tone of values, with the single exception of pig iron, is that way. Payments have not been quite so good recently, but merchants here don't express any uneasiness over the fact, attributing it to he bad country roads and backward spring..

Jobbers report some good sorting up orders for wire, the aggregate business involved being considerable since the quarterly meeting, and quite a quantity of goods are ready for shipment as soon as inland navigation commences.

Cut and wire nails come in for a fair degree of attention in a regular jobbing way, and makers say that they have booked some fair contracts since the association meeting decided buyers that there would be no change.

The demand for small goods, tacks, etc., is satisfactory, quite a few lots of cheese box tacks have been put through during the week on both city and country accounts.

Good sorting up orders are reported for locks, bolts, cutlery and shelf goods, also, in fact jobbers generally appear to be satisfied with the spring turnover so far. Tinware has been fairly active; hinges, bolts, and other building material have also come in for a fair degree of attention.

PIG IRON.

There has been very little change in the pig iron market during the week. The only spot business that we note was the sale of a small lot of Langloan at $21, closing out a lot, and some Carnbroe at $19. These two kinds, and a moderate quantity of Eglinton, which is quoted at $19.50, is the only British pig on the market here at present. Business in the matter of forward delivery is very small. Western buyers are only taking small lots of the Superior brands, as they secure the bulk of their supplies from the cheaper grades of American, and local buyers see no cause for any rush about ordering. Sales for Summerlee and Gartsherrie to arrive are quoted at $18.45 to 1875, and Langloan is offered at $20 to $20.50 for future delivery.

BAR IRON.

The bar iron market is quiet and unchanged. We note sales of car lots at $1.90, and smaller quantities at $1.95, the standard basis.

TIN PLATES.

There is very little to report in tin plates, either in the way of spot business or forward delivery. One lot of coke changed hands at $3.20, and it would cost about the same figure to lay them down here ex-ship. Charcoal is held at $3.40 to arrive, with spot prices $3.50 to $3.75.

CANADA PLATES.

There has been further enquiry for Canada plates ex-store, and business in some moderate sized lots has occurred at $2.45 to $2.50. To arrive in the spring sales agents here are asking the same figures for 100 box lots ordinary brands accord- to sellers' option.

OTHER METALS

Other metals are generally quiet and unchanged, ingot tin selling at 22 1-2 to 23c., and copper 12 1-2 to 13c., spelter is at $4.75 to $6, and antimony 12c. to 13c.

SHEET IRON.

There has been some small sized orders placed for spring delivery in sheet iron at $2.40 to $2.50 for No. 28, 10c. less for No. 26, and $2 for No. 20 and heavier grades.

LEADS AND PAINTS.

A moderate business is doing in varnishes, etc., but in leads makers are not pushing business to any great extent, although orders are naturally freer at the reduction of 1 4 of a cent.

OILS.

The feature of the oil market is the firmness of seal oil, which is held here in round lots at 50c., and in jobbing quantities, 52 1-2 to 55c. All advices from Newfoundland confirm the expectations of a very short output. Fish oils show no feature of importance, and no new cod will be offered here for some time. Linseed oil is the same as last reported, 60 to 63c. for raw and boiled respectively.

GLASS.

There have been some fair sized orders for glass received during the week for shipment on the first boats. Prices are unchanged at $1.35 for first break. Putty in bulk is steady at $1.90.

NAVAL STORES.

Turpentine is quiet and steady, business of a moderate kind being to note during the week at 53 to 55c. Resins show no change, and other lines are the same way. We quote: Turpentine, 56 to 57c.; resin, $2.40 to $4.50; coal tar, $3.50; pine pitch, $2.50; pine tar, $3.50 to $3.75; cotton waste, colored, 5 3-4c. to 6 1-2c.; do. white, 8 to 10c.; oakum, 5 1-2 to 7 1-2c.; cotton oakum, 10 to 12 1-2c.

CEMENT, ETC.

There is little new to be said about the cement market, spot prices on stock ex-store remaining as before. For forward delivery, however, sales have transpired at $2.10 to $2.20 for best London brands and $1.95 to $2.10 for Belgian. On spot we quote $2.50 to $2.65 for best London brands in jobbing lots. There is no change in fire-bricks, which range from $18 to $22 per 1,000.

PETROLEUM

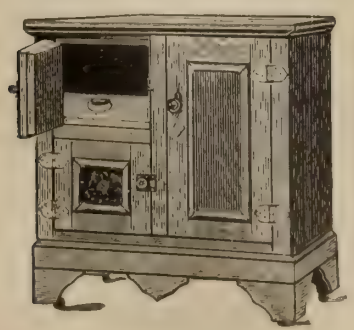
Refined petroleum is in better demand, the movement being good for the season. Canadian refiners are still cutting prices, and while 12c. is still the nominal quotation for round lots, it is an admitted fact that sales have been made inside of this. We quote as follows: Canadian 12c. at shed in Montreal for round lots, and 12 1-2c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c. in 10-barrel lots, 19 1-4c. in 5-barrel lots, and 19 3-4c. for single barrels, 2 per cent. off for cash; American bennzine, 23 to 25c., Canadian benzine 10 3-4c. Petrolea, 12 3-4c. Montreal.

MONTREAL TRADE NOTES.

Newfoundland cables say that the output of seal oil will not be one third of an average one.

Mr. A. J. Whinby, manager of Simpson, Hall, Miller & Co., reports general business quiet, but says that the firm have been

Refrigerators



Hardwood, Lined Galvanized Iron, Patent Locks, Four Sizes

These are highly finished and each season has shown an increasing demand. This year we are also making a cheaper line in above style, so as to meet all requirements.

Milk, Delivery and Creamery Can Trimmings.
All Sizes Body Stock for Cans and Cheese Vats.
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Lithographed Tea Caddies and Signs.

We make and Supply everything used in the Stove and Tinware Trade.

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

pulling through some large hotel orders recently in plated ware, etc., notably the Mount Baker Hotel.

The big National Monument building on the main street is being fitted throughout with Safford radiators.

Messrs. T. W. Ness & Co. say that they are very busy at present executing some large orders for electric plant.

Wm. Clendinneng & Son are putting in the iron work and fittings in the new Witness office at the corner of St. Peter and Craig streets.

H. McLaren & Co. iron brokers and general manufacturers agents are removing from their old offices on St. Francois Xavier street, to new premises at 706 Craig street.

McArthur, Corneille & Co. report a lot of orders for shipment west by the first boat up the canal, but don't expect that navigation in this respect will be opened until the 5th or 6th of May.

Alex. McArthur & Co. report a good demand for felt and roofing paper from city builders who have more than the usual amount of operations in progress in the city and suburbs this spring.

Delegations of iron founders, brass founders, steel manufacturers, rolling mill men and wire manufacturers waited on the Hon. Messrs. Foster and Bowell here during the week with regard to a revision of the tariff.

Mr. Frank Hyde, of F. Hyde & Co., is just back from a visit to Great Britain. He paid a visit to all the big cement and drain pipe works on the other side, and has come back with a lot of valuable new ideas.

A. Ramsay & Son are supplying the extensive glass order for filling up the new Witness building at the corner of St. Peter and Craig streets. They have already set some fifteen large handsome plate glass windows in the counting house floor.

Messrs. R. C. Jamieson, Robert Munro, Wm. Johnson and J. C. McArthur representing the paints, oils and varnish trade, waited on the Ministers of Trade and Commerce and Finance during the week regarding the revision of the tariff.

TORONTO MARKETS.

TORONTO, April 28, 1893.

HARDWARE.

Nothing particularly new has developed during the week. Taken on the whole trade is not so brisk as a week ago, but,at the same time,it is not dull. On the contrary there is a good seasonable movement, while in such lines as harvest and garden tools the demand is much greater than the supply, the manufacturers being far behind with their orders. For milk can trimmings the demand continues to fall off. Nails are going out in good quantities and orders are more plentiful. The feeling is firmer on chain on account of the withdrawal of prices by English manufacturers. Plumbers' supplies remain in an unsatisfactory condition. About the only change in prices worthy of note is an advance in green wire cloth owing to the scarcity. Payments continue to improve.

NAILS—Orders are more plentiful if anything, and the movement is reported to be good but devoid of any special feature.

ROPE—Is going out more rapidly for the spring trade in all sizes at unchanged prices.

CHAIN—There is a good deal moving in the smaller sizes. Prices have been withdrawn in England owing to the continued strike and an advance is anticipated. Jobbers here seem to have fairly good stocks and they are still selling at old figures.

TOOLS—Manufacturers are just as backward as ever in filling orders for both harvest and garden tools. It is estimated that they have turned out double as many goods as last season, and yet are some two to three months behind in their orders.

TINWARE—Demand continues to fall off for milk can fixtures, but generally speaking a fairly good business in tinware is being done.

PLUMBERS' SUPPLIES—Business in this line continues dull and featureless.

GREEN WIRE CLOTH—This article has been advanced to $1.90, manufacturers, owing to a scarcity, being unable to supply the demand. An American manufacturer writes a local firm that he would readily pay for five million feet 20 cents per 100 square feet more than he recently sold car lots at.

METALS.

A fairly good movement is reported in metals, particularly for Canada plates, ingot tin, black iron, tinned iron. Pig iron shows some awakening, and bar iron is moving out freely. Antimony, ingot copper, zinc spelter, zinc sheet, and lead are not much wanted.

PIG IRON—The usual spring awakening seems to have set in, and there have been direct import sales of 50 and 100 ton lots at $19.25 for Carnbroe and at $20.25 for Carron. Siemen's is quoted at $22 and Southern at $19.

BAR IRON—There has been a good movement on the basis of $1.95.

TIN PLATES—There has been no change. Stocks are arriving and are quite sufficient for the usual seasonable demand now obtaining.

SHEET IRON—There is nothing to note in this beyond that a fairly good seasonable trade is being done.

CANADA PLATES—There is not much demand and stocks now arriving are ample. Orders are at the moment being taken for import, fall delivery. The chances are that there will be an advance in Canada plates and in all heavy goods owing to the increase in freights. Prices are unchanged, all dull being held at $2.65, half-half at $2.75 and all bright at $2.80 to $3 per box.

GALVANIZED IRON—This line is moving freely at 5 to 5¾c. for Queen's Head and Gordon brands.

ZINC SHEET—Not much doing and prices unchanged at 5¾ to 6c. for 5-cwt. casks and 6 to 6¼c. for part casks.

ZINC SPELTER—Dull and quoted as before at 4¾ to 5¾c.

LEAD—Dull. We quote 3½ to 3¾c. ordinarily and 3¼c. for ten-ton lots.

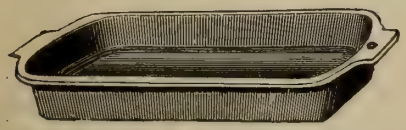
ANTIMONY—There is very little demand for it at the moment. Prices are unchanged at 13½ to 14c. for Cookson's and at 13 to 13½c. for other kinds, but these prices would be shaded for large lots.

INGOT TIN—This line is quoted higher at 24 to 24½c. in sympathy with the advance in the States. Demand is good.

INGOT COPPER—There is the usual demand for small lots at 12⅞ to 13c. for the better qualities.

FIRE PROOF
ROOFING
ILLUSTRATED CATALOGUE FREE
METALLIC ROOFING Co
MANUFACTURERS. TORONTO

"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

MARKETS—Continued

GLASS.

There is a good brisk demand on the basis of $1.25 to $1.30 for first break. All the import orders for glass are now arriving.

PAINTS AND OILS.

The Ontario Association met Friday and decided to put the price of turpentine down 2c. a gallon. The price now is 52 to 54c., the outside figure being for outside points, freight allowed. The volume of business generally is somewhat behind that of last year at this period, and it seems to be owing to the unsatisfactory condition of business in the city. One house puts it something like this: "Country trade is 10 per cent. better than last year, while city trade is 25 per cent. worse." Payments are being fairly well met. There is a fair demand for white lead on the basis of 4¾c. Trade in prepared paints shows a slight falling off, most retailers having got their stock about in. A fair business is being done in varnishes at unchanged prices. Linseed oil is quoted as before, but there is not much doing. Most dealers seem to have pretty well supplied themselves with castor oil, for since the advance there has not been much wanted.

OLD MATERIAL.

Supplies are a good deal freer and an increase in the demand is reported. Prices remain as before. We quote the following quotation:—No. 1 heavy cast scrap 65 to 70c. per 100; stove cast scrap 40 to 45c.; No. 1 wrought scrap 50 to 60c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c.; new light scrap copper, 8 1-2c.; heavy scrap copper 9½c.; old copper bottoms, 8c; light scrap brass 5½c.; heavy yellow scrap brass 7½c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1¼ to 2c.; scrap zinc, 2½ to 2¾c.; scrap rubber, 2½ to 2¾c.; country mixed rags, 80 to 85c. per 100 lbs; clean dry bones, 50 to 60c. per 100 lbs.

HIDES, SKINS, WOOL, TALLOW.

HIDES—There is a fair demand for all well-selected buffs and prices are steady. There is no accumulation of stock in this market, but in the country there is an accumulation owing to there being so many grubby and No. 2 hides. This kind of stock is neglected. For good selections 5¼c. is the idea, but car lots would probably go at ¼c. less, with a large proportion of No. 2 selling at 75c. to $1 per cwt. lower.

SKINS—Calfskins are weaker, and the price has gone down from 5 to 10c. per skin, and there are expectations of a further decline, as this class of stock has been selling too high compared with the price of the articles into which it is manufactured. Jobbers are paying 7 to 8c., and are selling selects at an advance of 1c. on these figures. There are not many sheepskins coming in, and prices are nominal at $1.35 to $1.45.

TALLOW—Market is demoralized. Jobbers are selling good prime rendered tallow at 6c. a pound. All they are offering is 5 to 5½c., but they do not seem to be getting any at these figures. Rough is unchanged at 2½c.

WOOL—The market is quiet, and the excitement consequent upon the upward tendency of prices at the sales in London has subsided. Business was checked for the moment, as most of our manufacturers had good stocks of wool and were looking for a decline instead of an advance. The mills are running day and night. Prices in all tweed, flannel and blanket wools are well maintained. Fleece wool is nominal at 17 to 19c., clothing 25 to 26c., Canada South Down 27 to 28c.; white Indian, suitable for blankets, 17 to 19c., gray East Indian 11 to 13c., B. A's white clothing 32 to 34c., cross breeds 26 to 28c., Canada extra 25 to 27c. Canada super is scarce and good selection would readily fetch 23c.

SEEDS

Trade generally is quiet. Red clover is quoted 15c. per bushel lower. Alsike is scarce and higher. A good jobbing trade is being done in timothy, but prices are lower in sympathy with the Western market. Prime red clover is quoted at $8.70 to $8.85, extra choice $8.85 to $9, and $9 to $9.15 for Mammoth or Large Lake. Alsike runs all the way from $7.80 for good to $8 90 for choice. Timothy sells at $2.45 to $2.50 for choice, $2.53 to $2.65 for extra, and $2 65 to $2.80 for unhulled flail threshed.

PETROLEUM.

The Petrolea Advertiser in its weekly report, says: "During the past week there has been very little change on the face of matters in connection with the trade. The demand for crude has not grown any brisker, but though there is no excitement to be seen there is yet a fair, steady trade going on just the same. The Imperial Oil Company are taking in most of the crude and prices range about $1.15 f. o. b. Imperial Co's refinery. What the future may have in store for us can only be a matter of conjecture; there are so many circumstances liable to arise, the influence of which may work entirely antagonistic to the general desire, that it would be folly to prophecy on the matter. The indications at present all point to a lively trade, and good values this fall, and there seems to be a general disposition among holders of stock to believe that such will be the case." Refined 10c. in barrels, and 7½c. in bulk.

There is a brisk demaud on the Toronto market for machine oils, but outside this particular line there is just the usual seasonable trade doing. Prices are unchanged. We qnote: Canada refined oil, 13 to 13½c.; carbon safety, 17½ to 18c.; Canada water white 19c.; American water white, 21 to 22c photogene, 25c.

MARKET NOTES.

Rice Lewis & Son report large sales of wheelbarrows.

Green wire cloth has been advanced to $1.90 owing to a scarcity.

Ingot tin is quoted higher at 24 to 24½c., owing to advances in the States.

H. S. Howland, Sons & Co. have just received a full line of Wostenholm's pocket cutlery.

English manufacturers have withdrawn quotations on chain, and an advance in price is not at all improbable.

Manufacturers of harvest and garden tools claim to have turned out nearly double as much stuff as last year, and they are now away behind in their orders.

The Gurney Foundry Co. have got in a new milling machine with a capacity of 500 loops per day. The firm were compelled to get it owing to the demand for its radiators.

From an item that appeared in the last issue it might have been gathered that the Hartz Steel Tackle Block was not a new thing on this market, while, as a matter of fact, it has only been made during the last two or three months, and all the patterns are not yet complete. H. S. Howland, Sons & Co. expect to have their stock of these blocks complete in ten days or two weeks.

The Gochen Rapid Carpet Sweeper is having a large and increasing sale. It is a beautiful machine, contains important improvements, and is taking the place of the Grand Rapid altogether.

AMERICAN MARKETS.

New York, April 28.

COPPER.—The report came from Boston that leading producers of Lake Superior ingot have recently closed contracts with American consumers for a considerable quantity of the metal at 11c. per pound delivered. As to the amount involved no particulars were divulged, but the few facts that leaked out indicate that the large consumers have contracted for at least three months' supply. What the smaller concerns have done is very uncertain at the present time, and whether the market is in better shape than it was at the beginning of the month is uncertain, although the last statistical exhibits reflect barely average production on this side of the Atlantic and some reduction in the visible supply in Europe. However, the demand thus far this year has been disappointing, and the surface indications are that there is more than enough copper to go around despite the reduced output. Casting brands sell in small quantities at about 10 3-8 to 10 1-2c., but for round lots anything above 10 1-4c. is the exception. London cables quoted merchant bars at £44 7s. 6d. for prompt and £44 15s. for future delivery.

TIN PLATE.—The lower level of prices established on Monday's dealings was slightly shaded on Tuesday, and the market wore a rather depressed appearance. To all accounts the bulk of supply is controlled by large concerns who seem inclined to speculate against the effect of unusually large stocks here and the possibility of the McKinley duty being rescinded, but enough tin leaks out from one quarter and another to obstruct a successful bull movement, temporarily at least. In any event, the record for the day shows that there were more sellers than buyers of Straits tin at prices on the basis of 20.60c. net cash for prompt delivery, and that May delivery could probably have been secured at that price. A sale was recorded on the Metal Exchange of 5 tons Boustead tin at 21 1-4c. prompt delivery.

PIG LEAD.—There was no new developments in the market for this metal. Offerings were more reserved, with sellers standing out for 4.10c. upward and demand was moderate, with bids above 4.05c. for prompt delivery the exception. Result, no business apart from very commonplace trades at intermediate figures. The St. Louis market was quoted easier at 3.85c. London cables again quoted £9 15s. in the English market for soft Spanish lead.

SPELTER.—Business was very moderate in the local market, and general reports were tame. Demand continues light, higher, and, while somewhat reduced, the supply seems sufficient to meet urgent needs of consumers. According to latest mail advices the production of ore in the West since January 1st has been

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

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Head Office and Factory: Montreal; **J. J. McGILL, Man.**

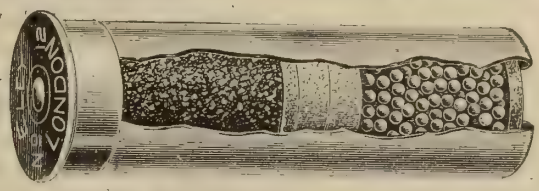
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J. H. WALKER, Manager.

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CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. Wholesale Only.

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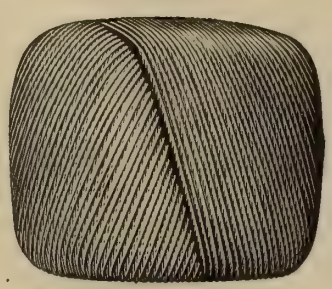
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Binder IS THE Twine



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Common Sense . . Brand . .

Completely Weather and Rot Proof

CHEAP AND EASY TO WORK

Follows Manilla on all Machines in Good Order without Change of Adjustment.

MARKETS—Continued.

104,096,000 pounds, or an average of about 6,500,000 pounds per week, while returns for the last of the sixteen weeks shows 7,050,000 pounds output. On their face those returns would indicate a quite full supply. Still, sellers offer reservedly and prices are held with some showing of firmness at 4.40 to 4.45c. for Eastern delivery, while St. Louis telegrams again quoted 4.20c. there. London cables were £18 for good merchant brands.

ANTIMONY.—About the usual demand for moderate quantities prevailed and the orders received were filled at about former figures. On round lots the quotations are 10 to 10 1-8c. for Hallett's, 10 1-4 to 10 3-8 for LX, and 10 1-2 to 10 3-4 for Cookson's.

TIN PLATE.—There is no new feature in the market. Prices vary to a moderate extent only, and business is still of strictly routine character.

IRON AND STEEL.—The market for American foundry and mill grade iron remains unchanged. Business is not as brisk as might be desired, and prices are still a little irregular, but the general movement is very much the same at the present time as it has been for a month or six weeks past.

Scotch pig is slightly irregular in price and moving slowly at about former prices. Importers quote at $21.50 to $22 for Coltness, $21 to 21.50 for Summerlee, $20 to $20.50 for Carnbroe, and $19.50 to $20 for Eglinton.

Foreign ferro-manganese, 80 per cent., is quoted at $57 to $57.50, and spiegeleisen $25.50 to $26 for 20 per cent. Transactions are few, and the demand runs light.

Old material continues slow of sale and prices show little fluctuation. Current quotations are $16.50 to $17 for iron tee rails, $14 for steel, $16 for No. 1 wrought scrap iron, $12.50 to $13 for machinery cast scrap, and $13 to $13.50 for car wheels.

Business in all lines of manufactured iron and steel is merely fair, and the market presents no feature distinctly in contrast with those that have prevailed for several weeks.

TRADE SALES.

The stock of Howson & Co., general dry goods, Walkerton, valued at $7,812.03, was sold at 57 cents on the dollar. J. F. Gibson was the purchaser.

F. M. Unwin, crockery and glassware, Barrie, assigned to Chas Langley, with a stock valued at $3,197.85. His stock was sold at 49 cents on the dollar to R. A. Dutton of Barrie.

At Suckling's on Tuesday the grocery stock of J. Beilby, 84 Dundas street, Toronto, valued at $911.24, and furniture $280, was sold to Dahl Bros., Orangeville, at 64c. on the dollar.

The stock of J. P. O'Higgins, a London grocer, is to be sold by the assignee this week. As is usual, the bankrupt knew more than his brother grocers and could run his own business. So he refused to join the association or co-operate with its members. Being also a price cutter and not having the delinquent list he got a good many bad accounts. This is the second time he has failed. The association has decided to watch the sale and to bid it in if the price does not go high enough to keep the buyer from slaughtering it.

INTERESTING TO RETAILERS.

A neat little pen-wiper has been issued by the Hamilton and Toronto Sewer Pipe Co. (Ltd.) On the top is a representation of one of their steam-pressed vitrified salt-glazed sewer pipes.

Berger Bros., manufacturers of tinners' hardware and roofers' supplies, Philadelphia, Pa., have issued their catalogue for 1893. It consists of some 90 pages and is profusely illustrated with cuts of the numerous styles of articles which this firm handles. In anticipation of a still further increase in business Berger Bros. have increased their plant, and added new goods to their already extensive line of supplies.

A photo of the Electrical Exhibit sent to Chicago by T. W. Ness, of Montreal, is circulating among the trade. Besides a number of annunciators, a complete telephone switchboard is also shown. The principal exhibit, however, is a display of telephones, which will be exceptionally interesting at the present time, owing to the patents expiring on them in the United States. Main Line Telephones, suitable for 200 miles use, are shown, Receivers, Blake and Carbon Transmitters, etc. The warehouse telephones form a prominent feature, as these instruments are now largely used in factories and offices. With this system there is no central exchange required, each telephone having its own switchboard, and being able to communicate with any or all of the others. These are fully described in a new illustrated catalogue which will be sent free to applicants.

The Magee Mfg. Co., Ltd., of London, Ont., report trade active this season, particularly so in their special make of navvy, contractors and garden wheel barrow's. Several large orders having been shipped to Manitoba and points farther west, and to Montreal in the east. This firm manufactures wheel-barrows, specially adapted for navvies, railroad and other contractors work, gardners, etc., each class of work requiring a differently constructed and specially made barrow. The Magee Mfg. Co. have devoted considerable time and study on this line and have succeeded in designing a barrow adapted to each of the above mentioned special purposes. They also manufacture barrows of any special design to order. Attention is also directed to their improved horse poke. This poke is simple in construction, light but durable and easily adjusted to any size. No horse could in any possible manner get over through or under a fence while wearing the Improved Eclipse Poke. The firm also shows a large assortment of log and counter measures, yard sticks and foot rules of every description, down even to the common 1 foot rule for school children and advertising purposes. They however pay special attention to their lumber department. The trade is invited to write for prices, etc.

PERSONAL MENTION.

G. K. McKeen, North Sydney, C.B., paid a flying visit to Toronto this week.

Mr. McNab of J. & D. McNab of Claremont has been touring the warehouses this week.

G. R. Vanzant of Vanzant & Co., Markham, has been in the city replenishing his stock.

C. Beck of the Beck Manufacturing Co., Penetang, has been in Toronto this week on business.

John Moore of Hamilton, was in the city this week. Speaking of the building trade prospects in the Ambitious City, he said they were good.

A. G. Peuchen of the Canada Paint Company, Toronto, was married Wednesday. Miss Thompson, third daughter of the late John Thompson, was the bride.

Mr. Marrett of Chicago, manager of the American branch of the Coventry Machinists, was in Toronto this week. He reports that there is a large and increasing demand in the States for the Swift bicycle.

W. G. Ross of Owen Sound was in the city this week, buying supplies for the first boats, goods to be shipped at once, it being expected that the boats will start this week. Mr. Ross reports open water at Parry Sound, but not all the way through.

A. M. Wastell, representing Robt. Thomson & Co., wholesale saw mill men and lumber merchants, of Hamilton, Ont., is staying at the Leland. He comes west on a holiday trip, but while here will collect what information he can about the lumber business. He takes east with him samples of B. C. shingles in which he thinks a considerable trade can soon be done with Eastern Canada.—News Advertiser, Vancouver.

WOODSTOCK BOARD OF TRADE.

These officers were elected at the annual meeting of the Woodstock Board of Trade: Pesident, Andrew Pattullo; vice-president, D. W. Karn; secretary-treasurer, J. G. Wallace; auditors, M. Douglass and R. W. Sawtell; council, John White, George Caldbeck, Dr. McLay, Jas. Scott, Jas. Sutherland, J. M. Grant, Alex. McIntosh, J. J. Hall, H. H. Powell, and R. Whitelaw; Board of Arbitration, H. Dickinson, T. J. Clarkson, V. L. Francis, R. W. Sawtell, R. W. Knight, R. T. Crawford, Thos. McClay, Dr. Mackay, Fred Millman, John Hall, E. W. Nesbitt, and J. R. Huggart. The total membership of the board is now 90. The receipts for the past year amounted to $200.34, and the disbursements to $237.12. A gratifying feature pointed out by the annual report was the few failures that had taken place in the town during the year, and also the smallness of the amounts involved.

The creditors of Frank S. Taggart, dealer in sporting goods, etc., King street west, Toronto, have agreed to accept 25 cents on the dollar.



H D. SIMMONS, Manufacturers' Agent,
85 York Street, TORONTO.

WIRE

Coppered Steel Spring. Tinned Mattress Wire. Broom and Brush Wire. Hay Baleing Wire. Flat Wires. Soft Coppered Wire.

Write for Catalogue. We guarantee the quality of all our Wire.

Manufactured by

The B. GREENING WIRE CO., Ltd.,

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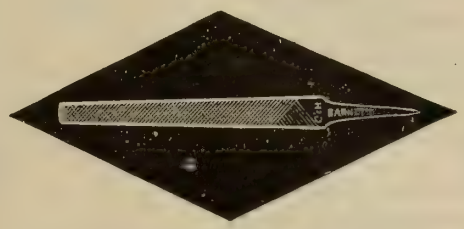
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- Blacksmiths' Tools
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- Tube Expanders

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BLACK DIAMOND FILE WORKS,



21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

—MANUFACTURERS OF—

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES.
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
CLIMAX SAWFILES. LIGHTNING SAWFILES.

—AND—

EVERY OTHER DESCRIPTION OF SAW FILES.

The OLD WOODEN BUCKET MUST GO

Indurated Fibre Ware.



NO HOOPS, NO JOINTS, CANNOT LEAK, SWELL, OR WATER SOAK.

The E. B. EDDY CO.
MAMMOTH WORKS
HULL, CANADA.

We manufacture all kinds of Paper suitable for the Hardware Trade.
Send for Samples.

BUSINESS CHANGES.

PARTNERSHIPS FORMED AND DISSOLVED.

Houston & Betts, general merchants, Wetaskiwin, have dissolved.

Fullerton & Ross, general merchants, Manitoba, have dissolved. W. Fullerton will continue under same style.

CHANGES.

J. L. Beaudoin, general merchant, St. Patrick, Ont., has left.

The Superior Lumber Co., Toronto, have sold out to Noel Marshall.

Norris & Carey, general merchants, Edmonton, are giving up business.

James Rickwood, blacksmith, Corinth, has been succeeded by Chas. Wilson.

John McKay has succeeded Hayes & Phillips, hardware merchants, Hepworth.

Wm. Malloch & Co., of Fullerton street, London, have bought out Robert McPherson's foundry on the same street. The figure is said to be $7,000.

J. Boyle, general merchant, Alexandria, has been succeeded by Barrett & Co.

E. Lecours, general merchant, Sherbrooke, Que., has been succeeded by J. Hemond & Co.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES

W. R. Gray, manufacturer, Dundas, has assigned to F. M. Wilson.

M. G. McMurchy, Toronto Roofing Co., has assigned to W. A. Campbell,

The rating of D. R. Dewey Coal and Wood Co., Hamilton, has been withdrawn.

W. Wilson, furniture and undertaker, Owen Sound, has assigned to P. J. H. Kerr.

George Hurst, general storekeeper, St. Thomas, has assigned to R. H. McConnell.

W. D. Bradford, general merchant, Granby, Que., has compromised at 72½c. on the dollar.

F. W. Long & Co., general merchants, St. Mary's have assigned to C. B. Armstrong of London.

W. R. Gladstone, general storekeeper, Blackwater Junction, is offering to compromise with his creditors at 30c. on the dollar.

Consent to assign has been filed in the matter of Fee & Martin, wholesale and retail furniture, Montreal, and W. A. Caldwell has been appointed provisional guardian.

Johnston Bros., general merchants of Walkerton, Wiarton, Chesley, Paisley and Tara, all in the county of Bruce, have assigned to W. A. Campbell of Toronto. There is a large number of creditors and the liabilities are large.

W. Reid Fee, furniture dealer, formerly doing business under the firm name of Fee & Martin, Montreal, made an assignment, Tuesday, and it was ordered that a meeting of the creditors be held on Wednesday, May 3rd. The total liabilities will amount to $63,666, of which $4,386 are privileged claims, $26,500 direct liabilities and $32,500 indirect. The principal direct claims are those of T.C. Foster & Co., Brockville, $3,500; J. Hay & Co., Woodstock, $2,000; Broadfoot & Box, $1,000 Watson & Malcolm, $1,325; Gault Bros. & Co., $1,233; J. Macdonald & Co., Toronto, $1,235; J. Lewis, Hamburg, $900; Alexandria Manufacturing Co., $900. The indirect liabilities are the Union bank, $13,000; Jacques Gartier bank, $4,000; Fred Nash, $9,000; James Baxter, $2,500; F. A. Clark, $1,600; G. Bishop, $400; Jas. Fortier, $1,500; and Euard & Macdonald, $500.

SALES MADE OR PENDING.

R. & W. Warrington, hardware, etc., Montreal, are selling out.

The building, land, engine and boiler of the Toronto Drop Forge Co., which recently went into liquidation have been sold.

The stock of W. Rannie, general merchant, Caledonia, is advertised for sale by auction 28th inst.

DEATHS.

John Harty, general merchant, Bedford, Que., is dead.

John Law, sen., of Law Bros. & Co., founders, Ottawa, is dead.

H. Nightendale, furniture dealer, Montreal, died on Friday, aged 52 years.

Dennis Kane, carriage maker, Kingston, many years ago a councilman there, is dead, aged 78 years.

FIRES.

J. H. Bragg, furniture dealer, Sarnia, has been burned out.

Eli Braund, hardware dealer, and E. Maher, furniture dearer, Aurora, have been partially burned out.

The sash and blind factory owned by the estate of C. Joanis, Buckingham, has been burned out; partially insured.

The hardware establishment of James Robertson & Co., Winnipeg, was damaged to the extent of several thousand dollars on the 20th inst. by fire. This is the third fire which the firm of James Robertson & Co. has suffered since last August. At that time their Winnipeg wholesale warehouse stock was damaged to the extent of $60,000, and Sunday week in Toronto their large factory on King street was destroyed.

THE WORLD'S PHOSPHATE SUPPLY.

Florida shipped in 1889 her first phosphate, and in 1891 mined 181,448 tons; Algiers and Tunis have newly found phosphate deposits away from rail or water communications, estimated at 15,000,000 tons, and Nelson County, Va., has a small area of high grade phosphate ten miles from rail.

South Carolina is the largest producer of phosphates in the world, leading with her 600,000 tons; France and Belgium next, each with 450,000 tons; Florida next, 200,000 tons; Russia, 75,000 tons; Spain and Germany, 50,000 each; Dutch West Indies, 20,000; English West Indies, 10,000; North Carolina, 7,500; algeria, 2,500.

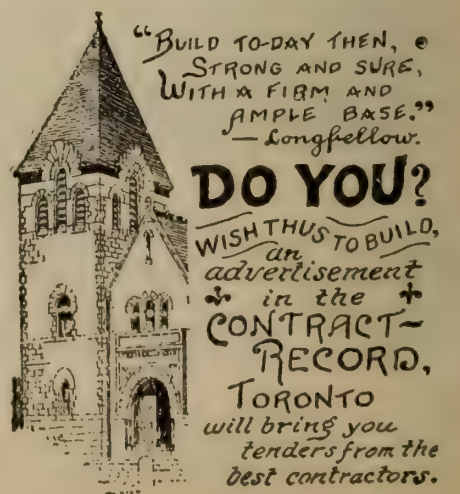
South America produces 60,000 tons of guano, and Mexico 5,000. Canada produces 31,000 tons of appatites and Norway 20,000. The whole phosphate and guano production of the world is 2,100,000 tons, of which Carolina produces 600,000 tons, or nearly 30 per cent.

South Carolina has no prospect of losing her phosphate supremacy. The phosphate exhibition she will make at the World's Fair at Chicago this year will be unique and striking, and attract universal attention, and enlarge her repute and business. And the entire withdrawal of cotton seed as a fertilizer, due to its greater value for other purposes, must proportionately swell the demand for and use of Charlston's valuable and exhaustless phosphate rock.—Charlston News and Courier.

Referring to the English pig tin market for April the London correspondent of Metal Markets Report says: The statistics for the month show an increase of about 2,000 tons, as compared with last month, and 6,200 tons as compared with last year. The deliveries from warehouse show better than they have done for a long time past, but the Straits shipments, as forecast in our recent reports, were very heavy, say 5,100 tons to all parts. The American figures show a total of 7,600 tons, which we estimate will be sufficient for their consumption up to the end of June, and leave a reserve of about 2,000 tons for the period when the duty will be in force. This reserve is totally inadequate, and the Americans are bound to make further large purchases between now and the end of May, for after that time it will be too late to save the duty.



Harry (to little brother): SAY, SHUT UP YER DARNED NOISE, WON'T YER; I CAN'T SAY MY PRAYERS.



TORONTO CUTLERY CO.,

M. MAYER, Propr.

65 and 67 Yonge Street, Toronto

Imperial Razors

Joseph Allen's NON-XLL Cutlery

T. C. Co.'s Shears and Scissors

G. A. Mix & Co.'s Chisels

The Most Complete Lines of all Kinds of Cutlery in the Market.



S.S. SMOKELESS POWDER is the best· Made by the Smokeless Powder Co., of London' Eng. A stock kept in Montreal. 25 lb. Drums' 2lb. Cannisters, ½lb. Cannisters. Send for Prices. WILLIAM DARLING & CO, Wholesale Hardware Merchants, 30 St. Sulpice Street, Montreal.

A FEW REASONS WHY

You should Keep your Stock fully Assorted With

Boeckh's Superior Brushes

They are always reliable and as represented.
They are guaranteed in every particular by the manufacturers.
They are made of the very best material and workmanship
They are sold at closest possible prices.
They are finished and put up in neat and attractive shape.
They are well known throughout the Dominion and are popular with all classes of consumers.
They are handled by all leading Hardware and Paint and Oil trade.

See that the name "BOECKH" Is on every brush.

Boeckh's Flexible Bridled Brushes.

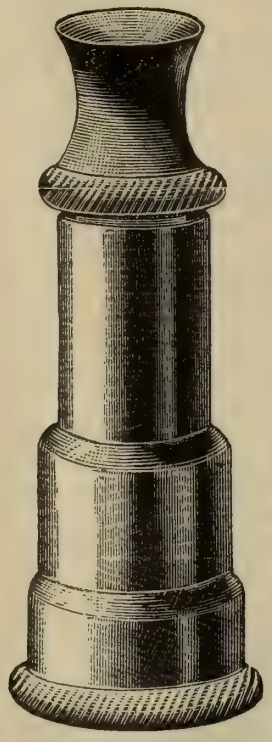
Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

TORONTO, - CANADA.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it

It is impossible for this pipe to get out of order

Give it a trial and you will use no other.

Hamilton Brass Manufacturing Co.

HAMILTON, ONT.



JOSEPH RODGERS & SONS LIMITED.

CELEBRATED CUTLERY : : :

Still Leads the World.

OUR REGISTERED TRADE MARK

GRANTED IN 1764, IS STAMPED ON EVERY ARTICLE.

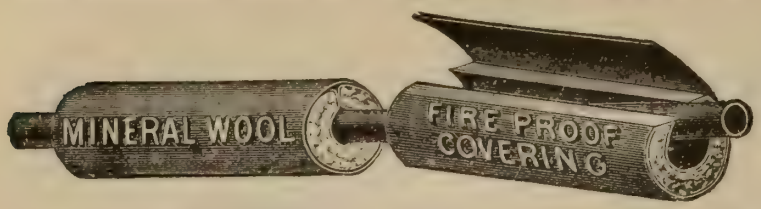
AGENTS:

JAS. HUTTON & CO.

MONTREAL

AND

TORONTO.



A Great Loss?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss. The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.



ALL SILVER PLATED WARE

E. G. Gooderham, Manager.
Jno. C. Copp, Sec.-Treas.

WHETHER it be light plate or the heaviest, has the same outward appearance and there being no way to determine the thickness of plate except by analysis or actual wear, it is of the utmost importance, **if quality is desired,** that every article bear the full name of a manufacturer known to make these goods exactly as represented, who will guarantee them to give satisfaction if properly used. All Spoons and Forks bearing our stamp, **"Toronto Silver Plate Co."** are warranted to be made of 18 per cent. Nickle Silver Metal plated with Pure Silver, as represented by marks thereon. Our process of plating is excelled by none, giving uniformity and durability.

Money Paid will be Refunded for all Goods not found as Represented.

Factories and Salesrooms:
570 King Street West, Toronto, Can.

Magee Mfg Co.

LONDON, ONT.

Manufacturers of all kinds of

Lumber and Log Rules
Counter Measures, etc.

IMPROVED
Eclipse Horse Poke
Navey Barrows . .

OF ALL DESCRIPTIONS

Special Lines Made to Order.
Write for Prices.

. . REFRIGERATORS . .



Manufactured by

KNOWLES & NOTT.

BRANTFORD, ONT.

Send for Catalogue

CEMENT . .

7,000 Barrels of

GENUINE WHITE'S

and other best London Brands in stock and to arrive.

ALSO

FIRE BRICK, DRAIN PIPES,

Best Quality and Lowest Prices.

F. HYDE & CO.

31 Wellington Street.
MONTREAL



C. C. HARRIS

Manufacturer of Solders and Antimony Alloys.

Cor. Wickson Ave. and Yonge St., Toronto.
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COWAN & BRITTON

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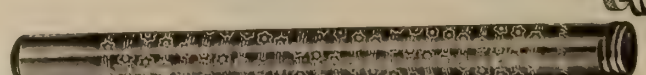
Nails, Hinges AND Buts

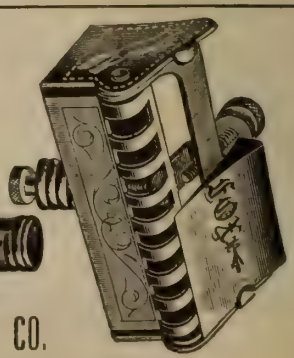
Manufacturers of every description of these goods.

THE FOX SAFETY RAZOR

Cut 2/3 Size.

The Finest and most Practical in the World. – Every Man His Own Barber





Makes shaving a luxury.
No danger of cutting.
Adjustable blade.
Silver plated frames.

THE FOX CUTLERY MFG. CO.
MONTREAL

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT

Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

THE BEST English Sporting Gunpowder

USE THE

"ALLIANCE"

PRIZE POWDER

—Made only by—

Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.

Always obtainable from

Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,

Agents.

MONTREAL AND TORONTO.

The grass guards throw all the grass coming between the wheels on to the knife so that it must cut, and cannot get up around the journals.

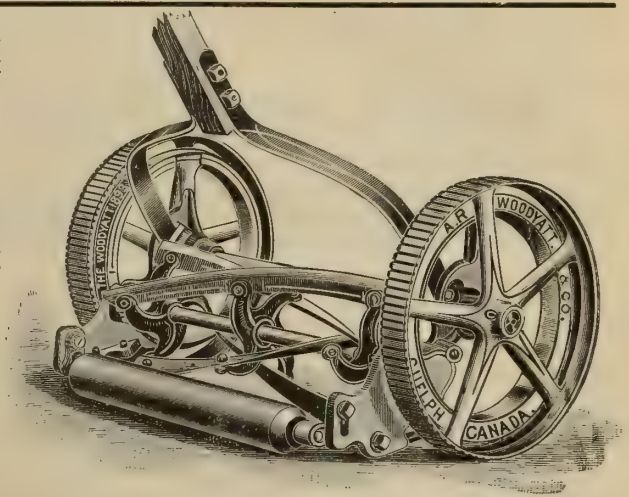
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THE "WOODYATT" LAWN MOWER

Light, Durable, and Efficient.

Now On Sale by all Wholesalers.

A. R. WOODYATT & CO. GUELPH, ONT.



Wm. Clendinneng & Son.

Iron Founders and Stove Manufacturers

Makers of the "Etna" Hot Water Boilers, Soil Pipe and Fittings, Stable Fixtures, Machinery, Builders and Special Castings

WRITE FOR ESTIMATES

WORKS: Cor. William and Inspector Sts.,

OFFICE and WAREHOUSE: 145 to 179 William Street

MONTREAL

BUYERS OF CUTLERY

WILL find it to their interest to see our samples before placing Spring orders. A choice assortment in stock of Jas. Rodgers & Co.'s and E. M. Dickinson's goods at special prices.

A. C. LESLIE & CO., MFRS. AGENTS,
MONTREAL and TORONTO

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,
McRAE & CO., OTTAWA

MUNN'S LIQUID GLUE

IS THE BEST.

Kennedy Bros., Agents
101 Bay Street, TORONTO.

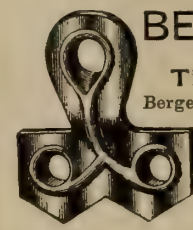
Established 1864.

CLARKSON & CROSS,
CHARTERED ACCOUNTANTS
NO 26 WELLINGTON ST. EAST
E.R.C.Clarkson, F.C.A.
W. H. Cross, F. C. A.
Edward Still.
John F. Helliwell.
TORONTO, ONT.

Excellent Quality! Reasonable Price!



ADAMS-MARS
BEST.
GALVANIZED SHEET IRON. SP



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucpan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	24, 24½
Strip "	25, 25½

Tin Plates—*Charcoal Plates, Bright.*

M.L.S. equal to Bradley	Per box
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 25 4 50
I.X., "	5 25 5 50
I.X.X., "	6 25 6 50
I.XXX., "	7 25 7 50
D.C., 12½ x 17	3 75 4 00
D.X.,	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

Cookley Grade—	Per lb.
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65,	

Tinned Plates

72x30 up to 24 gauge	6¼ 6½
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
-inch	13½

Steel Boiler Plate.

¼inch	$2 45
16 "	2 35
¾ " and thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2¾, 2⅞
26 "	2¾, 3
28 "	3 , 3¼

Canada Plates.

Blaina ½ bright	2 75 ....
Abercarne	2 75 ....
Lion	....

Iron Pipe.

Wrought 62½ p. c. to 62½ p. c. and 5 p.c. Galvanized, 37½ to 40 per cent.

Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams–Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 "	5¾, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅝ 5
" 5-16 " "	4½ 4⅝
" ⅜ " "	4⅜ 4½
" 7-16 " "	4¼ 4⅜
" ½ " "	3⅝ 4
" ⅝ " "	3⅜ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 14 0 14½
Lake Superior	0 13 0 13½

Bolt or Bar.

Cut lengths, round, ½ to ⅞ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20 0 22
" 35 to 45 " "	0 19 0 20
" 50 lb and above per lb	0 18 0 19

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 05 0 05½
Domestic "	0 04½ 0 05

Zinc Sheet.

5 cwt casks	0 05¾ 0 06
Part casks	0 06 0 06½

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03½
Bar, 1 pound	0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04⅝ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 17 0 19
Standard	0 16 0 18
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½ 0 14
Other makes "	0 13 0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt 4 75

No. 1 Do "	4 50
No. 2 Do "	4 25
No. 3 Do "	4 00

Prepared Paints.

(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.cwt	1 35	1 40
" " (J.F.L.S.) " "		2 75
" " Royal " "	1 10	1 15
Venetian Red (R.C.2) " "		1 50
Venetian Red (best) "	1 80	1 90
English Oxides per cwt		3 25
American " " "		2 25
Canadian " " "		1 75
Paris Green, per lb	0 13	0 15
Burnt Sienna, per lb	0 08	0 08½
Burnt Umber "	0 05	
do pure	0 08	
Drop Black "	0 09	
Chrome Yellows "	0 12	
" " Lemon pure,		
8 lb. tins, per lb	0 19	
Chrome Greens "	0 12	
Golden Ochre	0 03½	

Varnishes (in bbls).

No. 1 Furniture, per gal	0 70
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	2 00
Hard Oil Finish "	1 30

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal 0 52 0 54

Castor Oil.

Best, per lb 0 09 0 09½

Cod Oil.

Cod Oil, per gal. 0 48 0 50

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet makers	0 17 0 18
White	0 16 0 17
London Town	0 7½ 0 08½
Gelatine	0 22 0 27
Stripped	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50,50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers'..... .. 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 60 and 10 p.c to 65 per cent.
From stock 60 and 5 p.c:

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 45 to 47½ p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb . 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross..... 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05
Screw hook and hinge—
6 to 12 in., per set 0 00 0 04½
14 to 20 in., " 0 00 0 03½
21 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

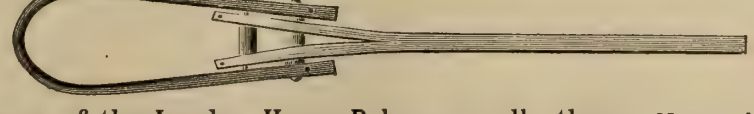
Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

THE LONDON HORSE POKE.

DURABLE



STRONG

Some of the Advantages of the London Horse Poke over all others.—No wooden pins to break or loose. No wire spring to rust or get out of order. The London Poke is the only one made with iron bolts, which cannot get lost or broken in shipping. It is the only adjustable Poke made to fit any size horse from a Pony to Clydesdale.

Send for Sample Order. **BOWMAN, KENNEDY & CO., London,** Western Agents

Wrought Hooks and Staples, Amer dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 60 per doz.
ronze, Berlin, per doz .. 2 75 3 25
ronze, Gem, " 6 00 9 00
axe " 8 75 10 00
hutter, porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy.....	2 30
40dy.....	2 35
30 dy.....	2 40
20, 16 & 12 dy.....	2 45
10 dy.....	2 50
8 & 9 dy.....	2 55
6 & 7 dy.....	2 70

American Pattern Only

from 4 to 5 dy	2 90
3 dy. (lath).....	3 30

3. Canada Pattern Only

from 4 to 5 dy	2 80
3 dy. (lath).....	3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Nails.

Galvanized, per doz..... ... 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3½

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10	11½ 11 11½
¼, 5-16, ⅜ in.....	10½	10¾ 11½ 11¾
Cotton, per lb.....		18 20
Russia Deep Sea, per lb..		13½ 16
Jute ..... " ...		08 08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.
Hack, complete, each.... 1 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P,, 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen..... 1 25

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross	7 50	12 00
Dessert " ..... "	21 00	.....
Table " ..... "	30 00	30 00
Dessert Forks.... "	24 00	.....
Medium " .... "	27 00	.....
Table " ... "	36 00	.....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4½ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 65 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 51½ per cent.
Channel nails 5c. lb. off list.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz ..... 1 [illegible] 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " " } 4½ 4¾
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... .... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 80 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS.

MANUFACTURERS OF THE

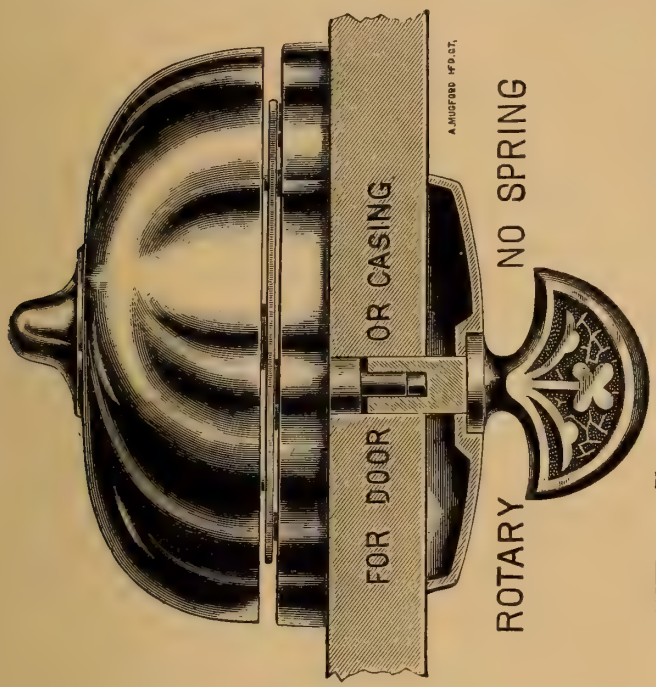
Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

---

NEW DEPARTURE "ROTARY" DOOR BELLS.



Incomparable!
NO SPRING!
Best Tone, (Sure)
Superior Finish!
Bronze Trimmings!
COMPACT!
CHEAP!

For Circulars, address

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BRISTOL, CONN.



TELEPHONES

FOR
Main Lines
Warehouses
Colleges
Banks

Send for new 32 page Catalogue of Telephone Testimonials.

T. W. NESS

Manufacturer of Telephones, Etc.

749 Craig Street, - MONTREAL.

FIRE BRICK
FIRE CLAY.

Scotch
English or
American

GAS RETORTS
GAS WORKS SUPPLIES

Write for Prices to

The Colman-Hamilton Co., Ltd.

44 Price Street, TORONTO

Also for Sewer Pipes, Invert Blocks, Flue Linings, Portland Cement, Calcined Plaster, Keen and Roman Cements, Etc.

Phone. 3763 Mention this Advt.

H. Boker & Co.

are famous for their fine quality

Razors, Scissors
—AND—
Pocket Cutlery

TRADE MARK.

(TREE BRAND)

FOR SALE BY LEADING WHOLESALE HOUSES.



All kinds of Office and Store Fittings and Furnishings

PRINTERS
Apted Bros.
TORONTO

WEDDING SOCIETY INVITATIONS

AT HOME
VISITING
PROFESSIONAL CARDS
SOCIETY

Printed

Equal to Copper Plate or Lithography at less than one-half the cost

TRY US AND BE CONVINCED

54 YONGE ST., TORONTO

W. J. REID & CO.

IMPORTERS AND DECORATORS OF

Crockery China and Glass.

LAMPS A SPECIALTY.

All glass, Vase, and Library Lamps, in every hue and design.

Our travellers will call upon you shortly with samples.

LONDON AND BELLEVILLE.

Dominion Wire Mfg. Co., (Limited)

WIRE DRAWERS, GALVANIZERS AND MANUFACTURERS

MONTRENL AND TORONTO

Iron, Steel : and Copper **Wire**

Bright, Annealed, Oiled, Galvaized, Coppered, Spring, Nail, Rivet, Telephone, Telegraph and Tinned (for Mattress and Broom makers use. **Wire**

Also "Lyman" 274 Barb Ribbon, Thorn and Plain Twist, Fencing.
Wire Nails and Wood Screws.

Price Lists Furnished and Discounts Quoted on Application.

ONE OF THE

Seven Wonders of Canada is that



FANCY Vase Lamps can now be sold at prices as to be within the reach of all. It is hard to explain, but there is an assortment of the most beautiful Lamps on the market. Put up in lots to more than astonish yourself and all who come in contact with them.

GOWANS, KENT & CO. WHOLESALE AGENTS

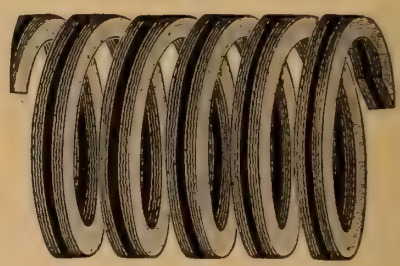
TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

"GUTTAPERCH"

BRAND OF



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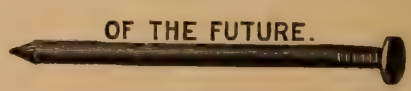
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VOL. V. TORONTO, MAY 6, 1893. No. 18.

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Published Weekly. $2.00 a Year.

Vol. V. TORONTO, MAY 6, 1893 No. 18

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

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Retail hardware merchants in the City of Toronto may as well make up their minds that as far as their connection with the building trade is concerned business will not be brisk this season. Nearly every builder you meet on the street will tell you that he does not expect to do much this season, and, what is more, does not intend to make much of an effort to secure work, explaining that there are too many who are ready to undertake contracts for little or nothing. It is generally conceded, however, that the whirlwind created by the real estate boom has been reaped, and that things are again getting into their normal condition. The outlook is not pleasant for the local retail man, although the conditions are more favorable than a year ago. Then there did not seem to be any rift in the cloud; now the sunshine of a better day is beginning to peep through. In the meantime the retailer should burnish up his courage, put on his thinking cap, and devise ways and means of increasing his business in other directions. By the exercise of a little originality, a judicious expenditure on advertising, and a utilization of the window for the display of stock, much can be done in the premises. An extra effort might at the moment be made on garden tools. Then there are many little things that might temptingly be thrown in the way of the housekeeper, such, for instance, as the newest things in cooking utensils, brackets, oil and gas stoves, housefurnishings; in fact, a thousand and one little nick-nacks that only need pushing to be sold. The popular craze runs to bicycles these days. And this might with profit be taken advantage of It is an ill wind that blows nobody good. All that is wanted is somebody to hoist a sail and utilize the breezes to the best possible advantage.

* * *

The outlook for the country hardware dealer is much brighter than it is for his brother in the city. The two years of plenty have repaired much of the damage done to the farmer by the previous lean years. And now he is building himself new barns and outhouses, repairing or rebuilding his dwelling, and replenishing his stock of tools, all of which means more regular visits to the local hardware store. Reports from visiting hardware men corroborate this view. And a further favorable feature of the situation is the generally satisfactory condition of stocks.

* * *

Gas and oil stoves are gradually becoming necessary adjuncts to housekeeping. They are made for the poor and those in ordinary circumstances as well as for the rich. As a result the demand for them is becoming larger every year. This season, if the march of progress is to be kept up, gas and oil stoves promise to be more popular than ever. The cool weather is lingering long with us, and spring is somewhat stunted in its growth in consequence, but some of those days it will suddenly burst into warm summer. Then will come the request for useful and convenient gas or oil stove, and the hardware dealer who is wide-awake and wise is getting that portion of his stock into shape for the occasion.

* * *

Men go into business to make money, even if it might be gathered from the actions of some that they were merely in it to clothe the naked, feed the hungry and provide necessaries for the improvident. This being recognized it will be conceded that the man of business should tap every legitimate source that will will cause revenue and profits to flow in his direction. In pursuance of this line of argument, it may be asked, How would the keeping by the hardware trade of bicycles for hire pay? Boats and horses and vehicles are kept for hire, and why not bicycles? An English hardware dealer, who has had some experience in the matter, claims that it can be done with profit, and advances his own experience as proof. Although the machines do not take up much space, he advises no one to try it who cannot spare the room. His tariff for bicycles is 8d. per hour, 4s. 6d. per day, 12s 6d. per week, £1 per fortnight, £1 11s. per month, and 6s. from Saturday till Monday. All hire charges he collects in advance, and they are made out on a special book with perforated leaves. "A start," he says, "might be made wtih only two machines if desired; but these would soon require supplementing by at least another safety, and a tricycle is almost a necessity for ladies. If the money which these earned be kept account of, it would soon form a fund large enough to purchase any further machines required. A moderate priced strong machine is recommended, and cushion or solid tyres in preference to pneumatic. It would soon be found that the sale of new mounts would be easily accomplished, also accessories, which show a fair profit." The matter seems worthy of the consideration of some of the hardware dealers in this country.

* * *

To know how to buy and how to sell are essentials to success. And if either is of more value than the other, it is the buying quality. The keenness of competition makes it such. Unless a man is able to buy right he cannot exist for a great while. His keener and more wide-awake competitors will soon crowd him to the wall. It is a case of the survival of the fittest all along the line

and to keep in the conflict you must be as well armed as your adversary. To be a poor buyer is to be poorly armed. The man who knows what to buy and how to buy has one supreme advantage; he can hold out better inducements to his customers. Three things are necessary to right buying—a knowledge of the goods, an acquaintance with the peculiarities of his customers and capital. The merchant who possesses the first essential knows a good thing when he sees it. He cannot be well deceived, and consequently he is in a position to recommend his goods. An acquaintance with the peculiarities of his customers is a valuable qualification, for not only does it assist in the direction of gaining the approval of his patrons, but it makes less possible the accumulation of undesirable and old stock. The importance of capital all realize. With capital at his command he can buy in larger quantities and cheaper, and from his discounts he usually gets enough to pay at least his rent. Thrice armed is he for the battles of business who possesses these qualifications. He may have relentless competitors to oppose him, but he will make business a success in the long run, sure.

* * *

Our market report this week announces a further decline of two cents a gallon in turpentine, making in all a drop of four cents in two weeks. The Ontario Association was induced to make the change by the same conditions that actuated them a week ago—a falling market in the South. There is now a firmer feeling at the decline. Stocks on the spot are small, and dealers have not ordered largely to arrive. For this reason there are not wanting those who claim that the Association has been somewhat hasty in reducing prices. But it must be remembered that there are dealers who are not in the Association. The steadier feeling on the market has been emphasized by advices from the South stating that the production is not so large as anticipated owing to the backward character of the season. Looking at it in this light some dealers anticipate an advance, but this is scarcely likely to take place in the near future, the new crop being due to arrive soon.

* * *

The stove dealer of by-gone days paid little attention to the art of displaying his wares. Everything appeared to be promiscuously pitched into the store—often a dark and dirty one—and the customer not infrequently had to plough his way through a labyrinth of stoves old and stoves new with a stray leg here and there to trip him up. Much of that has been changed now, a good many of the stove stores being decidedly pretty and attractive. As in other branches of trade, there are some dealers however who have inherited the careless and slovenly methods of their forefathers. It is a mistaken idea to think that stoves do not need to be tastefully arranged like other lines of hardware or that much attention need be paid to cleanliness. And the attractive and clean-looking stores we see around us is a proof of this.

DISCUSSING THE IRON DUTIES.

Minister of Finance Foster is visiting the commercial centres of the country gathering information to assist him in the proposed revision of the tariff. Tuesday he alighted in Toronto, and the next morning at ten o'clock he lent his ears to the manufacturers and hardware dealers of the city. He was accompanied by Hon. Mackenzie Bowell, Minister of Trade and Commerce, and Hon. Mr. Angers, Minister of Agriculture. The conference was held in the council chamber of the Board of Trade. The iron and hardware men were represented by George H. Bertram, G. B. Baker, Lyman M. Jones, R. H. Young, J. Martin, A. B. Lee and F. T. Mercer.

The meeting was private, but HARDWARE gathered enough to know that the report which was drawn up by a special committee of the board in February last, and which was not then presented to the Government, in compliance with a request of the Minister of Finance, was resurrected and made the basis of discussion. Each member of the deputation was privileged to speak, and as far as known did so. Mr. Foster was a careful listener and a persistent questioner. "He kept plying us with questions," said a member of the deputation, "but we could not of course get anything out of him."

Hardware merchants are not as a rule much concerned in the premises, but at the same time he who does not concede that some rearrangement of the tariff is necessary has yet to be found. The exigencies of the times, they say, demand it. But even those who are the most persistent in their advocacy of a change urge that whatever reduction is made must be by easy stages. The chief items on which lower duties are desired are bar iron, sheet iron and hoop iron, and it was around these that centred much of the talk at Wednesday's conference. What was considered by some to be an anomaly, and to which the Ministers' attention was drawn, was the privilege accorded manufacturers of bringing in iron free of duty when specified for particular purposes. "This," said one hardware man, "gives the big manufacturer an unfair advantage over the small manufacturer. For instance, there is A, an extensive manufacturer with large capital. He wants a large quantity of iron for a specific purpose. He sends to England for it, and, on taking oath that it is for building, say a bridge, gets it into the country duty free. B, on the other hand, who is a small manufacturer with limited capital, if he wants iron for a specified purpose, is, as a rule, compelled to go to the home wholesale dealer and purchase material upon which the duty has been paid." Others answer this argument with the rejoinder that even if B is compelled to purchase iron upon which the duty has been paid that he can put it to a diversity of uses which A cannot, and furthermore, that if he has not enough capital to undertake big jobs and import direct for specified purposes he should, if he desires to expand, gather around him a company of capitalists and form a joint stock concern.

It is generally conceded that the tariff needs a little tinkering up in regard to mining machinery. When the special committee submitted its report to the council of the Board of Trade Feb. 15th last, it expressed the opinion that there should, in order to encourage the development of our iron mines, be an increase in the present bounty on pig iron without any reduction in the duty on this article. But at a meeting of the council held a few days ago this was amended somewhat, being made to express the opinion that while the bounty should be increased the duty should be decreased; and this was the view that was expressed to the ministers at Wednesday's conference.

Later in the day the ministers were waited upon by deputations representing the barbed wire, safety barbed wire and locked wire fence industries. These interests, it is said, do not want a change in the tariff as far as they are concerned, but they ask that if the duty on the manufactured article be lowered that the same thing be done in regard to raw material. Messrs. Dick and Ridout obtained an interview in order to urge a rearrangement of the duty on raw materials used in the manufacture of linen bags and jute products. In the evening the ministers gave audience to a deputation representing the iron mining industry. They are reported to have asked that the tariff on pig iron remain unchanged or that the bounty be increased in the event of the duty being lowered. They claimed that under existing conditions the production of native iron was increasing and showed that the quantity produced last year was 60,000 tons compared with 28,000 tons the previous year.

THE TENDENCY OF SEAL OIL.

The position of seal oil and the moderate stock of it in Montreal is attracting considerable attention in view of the fact that the position in Newfoundland and all news from that point is of a bullish description. According to reliable advices, the output will not equal one-third of an average one, and all the large operators in the article in Montreal seem to agree on the point that the quantity that will be sent forward to that port during the ensuing spring and summer will be very small. This is due to the fact of the small catch and the circumstance of most of the oil dealers in Newfoundland being shipowners as well, who, as the English market is strong, will no

doubt prefer to provide their vessels with cargoes across the Atlantic for the purpose of supplying this market, unless it is made worth their while to allow the oil to come in this direction. In consequence of this condition of affairs genuine offerings of stocks to arrive in Montreal have not been large; in fact, brokers and shipping agents generally have none to offer, and they are working more with an idea of getting bids from buyers than making any firm offer of stock. Consequently no new crop seal oil has really been brought to arrive, although some brokers have been talking of such. The tone of values on the article, in view of the above facts is very firm, and the one dealer who practically controls the bulk of the supplies here outside of a few outside lots can derive considerable satisfaction from the fact that he carried his stock so long. He bought on "spec.," it is understood, during the excitement consequent upon the shipments which were being made to the States last fall and has held on ever since for a price of 50c., and it is likely that he will get it now in view of the position in Newfoundland. His lot is understood to comprise in the vicinity of 1,000 barrels, and it is thought to be the only large lot of old stock held anywhere in Canada.

In view of the position of seal oil some facts culled from a recent despatch from Newfoundland regarding the seal catch will be interesting. This despatch says that to all appearances the year is one of the most disastrous on record. Last year 348,642 seals were taken. This success led to an unusually large outfit this year. Twenty-two steamers, having on board about 5,000 men, left for the ice. A larger number of schooners than formerly also engaged in the enterprise. At least 6,000 men were engaged in this year's hunt. At present there is reason to fear that the total catch may fall short of 100,000 seals. If so, this will be the most unsuccessful year in the annals of the seal fishery. The smallest number of seals ever taken was in 1882, when the return was 178,812. The next lowest was in 1890, when 220,321 were taken, and in 1887, when the catch was 230,355. How greatly the catch varies may be judged of by the following figures:

Year.	No. of seals taken.
1831	686,836
1832	508,407
1843	651,370
1844	685,530
1845	352,702
1846	265,169
1848	521,604
1849	306,072
1855	293,083
1858	507,624
1862	268,426
1871	537,094
1872	278,372
1881	447,903
1889	335,627
1891	364,803
1892	348,624

CUT NAIL MEN MEET.

There was a quarterly meeting of the cut nail branch of the iron trade in Montreal on Monday last for the discussion of regular business. The representatives present were Messrs. D. McIntyre (Ontario Rolling Mills Co), J. Graham (Graham Nail Works), G. Mecagy (Pillow, Hersey & Co.), W. Abbott (Abbott & Co.), Jos. Peck (Peck, Benny & Co.), and McMaster (Montreal Rolling Mills Co.) The meeting had to consider a report to the effect that some of the manufacturers in the Maritime Provinces were cutting under the agreement. The complaint was based on the report of a traveller to the effect that representatives of makers down below instead of cutting adopted the device of betting the prospective buyer as the case might be $25 or $50 that they would not get the order. Those who attended the meeting, however, informed HARDWARE'S representative that the story was without foundation, and that no such practices had occurred. The traveller in the case in point had simply been misinformed, for the Maritime Province men had satisfied the association that they were acting conscientiously. No change in the basis of cost was decided upon, the former rate of $2.25 f.o.b. Montreal and $2.30 f.o.b. Toronto and Hamilton, and $2.45 for the Maritime Provinces being confirmed.

SUBSTITUTE FOR RUBBER.

Another substitute for hard rubber has appeared in the field. According to the opinion of good judges, it is a combination of wood pulp and shellac. It certainly makes a pretty appearance, but whether it will be something that will really take the place of hard rubber is the question. For a number of years inventive genius has been at work to try to displace hard rubber by some cheaper article. Among the many substitutes was one known as diatite, which was a combination of diatomaceous earth (fossil flower) and shellac. This made excellent goods, but as it had to be struck up under the very heaviest pressure, the best constructed steel dies were found to give way under the severe usage, and, after a heroic struggle on the part of the inventors, diatite disappeared from the market.

Another scheme was to make an imitation hard rubber of wood pulp, impregnating the pores with an acid-resisting compound made of boiled vulcanized linseed, to which was added sulphur and shellac. This resisted the acid for a time, but, if the liquid was taken out of the jar, even for a short time, and the air allowed to get at the lining, it was found that, when next filled, it leaked like a sieve. Wood-pulp was later treated with asphalt, and for some of the ordinary uses goods were made of this compound that were very cheap and fairly durable. Perhaps the most conspicuous success in this line was what is known as vulcanized fibre, which is wood pulp impregnated with certain resisting compounds and made up under enormous pressure. This has hydroscopic qualities which make it inferior to hard rubber; these same qualities, however, make it most excellent for water packing, as it absorbs a certain amount of water and fills the joint so tightly that it packs perfectly.

Almost all the compounds have had a gum basis, and a singular compound made of recovered rubber and wood-pulp was used two or three years ago with excellent results. It, however, did not prove to be superior either in effectiveness or cheapness to the ordinary rubber compounds which did not contain a particle of pulp, showing conclusively that the excellence of the compound came from the rubber with which it was impregnated. The new compound is manufactured in East Boston, and for some of the smaller electrical work it is said that already large orders have been taken. The promoters, it is understood, are seeking for capital, and if they have solved the problem as they believe they have, they ought to be able to secure it.—India Rubber World.

CONSTRUCTING GLASS ROOFS.

A method of constructing the framing to hold the glass in the roofs of covered courts is described by C. Frey, practical glazier, in a recent number of Diamant. The object of this special construction is to do away with the annoyance caused by the dropping of condensed water, and water which has leaked through. The device consists of a particular form of frame, pressed or rolled out of thin sheet iron, of such form as to leave a small gutter on the underside of the glass next to where it rests on the frame, into which gutter the water can flow and be carried to the waste pipe. The passage of the water to the gutter is still further facilitated by having the lapping edges of the separate sheets cut 10 deg. or 15 deg. out of the square, so that the seam, running across from frame to frame, will have a slight slope according to the slope of the roof, and the water which gathers on the underside of the pane will run down this sloping seam into the gutter, in place of gathering and dropping onto the heads below. A roof constructed on these principles at Basel, Switzerland, gave entire satisfaction during the whole of the past severe winter.—American Manufacturer.

FOR DEALERS TO THINK ABOUT.

A reliable estimate shows that, according to the whole population of this country, there are double as many men engaged in merchandizing and trading as were twenty years ago. It shows another thing quite as worthy of notice, that is, that the percentage of profits charged customers on goods at retail is not more than half as much as charged by the preceding generation of merchants and traders. Thus it is shown that two men are engaged supplying a number of customers no greater than the average number who patronized one twenty years ago, and that the two are doing business for half the ratio of profits to-day that the one formerly received. In other words, the profit made on a plow, reaper, mower or threshing outfit twenty years ago, was as much as that made on four such sales to-day. The argument we sometimes hear, that there are so many more sold now-a-days than used to be, that a greater gain is made in the long run, is at least partially refuted by the fact that there are twice the proportionate number of dealers per customer as there used to be.

How then, it is naturally asked, can dealers, or merchants of any class, for that matter, do business and live? How is it possible for four men to get on in the world now days on a percentage of profit only thought enough for one man two decades ago? The answer is, that they can do so only by limiting their risks in accordance with their profits, and by handling a greater amount of goods; for, while it is true that the dealer of to-day has not many customers as did the dealer of twenty years ago, the average consumer of to-day buys very much more than did the average consumer a generation ago.

This is said to be a thriftier generation than the one preceding it, and, taking everything into consideration, that may be true; but comparing the wastefulness of mankind to-day to what it used to be, one distinctive mark of thrift, at least, is removed. But wastefulness creates a demand, as every implement dealer knows, and every implement dealer also knows that it is an unhealthy demand, and that the man who must buy on account af wastefulness is not by any means sure pay.

This brings us to the consideration of another element of success in the retail trade. The dealer who makes the greatest measure of success is not the one who sells for the closest margin of profit or who never overlooks any opportunity to sell goods; he is the man who charges as much profit as the very best goods will readily bring, and who limits his sales to good and responsible customers.

One of the greatest dangers in the retail implement trade to-day, and it has been so for a long time, is the taking of "long" risks by dealers. No business man can afford to supply a customer at a great risk, it matters not how much capital he has, and it is absolutely the very worst thing a dealer of limited means can do. The dealer who does a safe business may not "stand to win" as much as the one who takes all sorts of customers, but he "stands to lose" scarcely nothing in comparison; and, in the eyes of the man to whom he looks for credit and for favors of various sorts he is regarded as a safe business man, while the other is regarded with more or less suspicion by everyone—more by those who know him best.

Profits are not as big as they used to be, but they will probably never be any greater than they are to-day; the chances are they will be less. Besides, it does not require as much capital to run a business as it used to; and, considering that a dealer can buy two or three plows for what one used to cost, he isn't so bad off, after all, unless he should bargain his plows away to "fly-by-night" customers for worthless notes.

The dealer who locates in a good place, stays right there selling first-class goods at a living profit, at the same time serving notice on the trade that he has no goods to give away, will make money. The dealer who cuts prices, sells more or less to customers who are liable to forget him when pay day comes around, and who, in consequence of his loose business methods can neither meet his obligations nor make a good, clean businesslike showing for himself, must fail. It is only a question of how long such dealer's capital will permit him to demoralize trade—he must go to the wall or out of the business.—Implement Trade Journal.

BUSINESS ECOMOMY.

It is rather trite to say "economy is wealth," but of all the wise sayings so common to folk lore, none is of more universal application nor more generally true. But it is in the petty details of business that it is most generally overlooked, and it is these that are pregnant with the fortune and failures of the dealer. The fact is notably conspicuous in all the details of manufacture, whether it be in the mammoth establishment devoted to the making of heavy machinery or in the shop of the ordinary dealer in hardware. Labor-saving machinery has found an extended demand not merely because more work can be accomplished by it, but because it has proven more accurate. Expensive mistakes occasioned through the carelessness or inefficiency of workmen are to a great extent eliminated, and a greater assurance is given to the estimated cost of everything manufactured, from a stovepipe thimble to a traction engine. The fact is confirmed by the daily experience of every dealer who has occasion to make anything.

The same question of economy is involved in the purchase and sale of all unmanufactured material. Not long since the handling of mica was referred to in these pages as generally resulting in a loss to the dealer because of the oversight in pricing it by guess rather than by careful estimate. But this is only the one instance in which guessing is the predominant feature. A complete list would involve almost everything handled in the ordinary stock of a dealer. The elements of original cost and carriage can be always determined. The average cost of doing business, including such items as rent, interest, and service, can be accurately determined from the experience of several years, and reduced to a percentage. While it may not be wise to apply any rigid rule to every article, the item should not be lost sight of, and further experience will guide to its proper application. Too many dealers blind themselves to the fact that their business is not profitable until forced to meet it at the close of the fiscal year. It is then too late for the largest use, though the experience is not entirely wasted if it leads to better methods afterwards.

Another call for the application of economy is in the arrangement of the store. In the majority of cases a question as to the location of any line of goods would develop the fact that it was placed by chance, or because some one else had adopted such an arrangement by chance or otherwise. Not long since a large jobbing house erected an expensive building for its use in the hardware business. It was architecturally all that could be asked for. No pains or expense was spared to make it attractive to the observer, or convenient to the office force, but when the shipping facilities were brought into use it was found that not less than two extra men were needed to overcome the difficulties that might have been avoided in the plans, but were permitted for the sake of a personal preference. In this case the extra expense is the price paid for a luxury, an example that the ordinary business man cannot afford to follow. But a similar disadvantage is entailed by a faulty arrangement of stocks, and more than one dealer has said that it took several years to learn to economize by correcting this fault. In one case a distinct saving of one man's annual wages was secured.

It is in this way, rather than in the search for large leaks that a profit is won from an ordinary business. But this should be the regular practice. Spasmodic efforts at economy often betray the dealer's interest in the other extreme. To permit any disposition toward niggardliness to control business affairs is almost as destructive of profits as the contrary course. What is desirable in the case is that the dealer should systematically assure himself that every expenditure, and every price, is based upon intelligently apprehended facts. Business

is conducted for a pecuniary profit, and when it fails to do this has no proper reason for existence. This can be accomplished only by a correct knowledge of what the tendency of every factor of the business is. Guessing is never safe, never economical, and lack of economy is synonymous with loss.—Stoves and Hardware Reporter.

SILVERING GLASS.

The following method of silvering glass is, according to an exchange, said to be eminently successful, and is largely adopted in many manufactories :There are two solutions used in the process, known respectively as the reducing and silvering solutions. To prepare the first, dissolve 12 grains of Rochelle salts in 12 ounces of water, and boil; then add, while boiling, 16 grains of nitrate of silver dissolved in an ounce of water, and continue the boiling for 10 minutes, after which add sufficient to make 12 ounces. To prepare the second, dissolve one ounce of nitrate of silver in 10 ounces of water; then add liquid ammonia until the brown precipitate is nearly, but not quite all dissolved; then add one ounce of alcohol and sufficient water to make 12 ounces. Distilled water should be used in making these solutions. When both preparations are ready, take equal parts of both solutions and mix them thoroughly; then lay the glass face down on the top of the mixture while still wet, the glass being carefully cleaned with soda and rinsed with clean water. About two drachms of each solution will be sufficient to silver a plate two inches square. The dish in which the silvering is done should only be a little larger than the plate. It is better to let the solution stand or settle two or three days before being used.

PARABLE OF A FOOLISH TRADER.

"Ambition is a goodly steed
If but you hold the bridle tight."

Once upon a time, in a certain place, there was a certain trader, who, by diligent labor and long hours had built up a fine paying hardware trade. His small storehouse was filled with merchandise, and his pockets were heavy with "jingling silver." His customers came from far and near, and the bargains which loaded his counters rapidly changed hands.

Now it so happened as this trader stood on a fine morning sunning himself in the door of his shop, and rubbing his hands from inward glee at the thought of his well-earned prosperity, he forgot his humble origin and the early years of his struggle for trade, and began to be envious of the fine large stores which surrounded him on every side. Now a wise man has said that the wish is parent to the deed, and in his mind the trader turned over and over the fond idea of an elegant tall building which should bear aloft his name in golden letters, and contain a large store filled with eager customers and willing clerks—himself the proud proprietor.

The longer the thought grew, and its growth was very rapid, the smaller seemed to shrink his present surroundings; the contrivances which he had planned and made and which were once the acme of his desire were now an eyesore and seemed an hindrance to his progress. His elbows, a thing before unnoticed, now were continually hitting the sides of his cramped storeroom, and his feet stumbled over the bales of goods which crowded the meagre space; even his manner changed, and his old clerks found him absent-minded and preoccupied with his thoughts. When the last customer had come and gone, and the shutters had been closed and the store door bolted for the night, the trader hied him home, and, as usual, without speaking of his thoughts to his wife,—who had saved what he had made these many years,—was soon lost in happy dreams of the grand store and elegant surroundings which were to be.

Now, in this same city there dwelt a very rich man who had gold in plenty which he lent to those in need, not from kindness but for gain. To him the following day came the trader and unfolded his cherished plan, and, having signed a bit of paper, received a bag of gold with which to put into execution the fond idea. Now, not far from his shop was a large vacant plot of land, the owner of which gladly gave it to the trader in exchange for part of his gold.

Then came the mason, who dug and built the foundation broad and strong; then came the builder, who placed the beams and reared the walls plumb and true; then came the tinner, and covered the roof tight and sure; then came the plumber who fixed the pipes; then came the plasterer, who covered the walls; then came the artist, who frescoed the ceilings; then came the painter, and the building was done. And above it all there shone in gold letters the successful trader's name, which could be seen for many miles, so high was it. Then came the trader with his goods and wares, but the bag of gold and pockets of jingling silver had vanished, for the foolish trader had signed his name to many bits of paper, the remembrance of which caused him much anxiety.

Now the old clerk of this trader, who had grown wise from long service, spoke with his wife and they considered together, and through her wise counsel he secured the lease of the old shop and remained behind and refused to longer serve the foolish trader. So it came to pass that the customers who liked the old shop and its clerk and its great bargains also remained behind, and the foolish trader was sorely troubled and often sighed for the days when his storehouse was filled with wares and his pockets with jingling silver.

Then came the rich man and demanded his gold. Then came also divers others and demanded gold for the bits of paper which the foolish trader had signed. Then last came the bailiff and sold out the goods, and took down the gold sign, and posted a notice on the door of the grand store, and took the key of the same from the possession of the foolish trader, and the savings of years had vanished in a few moons, and were no more. Then the foolish trader sorrowfully went home and sat by the fire and wept bitterly, but his wife said not a word. For she was not his business confidant. But her looks reproached him.

Moral—Let well enough alone, lest in reaching for more you lose what you have already gained, and ask your wife's advice before you kill "The goose which lays the golden egg."

"For it so falls out
That what we have we prize not to its worth
While we enjoy it, but being lacked and lost
Why, then we rack its value; then we find
The virtue that possession would not show us
Whiles it was ours"
—Ideas for Hardware Merchants.

HOW TO PREVENT ACCIDENTS.

A large decrease in the number of accidents has resulted from a law in Germany relating to shops in which machines are used. Under this law the maiming of a workman entails upon the proprietor the payment of doctor's bills, a life pension to the employe in case of permanent disability resulting from the accident, or, in case death results, a pension to the family of the deceased. The effect of the law has been the general discharge of careless help and the shielding of such parts of machines as are ordinarily dangerous when left exposed, and these measures are said to have produced a remarkable diminution of casualties in the use of machines. It would be wise, in the absence of such a law in this country, for proprietors to instruct superintendents or foremen that carelessness on the part of workmen as to their personal safety will be immediately punished by suspension or discharge. More accidents result from heedlessness and carelessness on the part of employes than from all other causes combined. It is probably no mistake to attribute the decrease in accidents in German workshops more to the elimination of careless operatives than to the boxing in of the dangerous parts of machines.—Iron Industry Gazette.

By a bill which Mr. Wood, of Brant, has introduced in the Ontario Legislature, assignees are required to reserve from insolvent estates sufficient to pay any claim there may be for taxes. Another bill which Mr. Wood has in hand gives liquor license boards the same powers to enforce their by-laws as are exercised by municipalities.

STOVES and TINWARE

THE STOVE BUSINESS.

Ever since the day when Franklin invented his "little demon," which, by the way, was the first American coal stove, the man who has had the hardiood to engage in the stove business has been looked upon as a black-hearted person. Nickel-plating has of late years partially succeeded in removing from the business this false idea, but in the main the first idea which people received of coal stoves has clung to them even unto the third and fourth generations. For this we can thank the medical profession,for it was an M.D. who so named the first stove.

It has been a source of conjecture why this learned doctor expressed himself so forcibly against the infant industry. It may be that it hurt his practice by enabling people to avoid catching cold, or it may be that anyone's invention but his own was n. g., or it may be that he tried to fit stovepipes to one of the demons. At any rate it has gone down on the fair page of history that the first coal stove was a "little demon," and consequently all successors are greater or less demons who have succeeded in concealing the cloven hoof more or less successfully.

This demoniacal idea is very prevalent to-day. Everybody looks on the stove business suspiciously. The public, when it is called upon to buy, fortifies itself on the eve of purchasing with an extra stock of sagacity, so that the stove dealer will miserably fail in all his efforts delude it. Nobody believes what a stove man says about a stove. Everybody buys with the object of making the best of a bad bargain. The butcher, the baker, the candlestick maker, all hesitate to give credit to the stove man—very risky, you know. Even Bradstreet's, those sagacious people who know more about a man than he knows himself, or his mother-in-law knows about him, even those sharp men of business eye him with distrust. Verily, the stove business is not a soft snap. The stove dealer himself is partly to blame for this state of affairs. His place of business is rarely attractive, often it is repulsive. Then, too, he bewilders the public with theoretical demonstrations of the fact that a return flue is sanitary, scientific, philosophical, beautiful and economical. In short, he goes too far into the science of and scientific laws in general which govern stove making. This is too much education for the average public to swallow in a lump. They grow suspicious. The statements set forth are improbable. Here arises the prejudice. Dirt is another cause of the inappreciation of the stove business. Common dirt. It is a generally accepted fact that cleanliness is next to godliness. There are two sides to every question, and by the laws of association the stove dealer is very nearly akin to the devil, that is as appearances go. This fact may have been the cause of the M.D.'s sarcasm.

To remove this false impression should be the ambition of everyone in the trade. How to do so often becomes a purely local question. Above all, get rid of the dirt and confusion. A woman can run a stove all winter without allowing the fire to go out, and keep her house clean, but a stove dealer must let his floor get black with dirt and dust and stove polish, while the stove stands empty. Surely there is something lacking. It would not be advisable, perhaps, to carpet the floor with Brussels, and put a pier glass in each corner of the room, but the floor might be well oiled and kept clean. Moreover, there is no reason why the windows of the stove store should not be as attractive as the windows of the hat store, or shoe store or furniture store. With the marvels of art and beauty which our modern stoves represent, it is possible for a tasteful person to make as attractive a display as ever reposed behind plate glass.

And above all things, do not day after day exhibit upon the sidewalk a horror of a stove that was the direct descendant of the demon referred to. Better block your sidewalk as little as possible and make your window as attractive as possible. If you must intrude upon the passing public, let it be the very finest you can put forth.

There are many pleas raised for the elevation of the stage, but few, if any, for the elevation of the stove business. Whether you think you are at your proper level or whether you think your case is hopeless, there is room for elevation, and up she must go. If you don't, some other fellow will. They are pushing upward now, and the day is coming when the stove merchant can fraternize with the dry goods merchant and the hat merchant, yea, and the shoe merchant, will declare that the stove business has taken to itself much polish, and the sagacious Bradstreet will hasten to acknowledge that it is well centered.--N. Y. Metal.

OIL LAMPS AND STOVES.

At a recent meeting of the Edinburgh Association of Science and Arts, John Laing, of London, read an interesting paper on "The Burning of Oils in Lamps and Stoves with Safety." As reported by an English paper he said that when gas was of so bad a quality and so high a price, the public generally ought to know that oil was cheaper, and produced a purer atmosphere than gas. Every nation seemed to be alive to public safety but Britain. Americans laughed at the British, and sent over the oils that were unfit for use, and that they would not use themselves. He then showed how the dangers from oil-lamps could be reduced to a minimum. He was strongly of opinion that the present legal flash point was far too low, and thought that 100 degrees should be the minimum flash point of all oils used in the United Kingdom. It was the duty of the Government, he contended, to see that the general public had the same margin of safety as they claimed for the war office and for lighthouse purposes. Mr. Laing recommended that all oil fonts and burning lamps should be surrounded by an outer vessel containing cold water. The water could be changed at any time by a simple arrangement without disturbing the lamp. He believed that the majority of lamp accidents were not due to explosions but the overturning of lamps and the oil catching fire from the burning wick. If an efficient extinguisher had been attached to the overturned lamp there would have been no danger.

UTILIZATION OF OLD TIN.

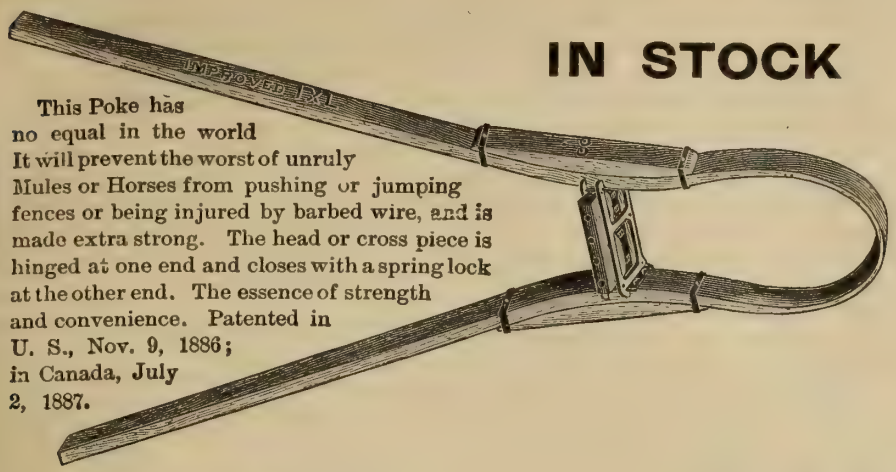
Old tin cans are dumped into a furnace. This furnace is mostly an old soap boiler, into which a few sticks have been thrown; the bowl is then filled with cans, a quart of kerosene poured over them and ignited.

The heat developed by the oil is not great enough to attack the tin, but melts the solder, which flows to the bottom of the bowl. The solder recovered from a load of cans averages 40 pounds. After this process is completed the tin plate scrap is sold to make what is called "acid."

Into a large open vat containing waste acid, acid ferric sulphate, sulphuric or hydrochloric acid, the scrap is thrown and allowed to remain until the tin is stripped from the iron underneath; more scrap and metallic iron is added until the solution is neutral. The tin thus dissolved is used as a bas's for the preparation of stannates or other tin compounds, and by dyers.

The iron plate is rolled into balls for melting, the ferrous sulphate purified and sold as commercial copperas, and the remaining acid used in repetition of the process.

The total tonnage launched in Great Britain in 1892 was 1,300,142 tons; about the same as in 1891 and 1890, but 46,000 tons below 1889. Excluding war ships, the merchant tonnage floated was 1,131,816 tons, considerably less than in 1891. A larger proportion of the total is sailing tonnage—22 per cent., as against 18 1-2 per cent. in 1891. As to material, 98 per cent. of the shipping built was of steel. There was a decrease of tonnage built for foreign orders,which has been falling off for several years.



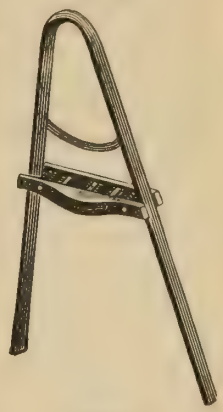
IMPROVED I. X. L.

IN STOCK

This Poke has no equal in the world It will prevent the worst of unruly Mules or Horses from pushing or jumping fences or being injured by barbed wire, and is made extra strong. The head or cross piece is hinged at one end and closes with a spring lock at the other end. The essence of strength and convenience. Patented in U. S., Nov. 9, 1886; in Canada, July 2, 1887.



DICTATOR.



CLIMAX.

CHAMPION.



Also—
The Pearson
No. 1 & 2.

H. S. Howland, Sons & Co.,
WHOLESALE HARDWARE, - - 37 Front St. West, TORONTO.

Carriage Paints . . .
Superfine Coach Colors
Varnishes . . . . .
Linseed Oil . . . .
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Our Pure Prepared Paints
Are the
STANDARD CANADIAN MAKE
EVERY PACKAGE GUARANTEED
THE TORONTO LEAD & COLOR CO. LTD
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SPECIAL ATTENTION AND PROMPT SHIPMENT.

White Lead . . . .
Colors in Oil . . . .
Oil Stains . . . . .
Harness Oil . . . .
Carriage Top Dressing
Etc., Etc. . . . . .

BRITISH BOARD OF TRADE RETURNS

The Board of Trade returns for the past month, says the London Times, are of a better character than were those of February, and are, indeed, more encouraging than any published for many months past. The total values, it is true, are below those of March, 1892, but it must be remembered that March included Good Friday this year, but not last. The low level of prices of commodities is still apparent, and to this fact is chiefly due the decrease of the total values of both imports and exports. The value of the imports is £34,089,413, a decrease of £2,703,781, or 7.3 per cent., and the exports of British and Irish produce are valued at £19,432,904, a decrease of £232,478, or 1.2 per cent. The most prominent decrease is as regards raw materials for textile manufacturers, and reaches the sum of £2,138,851. This is caused chiefly by the imports of raw cotton being 737,612 cwt. below the total of March, 1892, and those of sheep's wool being less by 25,749,863 lbs. The receipts of woolen rags were abnormally heavy, the weight being 16,083,200 lbs., compared with 6,569,920 lbs. and 8,028,160 lbs. in March, 1892 and 1891 respectively. The decrease in the imports of live oxen is very marked. Of the number landed, 16,738, compared with 44,032, came from the United States, low prices here having caused this falling off. On the other hand more chilled beef was landed thence. As regards wheaten flour, 1,254,564 cwt., or nearly the whole, came from the United States, but in February last year the quantity was 2,280,598 cwt. In yarns and textile fabrics, cotton yarn and cotton fabrics exports alone account for a decrease of no less than £727,910, while owing to the increased shipments of jute materials, linen, silk and woolens this heavy decrease is reduced to £543,631. Of cottons, the lessened shipments to the East have chiefly caused the reduction. Again this month a small increase in the shipments of iron is recorded. The demand for tinplates for the United States is the chief cause of this increase, that country having taken 31,334 tons, compared with 23,789. The increase in the value of the exports of machinery is nearly equally divided between "steam" and "not steam." Of mining and textile machinery, South Africa takes most of the former, and countries in Europe most of the latter. The larger shipments of alkali and bleaching materials sent to the United States have mainly caused the increases in these articles.

NEVER DROVE A SCREW.

In the halcyon days before the conquest of the industrial world by the hustler, no carpenter who had occasion to screw two pieces of wood together thought of hammering in the screw nearly up to the head and breaking and destroying the tenacity of the wood around it and then sending it home with a half turn or so; but he carefully bored a hole a size smaller than the screw, then countersunk the opening and screwed the screw all the way through solid wood. Careful provision was also made for the undoing of the work without damage in case it should become necessary. In fact, with some workmen these things were religious duties. An old English carpenter, on his death bed, when asked if he were prepared to die, answered: "Why not? I've worked at my trade fifty years and never druv a screw without greasin' it."—Philadelphia Record.

TORONTO'S SHOP FRONTS.

It is said that the City of Toronto has as great an extent of shop fronts as the cities of Buffalo, Detroit and Rochester combined. Toronto is said to have 27 miles of shop fronts, while Buffalo has only 13 miles. Circumstances are at work in Toronto which will probably transform the character of some of the principal thoroughfares, such as King and Yonge streets. On these streets there are a large number of small shops which it is believed will before many years revert to residence purposes. Two principal causes are at work tending to bring about this change. One is the introduction of rapid electric street railway transit, by means of which residents in the outlying districts of the city can be transported to the business centre within an interval of a few minutes. These facilities for dealing at the larger down town establishments is likely to be taken advantage of to the detriment of the smaller business concerns on the less important thoroughfares. The second cause is the recent development of a few large establishments where goods of almost every class are sold under one roof. These concerns will certainly wipe out of existence a very large number of the smaller stores. It is estimated that one such establishment already in existence in Toronto is doing the trade which formerly was divided amongst 500 small stores. These achanges most seriously affect the value of a large amount of property now used for business purposes.—Canadian Architect.

JOHN JONES JR.

"Young men think old men are fools,
But old men know young men are fools"

John Jones was the owner of a retail hardware store in the metropolis. The stock of goods was clean, and strictly in the hardware line. The store had long enjoyed a paying trade for staple articles. The location was fair, and the stand was well established in the public mind.

He had been engaged all his life in the hardware business, and had derived a fair income from it, although the latter years of his life had not been as remunerative as he had hoped for. Being a prudent and conservative business man, John Jones had noticed and avodied many of the mistakes of his competitors. He viewed with special disdain the attempt of a newly established "Department Store" to carry on, under one management, various useful lines of business. He knew that the principal of the whole thing was commercially a mistake, and it somehow reminded him of the "Country Store" of his early recollections.

Gradualily the new store opened up a hardware department, and John Jones was then fully convinced that they were mistaken in their theory of business. His sales of nails, screws, and bolts were as large as ever, but his limited stock of cutlery did not sell as readily as before. Customers began to have a provoking way of hinting that his knives and scissors were not of the proper shape and finish, and that they had seen the same goods advertised cheaper at the department stores. John Jones, being of a cautious and prudent disposition, contented himself with a review of his former years, and restricted his stock still more to staple goods. He found consolation in disparaging remarks about the change in business methods since the introduction of department stores. But in spite of his early and late hours, and careful business training of years, his store lost prestige, and he often stood by his door watching his former customers hurrying past to the great store up the avenue. The profits of former years seemed to stand out upon the pages of his ledger like eye-sores, and he sighed for the good old days, when every man knew his own business, and minded it. At last kind Father Time gathered him in, where competitors cease from troubling, and the weary are at rest.

John Jones, jr., an only son, succeeded to the hardware business of his father, and also inherited his sire's capability for hard work—the basis of all genius. Besides, he was a young man of modern progressive ideas, and felt the urgent need of adapting his business methods to the current of events. He fully recognized the substantial advantages which the department stores were able to offer their patrons, both in price and selection, and he studied their methods.

The first element of their success he found to be exact and practical system. System in the purchases. System in accounting for stock and sales. System in the delivery of goods. The second factor of their success he found lay in the fact that they led public opinion, rather than followed it. That they had a scent for future wants. That they created the demand as well as contributing the supply. The third cause of their success he found was due to reasonable prices, and the same price to all. Plain figures told the tale; not the glib tongue of the crafty salesman. The fourth cause of their success he attributed to their extensive advertising in the newspapers. The free free use of printers' ink attracted attention to their store, stock, and prices; and their printed statements were confined strictly to facts, and were made readable and interesting.

John Jones, jr., determined to infuse these methods into his own business. Soon the "old stand" began to take on a new aspect. People stopped to look in at the windows, and were attracted by the display of tools, sporting goods, cutlery and novelties, which were skillfully arranged to please the eye; while neatly printed cards impressed upon the mind the value and use of the articles. Inside, the change was still more apparent, Nails, screws and bolts were no longer the principal merchandise. They were there, but were kept in the background. The stock was arranged into compact departments, with a clerk in attendance at each, whose duty it was to attend only to the stock under his care, and he was responsible only for its condition. At the rear of the store was the cashier's desk, to whom all sales were reported and all the money paid. The salesmen were not permitted to sell anything for less or more than the marked price, and were obliged to keep a memorandum of goods asked for, but not kept in stock. The newspapers kept John Jones, jr., prominently before the public mind, and his printed statements never deceived anyone. When a new article of merit appeared on the market he tried to be first to display a stock of it. He was constantly on the outlook for saleable novelties or staples, to add to his variety, and increase his profits.

Customers began to appreciate the advantage of coming to his store first. They were sure of finding the latest and most approved device, and of being served promptly and fairly. The department stores still flourished, and their number increased, but John Jones, jr., flourished also. True, he read "Looking Backward," and was interested in it as a fanciful sektch of the far future, but he lived and acted in the present, and adapted his business to the times as he found them. He trimmed his sail to meet the wind of demand, and his ship of trade moved steadily forward.

"He never knew a better thing
But what he sought it.
He set his aim so high
It kept him ever climbing."

—D. T. Mallett, in Ideas for Hardware merchants.

The Columbian Associated Travellers, composed of the commercial travellers of the world, will celebrate their day, July 26th, at the World's Columbian Exposition. The entire week, July 24th to 29th inclusive, will be consumed by the travelling men in celebrating at Chicago. A large number of Canadians will be present.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton. Ontario.
SP

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friends against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

THE BEST
English Sporting Gunpowder
USE THE
"ALLIANCE"
PRIZE POWDER
—Made only by—
Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.

Always obtainable from
Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.

NONE GENUINE
WITHOUT THIS BRAND



STAMPED IN HEAD OF
EVERY PACKAGE

JOHN WILSON'S
Butcher Knives
and Steels,
Farriers' and
Shoe Knives
Are the best in the World.

Trade  Mark

TOPICS OF THE MOMENT.

"Well, there is one thing I know," said a wholesale hardware man to me Wednesday, "I would rather have a poor but permanent tariff than a good one that was everlastingly being changed. Why, look at the way business was unsettled by the announcement made in the House during the tariff debate that a revision of the tariff was contemplated."

* * *

"Well, we middlemen are not much concerned about tariff revision," said another wholesaler. The manufacturer and consumer are gradually getting closer together, and the more this goes on the less we are troubled regarding the tariff."

* * *

"This sole agency business doesn't amount to a row of beans," said a well-known wholesaler to me the other day. "For instance, the other day we specified a certain article for a job we were tendering for. We were told that we could only get the article from the sole agents. But what was the result? Why, simply that we got the articles we wanted, and right under their noses, too. Oh, you can get anything when you have the money."

* * *

"If you want to get a good trout stream," said a commercial traveller who can catch a fish as adeptly as he can a customer, "just go up the Coldwater stream about six miles above the village and I'll bet you'll be good for a ten-pound catch in an afternoon. I know what it is like, for I have been there myself. O, they are beauties, as firm as a rock, and—don't I wish I was there now," he added, going through the motions of throwing a fly and hooking a fish.

RAMBLER.

CEMENT AND IRON PIPES.

In a recent number of the Genie Civil a description is give no! the application of cement to the construction of pipes on the Bordenane system by sidero-cement. The general principle consists of embedding a framework of iron bars in cement mortar. Bars of I section are used, and these are made as long as possible, and are wound in helical form, the pitch of the helix being determined by the section employed, and the pressure to be withstood. Dependence for structural strength to resist pressure is placed wholly on the metallic framework. The working stress is calculated at 9.8 tons per square inch; so that for a pipe of an inside diameter of 2 feet 7 1-2 inches a bar .5 inches by .2 inches would have a pitch of 3.8 inches for a head of water of 33 feet. Cylindrical vessels are also made on this principle, the bottom being suitably constructed of radial and circumferential bars, with vertical bars also introduced in the walls. In this case the pitch of the helix is lessened toward the bottom, so as to withstand the increasing head. The principles set forth have been tested by use, an experimental line of four miles in length having been constructed. Fortunately the coefficient of expansion of iron and cement are approximately equal, otherwise, of course, the system would not be trustworthy. The metal is completely protected from wasting by the cement, which adheres closely to it. It is said that no vegetation or deposit of any kind will attach itself to the cement, and the danger from leakage is said to be less than in iron piping with lead joints, and, finally, it is claimed that there is a saving in cost over iron pipes of from 15 to 45 per cent., according to circumstances, while the durability is said to be exceedingly good.

NICKEL STEEL GUNS.

Nickel-steel forgings for an experimental 8-inch breech-loading rifle have arrived at the naval gun foundry, Washington, and the manufacture of the gun will begin at once. Great interest will attend the construction and subsequent experiments with this gun. Nickel-steel has never been used in the manufacture of guns, and it is thought that the non-corrodible quality of the alloy, coupled with other physical characteristics such as increased elasticity and extraordinary elongation, render it specially adapted for guns subjected to high pressures with nitro-powders. The forgings for this particular gun have 3.15 per cent. of nickel. The guns will be 304 1-2 inches long, and will weigh 31,300 pounds.

The minimum physical characteristics of the gun will be, for the tube, tensile strength, 85,000 pounds; elastic limit, 42,000 pounds; elongation, 20 per cent. For the jackets the same characteristics will be, tensile strength, 90,000 pounds; elastic limit, 45,000 pounds; elongation, 13 per cent. The gun will be of special design. It will be composed of only three parts—a tube, jacket, and hoop—and will be assembled by means proposed by William Sellers, of Philadelphia.

It is claimed for this class of guns that they can be dismounted after considerable service, the corroded or damaged tube readily removed, and a new tube substituted, the old jacket and hoop being used on the new tube. Should the experiment be found a practical success, not only will the original cost of the gun be considerably reduced, but it will be possible after extensive use to make virtually a new gun by merely supplying another tube, the wear and tear of the jacket and hoop being of no particular account in firing. Mr. Sellers contends that the jacket and hoop can readily be removed by a process of artificial contraction and expansion, similar to that recently applied to the 18-inch gun.

AMERICAN ORDERS FOR CUTLERY.

"It is well enough known," writes the English correspondent of American Manufacturer, "that the grades of cutlery which are most largely used for America are not being more freely ordered from the manufacturers of Sheffield, and many cutlers who have been accustomed all their lives to American patterns have no prospect for renewing their employment for that market. The increased value in the cutlery dealings with the States applies to the costlier kinds of goods, and not a small part even of the increased cutlery exports may be due to managers of hotels and restaurants equipping themselves for the exceptional season of the World's Fair. Under any circumstances, it will be foolish to anticipate full 'recovery' from the McKinley tariff. The business in which the 'long lines' are given may be partly taken by the more adaptable Germans, who have an absolute genius for cheap production, but it is not likely, I fear, to return to England."

A NEW WIRE.

We learn from an exchange that a Connecticut manufacturing firm has brought forward a new resistance metal in wire, sheet or castings, which is regarded as a very important contribution to this class of material in electrical engineering. The wire resembles ordinary copper wire on the outside, has a pinkish white tinge at the surface of fracture, and is very strong without losing much ductility; the torsion test shows over 80 twists in 6 inches for an annealed wire, which still possesses 70,000 pounds tensile strength to the square inch, and hard drawn wire is said to run to 100,000 pounds tensile strength, with about 40 twists in 6 inches. Combined with these favorable mechanical qualities it is claimed that the wire has the remarkable resistance of 35 times that of a copper, with a temperature co-efficient of less than 1-10 that of German silver. By having the resistance lower than as above described, the tensile strength can be increased up to 140,000 pounds per square inch.



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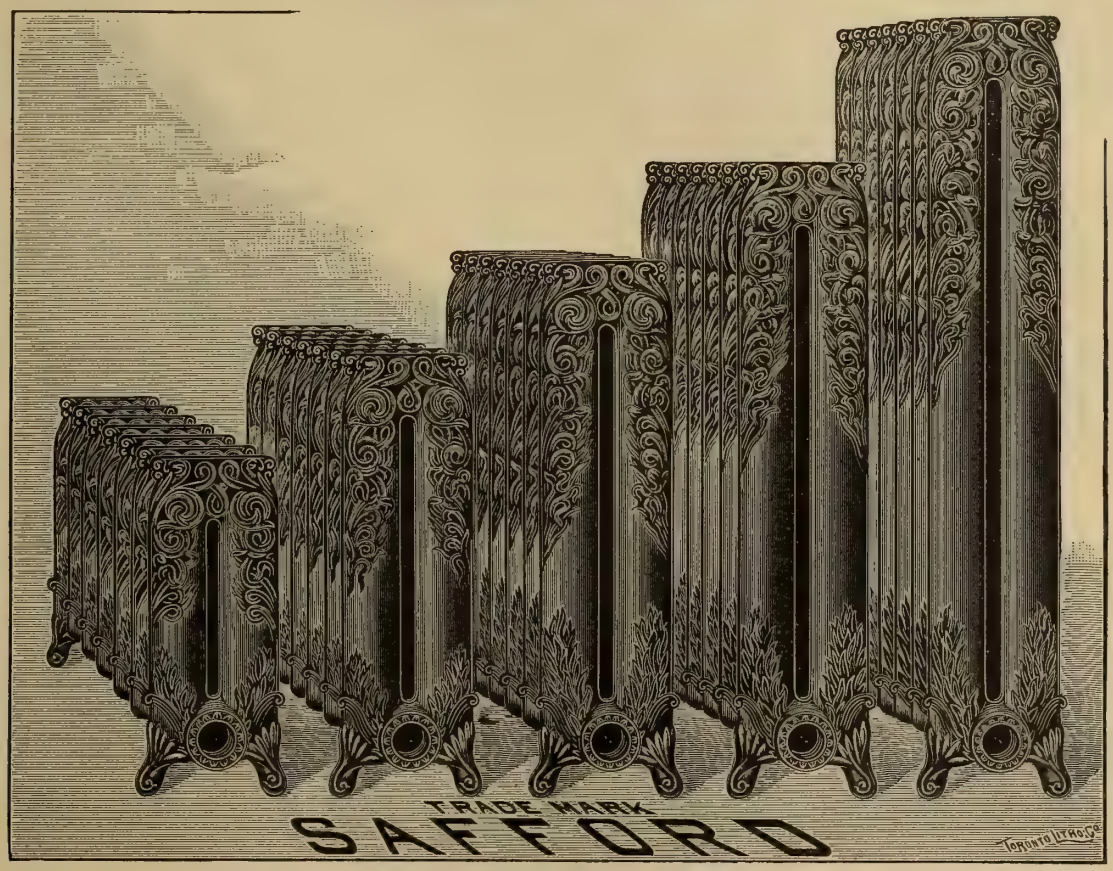
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TRADE CHAT

[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Tuesday.]

Sixteen ounces of gold it is said are sufficient to gild a wire that would encircle the earth.

The Hamilton council is considering a by-law to protect citizens from unprincipled coal dealers.

England expects to have increased competition from the Continent in the making of basic steel.

A. D. Beardmore, James Strickland and Edward Hay have been elected members of the Toronto Board of Trade.

Montreal aldermen propose to tax all telegraph and electric poles $10 each. There are 10,000 poles in the city.

The St. Lawrence Foundry Co. has secured the contract to supply the Kingston waterworks department with cast iron piping.

The steamer "City of Collingwood" constructed for the North Shore Navigation Co., was launched at Owen Sound Wednesday.

It is said that the Canadian General Electric Company is thinking of making a bid for the electric street railway franchise at London.

John Cameron, the genial representative of J. B. McLean's trade journals, called on the Confederate on Thursday. —Mt. Forest Confederate.

A Board of Trade was formed in Thorold April 27th with the following as officers: W. J. MacCartney, president; Omor Johnston, vice-president; T. E. Simson, secretary.

It is reported that the iron syndicate, composed of Churchill Bros., J. B. North, R. Burgess, of Wolfville, and others, intend establishing smelting works at Hantsport, N. S.

The naval vessels now in process of construction at various shipyards in the United States are estimated to cost $53,000,000, and the merchant vessels building at $4,560,000.

The members of the Montreal Board of Trade and the Corn Exchange Association moved into their new quarters in the new Board of Trade building on St. Sacrament street Monday.

The Eddy paper mills at Ottawa have found the railway accommodation insufficient for the firm's enormous business, and a spur of the C.P.R. is to be run into the sulphite works and mills.

A despatch from Kingston says that an American company, to erect cement works at Marlbank, is in course of organization. Besides cement it is proposed to make crockery.

The Hamilton, Grimsby, and Beamsville Electric Railway Company has secured the necessary number of signatures to a petition asking the Saltfleet council to submit a bonus by-law for $6,000.

The Percivals, of Merrickville, are in Kingston consulting with the civic authorities regarding the location of a plough and hammer works. They are said to be pleased with Kingston and its shipping facilities.

A dollar loaned for 100 years and compounded at 24 per cent. will amount in that time to $2,551,799,404. A lot of satisfaction in that! A fellow might as well throw the dollar into the lake for all the good he would get out of it.

A motion was introduced in the British House of Commons last week for ocean penny postage. The Government expressed its approval of the principle, but urged that financial considerations made the change impossible at present, and the motion was withdrawn.

Building permits to the extent of $250,000 were issued in Toronto last month. This is slightly in excess of the amount for April, 1892. The total for the first four months of this year is $391,350, as compared with $847,250 during the same period last year.

The contract for the construction of the Ottawa, Arnprior, and Parry Sound railway from Arnprior to Eganville, has been awarded to E. F. Fauquier, of Toronto. The work will be gone on with at once, and Mr. Fauquier anticipates that his contract will be completed by September next.

Experiments are to be made with a light brick for interior partitions, ceilings, and other places where crushing strength is not required. With ordinary clay and sand about fifty per cent. of the fine sawdust will be mixed; the brick will be molded under heavy pressure and then burned until the sawdust is consumed.

The art of making needles was kept a secret until about 1650, when it was taught to the English by Christopher Greening. Now English needles are sold all over the world. At Reddich alone 20,000 people make more than 100,000,000 a year, and they are made and exported so cheaply that England has no rival in the United States, and practically monopolizes the market.

More wonderful than the development of the locomotive has been the tremendous progress in naval architecture. The new Cunarders are scarcely ready to speed across the Atlantic ocean in possibly five days when report says that the White Star Company have in contemplation a vessel 700 feet long, 45,000 horsepower, and 27 knots speed, that will surpass the Campania and Lucania, which are calculated for a rate of about 23 knots or more. This high rate of speed would further diminish the time and discomforts of an ocean passage. It is worthy of note that this new vessel, to be called the Gigantic, will be 20 feet longer than the Great Eastern, and of 15,000 greater horsepower than the latest Cunarders.—N.Y. Bulletin.

The season of navigation was opened in Montreal Wednesday by the arrival of the first ocean steamship in port. The Hamburg-American Packet Company's steamship Pickhuben, Capt. Spleedt, from Antwerp, steamed into port about two o'clock, and was welcomed by a large crowd of spectators. The first arrival this year is just ten days later than last year's first arrival.

A delegation in the interests of the nickel mines at Sudbury, consisting of Messrs. Flett, Montgomery, Rose, Chesworth, Hillyard, and the Lowndes, who wish the Government to establish a smelter at that place, addressed the council of the Toronto Board of Trade Tuesday, giving their reasons why a smelter should be established there. Messrs. Baird, McKinnon, and Jaffrey were appointed a committee to report on the matter.

M. Beatty & Sons have launched the mammoth dredge they have been building at Welland for the Welland Dredging Co., of Trenton. Only one or two larger dredges have been built in Canada. Her dimensions are: Length, 107 feet, beam 35 feet, depth of hold 9 feet, capacity clay diging 2,500 to 3,000 yards per day, weight about 30 tons, cost, about $30,000. This is the eighth dredge built by this firm.

All the coal and railway companies in Montreal and United States capitalists who were interested were granted incorporation, and the Lieutenant-Governor of Nova Scotia has assented to them. These include the New York and Cape Breton Railway Company, the Cape Breton Copper Company, the Lennox Bridge and Railway Company, the Boston and Nova Scotia Coal Company, the Standard Coal Company, the Port Hood Coal Company, and the Consolidated Scotia Coal Company.

The Chaudiere lumber mills are about ready to start the season's business.. Bush, Orr & Co. start their saws this week. The firm employ about their mills some 500 hands, and Bronson & Weston as many more, so that when Booth's two mills are going there will be in the neighborhood of 2,500 hands at the Chaudiere, and this will represent a month'y pay-roll of nearly one hundred thousand dollars. Mr. Booth will employ between 1,500 and 1,600 hands.

The Vienna Handels Museum says: The automatic machines for selling railway and tram-car, etc., tickets, disposed at Berlin up to Oct. 31st last of 601,300 railway and 417,600 other conveyance

SITUATION VACANT.

MANAGER WANTED FOR THE CONSOLIDATED Plate Glass Company, Limited. Must have a thorough knowledge of the Plate Glass trade and be conversant with Toronto business. One having a knowledge of book-keeping and accounts preferred. Applications must be in writing and addressed, The President, Box 15, HARDWARE. 18

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Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

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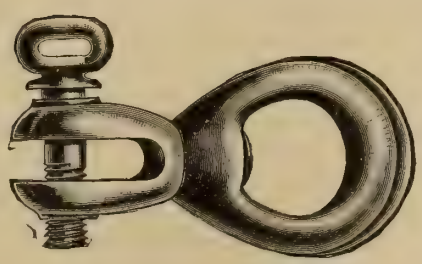
We beg to advise our customers that the fire which occurred Sunday morning will not interfere with our business. The fire was confined to our LEAD WORKS building. We have arranged to CONTINUE OUR USUAL LINES.

Yours Respectfully,

The JAS. ROBERTSON CO.,
(LTD.)

THE WHITMAN & BARNES MFG. CO.

Canadian Branch: St. Catharines, Ont.



This new **Swivel Clevis** can be attached to any Plow Clevis, used in place of Shackle or End Clevis.

MADE OF MALLEABLE IRON.

ALLIGATOR WRENCHES



Write us for Description and Prices

tickets. The daily sale of these tickets is now about 16,000, and is constantly increasing. These ticket automatons have recently also been introduced at Madgeburg, Strasburg (Alsace) and Breslau.

As a result of observations taken in the centre of Manchester, England, and about 1 1-2 miles distant, it was demonstrated that the presence of smoke prevents radiation to such an extent as to make an appreciable difference in the temperature. At the town station on Saturday and Sunday evenings, when the amount of smoke produced is less the temperature is perceptibly lower than during the rest of the week.

A Hamilton despatch says: Herr von Siemens, head of the great firm of Siemens & Halske, arrived in New York on Saturday, and will be here in a few days in connection with the Hamilton Radial Electric Railway Company and its proposed transmission of power from Niagaga to Hamilton. It is well known that the managers of Herr von Siemens' branch factory in Chicago think highly of the project, and if the distinguished visitor shares their opinion it is probable that a large plant will be erected here shortly.

Considerable excitement prevails in Bothwell over the gushing oil well struck by a London syndicate. Experienced oil men say it is the best they have seen pumped for years, considering it has not been shot with glycerine. The drillers got about 15 feet of good oil cuttings, and say there is lots of oil there, and now, as they understand, the surface well can be put down cheaply. It is understood the company intends putting down more wells and a new pumping rig with a capacity of pumping 100 wells.

The Drummonds, of Montreal, are in correspondence with Ald. Dewey of Hamilton relative to the removal of their charcoal iron blast furnace from Trois Rivieres to Hamilton, and, in addition to this, notice is given in the Canadian Gazette that a number of Philadelphia capitalists, joined with some Perth manufacturers, are seeking incorporation as "The Facer Hammered Solid Steel Car and Locomotive Wheel Company," with headquarters at Hamilton, and a capital stock of $600,000. So that the year's prospects look bright and cheerful.

The annual statistical report of the American Iron and Steel Association contains a review of the iron trade in the United States for the year 1892, and for the first three months of 1893. Last year's report intimated that the year 1892 was not likely to be a prosperous one for the iron trade, and that prophecy is now history. While other industries recovered their prosperity after the Baring failure—the textile, pottery and glass interests, in particular—the iron and steel industries did not. Putting it in a nutshell, Mr. Swank observes that last year was a year of good profits for very few iron and steel manufacturers, of small profits for many, and of no profits at all for a large number.

E. F. Cairns, of London, Eng., interested in the Lillieshall Coal and Iron Co. and Coal Brookdale Co., Shropshire, was in Toronto a few days ago studying the advantages for iron works. He said he proposed to establsih works in Canada for the manufacture of mining machinery. He believed in a country with mineral resources such as Canada possessed. There ought to be a good opening for such a business in the Dominion. He had not decided to locate in Toronto, and might choose Montreal or Ottawa, both of which places he had visited. He expected no bonus nor to have exemption. Associated in the enterprise with him are Mr. Richard Evans, of Haydock, the largest single colliery proprietor in England, and Lord Granville.

There is a great demand for a sharp sand for use in the sand boxes of electric cars and locomotives. Sea sand is extensively used for lack of better material, but it is so rounded by the action of the elements that it is inferior to the sand taken from river banks and beds of ancient lakes in the interior. The N. Y. Sun says that Edison has sand which has never been subject to the action of the elements, consequently has sharp edges. He makes it as a by-product of his ore-separating process at the Ogden mine in New Jersey, where he has a big plant engaged in crushing lean iron ore and extracting the iron by means of electric magnets. The residue is powdered rock, heavier than ordinary silica and sharper in girt than any sedimentary sand.

The London City Council at a meeting the other night heard the argument of Solicitor Rise, of Cleveland, Ohio, on behalf of the backers of the London and Port Stanley railway, for extensive modifications of the terms of the lease. Chief among the proposed changes is that instead of an annual rental of $28,000, the lessees pay $6,000 a year and expend $19,000 annually on the road. The lessees also agree to lay down hard coal in the city at $1 per ton less than is at present paid. The matter was finally referred to the finance committee and the city solicitor.

The C. P. R. officials have announced that final arrangements had been completed between them and the Australian Steamship Company for the establishment of a line between Vancouver and Sydney. The Miowera and Warrimoo are the two steamers engaged, and the first leaves Sydney May 11, the second June 8, returning leave here June 8 and July 6. The steamers are twin ships, 5,000 tons gross, 16 knots speed, and have accommodation for 125 saloon passengers. The company is now prepared to quote on Through freight. The distance between Vancouver and Sydney is about 334 miles more than to San Francisco, but as the steamers are faster than those it is thought the trip will be made in about the same time.

G. R. R. Cockburn, M.P., who was in Ottawa the other day on departmental business, saw the Postmaster-General in regard to complaints as to the unsatisfactory mail service between Toronto and New York. He was informed that the statement that the department had been asked and had refused to pay a small extra charge for the carriage of mails from Toronto to New York by the Chicago fast mail train which leaves Buffalo every evening, was entirely without foundation. No communication had been received at the Post Office Department from the United States authorities in reof Toronto as quick a service to New ticular train. The department, however, will do its utmost to give the merchants gard to the sending of mails by this parYork as can possibly be obtained.

Mr. C. E. Sontum, of Christiana, Norway, was introduced on 'Change at the Toronto Board of Trade Monday. Mr. Sontum is the Norwegian commissioner to the World's Fair. He is also deputed to endeavor to extend trade relations between his country and Canada. Mr. Sontum is highly pleased with Canada and Canadians. He says that business men of Norway prefer to trade with Canadians rather than the Americans on account of the high tariff prevailing in the United States. Some time ago the Norwegians made an order for some Canadian farm produce. So encouraging were the results of the experiment that several large orders for Canadian meal, split peas, fluid beef, whiskey, and other lines have been placed. Mr. Sontum expects that in the future Canada's export business with Norway will be largely increased.

Strikes took place centuries ago, and with about as disastrous results as characterize the majority of the great labor struggles of the present day. At Breslau, in Germany, in the year 1329, brass workers inaugurated a strike which lasted for an entire year. In 1385 a strike of blacksmiths took place in Dantzig, when the employers sought aid of the court, with the result that an order was issued by the municipal authorities that all workmen attempting to strike would have their ears cut off.

PERSONAL MENTION.

Mr. Graham, of Graham & Sons, Inglewood, was in the city.

E. Braun, of Aurora, was in town touring the warehouses this week.

Mr. Padget, of Padget & Hay, Unionville, was on the street this week.

J. A. W. Allan, of J. A. W. Allan & Co., of Newmarket, was in the city this week.

Bread without Crumbs . .

Cake without Breaks . . .

Fruit with Wafer Parings





WE call attention to the above improvement in construction of Knives for purposes indicated: securing Bread without crumbs, Cake without Breaks, Fruit with Wafer Parings. The Knives are made of the best steel, (triple plated)—do their work admirably—and are growing in popularity daily. They can be sharpened exactly like any other knife, on a whetstone or on a steel. The Knives are put up in sets, containing Bread, Cake and Paring Knives, and retail at $1.00 per set.

Liberal Discount to the Trade

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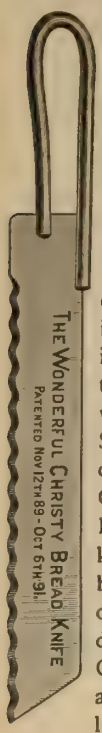
THE CHRISTY KNIFE COMPANY.

30 Wellington Street East, TORONTO

P.S.—There are Imitations on the Market. The "Christy" is the Genuine.

A POPULAR KNIFE.

"Bread without crumbs, cake without breaks, and fruit with wafer parings." These are the characteristics claimed for the Christy bread knives. These knives are made of the finest triple-plated steel, and that they do their work admirably is evidenced from the growth of their popularity. They can be sharpened exactly like any other knife, on a whetstone or steel. The accompanying cut is a representation of the bread knife. Constructed on the same principal, only with a more attenuated point, is a cake knife. The paring knife is a neat and handy little tool, and the three varieties here mentioned, which comprise the set, retail at $1. Now the company has placed on the market what is termed Christy's Improved Table Knife. It is made, like all the Christy knives, of the best steel, with steel handles which will not wear out or come off, are beautifully plated and do not require scouring. The Christy knives are now recognised as staple articles in the cutlery line. They sell well, and the field for them is gradually expanding as a knowledge of their efficiency spreads among the great mass of consumers. They are manufactured by the Christy Knife Co., of Fremont, O., and the Toronto branch is at 30 Wellington street east. The knives are supplied the retailer through the wholesaler, and those who may not yet be handling them will doubtless find it to their advantage to do so.



ART OF WINDOW DRESSING.

"Tell us in a few words, what is your theory of correct window dressing," asked an exchange of one who has some claim to pose as an authority on that subject, and he answered, "The art of window dressing may, like most others, be acquired by patient study of the causes of failure aud success. The objects sought are four, viz. :—

To attract the eye.
To arrest attention,
To excite curiosity,
To provoke enquiry.

Thus the attainment of the final object is a gradual process, advancing by degrees to a point where the desire of the public without meets that of the proprietor within. When these coalesce the end is attained, success is achieved, both desires are satisfied—in other words, business is done. Just as the spider spreads out its web in August, when the fly is fat and feeble on the wing so it is neecssary for the tradesman to consider the season and to adapt his attraction to the time. If it were possible, it is not desirable, to throw the whole contents of a shop in the window, but some windows create that impression, so crowded are they with a heterogeneous show, and that indicates shallowness of resource and lack of reserve force. The whole art of window dressing may be deduced from these few principles.

DURABILITY OF TIN ROOFS.

The question of the endurance of tin roofing is one which has had some discussion and less satisfactory conclusions than almost any other connected with the roofing trade. Along the seashore a tin roof without the protection of paint will last about as long as it would take to eat it up if put in a weak pickle. During the rainy months of the Fall and Spring it will get a coating of red rust inside of two weeks, and in a month will become so covered with rust that no trace of tin can been seen upon it. In the suburbs of New York and in the uptown districts it is a common practice among roofers to expose the roofs in its way until thoroughly rusted. In some of the dry interior portions of the country tin roofs without protection of paint have been reported in use for years with the tin still bright and perfect. They are undoubtedly so far away from salt water that no salt is present in the atmosphere, and probably the amount of carbonic acid present at the same time is at a minimum.

Rusting of iron takes place only in the presence of moisture and an acid. If we remove the moisture the iron is safe. If we can keep the iron in an alkaline condition it is also safe from rust. The effect of lime on a tin roof is probably well known to every tinner A few handfuls scattered about the roof will keep the tin bright for weeks after the remainder has disappeared under a coating of red rust.

The use of green sheathing boards, the placing of tin on roofs where acid vapors arise through the building, the use of acid tars and acid tar papers are among the causes to which the rapid destruction of tin roofs may be charged.—N. Y. Metal.

REGARDING INTEREST.

The question, can we afford to pay interest, is coming home to many dealers who once thought the biggest thing out was to do business on the capital furnished, in the shape of goods, by jobbers. It is a nice business operation to buy on time, sell on time, making both ends meet, with a margin to spare and leaving one's credit first-class; but, how many dealers do it who make a habit of trying?

The proportion of dealers who fail on this account is large, and those who have to be held up by creditors until they turn their stocks into cash assets are also too numerous. They are all right so long as their customers are able to meet their obligations, but with the loss of a few accounts and the accumulation of interest on their obligations every prospect of profit, which is largely their capital, goes glimmering.

It is a fact, proven by the experience of dealers, successful and otherwise, that ample capital to guard against the payment of heavy rates of interest is necessary to a dealer's success. The time comes in every business man's career when he needs cash and must have it at once. If he can borrow, and does so, he can avert the threatened trouble temporarily, but should he possess the cash reduired he can laugh at circumstances and continue his prosperous way untroubled.

But the man who borrows must pay or become bankrupt; and he must pay for accommodation at the current rate. The question is, will the profits he can make, taking into consideration the risk he runs in making unprofitable sales, permit him to do so. Most dealers who have tried it say not, and it is certainly a fact that the dealers who are doing a safe and profitable business have the necessary amount of capital on which to do so.

That men go into the implement and vehicle trade without the required capital to render their standing good or their credit above suspicion is not always the fault of those men. Jobbers and manufacturers are often to blame, not only for the encouragement and credit they extend, but for the injury they do dealers of unrecognized worth by making it possible for such competitors to go into the field against them. Fortunately this feature of the trade is on the decline, but there is still to much of it to continue with profit.—Implement Trade Journal.

CONSUMPTION OF WIRE ROPE.

A surprising quantity of wire rope is used in the operation of elevators in office buildings and warehouses. In a seven-story office building, for instance, in which there are only two elevators, nearly a mile of one-inch wire rope is required for the elevator equipment. It can readily be seen from this statement that the consumption of wire rope for this purpose alone throughout the country is enormous. The construction of very large office buildings above four stories in height is of comparatively recent date, the movement being scarcely ten years old. In fact, there are not a few important cities in which construction of this character has but just begun. It is probable that already the consumption of wire rope for passenger and freight elevators in buildings is as large as in any other single channel. This is but one of the numerous developments of business enterprise which is steadily increasing the general consumption of iron and steel.—Metal Worker.

One thing in particular should be impressed upon clerks—the necessity of careful attention to small customers

You can lose more than we do by not subscribing for this paper.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below, and in our Prices Current, necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, May 5, 1893.

HARDWARE.

Business in hardware is practically at a standstill, buyers holding off for the arrival of new stocks. The cement market is quiet but firm in tone, spot stocks being rather small at the moment. Leads and paints are steady but quiet, and naval stores are generally neglected. The movement noted last week in shelf hardware continues, jobbers reporting a fair sorting demand. Payments show little if any improvement owing to the continued bad state of the country roads.

PIG IRON.

Some further business has been done during the week in Langloan at $21, the market being now about cleaned up of everything except a few small lots of Carnbroe, which are held for $19, and a small quantity of Eglinton, which is offering at $19.50. Sales of Summerlee have been made to arrive at $18.50 ex wharf, and Carnbroe, Eglinton and Middlesboro' are quoted at $17 to $17.50

BAR IRON.

There is no change to note in the position of the bar iron market, a small movement being reported at $1.90 to $1.95 according to quantity.

TIN PLATES.

No further business is reported in tin plates either on spot or to arrive. Cokes are quoted at $3.15 to $3 20 and charcoal at $3.50 to $3.75 spot or $3 40 to arrive.

CANADA PLATES.

Some business is reported in Canada plates ex store at $2.45 to $2.50, which is also about the idea of selling agents for 100 box lots to arrive. The movement however is small.

SHEET IRON.

Orders are still coming in for sheet iron for early spring delivery but they are generally small and unimportant, quotations are $2 40 to $2.50 for 28, 10c. less for 26 and $2 for No. 2 and heavier grades.

OTHER METALS

Other metals are generally quiet, tin copper and lead being slightly easier in tone. Ingot tin is 22½ to 23c., copper 12½ to 13c., spelter $4.75 to $6 and antimony 12 to 13c.

LEADS AND PAINTS.

A good steady movement is reported in paints, business being fully equal to the usual spring demand.

OILS.

While no change is reported in the price of linseed oil, holders are very firm in their views owing to the temporary short supply, the idea for round lots of raw being about 60c., while boiled is held for 63c. Cod oil is steady at 40 to 41c. for Newfoundland, and $3 90 for Gaspe. Cod liver oil is 65 to 75c. as to quality. The seal oil market does not show any change, all advices being very firm, and in confirmation of the already published reports that the yield will not be over one-third the average. Steam refined to arrive is quoted at 47½ to 50c. for round lots, while the small stock on spot is held for 52½ to 55c.

GLASS.

The spot demand for glass is slow, but some fair sized orders are being booked for first steamers, on a basis of $1.35 for first break. Putty in bulk is steady at $1.85 to $1.90.

NAVAL STORES.

The only feature in naval stores is a easier feeling in turpentine which is now quoted at 52 to 53c. Rosins are in fair demand, but show no change in price. Other lines are extremely dull and featureless. We quote Turpentine, 50 to 53c.; resin, $2 40 to $4.50; coal tar, $3.50; pine pitch, $2 50; pine tar, $3.50 to $3.75; cotton waste, colored, 5¾ to 6½c.; do. white, 8 to 10c.; oakum, 5½ to 7½c.; cotton oakum, 10 to 12½c.

CEMENT, ETC.

The cement market is quiet, buyers generally holding back for the arrival of the first steamers in order that they may take advantage of the lower prices. The stocks on spot are small, but holders are very anxious to effect a clearance before the first arrivals come to hand. Several orders have been booked for stock to arrive at $2 10 to $2.25 for English and $2 to $2 15 for Belgian brands to arrive, while spot quotations $2.40 to $2.60. Fire bricks are in fair demand at $19 to $24 per 1000.

PETROLEUM.

While Canadian refiners are quoting refined petroleum at 12c. in car lots Montreal, there is very little business doing at these figures, selling agents cutting prices considerably. The movement in both Canadian and American oil is very fair for this season of the year. We quote as follows: Canadian 12c. at shed in Montreal for round lots, and 12½c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c in 10-barrel lots, 19¼c. in 5 barrel lots, and 19¾c. for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c.; Canadian benzine, 10¾c. Petrola; 12¾c. Montreal.

MONTREAL TRADE NOTES.

Wm. Clendenneng Co. are putting in a lot of new handsome iron store cases into the new Witness building on Craig street.

The Canadian Pacific Railway Company have ordered from Mr. T. W. Ness several large annunciators, which are now in course of construction.

The Aetna hot water boilers, will be pushed this season for all they are worth (which is claimed to be a good deal), by the Wm. Clendinneng & Son (Ltd.), of Montreal.

Mr. Geo. A. Grey of the Canada Plating Co., who is out on a trip through the district between here and Toronto, says that business prospects are more encouraging.

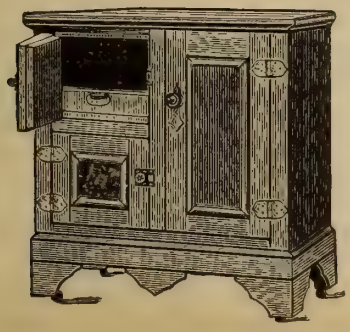
The wrought iron work in the new offices of the C. P. R., corner of St. James & St. Francois Xavier is being very much admired. It is the work of Messrs. Chanteloup & Co.

The town of Chicoutimi has been lately fitted up with a complete telephone exchange. Messrs. Guoy & Co. were the contractors, and they procured their complete outfit from T. W. Ness, Montreal.

Peck, Benny & Co. have moved their city offices from their old premises on St. Paul street to a new and commodious suite in the central part of the big Board of Trade building. Their handsome gold sign is a conspicuous object to any one coming down John street.

The contract for the iron work of the new Banque du Peuple building, which is to be erected shortly on the corner of St. James and Place d'Armes Hill, has been awarded to Messrs. Wm. Clendinneng & Son (ltd.). It includes an iron staircase and the amount of the contract is in the neighborhood, it is said, of $7,000. The same firm are also placing a cast iron staircase in the new court house.

Refrigerators



Hardwood, Lined Galvanized Iron, Patent Locks, Four Sizes

These are **highly finished** and each season has shown an increasing demand. This year we are also **making a cheaper line** in above style, so as to meet all requirements.

Milk, Delivery and Creamery Can Trimmings.
All Sizes Body Stock for Cans and Cheese Vats.
Galvanized Iron Eave Troughs in 8 foot lengths.
Lithographed Tea Caddies and Signs.

We make and Supply everything used in the Stove and Tinware Trade.

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

TORONTO MARKETS.

TORONTO, May 5, 1893.

HARDWARE.

A fairly brisk and healthy trade has been doing during the past week, and the volume of business is rather larger than at time of last review. It is unmarked by any pronounced features, shelf and heavy hardware generally moving seasonable well. The bulk of the season's business is however done and the demand is at the moment of a healthy sorting up character at steady prices. A good business is being done in both iron and wire nails. Rope of certain sizes is moving well, and a fairly satisfactory trade is still being done in ship chandlery. Harvest and garden tools continue to occupy the largest share of attention although not so much so as a few weeks ago, and manufacturers are able to breath more freely. Green wire cloth seems as scarce as ever. Payments continue to show slight improvement, but they are by no means satisfactory yet.

NAILS—The manufacturers have met, and as anticipated made no change. Prices now obtaining will likely rule till October, and even then no change is anticipated. Demand for iron nails is good, and wire nails are receiving considerable attention.

ROPE—All small sizes of rope up to 1¼ inch are in demand, particularly the lighter sizes for haying purposes.

CHAIN—Orders are now being taken for cow chain for fall delivery, last year's prices still obtaining. There are no English quotations on the market yet and merchants are working on the old stock, trusting that there will be a settlement of the strike and that here will be no change in prices.

TOOLS—Now that the demand has dropped off, both harvest and garden tools are coming forward from manufacturers more freely, and the jobbers are beginning to be well stocked up in consequence. The large orders have been pretty well filled, but a brisk trade of a sorting-up nature is being done.

TINWARE—Pieced and stamped ware is in good demand. Peerless ware is reported to be taking the place of granite and agate. The price is the same as second quality granite ware, and is considered to be the cheapest ware on the market to-day. Quite a demand has been created for it.

PLUMBERS' SUPPLIES—Since the formation of the association by the brass manufacturers a good deal of the trade that formerly went to the latter is now transferred to the jobbers, there being no difference in the price between the two interests. In consequence of this the jobbers are doing a larger business in this line.

GREEN WIRE CLOTH—Demand is still in excess of the suppy and prices are firm at $1 90.

METALS.

This line is, as before, seasonably brisk. Enquiries are reported for antimony and sheet tin. Large sales of copper have gone through. Tin is firm and purchases are being freely made at present figures. Iron continues in good demand, while in pig iron there is little or nothing doing.

PIG IRON—Very little doing, and not much may be expected till the buying for fall account begins. Siemen's is quoted at $22 and Southern at $19.

Rogers, Brown & Co., Buffalo, N. Y., report the Toronto pig iron market as follows: No change of any consequence has occurred in the market during the week. Competition is very keen and exceedingly low prices are being named by Scotch, Nova Scotia, and American irons. This results in quite an equal division of the business. We quote for cash f. o. b. cars, Toronto, in bond: IX Foundry Strong Coke Iron, Lake Superior ore, $15.70; 2X Foundry Strong Coke Iron Lake Superior ore, $14.70; 2 Foundry Strong Coke Iron Lake Superior ore/$14.20; Jackson County Silvery 1, $18.00 to $18.30; Jackson County Silvery 2, $17.30 to $17.80; Lake Superior Charcoal, $17 70; Southern Soft 1, $14.10 to $14.35; Southern Soft 2, $13.85.

BAR IRON—Is in good demand on the basis of $1.95. Since the price of bar iron was established houses that previously did not handle quantities are now doing a much larger business than formerly.

TIN PLATES—Are moving freely and orders are being taken for spring delivery. Importers are still wanting to see if freights will, as anticipated, advance, and are in the meantime quoting carefully.

SHEET IRON—Large consignments are coming forward. Corrugated iron for roofing purposes is being asked for, and quite a number of sales are reported. Demand is also good for iron hoops.

CANADA PLATES—Merchants are taking orders for fall delivery but general business is dull. Prices are unchanged, all dull being held at $2.65, half-half at $2.75 and all bright at $2.80 to $3 per box.

GALVANIZED IRON—Is moving freely in both the cheaper and better grades at 5 to 5¾c. for Queen's Head and Gordon brands.

CORRUGATED IRON
ILLUSTRATED CATALOGUE FREE
METALLIC ROOFING Co.
MANUFACTURERS TORONTO

ZINC SHEET—Dull and unchanged at 5¾ to 6c. for 5-cwt. casks and 6 to 6¼c. for part casks.

ZINC SPELTER—Continues inactive and unchanged at 4¾ to 5¾c.

LEAD—Corporations are asking for supplies, tenders are being placed, and orders have been taken for large quantities. A gradual improvement is now looked for. We quote 3½ to 3¾c. ordinarily and 3¼c. for ten-ton lots.

ANTIMONY—Some enquiries are heard but trade is still light. Prices are unchanged at 13½ to 14c. for Cookson's and at 13 to 12½c. for other kinds but these prices would be shaded for large lots.

INGOT TIN—Much about as before. Just the usual trade is being done and prices are unchanged at last week's advance, namely 24 to 24½c.

INGOT COPPER—Some large sales have gone through lately, but without any change in price; 12⅞ to 13c. is the idea for small lots of the better qualities.

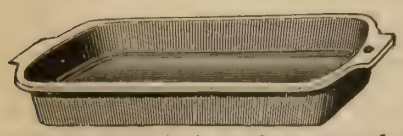
GLASS.

Shipments continue to arrive and stocks are quite sufficient for the demand. Prices are unchanged at $1.25 to $1.30 for first break.

PAINTS AND OILS.

Trade has developed a little more actively during the week. Business for the month of March was considerably better than for the same month last year. Payments are only fair. The feature of the trade is another drop of 2c. a gallon in the price of turpentine, in sympathy with the South American market, making a decline of 4c. a gallon for the two weeks. The price is now 50 to 52c., the outside figure being for outside points, freight allowed. Stocks here are light and the market is steady at the decline. Demand for turpentine continues to ease off. Linseed oil is comparatively scarce on the local market, and the demand is running in much the same groove as that for turpentine; prices unchanged at 60 to 62c. for raw and 63 to 65c. for boiled. Demand for prepared paints is well maintained, and white lead continues to move fairly well on the basis of 4¾c.

"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

MARKETS—Continued.

OLD MATERIAL.

Cast scrap is down $1 per ton and scrap copper and brass are each quoted ½c. lower. Receipts continue liberal and demand good. We quote as follows: No. 1 heavy cast scrap 65 to 70c. per 100; stove cast scrap 40 to 45c.; No. 1 wrought scrap 50 to 60c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c.; new light scrap copper, 8c.; heavy scrap copper 9c.; old copper bottoms, 8c; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1¼ to 2c.; scrap zinc, 2½c.; scrap rubber, 2½ to 2¾c.; country mixed rags, 80 to 85c. per 100 lbs; clean dry bones, 50 to 60c. per 100 lbs.

HIDES, SKINS, WOOL, TALLOW.

HIDES—Good hides are scarce and all such are taken up, but of grubby and inferior stock there is an accumulation. This latter class is undesirable and the tanners are fighting shy of it. For good selections 5¼c. is the idea, but car lots could be obtained at ¼c. less, with a large proportion of No. 2 selling at 75c. to $1 per cwt. lower.

SKINS—Our last week's report stated that calfskins were weaker, and we have to confirm this with a further reduction of 10c. each on all grades—deacons, dairy and veal. Jobbers are paying 7 to 8c. and selling at 8 to 9c. Sheepskins are still arriving in limited quantity only and prices are purely nominal at $1.35 to $1.45.

TALLOW—Little or nothing doing; dealers are paying 5½c. for rendered and selling at 6 to 6¼c. Rough is unchanged at 2½c.

WOOL—There is nothing new to report. Some small lots of unwashed new season's clip are coming in, for which 10 to 11c. is being paid. The mills are still busy. Fleece wool is nominal at 17 to 19c., clothing 25 to 26c., Canada South Down, 27 to 28c.; white Indian, suitable for blankets, 17 to 19c.; grey East Indian, 11 to 13c.; B.A.'s white clothing 32 to 34c.; cross breeds, 26 to 28c.; Canada extra, 25 to 27c. Canada super is scarce and good selection would readily fetch 23c.

SEEDS

Trade up to within the last couple of days has been dull. Since then a good many orders have been received, but they were only for small parcels. Seeding is backward owing to the unfavorable weather; in fact some have not sown a handful yet. Red clover is about 45c. per bushel lower in sympathy with the United States market. The season is over there, and people in consequence are anxious to sell out remaining stocks. Alsike is scarce and higher, while we quote timothy lower. Prime red clover is quoted at $8.25 to $8.40, extra choice $8.40 to $8.55, and $8.55 to $8.70 for Mammoth or Large Lake. Alsike runs all the way from $8.00 for good to $9 00 for choice. Timothy sells at $2.40 to $2.45 for choice, $2.50 to $2.55 for extra, and $2 65 to $2.80 for unhulled flail threshed.

PETROLEUM.

There is just a seasonable trade doing in illuminating oils, while demand for machine oil continues brisk. Prices are unchanged. We qnote: Canada refined oil, 13 to 13½c.; carbon safety, 17½ to 18c.; Canada water white 19c.; American water white, 21 to 22c photogene, 25c.

MARKET NOTES.

English B. S. ingot copper is quoted ½c. lower at 13½ to 14c.

Manufacturers of harvest and garden tools are beginning to overtake their orders.

The demand for M. L. S. charcoal tin, handled by M. and L. Samuel, Benjamin & Co., has been very large. It is claimed that the brand is equal, if not superior, to any other on the market.

There have been changes in the discounts on Daisy churns, iron pipe and horse nails.

Turpentine is 2c. a gallon lower, 50 and 52c. being now the prices for Toronto and outside points respectively.

Stewart & Wood report the arrival of another shipment of glass, and they have also received a new line of ochre, which is selling fast.

H. S. Howland, Sons & Co are in receipt of a fine line of English draining tools and sand shovels. The goods are of the best quality and prices right.

H. S. Howland, Sons & Co. have succeeded in inducing a Canadian manufacturer to put up axle grease in tins, and they are now putting the goods on the market with marked success.

Rice Lewis & Son report that the sales of lawn rollers and lawn tools have been much larger than usual in the larger cities and towns. They are also having a big demand for garden tools generally.

"Phenyle" is the name of a new disinfectant for deodorizing sinks and urivels and for general sanitary purposes. It is put up as a powder and in cubes and is well spoken of by sanitary authorities. A. W. Spooner of Port Hope is the manufacturer.

The round Rotary Cake Cutter has become so popular that the manufacfurers have, M. M. Vardon reports, been induced to extend the principle to cutting square and oblong cakes; also to increase the number of sizes of the round cutters from one to three.

Quite a demand has been created for the Hudson apple parer, or "rocking table," as it is commonly called. M. and L. Samuel, Benjamin & Co, who handle it in Toronto, report that a big demand is anticipated this season should the apple crop turn out any way well.

AMERICAN MARKETS.

New York, May 5, 1893.

PIG TIN.—The market was extremely tame, as far as speculative interest was concerned, and seemed to have been wholly bare of support beyond what was given by the leaders on the bull side. That support, too, seemed to have been more in the reserved offering than in the endeavors to buy for either prompt or future delivery. Outside interest is conspicuous by its absence, and trade demand is extremely conservative, despite latest rumors from Washington that no action on the proposed duty is likely to be taken at Washington before September, if at all this year. The statistical exhibit showed an increase in spot stocks last month of 1,213 tons in the United States and 156 tons in London, and a decrease of 730 tons in Holland, or a net increase of 639 tons. The United States has 4,905 tons on spot and 3,050 tons afloat (exclusive of 300 tons shipped from London May 1), or nearly five months' supply

On prices for the day there is nothing particularly new to note, but the market wore a flat, soft appearance, with indications that distant futures could have been purchased at prices that were bid Monday afternoon, and in the instance of July delivery, at 1-4c. per lb. below prices at which transactions were reported on Saturday last.

COPPER.—Reports of transactions the past 24 hours indicate that buying interest on the part of consumers who were not in the Calumet and Hecla deal has been fairly active, and that there is not a general tendency to lay in at least two or three months' supply. In any event, we learn of transactions involving fully 1,000,000 lbs. of Lake Superior ingot at 11c., and more business was in negotiation at the same price. Apparently the market is in a condition more satisfactory to all concerned than it has been at any time since the beginning of the year. Casting brands are selling somewhat better at 10 1-4c. London advices by cable quoted merchant bars at £44 7s. 6d. for prompt and £44 15s. for future delivery,

SPELTER.—On the surface the market for Western product looks very firm. There is little business doing here, and, as reflected in orders coming this way, Eastern consumers are still very indifferent buyers. Probability of coal strikes is apparently the chief strong feature, but late extensive purchases by Western galvanizers have helped to stiffen the market. The current quotations here at 4 1-2 to 4.55c. From St. Louis the range of 4 1-4 to 4.35c. was wired. London cabled £18 2s. 6d. for good merchant brands.

ANTIMONY.—The market is rather quiet, but prices remain steady at about 10 to 10 1-8c. for Hallett's, 10 1-4 to 10 3-8 for LX, and 10 1-2 to 10 3-4c. for Cookson's.

TIN PLATE.—Except in moderate quantities for prompt delivery there has been little business, and the market continues flat, with prices a trifle soft, yet showing no radical change.

PIG LEAD.—Dealings here were again on a very moderate scale, and the demand differed in no particular with average since the middle of last week. In point of fact, the enquiries were almost wholly for single carload lots, and moderate at that. Prompt or immediate shipments of common western could have been secured at 4.05 landed here. In St. Louis there was a drop to 3.80c. London cables quoted £9 15s. for soft Spanish.

PIG IRON.—Orders for foundry grades come this way slowly, and the demand for mill iron is also light. Offerings of brands that have a high reputation established are not particularly urgent, and that class of iron is bringing about former prices. There is some pressure of low grade, foundry and mill iron, Southern brands particularly, and it is probable that these may be secured at exceptionally low figures.

Scotch pig iron is featureless. There is no business outside placing orders for small quantities of some few brands for early shipment from the foreign market. Importers quote at $21.50 to $22 for Coltness, $21 to $21.50 for Summerlee, $20 to $20.50 for Carnbroe, and $19.50 to $20 for Eglinton.

Foreign ferro-manganese, 80 per cent., is quoted at $57 to $57.50, and spiegeleisen $25.50 to $26 for 20 per cent. Those figures are quite nominal, however, since sales are few and the demand moderate.

Old material meets with slow sale, but prices show little fluctuation, although rather weak. Current quotations are $16.50 to $17 for iron tee rails, $14 for steel, $16 for No. 1 wrought scrap iron, $12.50 to $13 for machinery cast scrap and $13 to $13.50 for car wheels.

MANUFACTURED IRON AND STEEL.—In this market a few small contracts for heavy section steel rails have been placed at prices on the basis of $29 f.o.b. mill. Beyond this and small sales of light

rails no business comes to notice, and it is the general report that demand continues slow. There were rumors of one or two sales of good-sized lots having been made in the West, at a "cut" price.

Track fastenings are also slow of sale, and, while showing no decided change, prices continue rather weak.

Structural steel orders are still remarkably slow. Desirable specifications that come upon the market are competed for keenly, and low prices rule. Ordinary merchant iron and steel moves out fairly in ordinary jobbing quantities, but large orders are conspicuously absent, and prices continue low.

Soft steel in the form of billets, rolls, etc., finds irregular sale, and the tendency of prices is somewhat in buyers' favor.

WASTE IN THE STORE.

The constant study of a subject, the main import of which is the caption above, will prevent many a man and many a firm from going to the wall. The writer, himself, has in mind a business acquired on a capital of $150,000, carried on for 11 years in a seemingly successful manner, the sales of which were enormous and based on a margin of profit that ordinarily would be more than safe—would be enriching. And yet that business literally leaked itself away. At the end of those years its stock was worth 40 cents. It sold finally under the hammer and did not realize 25 cents on the dollar on the original investment. It was full of leaks from cellar to garret, from office boy to president. They were never stopped, they grew, and those men to-day attribute every dollar of their loss to careless, criminal waste in the business. How to avoid it—be always on the lookout for it and know the remedy. Start at watching for small waste, and the habit will come of finding the large.

In the store never set out a box of matches, put out a dozen or so. Set out a box and every man will take a handful. We've tried it and we now make one box go as far as a dozen formerly went. Buy a good broom, name a fair life for it, and when the old one is worn out serve the new one yourself. Tell your clerks: "There are a dozen brooms, use them," and with the most of them three will be used where one ought to answer

Get every man in the house in the habit of turning down gas as soon as he is through with it. Two dollars a month saved for gas is a fair profit on $240 worth of goods sold in twelve months, or 10 per cent. on a $20 sale. Keep a nail box and use it—you throw them on the floor, why not in the box? Besides what we use again, we sell enough at 2 cents a pound to pay the broom account in a good sized retail store.

Keep a twine reel and use that. Do not stop to untie knots—you cannot afford to lose the time—but cut off the knots, make a quick tie, give the reel a whirl, it is wound up and ready. Do not try to ball scrap twine, the reel is better.

Save your iron scraps, it will surprise you to see the results of your hands alone from bundles of iron coming in. And there is your paper account. I think I am safe in saying that with all the goods that come in pasteboard boxes, it is possible to save one-half that account. The pasteboard boxes are the most convenient things in the world for sending out cut and wire and horse nails. Save the large pieces of pasteboard for every day special signs, and make a contract with some factory or foundry for all your good boxes, barrels, and nail kegs. You will be surprised to see how much P. and D. you can credit to that account. While you are saving—saving time, too. Buy a thousand or two cheap coin envelopes for brass headed tacks, screws, cupboard catches, brads, bed spring staples, etc., they take lots of time to wrap up and that time is money.

Do not economize on scales; have good ones, and have those that do not require down weight to show a pound. Your customer only expects what he buys, and with bad scales and careless clerks, you cannot possibly sell over 90 pounds for what you bought as 100. There is nothing that will rob a man so successfully as his scales.

The habit of not charging for small odds and ends is almost criminal. You cannot afford to give away goods simply because it is a screw, a screw-eye or two, a handful of nails, or six inches of wire. They are all worth a penny or two, and it takes but a few of these good-will sales to drown a dollar beyond recall. Friendship is one thing, and business is another; if goods are marked right no man respects you any more for cutting the price on them, either asked or unasked. If you do it, your clerks will. If you do not, they will not; and your example more than all else will prevent their sacrificing you in their little personal friendships. Other leaks are the exposed samples of goods. Sell them off, keep them fresh. Watch the parts of goods. Keys and strikes for locks, roses for knobs, nuts for bolts, hoops for buckets, etc, etc. If short, fill them or fit them up; keep them as near their original value as possible.

Cultivate the habit in the store of everyone always having something to do, if only using the dust brush. Have goods ready to go out. Grass seed packages made up, nails out in 5, 10 and 20 pound lots. Your season's rubber hose fitted up with nozzles, bands and connections, and ready for sale. There are hours in a day saved in such work, and the biggest leak in any house is the time wasted by employees. These are but a few of the wastes and losses, and their remedies, that if closely watched, will certainly bring the right side of a merchant's balance sheet to the front at the end of the year.—H. C. Wiseman, in Iron Age.

BENDING IRON PIPE.

Metal Worker gives this answer to a correspondent who wants to know how to bend 1¼-inch round iron pipe to a circle of extent of 1 foot in diameter: Sheet metal pipe that is to be bent is first filled with some substance that will allow the pipe to bend and at the same time keep it in shape as much as possible during the operation. Lead is used as a filling for some kinds of work, and is sufficiently hard to allow the wrinkles that are liable to form inside the bend to be pounded out and the pipe worked until it assumes the desired shape. Pitch is often used as a filling, and should be as hard as possible so as to bend without crumbling, and at the same time be sufficiently dense to allow such wrinkles as might form in the pipe to be pounded out. Pitch can be made by mixing tar with melted resin until the desired density is obtained. It is probable a tin pipe could be bent by filling with lead or pitch, provided the metal was of sufficient thickness to allow for the stretching of the outer part of bend. An objection to the use of either of the above fillings is the difficulty experienced in removing them, which must be done by melting, and in the case of tin pipe would be liable to injure the appearance of the surface. Plaster of paris is sometimes used as a filling for pipes, and might answer in the present instance. One end of the pipe is to be closed by means of a wooden plug or by soldering on a cap. The pipe is then filled with dry plaster of paris, which is rammed in by means of an iron rod, so the filling will be as solid as possible. When the pipe is filled the remaining end is closed, when the pipe is ready for bending, after which, by opening the ends of the pipe, the plaster can be removed.

SALESMEN AND PRICES.

A little "nerve" is often of great value to a salesman and consequently to the house which he represents, remarks Metal Worker. In some staple goods on which prices have long been soft salesmen have recently scored material advances by asking better rates and sticking to them with the determination to get some profit for their employers on the business turned in. It is too frequently the case that salesmen hasten demoralization by advising their principals that others are cutting prices when the trouble is either imaginary or confined to a few small concerns who would soon have such business as they need and then withdraw from competition. A salesman's function is, of course, to sell. If he cannot make sales he may soon find himself unattached. He is, therefore, measurable for forcing the market at times so that he can get business. But that man is a prince among salesmen who is keen to perceive when he can obtain better prices.

A customer secured is a promise of greater salary in time.



H. D. SIMMONS, Manufacturers' Agent,
85 York Street, TORONTO.

WIRE CLOTH

Green Painted Screen Cloth. Special Lath Cloth. Hardware Grade Cloth. Milk Strainer Cloth. Sand Screen Cloth. Honey Extractor Cloth. Fanning Mill and Threshing Machine Cloth, etc., etc.

Write for Catalogue and Prices.

Manufactured by

The B. GREENING WIRE CO., Ltd.,
HAMILTON, ONTARIO.



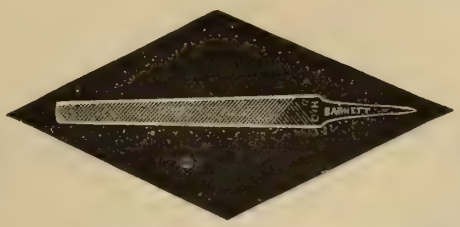
A. B. JARDINE & Co.

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- Blacksmiths' Tools
- AND
- Tube Expanders

Send for Catalogue and Price List

BLACK DIAMOND FILE WORKS,



21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

—MANUFACTURERS OF—

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES.
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
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—AND—

EVERY OTHER DESCRIPTION OF SAW FILES.

The OLD WOODEN BUCKET MUST GO

Indurated Fibre Ware.



NO HOOPS, NO JOINTS, CANNOT LEAK, SWELL, OR WATER SOAK.

The E. B. EDDY Co.
MAMMOTH WORKS
HULL, CANADA.

We manufacture all kinds of Paper suitable for the Hardware Trade.
Send for Samples.

THE COPPER SITUATION.

The negotiations now proceeding among the leading copper producers in the world to continue the understanding under which they have been working, again attract attention to the metal. On the whole, it may be stated that the arrangement has worked quite well, from the standpoint of the mines, since prices have maintained a level which may be pronounced quite remunerative to the large, well equipped mines.

So far as the statistics are available, it would seem as though the producers have been laboring under disadvantages which make the results of their efforts to favorably affect values seem surprisingly successful.

The statistics of production, of imports and of exports for the years 1891 and 1892 may be summarized as follows :

COPPER STATISTICS.

	1891. Pounds.	1892. Pounds.
Production U.S.	284,119,764	341,904,976
Imports :		
Fine in ore and pyrites	11,690,312	8,277,063
Pigs, bars and ingots	3,154,557	1,552,515
Total	298,964,633	351,734,554
Exports :		
Ingots and bars	69,279,024	30,515,736
In ore and matte (estimated)	50,000,000	66,000,000
Re-exports of foreign:		
Fine in ore	2,082,708	707,739
Pig, bars, etc.	534,949	1,274,410
Total exports	121,896,681	98,497,885
Available supply (exclusive of stocks.	177,067,952	253,236,669

Unfortunately, complete statements of stocks are not obtainable because of the refusal of some of the largest companies to furnish the data.

The statements of stocks, when they profess to cover the whole country, are worse than useless, since they are based on guessing, and are dishonest because they are not accompanied by a frank statement relating to the methods of their compilation.

On the face of it, the statement of the available supply, exclusive of stocks, printed above, appears very unfavorable to the producers, since it shows that in 1892 there was an increase of over 75,000,000 pounds over the preceding year. With such a growth in the quantity of copper to be sold in the domestic markets, the claims of the larger producers that they have been bringing the supply within reasonable limits would seem absurd. Still, a closer examination puts a somewhat different aspect on the matter.

It was only in July that the international agreement went into effect. So far as the American mines are concerned, it really does not materially reduce the production of the individual mines, excepting a few. Practically, it only provides that they shall not greatly increase their capacity. No official data are available for the production of copper during the first half of 1892. Still, a close estimate shows that it amounted then to about 190,000,000 pounds, while the second half may be credited with 152,000,000 pounds. A very large part of this reduction in output is due to the closing down of the Anaconda for about three months. Since this mine is credited in the copper trade with having made an average of over 10,000,000 pounds per month in the first half of 1892, it is probably responsible for 25,000,000 pounds out of the 38,000,000 pounds reduction in production during the second half of 1892.

It will be readily appreciated that an enormous power lies in the hands of those who control the management of the great Montana property. The Tamarack-Boston-Montana group and the Calumet and Hecla group each represent about 75,000,000 pounds annually, so that, with the Anaconda, a total of about 200,000,000 pounds is reached as the capacity of the three leading interests. Friction among them is therefore likely to be very troublesome, and may lead to a return to the liveliest competition. In all this the one conspicuous fact must not be forgotten, that lake copper is not, as it was at one time, the controlling factor in the markets. Electrolytic metal has deeply cut into its territory.—Iron Age.

A BIG IRON INDUSTRY.

The radiator business is one that has revolutionized the system of heating during the past three years, and to make a radiator that was absolutely perfect seemed beyond the skill of the most eminent manufacturers in the country. The Toronto Radiator Mfg. Co., seeing an opportunity for improvement and a market for a good article, at once purchased the patents of the "Safford" radiator, which to-day has no peer on the market. The construction, beauty of design, and general appearance of the "Safford" radiator, as manufactured by the Toronto Radiator Mfg. Co., have been the cause of much well merited comment by those interested in the heating trade. So great has been the demand for "Safford" radiators that the T. R. Co. have had to extend its facilities several times since it commenced business first five years ago, and it is said that it is among the most extensive manufacturers of radiators in the world and the largest in the Dominion. Their radiators are in use from coast to coast, and the company does not confine itself to the Canadian market alone, but has supplied the entire plants for several of the largest buildings on the Continent. It is said that at the present time its foreign trade is as extensive as its Canadian trade was during the first two years of their Canadian existence. This company's advertisement will be seen in our columns, and readers would do well to confer with the Toronto Radiator Co. before deciding on an inferior article.

VENTILATION FOR BUILDINGS.

A writer in the Jenness Miller Illustrated Monthly has the following relative to the all-important subject of ventilation : The heavy and dull feeling caused by a stay of any time in a close room has probably been experienced by everyone, yet it is surprising that all but the best architects still neglect to provide any means of ventilation for dwelling houses, although some kind of ventilating apparatus is generally used in large office buildings. It is possible that the defective plans adopted in some cases when the importance of the subject was just coming into prominence may have cast discredit on ventilation in general. Now, however, an architect who neglects to provide for an hourly supply of three thousand feet of fresh air for each person in the dwelling he is designing is not considered to make the proper division for the comfort of the inmates, although in the case of large auditoriums like a theatre, which is occupied but two or three times a day, twenty-five hundred cubic feet is considered enough. Bearing in mind that three thousand cubic feet of air are needed for each person, it is now easy to see why drafts are apt to be felt in a small room which is not permitted to contain polluted air. For example, the education department of England requires each pupil in the public schools to have 130 cubic feet of space in the room where he sits. Hence this regulation required that 130 cubic feet of air per pupil, assuming that the school-room is crowded to its legal capacity, be furnished twenty-three times in the course of an hour, a rate of supply which requires careful planning to avoid drafts. Again, heated air is often over-dry and unhealthy, and in large towns, needs to be freed from floating particles before it is in a fit condition to breathe. In the Victoria Hospital in Glasgow there is a system of ventilation in which the air is forced through hanging screens kept saturated with running water. The sanitarium also has to deal with another branch of ventilation, that of sewers, and the work thus far accomplished in this line is less satisfactory than with buildings. We are all familiar with open manhole covers and the odors sometimes given off through them. These odors are, of course, due to lack of ventilation. The underground sewers and drains have been compared to a great barometer, and during certain stages of weather the air is retained until it is thoroughly impregnated with the filthy emanations from the sewage within. Then comes a change of wind, a surcharge of moisture and lightening of the atmosphere, when from the manhole and grating the sewer air streams out. Various remedies have been tried, such as tall chimneys drawing the air from the sewer, smaller chimneys like a lamp-post, up which the air is sucked by a gas jet, and ventilating shafts up the front of buildings, but no entirely successful system has yet been devised which will cover all the cases that arise.—American Artizan

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

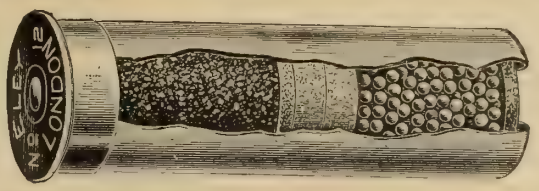
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Corner Front and Yonge Streets, TORONTO.

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. . ELEY'S . .

CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



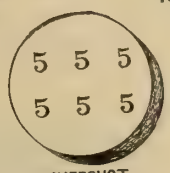
BLACK EDGE



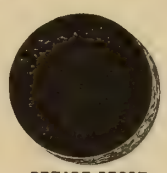
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Manufacturers of EB and other Percussion Caps.

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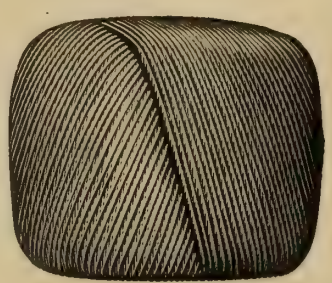
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The Only Reliable Low Priced

MADE BY DICK'S PROCESS

(Full Patents Applied For)

Binder IS THE Twine



REGISTERED.

Common Sense.. Brand..

Completely Weather and Rot Proof

CHEAP AND EASY TO WORK

Follows Manilla on all Machine in Good Order without Change of Adjustment.

AVOID SAYING TOO MUCH.

"Avoid as much as possible giving too much technical detail to your customer," says a writer in Ironmongery, "for he can use it to your disadvantage by going to your opponents, and asking their price for the self-same article, and they, judging by his more than usually exact definition, conclude that he is in the trade, or is a large buyer, and, perhaps, scenting a considerable order, cut the price very keenly. A commercial gentleman of my acquaintance related to me a very amusing experience which occurred in a provincial town not long since. Whilst he was speaking with the owner of one of the ironmongery establishments in the town, a raw countryman came into the shop and asked if they had any stamped tin milk pans 22 n., 52 lbs. to the dozen, and what price they were? Of course, he had been to another shop previously with the same enquiry, and the assistant, or perhaps the apprentice, with the idea of impressing the countryman, and airing his own knowledge at the same time, in mentioning the price, stated also that they weighed so many pounds to the dozen, and measured so many inches in diameter. There are some instances, no doubt, where it is not only advisable, but necessary, to state all details when describing an article, especially when it is one for which there is a large sale, and also in the case of its being sold by many dealers in the same town. Bicycles form a good example of what I mean; witness the "specifications" advertised by every maker without exception. A prospective cyclist about buying a machine has only to invest a penny in one of the papers devoted to the interests of this trade, and after reading it, to pay a visit to the nearest cycling agents and I will venture to assert he will be able to dilate on the merits of the various diamond frames, pedals, bearings, etc. The public are being educated year by year to a higher standard, and I believe this result is inevitable; but certainly the incident I have mentioned about the milk pans is, in my opinion, carrying the idea of enlightenment a little too far. I know some ironmongers who, on the other hand, are so excessively cautious that they will not state any particulars other than the bare description of the article itself, and are most careful to avoid, if they possibly can, committing themselves to writing. If a person requires to know the price of cut nails, they endeavor to quote by word of mouth only, and if calling on the customer at his own residence try to satisfy him with a verbal quotation, their idea being that should they send a written quotation, their opponents may be shown it, and thereby have the chance of amending their prices, and consequently securing the order. Now this denotes narrow-mindedness on the part of the person seeking to do business, and in the majority of cases, would defeat the object which it was intended to serve; for if the customer has any sense of honor at all, he would be most careful to keep the prices and estimates received from tradesmen private to himself, and if he had any suspicion that the ironmonger was pursuing the policy alluded to, would promptly set him down in his own mind as one not to be relied upon. The people who are possessed of this old-fashioned system will not, on any account, agree to the circulation of a printed price-list for the same reason, and it is useless to argue with them that, even if such a list was made the means of their competitors lowering their prices, yet in every such case where they might lose one customer, they might gain ten or twenty, or fifty new ones, and at the same time gain also a character for enterprise and push."

THE OAKVILLE BASKET CO.,



Manufacturers of

1, 2, 3 Bushel

Grain

AND

Root

BASKETS

THE OAKVILLE BASKET CO.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.

Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.

FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,

CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co

MONTREAL.

PRINTERS Apted Bros. TORONTO

WEDDING INVITATIONS

SOCIETY

AT HOME CARDS

VISITING

PROFESSIONAL

SOCIETY

Printed

Equal to Copper Plate or Lithography at less than one-half the cost

TRY US AND BE CONVINCED

54 YONGE ST., TORONTO

COWAN & BRITTON

GANANOQUE, ONT.

Nails, Hinges AND Buts

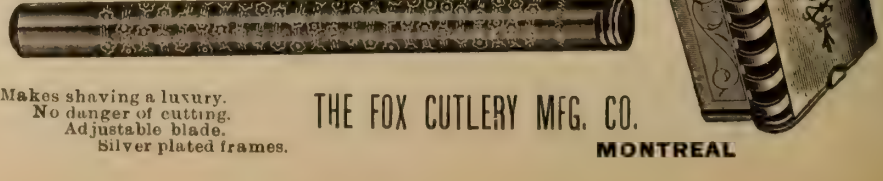
Manufacturers of every description of these goods.

THE FOX SAFETY RAZOR

Cut 2/3 Size.

The Finest and most Practical in the World.

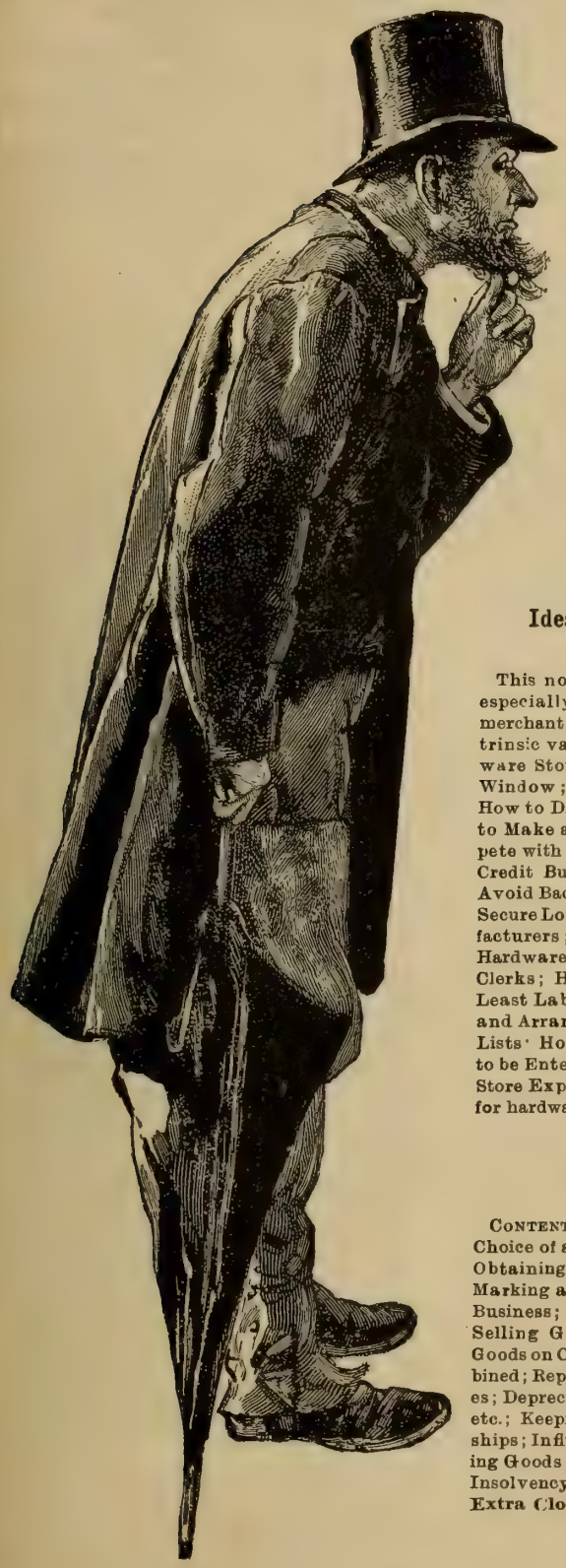
– Every Man His Own Barber



Makes shaving a luxury.
No danger of cutting.
Adjustable blade.
Silver plated frames.

THE FOX CUTLERY MFG. CO.

MONTREAL



It is more honorable to have built a dog-house than to have dreamed of building a palace. . . . . .

BOOKS FOR BUSINESS MEN.

Ideas for Hardware Merchants.

By D T. BALLET.

This novel book is the only book ever written especially for hardware men and every hardware merchant will find it of decided help and of intrinsic value. It tells How to Advertise a Hardware Store; How to Dress a Hardware Store Window; How to Select Seasonable Goods and How to Display Them to Best Advantage: How to Make a Success with Hardware; How to Compete with "Department Stores;" How to Turn a Credit Business into a Cash Business; How to Avoid Bad Debts and Increase Trade; How to Secure Low Quotations from Jobbers and Manufacturers; How to Arrange the Fixtures in a Hardware Store; How to Treat and Manage Clerks; How to Keep Your Accounts with the Least Labor; How to Systematize Your Business and Arrange Its Details; How to Arrange Price Lists; How to Meet Close Competitors and How to be Enterprising; How to Properly Proportion Store Expenses, and thousands of practical hints for hardware merchants. **Paper cover, $1.**

How to Keep a Store.

By SAMUEL H. TERRY.

CONTENTS: The Selection of a Business; The Choice of a Locality; On Buying a Stock of Goods; Obtaining Credit on Purchases; Examination, Marking and Arranging of Goods; Advertising a Business; Employment of Clerks; The Art of Selling Goods; Selling Goods for Cash; Selling Goods on Credit; Selling for Cash and Credit Combined; Replenishing Stock; Settling for Purchases; Depreciation of Goods; Losses by Fire, Theft, etc.; Keeping Accounts; Expenses; Co-partnerships; Influence of Social Life on Business; Buying Goods at Auction; Investment of the Profits; Insolvency; Business Qualifications, etc. **12 mo, Extra Cloth, $1.50.**

300 Ways to Dress Windows.

By HARRY HARMANN.

Fully explained. For grocers, general dealers and all lines of business. 250 pages, 150 illustrations. Price, post paid, $1.75 This includes a nickel hammer and a pamphlet on show windows. **SENT FREE**, a sample of Bon Ami; cleans windows, show cases, brass, etc., with a 44 page catalogue of window supplies.

Building Business.

By N. C. FOWLER.

Nath'l C. Fowler, jr., the eminent advertising doctor and expert at business, has written a book all about advertising in daily papers, weeklies, magazines, religious and agricultural papers, in street cars, signs, lithographs, novelties, calendars; about cuts and how to use them; window dressing; store decoration; points on selling; keeping accounts; everything about publicity and business outside, written from the merchant's standpoint—a book worth its price to the man who spends $25 for printing, and the more to the extensive advertiser and merchant; 177 great advertisers answer the vexed questions of advertising, presenting individual and collective opinion of positive value—most important chapter written. **Cloth $3.75, half leather $4.50, full leather, $5.**

Self Instruction in Practical Business Qualifications.

By CHAS. S. MCNAIR.

Size, 8½ x 11 inches, 256 pages. **$2.50**

How to Sell Goods.

By B. F. CUMMINGS.

A Prize Essay, **10c.**

METHOD IS THE SECRET OF SUCCESS.

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THE J. B. MCLEAN PUB. CO., LTD.
10 FRONT ST. EAST,
TORONTO.

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES

McInnes & Irwin, general merchants, Straithclair Station, have assigned.

B. Hollinquist, general storekeeper, Oak Lake, Man., has assigned to S. A. D. Bertrand.

R. W. Woodward, general store and saw mill, Lower Nicola, has assigned in trust to C. A. Schooley.

A demand of assignment has been made on F. MacKay, general merchant, Papeneauville, Que.

C. A. Smith & Co., general storekeepers, Chester, N. S., are offering to compromise with their creditors at 50c. on the dollar.

A. Lewis & Co., stoves and tinware, Nanaimo, B.C, whose difficulties have already been announced, are offering to compromise at 75c. on the dollar.

The factory and two of the storehouses of the Oakville Basket Company's property were entirely destroyed by fire Saturday morning. Loss, $8,600; insurance, $4,000.

Gosnell Bros., coal and wood merchants, North Toronto, are financially embarrassed, and the bailiff is in possession for rent. Real estate speculation is the cause of the difficulty.

Port Perry has been visited by another destructive fire. The victims are W. Brock, general merchant; Jones & Co., dry goods; T. H. Phillips & Co., stoves and tinware; Phillips & Meharry, grocers.

Wm. Darling & Co., hardware merchants, Montreal, have made an official abandonment. The liabilities are $64,519, and the principal creditors are as follows: Central Rolling Mills Co., $2,711; Peck, Benny & Co., $2,276; Dominion Wire Manufacturing Co., $1,518; Heron, Dickson & Co., Glasgow, $2,760; Merchants' Bank (including customers' paper), $44,342.

DEATHS.

D. H. Taylor, general merchant, Cathcart, is dead.

M. L. McGrath, general merchant, Shegundah, is dead.

PARTNERSHIPS FORMED AND DISSOLVED.

Lavoie & Jacques, painters, Montreal, have dissolved.

Peletier & Dugas, tinsmiths, Montreal, have dissolved.

Dinsdale & Burns, contractors, Victoria, B. C., have dissolved.

Joamette & Renaud, blacksmiths, etc., Montreal, have dissolved.

Penny and Fulson, furniture and undertakers, Dunnville, have dissolved.

Gillies Bros., general merchants, Lucan, have dissolved. James Gillies continues.

Victor Rangier has been registered proprietor of the hardware firm of Royer & Dugas, Montreal.

Langhman & Flaherty, ship chandlers, Montreal, have dissolved and business will be continued by Langhman & Wall.

Edward Sandreuter and George Waters have been registered as partners to carry on the business of manufacturers' agents at Montreal.

Carlin, Lake & Co., general merchants, Anthracite, N.W.T., and Field, B.C., have dissolved. L. French retires and Carlin and Lake continue.

F. N. Labrecque and J. S. Cauchon, Montreal, have registered as partners to carry on the plumbing business, under the firm name of Lebrecque & Cauchon.

Zoel Caron and Benoni Dufresne, Montreal, have registered as partners in the hay, grain, coal and wood business under the firm name of Caron & Dufresne.

The Merchants' Electric and General Service Company have registered at the Tutelle office, Montreal. Mr. G. A. Greene is president, Mr. John A. Grose, manager, while the directors are Senator A. W. Ogilvie, Messrs. S. H. Ewing, James Cooper, G. S. Brush, E. Hanson and S. Finley.

CHANGES.

A. J. Thomas, plumber, Victoria, B.C., has sold out to H. T. Flett.

John T. Pond, blacksmith, Durham Bridge, N. B., has sold out.

Henry Roeder, wagonmaker, Gad's Hill, Ont., is out of business and has left.

Wm. Chubb, blacksmith, Staffa, Ont., has been succeeded by Albert Cameron.

E. Hales, brick and tile maker, Alvinston, has been succeeded by C. J. Bindner.

E. T. Hamilton, painter and carriage maker, Flesherton, has removed to Nattawa.

J. E. Edmonson, lumber dealer, Dipestare, Man., is reported to have sold out to Crawford & Co.

H. C. Bartlett, wagon maker, etc., Linwood, has sold out to D. H. Williams. Louis Schlegel, blacksmith of the same place, has sold out and left.

The Warren Scale M'fg Co., Montreal, have dissolved and a new partnership formed, composed of Auguste Giradin and J. B. Perrault. Style unchanged.

FIRES.

The foundry and machine shop of Thomas Robson, Fenelon Falls, has been partly destroyed by fire. Loss about $6,000; insurance $2,500.

ALUMINIUM DRINKING VESSELS.

The use of aluminum for drinking vessels has been objected to on the ground that the metal unpleasantly affects the taste of certain potable liquids if these are allowed to remain in contact with it for more than a very limited time. The question seems to have excited quite a lively difference of opinion among members of the Davos section of the Swiss Alpine Club recently, some deprecating and others approving the use of the flagons made of aluminum. To settle the dispute, Veltliner and Massala wine was placed in aluminum and also in glass bottles, and allowed to stand for twenty-four hours. At the end of this time a jury was invited to taste the samples without being told from which class of vessel they were taken, but in no case could any difference in flavor be found. It was assumed, therefore, that the chemical neutrality of the metal was unaffected by fermented spirituous liquors.

A HANDSOME DOOR LOCK.

The accompanying cut is an illustration of the Barfi door locks and knobs in use at the new parliament buildings in the Queen's Park, Toronto, and supplied by Rice Lewis & Son, Ltd. They are of antique brass and copper. Each embodies the Ontario coat of arms as well as two grotesque lions' heads for the keyholes. The design was selected by the architect from a number submitted. A feature of this design is that it is not absolutely necessary to use a fancy butt as with most designs. This, to persons



making selections of hardware, is a big advantage, for it enables them to use a handsome design and economize to a certain extent without impairing its beauty. The idea of having a coat of arms on the knob is somewhat new in Canada, but it has obtained in other countries for some time. Some people have their crest or monogram placed on the knob. Rice Lewis & Son state that some of the large buildings that they have furnished with hardware of late, the Freehold Loan and Savings, for instance, have had their monogram cast on the plate, thus considerably embellishing already pretty trimmings.

TORONTO CUTLERY CO.,

M. MAYER, Propr.

65 and 67 Yonge Street, Toronto

Imperial Razors

Joseph Allen's NON-XLL Cutlery

T. C. Co.'s Shears and Scissors

G. A. Mix & Co.'s Chisels

The Most Complete Lines of all Kinds of Cutlery in the Market.



S.S. SMOKELESS POWDER is the best. Made by the Smokeless Powder Co, of London, Eng. A stock kept in Montreal. 25 lb. Drums; 2 lb. Cannisters, ½ lb. Cannisters. Send for Prices. WILLIAM DARLING & CO, Wholesale Hardware Merchants, 30 St. Sulpice Street, Montreal.

A FEW REASONS WHY

You should Keep your Stock fully Assorted With

Boeckh's Superior Brushes

They are always reliable and as represented.
They are guaranteed in every particular by the manufacturers.
They are made of the very best material and workmanship
They are sold at closest possible prices.
They are finished and put up in neat and attractive shape.
They are well known throughout the Dominion and are popular with all classes of consumers.
They are handled by all leading Hardware and Paint and Oil trade.

See that the name "BOECKH" Is on every brush.

Boeckh's Flexible Bridled Brushes.

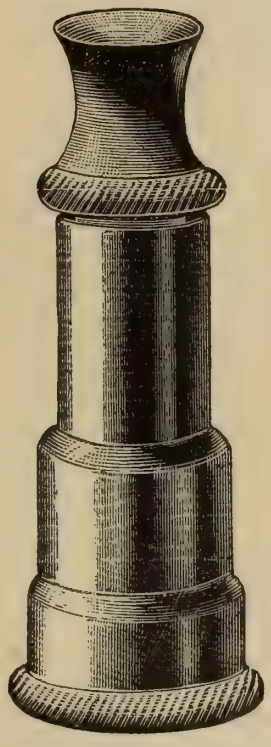
Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

TORONTO, - CANADA.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it

It is impossible for this pipe to get out of order

Give it a trial and you will use no other.

Hamilton Brass Manufacturing Co.

HAMILTON, ONT.



JOSEPH RODGERS & SONS

LIMITED.

CELEBRATED CUTLERY : : :

Still Leads the World.

OUR REGISTERED TRADE MARK

GRANTED IN 1764, IS STAMPED ON EVERY ARTICLE.

AGENTS:

JAS. HUTTON & CO

MONTREAL

AND

TORONTO.

POINTERS FOR SMALL DEALERS.

"In the struggle of giants," says someone, "the pigmy may and generally does escape." Let us apply this to the ironmongery trade, and ask ourselves how the dealer who is hampered with insufficient capital can best keep his craft afloat in the fierce battle of competition. He tells us, and tells us truly, that he is harassed most by the guns of the big three-deckers, any one of whose shots might, if they struck him fairly, sink him without ceremony. But, happily, though not out of range, he is not a very prominent target, and with adroitness he may rely upon carrying his ship through the battle, though he be in the thick of it. To leave our figure, the question which must be agitating a good many dealers to-day is how to retain a paying business when so hard pressed on so many sides, by the big stores, by the general dealer, by the heavily capitalized ironmongery houses, and, last, but not least, by the pirates. He has not the resources to warrant him in branching out and becoming a very big gun himself. He finds trade growing less and less in volume and profits diminishing. What is he to do? Clearly we can offer little more than generalizations about such a situation, since every case differs in some essentials from all others, but it must be very evident, upon a little reflection, that the smaller dealer should begin by getting a perfectly clear view of the situation, and this is to be obtained by carefully analyzing the methods of the big concerns, imitating them where possible, and improving upon them in those particulars where the big business is handicapped. For example, the small dealer will observe that the large houses attract custom, among other means, by the variety of their display, the excellence of their arrangement of goods, and by low prices. How far can he go in competing on those lines? Well, he can, if he choose, make quite as good and attractive a show in his shop with a limited stock as they with an unlimited. He cannot show so great a variety, but by making a point of keeping choice goods carefully selected he could cultivate a higher class trade than the large establishments usually secure. Then, as to prices, it may be observed that the passion for buying cheaply is not universal. Extremely low prices breed suspicion in a great many minds that the quality is not what it ought to be. There is still a large section of the public who regard good quality in their purchases as the all-essential thing. Let a dealer, however, limited his place of business, once secure their confidence by selling reliable goods at a fair, not excessive, price, and he may have a paying business and a growing business and a sure business by persevering in that policy. Then, in one way, he has a very great advantage over the great house, he can know his customers himself.—Ironmongery.

THE PROSPECTS OF THE IRON TRADE.

The year wears rapidly on without any of the much-desired improvement making its appearance, and we confess that we entertain little expectation of any amelioration of the existing unsatisfactory position of the iron trade being speedily experienced. Leaving out of account the shock to credit produced by the Baring crisis, and other smaller but still important disturbances which have only been dwarfed by comparison with the more imposing dimensions of the first-mentioned, there appears to us to be other, and, unfortunately, more permanent, influences at work. So long as enterprise was unhampered by restricted credit, commerce and industry could afford to ignore these; but now that new schemes and projects are more conspicuous by their absence than otherwise, we are compelled to fall back on the permanent mainsprings of trade, and, if these fail us also, the prospect is sufficiently uninviting. When we speak of the permanent mainsprings of trade failing, it will be understood that it is only a comparative term. They may be considered for all intents and purposes a constant quantity; but if they are not supplemented by extraordinary demands, if, in other words, the whole available forces of supply have nothing else to look to than this normal consumption, the outlook for the trade cannot be considered encouraging.

Looking back over the last forty or fifty years, it is evident that the iron trade has been assisted by a series of special sources of demand, which, while they have tended to enrich the country to a vast extent, have unfortunately called into existence enormous powers of supply, for which it now seems impossible to find adequate means of employment. First and foremost amongst these special sources of demand come railways. The construction and equipment of these, at first at home, and then on the Continent and in the United States, gave a great impetus to the iron trade of this country. When European nations and America took to supplying their own requirements, our makers found fresh outlets in India and the colonies; and, later still, when these were more or less satisfied, South America furnished a demand of no mean amplitude. Now these special requirements have been practically supplied, and there is nothing to take their place. It is, of course, undeniable that there are vast tracts of country still untapped, and these may one day have to be supplied; but that day appears at present far distant. Leaving out of the question China and India, there are no countries in the world the population of which would seem to warrant any large schemes of railway building being started. With regard to China, the prospect of railways becoming popular seems as remote as ever, and in India the cautious policy pursued by the Government precludes any hope of demands of sufficient magnitude to affect the normal course of the iron trade. In the absence of any new schemes of first-rate importance, the iron trade will have to be content with such demand as arises from renewals of permanent-way, renewals and repairs to rolling-stock, bridges, etc.; and with the capacity it now possesses it is to be feared that will go a very short way.

Next to railway building, shipbuilding has perhaps afforded the iron trade the greatest support during the last thirty or forty years. The substitution of iron for wood as a material for the building of vessels, and, later, the displacement of iron by steel, coupled with the necessity of all large shipowners to have their fleets of the most modern design and construction, have contributed to keep shipbuilders busy in the past. The question thus is—Is there any fresh development possible, not to say probable, which in the future will create a demand for new vessels, such as the last ten or twenty years has witnessed; or must we reckon upon the requirements which will be occasioned by the replacement of vessels lost and worn out? The engineering trades have been important customers of our iron and steel industries, but they are to a large extent dependent upon the two sources of demand we have just alluded to. In so far as their trade is not dependent upon railway or shipbuilding, it has in a large measure arisen from our supplying the foreigner with machinery which is now brought into competition with our own; so that, take it all in all, it scarcely appears possible for the future to provide the same amount of demand as the past.

What is wanted for the salvation of the iron and steel trades of this country is the discovery of new uses for the metals, such as will in some measure replace the failing demand from the quarters we have mentioned. Is such a thing impossible? We should be sorry to say it is, when the past has witnessed such marvellous developments in the applications of iron and steel; but it is difficult to see at present from what direction any important demand can be looked for. It seems to us rather, that such relief as may be vouchsafed through new applications of these metals will be received in small portions as the result of the extension of their use in directions in which the scope is not very great; and such a prospect is not very cheering.—Iron.

An ingenious Frenchman has invented a little device intended to economize the oil in lamps of every description. It is composed of a metal cone, which is placed in the opening at the top of the lamp chimney; thus presenting a large heating surface to the escaping gases. It is so constructed that it in no way interferes with the brilliancy of the flame, while it causes a current of heated air to circulate in the chimney, consuming the waste products of combustion, and thus causing a considerable saving in oil. Those who have experimented with this contrivance claim that it works very satisfactorily.—Ex.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C.I.F." THREE RIVERS

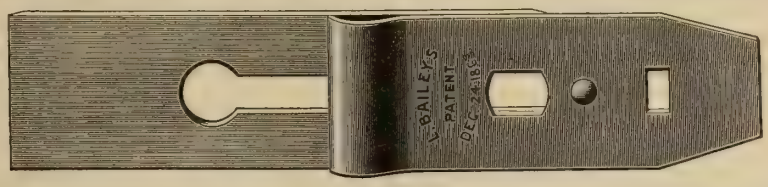
PLANTS AT

Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

STANLEY'S PATENT IMPROVED PLANE IRONS

The improved form of this Plane Iron renders it unnecessary to detach the Cap-Iron *at any time*. The connecting screw will slide back to the end of the slot in the Plane Iron, without falling out; and the parts are thus always kept together, preventing any loss of time in hunting about a bench or shop floor for them. The Cap-Iron will serve as a convenient handle or rest, in sharpening the Plane Iron.



The circular enlargement of the slot in the Plane Iron being nearest the cutting edge, it can be safely tempered up to, or above, the lower side of the opening; as a perfect circle located at this point in the Plane Iron insures equal expansion and contraction of the metal. The owner can use this Iron up much closer than formerly, without liability of its being broken or cracked at the corners of the slot as heretofore formed.

This Machine cannot be surpassed for smooth work, light running and durability. The drive wheels are 10½ inches in diameter, and warranted to cut grass 6 to 8 inches high. ALL GOODS WARRANTED.

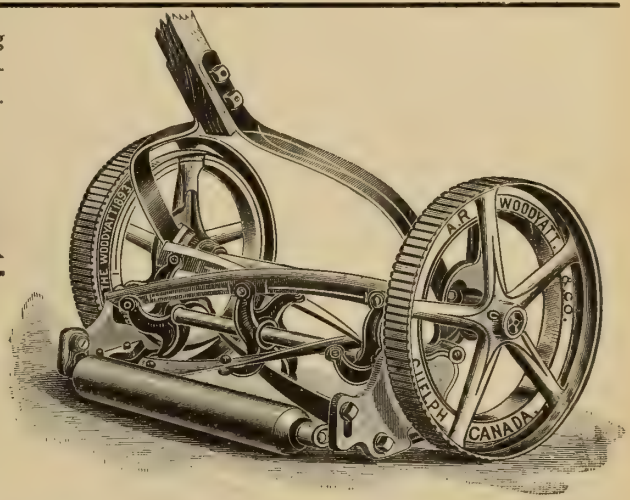
. . **1893** . .

THE "WOODYATT" LAWN MOWER

Light, Durable, and Efficient.

Now On Sale by all Wholesalers.

A. R. WOODYATT & CO. GUELPH, ONT.



Wm. Clendinneng & Son.

Iron Founders and Stove Manufacturers

Makers of the "Etna" Hot Water Boilers, Soil Pipe and Fittings, Stable Fixtures, Machinery, Builders and Special Castings

WRITE FOR ESTIMATES

WORKS: Cor. William and Inspector Sts.,

OFFICE and WAREHOUSE: 145 to 179 William Street

MONTREAL

BUYERS OF CUTLERY

WILL find it to their interest to see our samples before placing Spring orders. A choice assortment in stock of Jas. Rodgers & Co.'s and E. M. Dickinson's goods at special prices.

A. C. LESLIE & CO., MFRS. AGENTS,
MONTREAL and TORONTO

OUR SALES OF
"BURHAM" Portland Cement
For the past 8 months have been
25,499 CASKS.
"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,
McRAE & CO., OTTAWA

MUNN'S LIQUID GLUE
IS THE BEST.
Kennedy Bros., Agents
101 Bay Street, TORONTO.

Established 1864.
CLARKSON & CROSS,
CHARTERED ACCOUNTANTS
NO 26 WELLINGTON ST. EAST
E.R.C.Clarkson, F.C.A.
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TORONTO, ONT.

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.
GALVANIZED SHEET IRON. SP



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—		
56 and 28 lb ingots, per lb	24,	24½
Strip "	25,	25½

Tin Plates—*Charcoal Plates, Bright.*

M.L.S. equal to Bradley	Per box	
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 25	4 50
I.X., "	5 25	5 50
I.X.X., "	6 25	6 50
I.XXX., "	7 25	7 50
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
" 14x65,	

Tinned Plates

72x30 up to 24 gauge	6¼	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼inch	$2 45
16 "	2 35
¾ " and thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2⅞, 2⅞
26 "	2⅞, 3
28 "	3 , 3¼

Canada Plates.

Blaina	½ bright	2 75
Abercarne		2 75
Lion		

Iron Pipe.

Wrought 62½ and 5 p. c. to 65 p. c.
Galvanized, 37½ to 40 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5¼
26 gauge, "	5¼, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5¼, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅝ 5
" 5-16 " "	4½ 4⅝
" ⅜ " "	4⅜ 4⅜
" 7-16 " "	4¼ 4½
" ½ " "	3¾ 4
" ⅝ " "	3½ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 13½ 0 14
Lake Superior	0 13 0 13¼

Bolt or Bar.

Cut lengths, round, ½ to ⅝ in.	$0 22 $0 25
" round & square	
1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20 0 22
" 35 to 45 " "	0 19 0 20
" 50 lb and above per lb	0 18 0 19

Boiler & T. K. Plts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 05 0 05½
Domestic "	0 04½ 0 05

Zinc Sheet.

5 cwt casks	0 05½ 0 06
Part casks	0 06 0 06½

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¾ 0 04⅞

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.	per lb.	
Bar Half-and-half (guar.)	0 17	0 19
Standard	0 16	0 18
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½ 0 14
Other makes "	0 13 0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	4 75
No. 1 Do. "	4 50
No. 2 Do. "	4 25
No. 3 Do. "	4 00

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red (R.C.2) " "	1 50
Venetian Red, (best) "	1 80 1 90
English Oxides per cwt	3 25
American " " "	2 25
Canadian " " "	1 75
Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure,	
8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 70
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	2 00
Hard Oil Finish "	1 30

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 50 0 52

Castor Oil.

Best, per lb	0 09 0 09½

Cod Oil.

Cod Oil, per gal.	0 48 0 50

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet makers	0 17 0 18
White	0 16 0 17
London Town	0 7½ 0 08½
Gelatine	0 22 0 27
Stripped	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... 4 50

Augers.

Gilmour's, discount 50,50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 25

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—Socket, Framing and Firmer

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 45 to 47½ p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb . 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross..... 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05
Screw hook and hinge—
6 to 12 in., per set 0 00 0 04½
14 to 20 in., " 0 00 0 03¾
21 up " 0 00 0 03¼

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

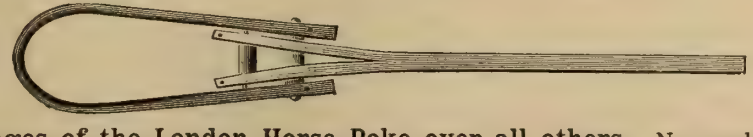
Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

THE LONDON HORSE POKE.

DURABLE  STRONG

Some of the Advantages of the London Horse Poke over all others.—No wooden pins to break or loose. No wire spring to rust or get out of order. The London Poke is the only one made with iron bolts, which cannot get lost or broken in shipping. It is the only adjustable Poke made to fit any size horse from a Pony to Clydesdale.

Send for Sample Order. **BOWMAN, KENNEDY & CO., London,** Western Agents

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
ronze, Berlin, per doz .. 2 75 3 25
ronze, Gem, " 6 00 9 00
s x 6 " 8 75 10 00
hutter, porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy.....	2 30
40dy.....	2 35
30 dy.....	2 40
20, 16 & 12 dy.....	2 45
10 dy.....	2 50
8 & 9 dy.....	2 55
6 & 7 dy.....	2 70

American Pattern Only

from 4 to 5 dy	2 90
3 dy. (lath).....	3 30

3. Canada Pattern Only

from 4 to 5 dy	2 80
3 dy. (lath).....	3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Nails.

Galvanized, per doz..... ... 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 1½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	18	20
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.

Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P., dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen..... 1 25

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4½ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 65 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 51½ per cent.
Channel nails 5c. lb. off list.

Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75 p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz 1 50 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... .... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4½ 4¾
" 4 " 4 & 6 " }
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 80 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

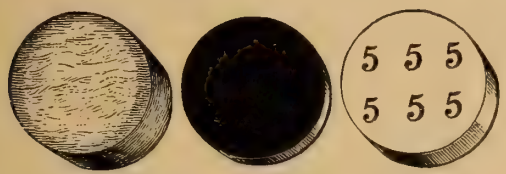
AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

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The Best in the Market.

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THICK FELT. GREASE-PROOF. OVERSHOT.

GUN WADDING,

For SPORTING and other CARTRIDGES. Best Hair, and Brown Felt of uniform thickness; also Best Cloth, Field, Grey Felt, Black Grease-proof and Card Wads. Overshot Wads, printed name and number. Indented Wadding, suitable for muzzle loading guns.

To be had of all Jobbers and Dealers in Sporting Goods.

JAMES BALDWIN & SONS,

ORIGINAL MANUFACTURERS,

Morville Street, Birmingham, Eng.

Agent:--W. H. JAGGER,

131 Bay Street, TORONTO

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PRIZE CUPS TROPHIES AND MEDALS

Suitable for any athletic competition. Special designs prepared, and estimates furnished on application.

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E. G. Gooderham, Manager.

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Crockery China and Glass.

LAMPS A SPECIALTY.

All glass, Vase, and Library Lamps, in every hue and design

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Dominion Wire Mfg. Co., (Limited)

WIRE DRAWERS, GALVANIZERS AND MANUFACTURERS

MONTRENL AND TORONTO

Iron, Steel : and Copper Wire

Bright, Annealed, Oiled, Galvaized, Coppered, Spring, Nail, Rivet, Telephone, Telegraph and Tinned (for Mattress and Broom makers use.

Wire

Also "Lyman" 2 and 4 Point Barb, Ribbon, Thorn and Plain Twist, Fencing.
Wire Nails and Wood Screws.

Price Lists Furnished and Discounts Quoted on Application.

JOB LOTS OF LAMPS

NOT JOB LAMPS

But Job Prices



We keep all kinds of Lamps, but we now call your attention most particularly to

THE FANCY VASE LAMP

Which we are selling at such low prices in lots of 12 or more.

All Good Shapes and First-class Decorations

DO NOT DELAY IN PROCURING AN ASSORTMENT.

COWANS, KENT & CO. WHOLESALE DEALERS

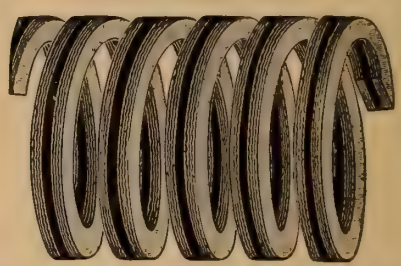
TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

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BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical Piston Packing. Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5 8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., **Toronto.**

BARB WIRE = WIRE NAILS

ORDERS SHIPPED ON SIGHT

OF THE PAST.



OF THE FUTURE.



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Offices: 54-56 Lombard Street,
Works: 55-59 Richmond St. East, Toronto.

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, MAY 13, 1893. No. 19.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

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Chicago Office: 41 Traders Building.
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Owners and Sole Manufacturers,
74 Cortland Street, NEW YORK.

WALTER H. COTTINGHAM & CO.

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Leading House
In the Trade for . .

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BLUNDELL, SPENCE & CO., Ltd.
Hull, and London, Eng.
Capital, $2,000,000.00.
Largest Paint and Color House in the world.

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Wolverhampton, and London, Eng.
Established 1803. One of the Largest Varnish and Color Houses in England.

GEORGE BENDA, Furth,
Fine Bronzes, Powders, Leafs.

F. W. DEVOE and C. T. RAYNOLD CO., New York
Artists' Materials.

Fine Colors
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Artists' Materials

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Walter H. Gottingham & Co.
Fine Paints Varnishes, Etc. MONTREAL

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ANCHORS = CHAINS

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BLOCKS and TACKLE

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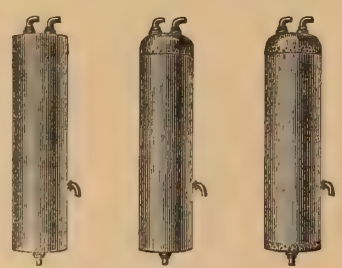
Galvanized Tackle of all Kinds

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TORONTO.

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Best Workmanship.



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Correspondence solicited and Price Lists on application.

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EO. BOOTH, Proprietor, formerly Booth & Son.

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TORONTO

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, MAY 13, 1893 No. 19

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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The window display is as much the part and parcel of a hardware store as is the coat to a man's wardrobe. Most people recognize this. But the trouble is that bad taste is sometimes exhibited in arranging the one as in choosing the other. The first object to be attained by window dressing is to attract and consequently to advertise. Where some merchants err is in the matter of quantity. Like the man who crowds all he can into his advertisement, they fancy the more they can work into their window display the more striking will be the effect. This spoils the very purpose that the merchant has in view. The average man has not time to spare to stand and contemplate upon all that is arranged in an over-displayed window. Even if he has the time he has not the inclination. A glance as a rule is about all the attention he has to spare upon it. If in that glance he comprehends what the display is well and good. But if on the other hand the window is over-dressed it is evident that the chance of the desired impression being made is lessened. As with an advertisement so with a window display —men read as they run. In a word, the window of a hardware store should contain just as few articles as is necessary to make a tasty and attractive display.

* * *

Conditions of safety in oil lamps and stoves is something that interests more or less all hardware merchants. At a meeting of the Edinburgh Association of Science and Art held some time since it was made the subject of a paper. The sole cause of explosions, said the essayist, was oil vapour, and what was wanted was an oil which would not give off vapours under any conditions of burning. The English Parliament saw fit some time ago to reduce the flash test of oils from 100 degrees Fah. to 73 degrees Fah. This came in for some strong condemnation, the essayist holding that even 100 degrees was too low for the public safety. Along this line of reasoning the Canadian flash test would not find favor with him, it being, as will be remembered, changed during the last session of Parliament from 95 to 90 degrees Fah. Water white oils also come in for some adverse criticism. The chemical treatment to which these oils are subjected detracted from their burning properties, the candle-power not being equal to that of the cheaper oils furnished by distillation. What ever may be the opinion regarding the soundness of the essayist's remarks regarding the oils, there is less chance of a difference of opinion concerning the overheating of lamp fonts. He would have all these provided with a vulcanite, abestos or other non-conductor, to prevent heat passing to the oil in the font. When he stated that lamp shades such as opal tended, by throwing heat on the container, to raise the temperature of the oil, he ventured a conclusion seldom if ever thought of. But when he deprecated the practice of turning the lamp wick down low he touched upon a more familiar point and one which causes to flash across one's memory the terribly fatal consequence that befell the family of a member of President Cleveland's first Cabinet through this cause. "If the flame should be reddish in color when turned down, that should be taken as a signal of danger and the flame should be turned up," is the counsel the essayist gives. Referring to lamps, he said that "a dealer would of course recommend the lamp that paid him best, provided he had no conscientious scruples as to its performance," but he plainly intimated that he did not approve of the table lamps of high illuminating power which were frequently used, both light and heat being too strong for the eyes. Here is a point that hardware merchants might with profit investigate. There is no doubt that injury is often caused the eyes by too strong a light being thrown upon the object upon which they are fixed. And if the dealer can show his customers that he is solicitous for their welfare he has earned their gratitude—and their patronage. Referring to explosions he said that he had never, after a number of experiments, found a lamp to explode upon being thrown to the ground, the flame having been extinguished by the concussion. He believed that there was greater danger of accidents when the lamp was upset on a table than when it fell to the floor.

* * *

In considering wicks, he ventured the opinion that those loosely woven were best for the majority of burning oils unless they were of light specific gravity, in which case one closely woven was considered best. He uttered a truism when he contended that it was not always the fault of the oil when the light was poor and dropping; old wicks were frequently to blame. Before a wick was used it should be dried before the fire until no watery vapour came from it, and should be put in the oil while it was still warm. The longer a wick was used the worse lighting results it gave. In a lamp or stove with a double wick it was dangerous to leave one wick unlit. When a lamp or stove was not in use the wicks should be turned down below the top of the tubes. This advice is given in the matter of care: "Lamps and stoves should never be charged only half full, because if vapors were run off in any quantity there was ample space for mixing with the air to a dangerous extent. On the other hand, brimful charges were very dangerous because of the expansion of the oil by the heat, which involved the risk of bursting the oil font. All wicks should be long enough to reach the bottom of the oil font; when they become

shorter a new wick ought to be supplied." After all, "so far as safety was concerned, it was not a matter of lamps or stoves but one of oil," were his conclusions. It would not be inappropriate for hardware merchants to instruct their customers in a few of these particulars when selling a lamp or oil stove.

THE McCAUSLAND FIRE.

Seldom has there been a more determined attempt at incendiarism than that which culminated in the partial destruction of the stained glass works of McCausland & Son on Monday night. These works are situated in Pearl street immediately behind the offices and warerooms in King street. Between 5 and 6 o'clock the previous Saturday evening, fire was discovered immediately outside the western entrance in Pearl street. It was kindled under a large frame that was leaning against the building. It caused about $50 damage. On Monday night about 8.30 o'clock another fire was discovered near the eastern entrance and a few feet east of the Saturday night blaze. The watchman who discovered it extinguished it, and summoned another watchman to assist in guarding the building. About 10'clock the same night fire was again discovered. This time the incendiary had started his fire in a more favorable place—at the foot of the hoist, up which the flames sprang with almost lightning rapidity. When the brigade arrived the interior of the building was wrapped in flames. A general alarm was turned in, but, although every section in the city was soon upon the scene the building was gutted from cellar to roof before the fire was extinguished.

The loss will be heavy. Some have estimated it at $15,000; but this is mere conjecture. Whatever the loss is it will be covered by insurance, there being $25,000 on the stock and plaint and $7,000 on the building. The appraisers are at work, but until they get through nothing reliable can be known. "You see it is like this," said Mr. Bryant, one of the firm, to a representative of HARDWARE, "there were so many articles that were in course of transit through the various departments that until everything has been turned out and the appraisers have determined how much this and that article has been damaged it will be impossible to tell what the loss is. For instance there is that stained glassed window with the flowery pattern you see there. Well before that was finished as you see it it had to go through several departments. The same there with that large plate glass mirror. One might be in the silvering department, another in this department and another in that. So you can see for yourself just how things stand."

Notwithstanding that the fire has so seriously interfered with business operations McCausland & Son will be able to fill with despatch all orders sent in. Over their offices and warerooms in King street are a number of vacant rooms and these will now be utilized for manufacturing purposes until the regular factory has been refitted. The burned building is detached from the King street premises, and is five storeys high.

The paper department was uninjured, and part of the lead room, where the stained glass is put together escaped, while the bevelling, bending and silvering departments will soon be in operation again.

SHIP BUILDING IN ENGLAND.

Lloyd's returns show that there were 354 vessels of 621,668 tons gross under construction in the United Kingdom at the close of the year ending March 31st, 1893, as compared with 493 vessels of 843,078 tons at the close of the corresponding quarter in 1892, thus showing that the work has diminished by over 220,000 tons, or 26 per cent. Of the vessels now being built there are 236 steel steamers, 20 iron steamers and 7 wooden and composite steamers, the total steam tonnage being 535,291; while as regards sailing vessels there are 51 being constructed of steel, 2 of iron and 38 of wood and composite, the gross tonnage being 86,377. The returns show that only Belfast and Hartlepool have held their own, all the other rivers suffered alike from the recent depression. The number of vessels being built abroad affords no room for the suspicion that shipbuilding is leaving Great Britain, the principal figures being: Trieste, 2 vessels of 4,900 tons; Antwerp, 1 vessel of 2,600 tons; Copenhagen, 7 vessels of 8,141 tons; Nantes and St. Nazaire, 9 vessels of 15,240 tons; Bremerhaven, etc., 8 vessels of 10,091 tons; Dantzig, 2 vessels of 7,500 tons; Hamburg, etc., 16 vessels of 29,458 tons; Rostock, etc., 8 vessels of 7,725 tons; Amsterdam, 2 vessels of 3,650 tons; Kinderdijk, 2 vessels of 3,540 tons; and Philadeldhia, etc., 9 vessels of 14,010 tons.

LOCAL JOBBERS ANNOYED.

The local wholesale hardware dealers are considerably annoyed at the inconvenience they are being put to regarding goods imported from the United States. Some houses report that orders placed April first with manufacturers over there have not yet been filled. Bundles of invoices have been received, but no goods. The delay is understood to be in connection the U. S. customs regulations which allow rebates in certain instances on the raw material imported. But whatever may be the reason, jobbers here are chafing under the delay and are threatening in future to do just as little business as possible with manufacturers on the other side if present conditions continue. Uncle Sam needs to get up and hustle.

MINING OUTLOOK IN NOVA SCOTIA

There is every indication that we are to have a busy mining year, but still mining news comes in slowly, as the old companies have nothing particular to report, and the prospectors have not yet started out in their search for mineral lodes. The Island of Cape Breton has been revivied by large investments in coal mines, and every branch of business has been benefitted, as commercial travellers from that section can attest. In its mineral wealth lies the great future of our Province, as with its development will come the revival of trade and commerce. Home employment will be furnished our people, the farmer will find a ready market for his produce, and money now tied up in the banks will begin to circulate. We firmly believe that the benefits of the large investment of capital through the Whitney Syndicate will be immediately felt, and that before another year has expired the men who are now decrying the measure will be loudest in its praise.—Critic.

DON'T WORRY.

"A man's business life is too short," says a contemporary, "to waste any portion of his time in fretting over any trifling matter of business. If a man has a mind to be annoyed by every little mishap that occurs in his establishment he can keep himself in constant hot water by worrying is neither sense nor reason in flying into a fit of passion because some careless clerk breaks a stone fixture, leaves a faucet running, smashes a jug, or commits some other trifling blunder. Constant fretting on the part of employers makes clerks and bookkeepers nervous, and in this condition of mind and body they are far more apt to make mistakes than they otherwise would be. Business worry wears a man out very rapidly, and when the habit of fussing is once acquired, it is extremely difficult to rid oneself of it. There are men who work themselves into perfect fits of passion over little insignificant matters not worthy of serious thought and consideration. There are other men who fret because they fear something unpleasant is going to happen to their business career. They may have obligations to meet, a note due at the bank, while their customers cannot be depended upon to help them out of a tight corner, but there is no earthly use in borrowing trouble until trouble comes, and then every enterprising merchant should manfully meet it. There is a great difference in merchants. Some wear themselves out before middle life, become irritable, morose, snappish and disagreeable in the conduct of a very small business, while other men, with vast interests and great responsibilities who are calm and well poised, patient and nervy, live to a good old age without borrowing trouble or shattering their nerves over trifles."

ATTENTION TO DETAILS.

The details of business are irksome, and the natural desire of the head of an establishment is to escape attending to them. He naturally and rightfully feels that his time is too valuable to devote to these minor matters, but it seems almost impossible to find men to attend to them without the direct oversight of the superintendent or manager.

Subordinates who can and will attend to details thoroughly and reliably will always be highly esteemed, but those who are contented to do so year after year have not the stuff in them of which successful men are made. They lack the breadth of mind essential to the filling of executive positions, or else they lack ambition, and one is as fatal as the other. On the other hand, a man who cannot or will not attend thoroughly and promptly to business when in a subordinate capacity is deficient in one of the most important qualities needed in more advanced positions.

A great deal has been written about the necessity of a close attention to details on the part of the head of the establishment, whether it be mercantile or manufacturing, but there is ground for the belief that not only has this belief been agravated, but that in a certain sense a close attention to details on the part of the chief is detrimental to business success, in some degree at least.

The successful man is he who knows how to get the details of his business looked after without giving them his personal attention, for it is undoubtedly true that his time and brains can be more advantageously employed in looking after the important general features. It is the worst kind of folly for a five-thousand-a-year man to busy himself continually about work an eight-hundred man can do just as well, and a careful study of the successful man will disclose the fact that he is a man of rare judgment in the selection of subordinates, and makes it his constant aim to get rid of all the details and routine work possible.

The attention of a successful executive to detail must, however, go this far: He must have a thorough knowledge of it in every department of his business, and, while ignoring it as a general thing, must make it a practice occasionally to devote the strictest attention to it, going over it with the subordinate in such a way as to let him understand that the manager is a thorough master of it. In this way he will secure proper attention to it by the subordinate, and if things do not run smoothly and economically he will be able to set them right.

More than two-thirds of the half-way failures in business are due to the fact that the chief fritters away valuable time in watching over trivial things when his attention ought to be devoted to weightier matters. A man has but a certain amount of energy and available working time, and it needs not very deep reasoning to see that if he devotes a large portion of it to minor affairs he will not be able to give the attention which he ought to the work that he is best fitted for.

To be thoroughly successful in a large way a man should be free to watch the situation, to keep a general oversight of all departments, and to make plans for the increase and proper conduct of the business. Ideas are the germs of success, and good ones properly worked out will be found to constitute the difference between the successful and the unsuccessful man.

Time devoted to the study of the market, to learning the tastes of customers, and to noting the tendency of this or that brand of goods is not time thrown away, and neither is time devoted to a proper cultivation of the trade. The successful man must keep abreast of the times, and to do this he must look into the future as far as in him lies, for the future will soon be the present, and not to be prepared for it is to court commercial death.—Commercial Enquirer.

A COMMON FAULT.

When a person enters a store with the evident intention of "looking around" let him look around to his heart's content. Many clerks when they see a possible purchaser looking at books or at toys, novelties, etc., will step forward and ask in an almost impertinent manner:

"Anything wanted?"

The natural reply is, "I don't know whether there is or not; I'm trying to find out."

Instead of privileging the customer to examine the various articles at his leisure, merely remaining near enough to answer his questions promptly, these inexperienced salesmen stand over him and act as a sort of sentinel on all his actions. They manifest impatience, and almost say, by their look and attitude, "Well, hurry up! If you don't want anything, move along, and get out of my sight."

A customer does not always want to be haunted by a clerk at his elbow. There are times when he prefers to wait on himself, and there are times and places when the clerk should understand that it is best to let him wait on himself. Above all things the clerk should avoid giving offense. Don't do anything to irritate a customer. Simply try to please him. Study his present humor, and gratify it. Make him feel that he is welcome—that you are pleased to have him examine the stock in your department. Do this, and maybe you will win a steady patron and gain a friend.—Commercial Tribune.

THE ORIGIN OF TABLE UTENSILS.

There is little thought given to the origin of the table utensils in daily use, but a recent French writer throws interesting light on the subject.

The old Romans, it seems, not only breakfasted, but dined and supped, if not in bed, reclining upon couches, and not until the days of Charlemagne were stands introduced, the guests sitting around them upon cushions. In the Middle Ages, when a table and benches with backs were an innovation, the ultimatum of luxury and ease seemed reached. The food was eaten from a kettle with side-handle, not unlike a poringer, but after a time thick rounds of bread were cut from the loaf to serve as plates.

Of very remote date is the salt cellar—as the use of salt belongs to the earliest ages; at Roman and Greek banquets it occupied a prominent place, and was termed by Homer divine.

The salt-cellar was made for the rich from silver or gold, and was a family heirloom. Francis I. had several of exquisite workmanship, the chasing credited to Benvenuto Cellini.

At the Louvre are specimens made from faience for the wonderful service of Diana of Portiers or Henry II. In contrast to this elegance, salt holders were formed from common earthenware, and at the ordinary repasts of the poor pieces of bread were cut and hollowed out, and placed at each plate to hold the salt. Individual, it seems, even if crude! No mention is made of the castor until the sixteenth century, and then it is termed cruet-stand.—Housefurnishing Review.

OIL SHIPMENTS.

The shipments of crude and refined, reduced to crude equivalent, which according to the Advertiser, left Petrolea over the lines of the Grand Trunk and Michigan Gentral Railways for the month ending March 31st, 1892-93 are as follows:—

Grand Trunk Railway.

Crude.	Refined.	C. Equiv.
11,381	8,579	32,828

Michigan Central Railway.

4,750	7,953	24,632
16,131	16,532	57,460

	1892			1893		
	Crude.	Ref'd	Crude. Equiv.	Crude.	Ref'd	Crude Equiv.
Jan.	17,441	24,751	79,218	23,671	28,834	96,756
Feb.	14,577	18,073	59,759	22,905	19,809	77,070
Mar	16,570	19,469	65,217	17,891	22,405	78,903
Apr.	12,542	15,145	51,704	16,131	16,532	57,460

Controller Wallace has decided that the departmetal circular issued two years ago giving the values of sash weights is no longer applicable, and collectors have been instructed that where they have no reason to seriously doubt the correctness of the values as shown in the invoices presented to them, to except such values for duty.

THE CROP OF FAILURES.

Failures in the iron trade have been unpleasantly numerous this year. It is probable that even thus early in 1893 such financial reverses have exceeded the aggregate of the entire preceding five years. The depressions in business in that period were comparatively easily borne, and the matter was the subject of frequent congratulation on that account. We now see how much more severely recent conditions have affected the manufacturers and merchants. The forcing of prices to a lower level than ever before attained, with their continuance for months at that low level, was bound to develop weak spots which could not be repaired except through a substantial recovery to better values. At such a time the seeds of trouble springing from inefficient management, insufficient capital, speculative investments or unnecessary expansion of plant must make themselves manifest in a crop of failures. There is no chance of their being hidden by large profits, which, like charity, cover a multitude of sins. The manufacturing or other commercial enterprises that can survive an era of depression such as this must necessarily be ably managed, well fortified financially, and thoroughly braced to meet occasional shocks to credit or a growing lack of confidence by money lenders.—Iron Age.

HOW TO KEEP THE STORE NEAT.

The chief requisite is that the proprietor should be a man of judgment, clear ideas, and withall of a kindly nature. This latter characteristic will impart a feeling of ambition to the clerks to keep things in shape out of respect to the head of the house. A clerk is necessarily somewhat of a machine, but if he feels that consideration is shown him, he will unconsciously grow to the idea that his employer's interests are his own, and in this way be willing and anxious to use all means of preventing confusion in the stock and accumulations of litter about the floor. The stocks will be put back carefully. Each piece of display goods will be kept arranged properly and the shelves show a neat appearance.

Of course, as first set forth, the merchant or his manager will have to embody the principle of neatness. Some men are born so, others achieve it by hard lessons, other storekeepers buy it, and have to pay dearly for the luxury.

The impression made upon a purchaser when entering a store by a trashy floor, unkept and mislaid stock, is anything but prepossessing, and many orders are lost by permitting the front part of the house, in both jobbing and retail business, to be used for packing and unpacking goods. It is very well to show in this way what a busy set of clerks one has, or what a big volume of business was being done, but many buyers hesitate to enter such a pandemonium. It is well to show the busyness of the clerks, but let them carry to a rear room the goods to be packed, and bring from there the new goods, bright and clean, to be neatly placed on the shelf or stowed in bins and cellar.

Every store should have a large rough mat at the door to prevent bringing into the house mud, dust, etc. The doors to the different stock or display rooms should be kept shut. Change of temperature, or, rather, the varying of wet and dry atmosphere, badly affects fine goods, and then, when one department is swept and dusted, the settlement should not accumulate on the other stock. And in the matter of sweeping and dusting, great art can be displayed, and no wise clerk or good porter should object to being thought effeminate in the discharge of this part of the work. Clerks should take pride in keeping their stocks clean and attractive, and notice of credit as well as fault-finding should be shown by the proprietor.

Wherever sprinkling can be done on the floor it is probably the quickest means of allaying and preventing dust in cleaning up, but wet sawdust is nearly as handy and much better adapted to a hardware house, as the floor is not wet much and not so much evaporation is given off. Out on the street or pavement is the most convenient place to deposit sweepings of dirt, litter, scraps of paper, etc., but the fireplace or ash barrel is a far more decent place to get rid of them.

Where it is possible it will be found very serviceable to have curtains of light material to hang in front of shelving from the ceiling while the sweeping is going on, and to hang these from Saturday evening until Monday morning. And as the force of clerks should be in reality a trained body of men or boys, they could easily put away the curtains in a short time and dust their stock over, and at night cover them up again, and as each stock should be looked after by a certain clerk, it will not be a hard matter for him to put away and collect his goods that were scattered by other salesmen showing customers around.

It should be a rule, too, for the clerks or salesmen who go around with the buyers, and necessarily take down and handle many sensitive goods, to go back and put away those articles; and the proprietors and their "bossy" sons should be willing to show this amount of consideration themselves.

The show windows of a large house should be the most attractive feature of the building, and under the constant care of a man who thoroughly understands art in exhibiting goods. The display should be constantly changed to represent the needs of the various seasons and changes of weather. The windows should be kept scrupulously clean, and have glass between the display goods and interior of store. It will pay to burn a glas jet day and night in these, turned down and out of sight, to prevent the condensing of moisture on the glass and goods.

Although it may be a good idea to receive and ship many goods through the front part of the house, to keep before the public and visitors the thrift and volume of business done, yet in most cases it is best to let the goods go out of a side or rear door.

Let the proprietors be polite and considerate to the clerks, appreciating neatness and original ideas, giving some leaway to the developments of the future merchants and yet demanding or rather requiring promptness and despatch, and there will be found very few young men who would not consider it an honor to be connnected with such a firm.—F. F. Gilmore in Iron Age.

A TRIBUTE TO BASIC STEEL.

It is a somewhat surprising tribute to the progress made in the manufacture of basic steel that a leading engineer has come forward with a strong plea for the basic method for Sweden. E. G. Odelstjerna urges the manufacturers of that country to introduce the basic open-hearth if they do not want to see their famous steel crowded out of the markets by the basic steel of Germany, Austria and England. It seems that Swedish producers have been amazed by having old customers for billets complain of the high silicon contents of the steel, although it is identical with that furnished for generations. Metal with silicon as low as 0.07 per cent. has been rejected on that score. The customers want sound steel, but do not want it made sound by means of silicon at the sacrifice of quality. It is a queer phase of recent development that the makers of steel from the purest raw materials should be driven to adopt the methods of those who start with a relatively very inferior quality. —Iron Age.

REPAIRING GRANITE IRON WARE.

"I solder granite ironware as eariy as I do galvanized iron," writes a correspondent of American Artizan. "I have frequently put bottoms on granite iron ware teakettles and preserving kettles, as well as repairing holes in the kettles. The way I do is to place the article to be bottomed or repaired on the mandrel or some solid body. Then with the joint of a hammer I tap the granite around the hole and thus scale a little fresh place where the solder will adhere as readily as it does to galvenized iron. To put a bottom on a granite iron ware article, cut the bottom with a chisel and with the burring machine, which will clip off enough of the granite. Then I

put on some nitrate of zinc, or acid, as tinners call it. After this I take a hot iron and some solder and tin the edge. If this method is a new one to you, you will be surprised to see how easy it is to tin and then double seam the bottom, and solder. I have successfully soldered granite iron ware for the last ten years."

RICH ALUMINUM ORES.

Another impetus to the manufacture of aluminum has been given by the development of rich bauxite mines in Alabama, Ga., says a contemporary. Bauxette is ferruginous hydrade of allumina, and specimens from these southern mines analyzed at the Smithsonian Institute,show from 40 to 48 per cent. of pure aluminum, whereas ordinary clay contains on an average only 33 per cent. Several car loads of bauxite are now being shipped every week from pits near Randall, Ala., to Kensington, near Pittsburg, Pa.,where the white metal is electrically extracted from the ore of the product, and pressed largely for the manufacture of equipages, etc., accoutrements for the German army, in the shape of belts, buckles, helmets, cartridges, shells, etc. It is said that a large iron corporation of Easton, Colasauga, Pa., is preparing to establish an immense plant to manufacture aluminum on a large scale.

These bauxite deposits are located in six contiguous counties on the border line between Alabama and Georgia—the counties of Cherokee, Calhoun and Clebourn, in Alabama, and of Floyd, Polk and Barto, in Georgia.

They are declared to be literally underlaid with bauxite. They are all situated on spurs of the Appalachian range, and form part of a region rich in hematite iron ore. The discovery was first made in Cherokee County, Ala., when some prospectors, in endeavoring to locate a vein of iron ore, sank a number of shallow shafts. In excavating a pit along one little ridge of the mountain they unexpectedly struck a bed of bauxite. A few yards away they again put in the pick, and at a depth of four feet again struck bauxite. A few yards further on they struck still more bauxite, and again still more, until they arrived at the conclusion, just recently verified, that the bauxite is everywhere present in that immediate neighborhood.

Since then some additional pits were dug in the hills east of Jacksonville, in Calhoun County, Ala. Four feet under the surface beds of solid bauxite 10 and 15 feet wide, and from 8 to 12 feet deep were located at random. In Clebourn County adjoining, similar veins have been laid bare with the greatest ease, and likewise in Floyd, Polk and Barto counties, to the eastward, over on the Georgia side. The fact now seems undeniable that the deposits can be found almost anywhere thereabouts, at least 30 miles in all directions from the village of Randall, which, fortunately, is within a mile or two of operating railroads.

A SMART COMMERCIAL TRAVELER.

The following incident is quite true in all details except names of persons and places: Some years ago a traveller employed by a large wholesale house in a town which I shall call Singleton, secured an order by a very clever ruse. A contractor who lived at a village about twenty miles distant asked for quotations for a considerable quantity of goods, and, as was customary, our traveller, Mr. Robinson, was deputed to wait upon him the following day to try to secure the order. I must explain that the contractor's place of business was so situated that it would be reached from either of two railway stations on the same line, being equi-distant from both. When Mr. Robinson arrived at the station most often used by visitors to the contractor, he was disgusted to meet with a brother commercial, Mr. Jones, from a rival firm, who was also bound on the same errand. They, of course, got into conversation with each other, and neither made any attempt to conceal from the other that they both anticipated booking the order. The two houses they represented were equal in all respects as far as the class of good was concerned, and, as regards the price, well, if one was a trifle higher than their opponent's, the traveller would be sure to find it out in conversation with the customer, and would accordingly reduce it. Both the representatives had a reputation for being smart; it was fairly a case of Greek versus Greek. One of them proposed to toss up and see who would have the chance of seeing their customer first, for they knew very well that if both made their appearance together neither would get the order, and it was almost a certainty that whichever of them succeeded in getting to the office first was sure of booking it, but the other would not agree to decide it by this means. Finally Mr. Robinson goes to the booking office and ostentatiously calls for a ticket for "home," making sure that Jones is within hearing, and the latter gentleman eventually follows his example, and awaits the arrival of the next train. The train steams into the station, and the two commercials get into different compartments of the same carriage, both narrowly watching the other. The whistle is sounded by the guard, the train slowly moves out, but Robinson, who is suddenly afflicted with a temporary illness, hurriedly opens the door and jumps out on to the platform, and Jones, who takes a moment or two to relize the tactics of his rival, is prevented from imitating him by a railway porter, who hastens over and rudely pushes him back and shuts the door. It is hardly necessary to add that Mr. Robinson just as suddenly recovers from his indisposition, and calls on his customer, gets the order, and before he is many paces away from the house, sees Mr. Jones, who left the train at the next station, and, in the hope of possibly seeing the contractor before the order is given, decided to walk to his office. They both returned to town in the same train, but I don't think Jones ever quite forgave our traveller for so cleverly doing him.

ARRANGEMENT OF A HARDWARE STORE.

In a hardware store, or elsewhere, the whole duty of the proprietor and clerks is not comprised in honest dealing, courteous attention in explaining and describing the uses of the various articles and prompt delivery of goods. It is further required that there should be ample space between stoves, display stands, etc., to permit of their being inspected and examined without undue crowding. Notwithstanding the fact that this should force itself upon the mind of merchant and clerk, we know of stores where the goods are so crowded that it requires some little ingenity to make one's way into the interior. The contrast between that style and as it should be is striking. Surplus stock should not be allowed to accumulate in the front part of a store, but should be so arranged as to afford a clear view from front to back, or end to end of the store. This invites new custom and will afford a more general view of the stock. It should be remembered that the front of the store and along and around the counters should be kept clear for custmers' use, and in no instance should shovels, spades, rakes, etc., which may have been brought out for inspection, be left standing against the counters or stoves. After the sale is made they should be returned at once, for not only are they unsightly, being out of place, but they are liable to be knocked down and may cause trouble. The comfort and safety of patrons, as well as courtesy, should be at all times uppermost in the thoughts of merchant and salesman. A hardware store cannot be made too attractive, either as regards arrangement and display of goods, or neatness or cleanliness. These features should go hand in hand.—Michigan Tradesman.

The town of Widnes, England, is to furnish gas at the lowest rate in the United Kingdom. The price was recently reduced to 1s. 8d. and 1s. 10d. per thousand cubic feet to large and small consumers respectively; and as the public lighting is done by the gas committee gratuitously, the average price of gas is said to be 1s. 6d. per thousand cubic feet. It is stated that this reduction is effected by the results obtained from the Dinsmore process, which makes a great saving of coal.

You can lose more than we do by not subscribing for this paper.

STOVES and TINWARE

HOW TO IMPROVE THE STOVE TRADE.

The New York Metal recently invited correspondence on the question: "What can be done to improve the stove trade?" In the last issue one of those who acquiesced, writing from Detroit, said:

To make a decided and prominent success it is necessary to have a stove which, in design and pattern, both of construction and ornamentation, shall be entirely distinct from that of other makers. A decade ago the public were most particular about the weight and capacity of a heating stove, while today the matter of domestic artistic taste so thoroughly permeates all classes of society, both rich and poor, that particular attention must be paid to the fitness of things. Perhaps the most striking instance of a successful departure from standard designs was that which attended the first introduction of the "Oak" stoves some years ago.

That many of our enterprising manufacturers rightly estimate the public demand for artistic and original styles of shape and ornamentation is evidenced by a perusal of their elegantly printed catalogues. Still it will never answer to rest on the success of the past, but eternal vigilance in the matter of presenting new styles and designs is of vital importance.

There is the constant danger of over ornamentation, towards which there is some tendency, and it calls for the exercise of rare taste and skillful adaptation to produce a style of ornamentation which shall be truly ornamental. A thing of beauty is always a source of pleasure, and though "style" may for the moment stay the demand, there will always remain the attractive features which will "wear well" in the estimation of the public.

The great charm which lies in the use of any really good article is the simplicity of its construction, and goes far to secure the respect and interest of the possible purchaser. The general public know, perhaps, less about how to regulate the drafts in a stove, how to dump the grate and operate the various parts than stove manufacturers even imagine. The fewer parts to operate, and a word or sign cast on the part to indicate its use or purpose, is the kindergarten species of education which the manufacturers will do well to consider. The avoidance of loose parts which may be lost in transportation or use, and a set of plain, intelligible directions permanently fastened to the stove would be appreciated by customers and assist the dealer, who is often quite too ignorant in the details of his business.

That there will be competition to the end of time no business man will dispute, but there are kinds of competition which may be obviated by an organization of the manufacturers on a legitimate and business-like basis. There has been a National Association for some years, and there can be no doubt that it has resulted in great good to the trade in general, but the good work commenced may be still further extended if each manufacturer will lend his individual cooperation and sympathy. There are matters in regard to the allowance of freight and cartage which are proper subjects for the adjustment of a trade organization. There is also the question of terms of sale, especially the length of time to be allowed on sales which might be easily and finally settled to the satisfaction of all concerned if a general policy would be adopted by the manufacturers. The question of price, while also of great importance, cannot be so easily regulated, but there is a certain principle of compensation which finally adjusts the question of profits. The maker who sells his product too low will reap what he sows, and the matter of price becomes after all the mere result of cost of manufacture and selling, in which the survival of the fittest is plainly demonstrated.

The modern method of advertising is tending in the direction of educating the consumer as to the advantages of a special article. It is expensive and the results slow at first, but the principle is correct and only needs ability, money and time to secure success. The first point is to reach the dealer, the man who comes into personal contact with the consumer and so indirectly reach the desired result. It would be futile to attempt to reach the individual consumer and sell direct, as the expense of each sale would more than equal the profit and would have to be repeated for each consumer. The proper method is to constantly present to the dealer through the trade papers, and by means of catalogues, the advantages of your production, and after "educating" the dealer he in turn will use your arguments upon the consumer.

If your stove is economical in use, explain why it is economical and repeat the explanation week after week until the advantage of economy is thoroughly imbedded in the mind of every dealer. If your stove is compact, or artistic, or convenient, or simple, or has any other particular virtue, use it for a prominent argument and repeat the fact until the adjective becomes synonymous with the name of your stove.

For a permanent example of the effect of this kind of public "education," notice the advertisements of a certain baking powder which, as you are doubtless aware, is "Absolutely Pure." If your stove is "pretty as a picture," or "simplicity simplified," or "easy as an old slipper," say so until the dealer automatically repeats the phrase, and it becomes identified as a settled fact by the public.

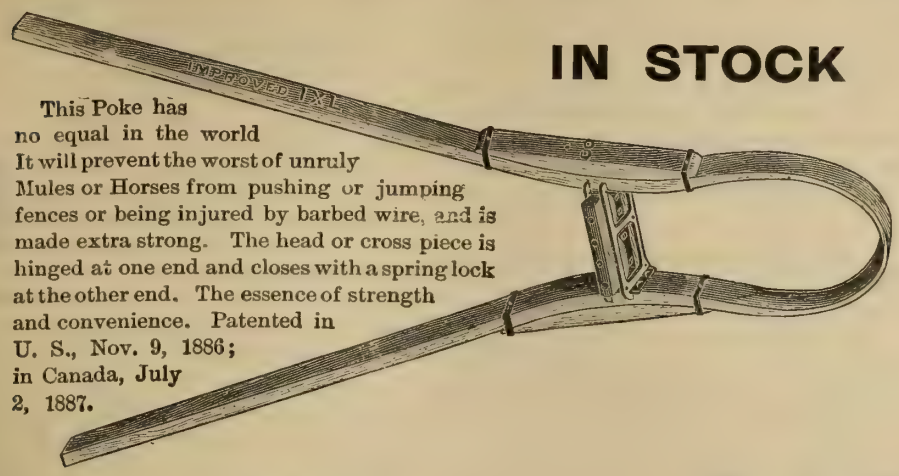
THE WEIGHT PER SQUARE FOOT OF SHEET METAL.

It will be interesting to those who have anything to do with sheet iron boiler plate or similar material to have an easily remembered rule for to find the weight per square foot of the material they are working with. It has been found by experience that a square foot of iron plate 1-8 of an inch thick weighed almost exactly five pounds, and this forms a basis for a very simple and easy rule. As a square foot of iron 1-8th thick weighs five pounds, a square foot of 1-4 inch iron will weigh ten pounds, and we can say that ——. The area of any sheet iron (or plate iron) in square feet multiplied by the thickness in 1-8ths and multiplied by five, will give the weight of the piece. There is a piece of tank iron, 5-16ths of an inch thick, three feet wide and five feet long, how much does it weigh? The area will be 3x5 feet, or 15 square feet. Now how many 1-8ths is 5-16ths of an inch? Since 1-8 equals 2-16ths, and 2 is contained in 5, 2 1-2 times, we say 5-16ths equals 2 1-2—8ths, or 1 1-2 times 5 pounds, equal to 12 1-2 pounds per square foot. And as there are 15 square feet we have 15 multiplied by 12 1-2 equals 187 1-2 pounds. Where the thickness is even 8ths of an inch it is much simpler, but even this is not a hard thing to do as shown.

It it is desired to use this rule for other metals than iron we simply find the difference between the weights of the two metals per cubic inch and find what a square foot 1 8th of an inch thick will weigh, then work as shown above.—Ironmonger.

POSSIBILITIES OF ELECTRICITY.

In the forecast of electrical developments, one need not wear the mantle of a prophet to foresee certain definite and assured possibilities. They furnish their own signs, which such as are wise can read, and such as are not may expect if they cannot explain. There is, of course, a limit to this pre-science, but within its circle there is no offense against the canons of common sense to assume what as yet is not existing. This is especially true of electrical science along certain formulated and established lines, and it is by no means a surprise that in the present expectant condition of the public mind, the scientist and practical expert should whet our appetites with the aroma of a coming meal. Indications are tantamount to an assurance that telegraphy without wires will yet be a



IMPROVED I. X. L.

IN STOCK

This Poke has no equal in the world It will prevent the worst of unruly Mules or Horses from pushing or jumping fences or being injured by barbed wire, and is made extra strong. The head or cross piece is hinged at one end and closes with a spring lock at the other end. The essence of strength and convenience. Patented in U. S., Nov. 9, 1886; in Canada, July 2, 1887.



DICTATOR. CLIMAX.

CHAMPION.



Also—
The Pearson
No. 1 & 2.

H. S. Howland, Sons & Co.,
WHOLESALE HARDWARE, - - 37 Front St. West, TORONTO.

Carriage Paints . . .
Superfine Coach Colors
Varnishes . . . . .
Linseed Oil . . . .
Turpentine . . . . .

Our Pure Prepared Paints
Are the
STANDARD CANADIAN MAKE
EVERY PACKAGE GUARANTEED
SPECIAL ATTENTION AND PROMPT SHIPMENT.
THE TORONTO LEAD & COLOR CO. LTD
14 16 18 & 20 PEARL ST
TORONTO.

White Lead . . . .
Colors in Oil . . . .
Oil Stains . . . . .
Harness Oil . . . .
Carriage Top Dressing
Etc., Etc. . . . .

practical and commercial fact; that train service will sooner or later reach a rate of unprecedented speed; that artificial production of foods is in prospective if not in immediate sight, and that in a thousand other ways of service electrical science will assert itself where at present it is practically a remote or anticipated agent.—Age of Steel.

FROSTING OF SHOW WINDOWS.

Although rather late in the season, the following extract from the Engineer of London, in regard to the prevention of frosting on show windows may be read with profit by those who have not yet discovered an effective remedy for the nuisance of obscured panes in frosty weather. The journal referred to remaks as follows: In order to prevent the frosting of windows they may be painted with a solution of glycerine in 63 per cent. spirits of wine. Glycerine, like chloride of lim , has the property of absorbing water, and this action overcomes the difficulty. For small show windows sulphuric acid may be employed, as is done in Russia, in the following way: Double windows having two plates of glass with a space of 1-4 inch to 1-2 inch between them. The cracks between the two window frames and around the edge are kept tightly sealed, while several small vessels of proper form, half filled with concentrated sulphuric acid, are left in the space between the plates of glass; any small amount of moisture that may penetrate to this space is absorbed by the strong acid and the air thus kept perfectly dry, rendering the undesirable condensation and freezing of moisture on the cold outside glass entirely impossible. From the outside the double thickness of glass is scarcely perceptible, while the vesse's containing the acid may be concealed by skilful decoration. The expense incident to the doubling of the windows limits the application of this method to small windows, however, and, further, a contemporary remarks, the painting of the larger windows with the glycerine and spirits of wine solution answers the desired purpose.

PRODUCTION OF BRITISH MINES.

The annual reports of the inspecters of mines in Great Britain, which have just been issued give the total yield of British mines in 1892 as 191,954,908 tons, of which 181,786,871 tons was coal and 5,644,486 tons was iron ore, the rest being fire clay, shale and the lesser minerals. The whole output is 5,738,684 tons less than that of the preceding year, the decrease of coal being 3,692,255 tons and of iron ore 1,584,664 tons. The total number of persons employed in connection with the mines of the United Kingdom last year was 721,808, of whom 6099 were females. In all there were 862 fatal accidents, occasioning 1034 deaths, being 1 death for every 679 persons employed. An interesting fact brought out in the reports is that the occupation of the miner is very much safer now than it was before the passage of the mining acts, the average of fatal accidents having sensib'y decreased. Formerly the average of deaths was as high as 1 in every 233 persons employed.

MONEY SPENT IN ADVERTISING.

No matter how hard you try to drive it into the craniums of some business men, you can't make them believe that millions of dollars are invested annually in advertising. Here are a few facts and figures, that can be easily verified. For instance, there is Harper's Magazine, which derives a yearly income of $350,000 from its advertising patrons in its twelve issues. Hear's Soap pays $9,000 a year for a single page in the Century. Enoch Morgan's Sons spend annually $300,000 to keep "Sapolio" before the public. As for John Wanamaker, it has long been known that he pays a man $10,000 a year only to write his advertisements. In 1888, no less than $110,000,000 went into newspaper advertising. Perhaps advertising does pay, after all.—Exchange.

THINK THRICE.

Think thrice before you embark in any commercial enterprise, says a contemporary. The decision to engage in a certain trade is but the preparation for the battle, and no hotly contested battle was ever won without the victorious army having perfected all its plans in advance. The merchant's primary object in trade ventures is, of course, the making of money. If he selects a certain branch of trade, he must have well defined reasons for his selection, and unless he knows in advance all the possibilities of failure, as well as the probabilities of success, the prospects will be unfavorable for him. An intelligent and comprehensive idea of the requirements of any line of trade should be obtained before the investment of capital is made.

Think thrice before you decide upon a location. Think first how many people you will have a chance to sell to; think second how many competitors you will have in selling to those people; and think third what kind of goods those people are used to buying. A physician does not locate in a new country where there are but a dozen or so families, nor does he hang up his shingle in a town where it is so healthy that they have to kill a man to start a graveyard, and the wise merchant does not open a store at a point where there is not enough trade to support him.

Think thrice before you purchase your stock. In nearly every store in this country are goods that are practically unsaleable, which were purchased in hopes that a trade could be created for him. It is well to make a test of such goods once in a while, but it is time to purchase in large quantities after the demand has been actually demonstrated.

Think thrice before you fix your prices. You know about how much your annual sales will amount to; you can tell within a few dollars of what your annual expenses will be; you know the personal cost of your living; you have, or ought to have, a very fair idea of your percentage of losses, and you therefore can easily ascertain what percentage of profit you have to make in order to protect yourself. If you can't get prices that will support you, it will be better for you to move to some other town, or close out your stock of merchandise. A slight loss now is immeasurably better than a partial or entire failure after a while.

Think thrice before you grant credit to new customers. Think three times thrice before you grant credit at all. The more readily you adhere to a cash system, the easier you will find it to utter the potent "no" when a doubtful customer wants thirty days' time on ten dollars' worth of merchandise.

Think thrice before you employ a new clerk. Upon the courtesy of your employees a great deal depends. It is better to pay an able, conscientious, energetic and polite clerk fifteen dollars a week, than to pay two incompetent clerks seven dollars and a half a week each.

Think thrice before you decide upon your advertising methods, but don't hesitate a moment when it comes to laying away certain sums for advertising. If you are now so located that advertising is not necessary, you are especially fortunate, but the time will come when you will have to spend money in printers' ink. It is not a question of the efficacy of advertising, but of mediums. Before you invest your money determine what class of people you want to reach, how you want to reach them, and what mediums have the most influence with them.

Think thrice, three times over, before you "dun" a customer by mail, or before you seek to collect by the process of law. There may be some satisfaction in forcing a "dead beat" customer to pay by resorting to legal procedure, but there is very little money in it, and an infinite amount of annoyance. Ninety-nine per cent. of those who will go to law before they will pay their just bills are law-proof, and a judgment against them is practically valueless.

Think thrice before you discuss your private affairs with your customers. They want to hear about the goods you have to sell, and do not come to your store seeking information about your competitors, or to learn the latest home cure for measles.

Think thrice before you give your promise to "do all in your power" for a friend. If you do all in your power for friends you will have to neglect your own business, and they will never be able to repay you, nor will some of them be willing to repay you.

Think thrice before you ask a favor. If you do everything in reason for yourself, you will have very little occasion to ask others to do anything for you. Think three times thrice before you take money out of a legitimate business to invest it in an uncertain speculation in hope of immense profits, and think thirty times thrice before you indorse the paper of an acquaintance.

WHAT ASSOCIATIONS NEED.

Under the above heading the Engineer has a long article in which a great deal of practical wisdom is displayed. It is shown, and it is the stand we take, that an association must have some definite object in view, which should be adhered to strictly under all circumstances. Associations of business men are formed for the single purpose of advancing the welfare and interests of the members and not to gratify the ambitions of individuals. They are business organizations, co-operating for the common need, and should be carried on precisely as any successful mercantile house conducts its affairs.

Leaders are few; like poets, they are born, not made. Men who have executive ability; sufficient personal popularity to carry the members with them and insure the execution of plans are very few, and when found every means should be taken to retain them. The presiding officer of an association is not to be envied; he cannot expect to please everyone, and should never be elected solely because he is popular. He must have capacity and executive ability, and sometimes the most disagreeable individual has the largest head.

The membership must be loyal to the general welfare. Some measures which have been instituted may bear hardly upon individuals; the benefits of any particular course or policy are not always felt at once, but if the members of the organization are satisfied with the zeal of the presiding officer, they should strengthen his hands in every way and maintain discipline. Unless this is done the best officer it is possible to find will be rendered useless, and the association itself will waste its time and money.

A TRAVELING MAN'S DEVICE.

"My wife and I," said a traveling man, 'were once in a hotel where we couldn't get any boiling water. After we had discussed the situation my wife asked me if I had an envelope in my satchel. I got one out when she told me to fill it with water and hold it over the gas jet. I hesitated, but finally did it and expected to see the envelope blaze up every moment. But it didn't blaze. The envelope took on a little soot, but that was all. The water boiled in time and the envelope was as good as ever when the experiment was at an end. I don't know the chemistry of the process, but try it yourself and see if it will not work."

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton. Ontario.
SP

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friends against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

THE BEST
English Sporting Gunpowder
USE THE
"ALLIANCE"
PRIZE POWDER
—Made only by—
Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.

Always obtainable from
Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.

Canada Iron Furnace Co., Ltd.
Manufacturers of
CHARCOAL PIG IRON
MONTREAL.
BRAND "C. I. F." THREE RIVERS
PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

H. Boker & Co.
are famous for their fine quality
Razors, Scissors
—AND—
Pocket Cutlery
TRADE MARK.
(TREE BRAND)
FOR SALE BY LEADING WHOLESALE HOUSES.

PERSONAL MENTION.

Mr. Paget, of Paget & Hay, Unionville, was in town Thursday, paying one of his weekly visits to the trade.

Harry Wright, of E. T. Wright & Co., wire manufacturers, Hamilton, was "drumming" Toronto Wednesday.

Geo. J. Gook, president of the Cook & Bros'. Lumber Co., has been elected a director of the Bank of Toronto.

S. A. Wabb, of French River was in Toronto on Wednesday, and, judging from the goodly sized parcels he bought, business prospects in his locality must be good.

F. P. Jones, late manager of the Automatic Knife Company, Gananoqua, has accepted the district agency of the Canada Life Insurance Company for the county of Lanark, with headquarters at Perth.

Col. Hutton, of James Hutton & Co., Montreal, is seriously ill at the Windsor hotel in that city. A. H. Symonds, the manager of the Toronto branch, has been called to headquarters, and the office here will be closed for some time.

William Edwards, Jr., late of the Canada Wire Mattress Company, of Toronto Junction, has returned to Gananoqua to take his brother Andrew's place in their father's business of furniture and undertaking. The latter has accepted a partnership in a wholesale establishment at Winnipeg of the same kind.

Among the country merchants noticed on the street during the week were: Charles Mason of Richmond Hill; N. Courtemanche, of Penetang; G R. Vanzant, of Markham; W. J. Cavan, of Springfield-on-the-Credit; E. Pollard, of Petrolea; "Doc." McDonald of McDonald & Vrooman, Sutton.

RETURNED GOODS.

While passing through the receiving room a few days ago, writes a correspondent of Metal Worker, my attention was directed to a strange medley of articles in the space allotted to returned goods, the accumulation of only two days—average ones at that.

There were small packages, large packages and lots of goods in no packages whatever. As it was quite an interesting conglomeration, I took a note of some of the articles which coustituted it and give it here:—

An Iron Pump.
One-half-dozen Post-Hole Diggers.
Two bundles Garden Hose.
One coil of Wire Rope.
Three bundles Shovels.
Two boxes Loaded Shells.
One-half dozen Cast Griddles.
A broken Spring Hinge.
A box of Calf Weaners, broken open and some parts missing.
Several packages Carriage Bolts, some of them in very bad condition.

Also several other articles in various conditions.

Being somewhat interested, I inquired the history of the various lots, and learned that the Calf Weaners, the Post-Hole Diggers, the Wire Rope and one number of the Loaded Shells were goods not carried in stock regularly, and had been picked up as an accommodation.

The Pump was specially ordered from the factory, and was returned because the dealer's customer had found one which suited him better before this arrived.

The Wire Rope was ordered and cut too short through dealer's mistake.

The Shovels were sent wrong by one of our order clerks.

The Hose was ordered in good season, but was delayed through negligence of the railroad company, and was not delivered till after close of season, consequently our customer refused it.

The Spring Hinge was not what carpenter wanted, so it was negligently wrapped and sent back, and arrived broken and worthless.

The Cast Griddles were returned for some reason or other—our fault I think—and as they had not been packed at all, they are very badly rusted and will be worthless until they have been repolished.

Thus it was through the entire list. Some of the mistakes rested with ourselves, but more with the dealers. Some of the goods came back accompanied by a terse letter, something like this: "Please give us credit, &c." As much as to say, we can't sell them; you must take them off our hands.

This matter of returned goods is a very serious one to the jobbers of the country. At various times action has been taken on it and some good effects resulted.

A year or so ago, a number of the leading houses issued a circular, stating under what circumstances goods might be returned. Some refused to allow anything to be returned which had not been sent wrong through their own mistake; others were more liberal. Few adhered strictly to the rules for any length of time. At first they would make exceptions of old and favored customers, who had overloaded themselves, and as one step led to another, the matter is now virtually where it was before the agitation.

This really means a dealer can buy goods, keep them as long as he pleases and, finding them unsalesable, return them to the jobber from whom he purchased them. If A remonstrates, the dealer calmly says he will transfer his trade to B, who will accommodate him. A knows this to be true, so generally gives in and is obliged to receive into stock goods which often are shopworn and damaged, and in many instances have to be sold at an actual loss.

This reveals a bad state of affairs which should not exist. The close competition of late years has led many jobbers to make rash agreements with their customers in order to secure their trade. In their zeal to gain and hold patronage they allow themselves to be imposed upon, and often make concessions which are uncalled for and certainly unbusiness-like.

The privilege of returning goods under many circumstances is right enough, but like nearly every other, it is shamefully abused. About the only remedy I can see is to do as the Edge Tool people have done with their warranty—shut down entirely. Nothing but concerted action will accomplish much.

I am glad to say that dealers, such as I have mentioned, are the exception rather than the rule, but they are numerous enough to be quite a thorn in the side of the jobber.

A word to all who may have occasion to return anything to jobber or manufacturer will not be out of place here. All goods should be carefully packed to withstand the rough usage of the transportation companies. I thought while looking over the aforementioned heap what a howl would go up if the very same parties who shipped those goods to us were to receive goods packed as those were, and in the same condition.

Express companies are not responsible for goods merely wrapped in paper so as to hide the contents. Good strong wood boxes should be used for heavy articles. Surely if the jobber is expected to accommodate his customers, they should see to it that the goods are properly packed and shipped, thus doing all they can to insure delivery in the best possible condition. It is no more than fair, to say the least.

A MOUNTAIN OF SILVER METAL.

The bar silver now stored in the United States Mint at Philadelphia amounts to 110,000,000 ounces, the largest quantity ever deposited in one place in this country. This quantity is equal to 6,250,000 pounds avoirdupois or 3,125 tons. Loaded upon wagons carrying one ton each, and allowing forty feet for each team and vehicle, this mass of metal would make a procession over twenty miles long. The quantity is so great that a new steel lined vault, 35 feet long, 8 feet wide and 10 feet deep, has been built to accommodate a portion of it. Piled full from floor to ceiling, however, this new addition holds only 20,000,000 ounces. As silver boullion is being poured into the Philadelphia Mint at the rate of 3,800,000 ounces a month, it will be only five or six months when another new vault must be built unless the purchase of the white metal is stopped.

A customer secured is a promise of greater salary in time.

A reputation for truthfulness is indispensable to permanent and satisfying success.

One thing in particular should be impressed upon clerks—the necessity of careful attention to small customers

"There are geniuses in trade, as well as in war or the state, or letters; and the reason why this or that man is fortunate is not to be told. It lies in the man."—EMERSON.

1893 - OUR LATEST - 1893

Safford Radiators

. . . FOR . . .

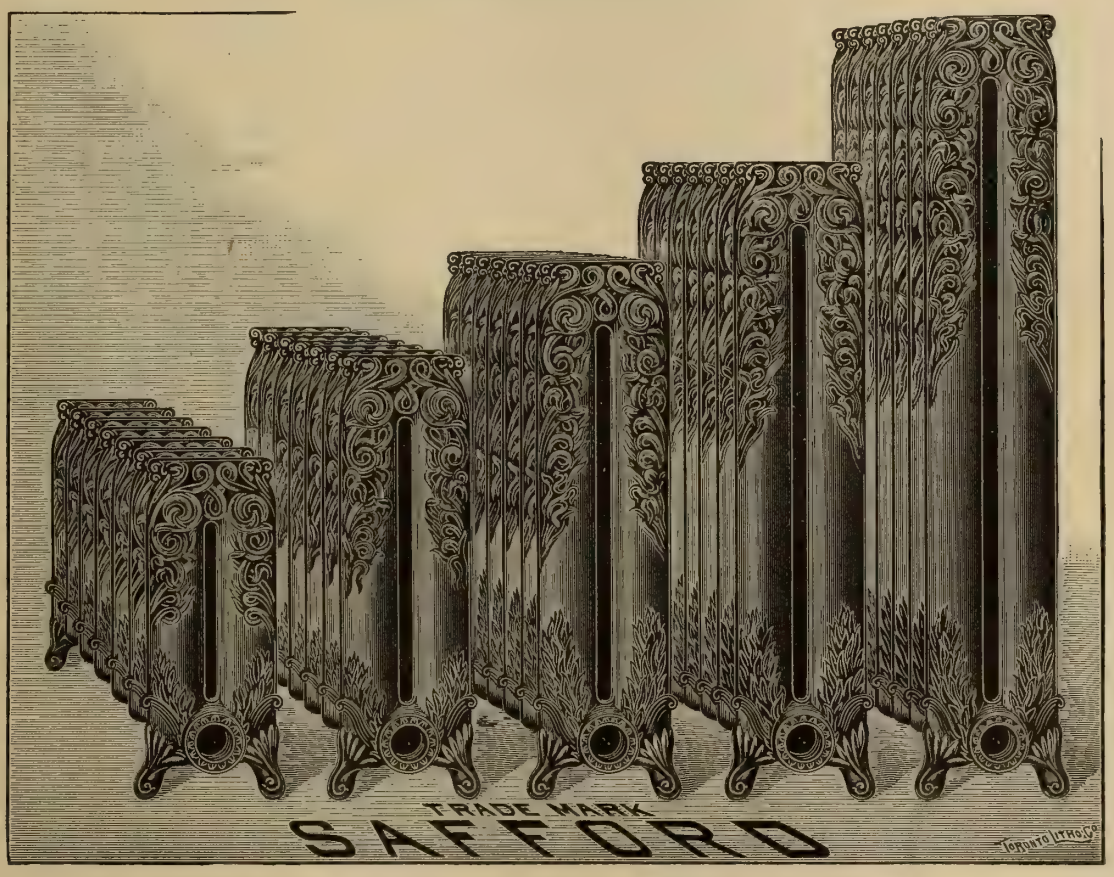
Steam and Hot Water

ARE UP TO DATE

Trade Mark Registered

MOST EFFICIENT
NEWEST DESIGNS
BEST CONSTRUCTION

ALL SCREWED CONNECTIONS



RADIATORS PATENTED AND ALL DESIGNS REGISTERED

References: New Parliament Buildings, Board of Trade, Confederation Life Buildings, Freehold Loan Building, University Buildings, Toronto; McGill University Building, Montreal; and many thousands of others which will be named in response to enquiries.

MADE ONLY BY

THE Toronto Radiator Mfg. Co. LTD.

TORONTO, ONT.

MONTREAL. QUEBEC. ST. JOHN, N.B. WINNIPEG. VICTORIA, B.C.

TRADE CHAT

The Gurney Foundry Company has been granted authority to increase capital to $350,000.

Hopes are expressed at Kingston that the Cleveland administration will reduce the duty on iron ore so as to make it possible for mining to be resumed in the back country.

It is reported that the Glasgow Iron Company has decided to cease making basic iron, and the Wishaw furnaces are to be changed on to hematite to be made from Spanish ore.

The old saw mill at the south end of the railway bridge, Gananoque, has been purchased by the Gananoque Electric Light Company, who will erect a three-storey building there for their plant.

The headquarters of the American Mechanic has been changed from Minneapolis to Chicago. Thos. P. Pemberton, late of the Master Steam Fitter and Stationary Engineer, is in Chicago as managing editor.

The shareholders of the Consumers' Cordage Company, Montreal, have issued a circular stating that the failure of the National Cordage Co., of New York, has in no way affected the Consumers' Cordage.

R. A. McCready, wholesale and retail dealer in bicycles, sporting goods, etc., is removing from his old stand, 378 Queen street west, Toronto, to the store next door, at the corner of Queen and Spadina avenue.

The Merchants' Manufacturing Co. has decided to issue the $100,000 additional stock which it was authorized to do at the last meeting for the purpose of carrying on improvements on the company's works.

The Dominion Paint Grinders' Association and the Canadian Color Manufacturers' Association held meetings in Montreal last week, but no business of any importance was transacted by either association.

To make glue waterproof, dissolve gum sandarac and mastic each 5 1-2 drachms in 1-2 pint of alcohol, and add 5 1-2 drachms of turpentine. Place the solution in a glue boiler over the fire and gradually stir into it an equal quantity of a strong hot solution of glue and isinglass; strain, while hot, through a cloth. Or, to a plain glue solution add bichromate of potash; on exposure to the air it becomes waterproof.

Lloyd's latest returns show the total number of vessels in the British mercantile marine to be 21,542, having an aggregate tonnage of 12,203,761 tons. Of this number 7,960 are steamers, with 8,980,203 gross tons, or an average of considerably over 1,000 tons each. In 1892 England added 872 vessels of 984,670 tons to her merchant service.

A Kingston despatch says: As soon as the electric railway agreement is ratified by the city and the Legislature, no time will be lost in building the line and equipping it with a first-class plant. The cars will be comfortable and of the most modern description. It is likely that an outside firm will be taken into partnership with the present company, and will have the management.

McCausland & Son on Monday completed and hoisted to its place on the front of R. Walker & Son's store, in King street, the largest sign that has ever been made in Toronto. It extends across the entire front of the building, 107 feet in length by five in height, the letters composing "R. Walker & Sons" being in heavy block gold set on a wire background and the numbers 33-37 and 39-43 at the ends being black on a hammered gold ground, the whole surrounded by a black and gold frame.

A scientific study of dust has proved that the atmosphere of New York improves with every storey of ascent. The intended window sills on the ground floor of dwellings subjected to examination were found deeply covered with dust containing all sorts of unwholesome particles. The dust was less and not so unwholesome on the next floor, and this improvement was continued until only a thin layer of light and comparatively harmless particles was found.

A combined clothes brush, spirit flask and drinking cup is a recent invention in the States. The brush has a hollow back, part of which forms the flask and part the cup, the whole fitting together in a most natural manner, the cup passing over the mouth of the flask and quite hiding it. The thirsty traveller who should venture while en route to supply himself with a drink from his clothes brush would be regarded with considerable interest by his fellow travellers.

One hardware dealer, says a contemporary, has hit upon the following plan for keeping his stock of rope ut of the way and out of sight, and yet convenient for inspection and for making sales. The stock is kept in the cellar in rolls or on drums, and one end of each size is drawn up through a hole in the floor and fastened to the front of a counter. Thus a customer can easily make his selection without going downstairs, and the rope selected is easily drawn up, measured off as it comes and cut at the desired length.

A meeting of mining operators and manufacturers of mining machinery was held at Sherbrooke on May 12th to consider and draft a statement showing the various classes and kinds of mining machinery at present manufactured in Canada, together with those which have to be imported and which, according to law, are entitled to free entry. Owing to the want of a statement of this kind in the hands of the customs officers at ports of entry a good deal of trouble has been experienced by our miners in passing machinery entitled to the benefits of the concessions granted by the Dominion government.

A new steel making process is said to have been lately patented by the Phoenix Work, Ruhrort, and the Dudlingen Iron Works in Luxemburg. These concerns have been experimenting for years with the object of finding out an improved method of introducing the necessary carbon into the molten metal bath. The problem is now said to have been solved by mixing pulverized anthracite and lime water together, and forming the mass into biquettes under great pressure; these biquettes are then brought into contact with the molten metal, and in this way exactly the desired proportion of carbon for the formation of steel of various tempers and qualities can be imparted in the converter.

An interesting experiment in glass-blowing is now being made in the little town of Woodbury, N. Y., where the Ashley bottle making machine, which since 1889 has been talked of, is now at work. The machine is not wholly an automatic one, as it requires the constant attendance of two operators, a "feeder" and a "carrier." The machine mechanically moulds the shape, and by means of compressed air blows the interior and delivers it to the carrier, who deposits it in the annealing oven. It is thought that the machine may be greatly improved, and that its present output of two bottles a minute may be improved upon.

The Toronto Board of Trade has approved of the bill before the Ontario Legislature to tax all capital on the net income.

The Fredericton board of trade has adopted a resolution to the effect that business men make twenty-five per cent. discount on American silver after this month.

Mr. Meacham, in moving the second reading of his bill in the Ontario Legislature to amend the Pharmacy Act, said that the clause making retail dealers register the sales of paris green was a dead letter, and he wanted the clause struck out.

California claims third place in the order of the yield of petroleum for the year 1892, with a production of 500,000 barrels of crude oil. Santa Barbara County produced 250,000 barrels; Los Angeles County, 185,000 barrels.

The Court of Appeal has decided that section 9 of the Ontario act respecting assignments is ultra vires of the Ontario Government and invalid. It provided that assignments should take precedence of judgments and executions. Now, the creditors who can

SITUATION VACANT.

MANAGER WANTED FOR THE CONSOLIDATED Plate Glass Company, Limited. Must have a thorough knowledge of the Plate Glass trade and be conversant with Toronto business. One having a knowledge of book-keeping and accounts preferred. Applications must be in writing and addressed, The President, Box 15, HARDWARE. 18

SITUATION WANTED.

WANTED—A SITUATION AS APPRENTICE in a retail hardware or hardware and stove store; good references. Write to J. S. WILLIAMS, Campbellford, Ont. 19

BUSINESS CHANCES.

Advertisements inserted under this heading one cent per word each insertion.

Estate Toronto Drop Forge Company

For sale by private treaty, patent for the manufacture of the Champion Iron Fence, with complete set of patterns and a quantity of stock. The fence has been long and favorably known, and orders are being constantly received for it. Full particulars on application to the undersigned.

E. R. C. CLARKSON, Liquidator,
26 Wellington st. East, Toronto.

WE CAN
SELL YOU——

Solder and Babbitt

Cheaper than You
——can Make It

TORONTO SMELTING and REFINING WORKS

FRANKEL BROS., Props.

92 and 94 Queen St. East, TORONTO.

Daily Capacity 10,000 Pounds.



All kinds of Office and Store Fittings and Furnishings



ASK FOR THE GRAHAM NAILS.

Hamilton and Toronto



—AND—



HEAD OFFICE: HAMILTON, CANADA

¼ the PRICE of Iron. Write for Discounts

READY MIXED PAINTS

TRADE  MARK

Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

Manufactured by **A. RAMSAY & SON**
MONTREAL

IT WILL MAKE NO DIFFERENCE

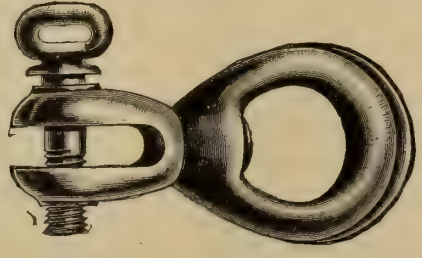
We beg to advise our customers that the fire which occurred some time ago does not interfere with our business. The fire was confined to our LEAD WORKS building. We have arranged to CONTINUE OUR USUAL LINES.

Yours Respectfully,

The JAS. ROBERTSON CO.,
(LTD.)

THE WHITMAN & BARNES MFG. CO.

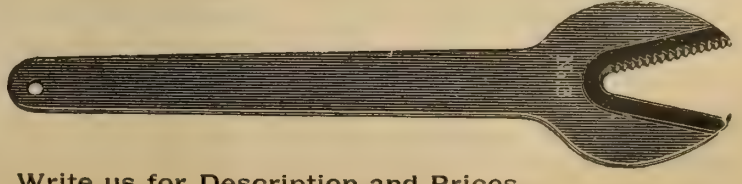
Canadian Branch: St. Catharines, Ont.



This new **Swivel Clevis** can be attached to any Plow Clevis, used in place of Shackle or End Clevis.

MADE OF MALLEABLE IRON.

ALLIGATOR WRENCHES



Write us for Description and Prices

get an execution or judgment out on quick time will not be knocked out by a subsequent assignment.

The varnish agent should tell nothing but the plain, unvarnished truth.

Thomas A. Cooper, a clerk in the wholesale hardware firm of M. & L. Samuel, Benjamin & Co., has been committed for trial on a charge of embezzeling from his employers.

The cement manufacturers have waited on Messrs. Foster and Bowell to ask that, the duty on cement be not reduced. The protection, they said was just sufficient to enable them to get along in view of the tax they had to pay on their fuel, 50 cents a ton on coke.

In the House a few days ago Sir Oliver Mowat, in answer to a question, said that whilst the matter had been under consideration, still it was not the intention of the Government to introduce a bill during the present session for the purpose of taxing mortgages as requested by the deputation of the Patrons of Industry.

The Haggart Foundry, Brampton, which has been in liquidation for about three years will be re-opened Monday after having been closed since last December It will be managed by John Smith, M.P.P., the liquidator. They will manufacture, as before, engines and threshing machines and will give employment to about fifty men.

A board of trade has been formed at Mission City. About thirty-one persons declared themselves members. H. B. French was elected president for first year; J. McLearn, vice president, R. Peake, secretary, M. DesBrisay, treasurer. The board will work in committees, one for manufactories, one for the streets and roads, and one in the interest of agriculture.

The following officers have been elected by the Guelph Board of Trade. President, Col. Higinbotham ; vice-president, James Watt ; secretary-treasurer, A. Scott. Council —J. Hallett, H. Murton, T. J. Day, Col. Macdonald, J. E. McElderry, James Innes, M.P., James Goldie, J. M. Bond, A. W. Alexander, G. B. Ryan, James Millar, Charles Raymond.

At a recent banquet of the Manchester, (Eng.), Commercial Travellers' Association, the chairman said that in 1851 there were estimated to be 9,734 commercial travellers in the United Kingdom. In 1881 there were 42,000, and at the same rate of increase would now be 56,000. In the States there were in 1888 between 250,000 and 300,000 commercial travellers.

The Bill promoted by the Manchester Ship Canal Company for power to borrow £2,000,000 additional capital, and the Bill promoted by the Manchester Corporation to lend that sum to the company upon agreed terms, will both pass as unopposed Bills through the House of Commons, the threatened opposition to them having been withdrawn. These Bills have already been sanctioned by the House of Lords.

A steel chimney has been built in Chicago which is three hundred and fifty feet high, with an outside diameter of nine feet five inches. The steel varies in thickness from five thirty-secondths of an inch at the top to three-eights of an inch at the bottom. The lower seventy-five feet are lined with eight inches of firebrick, and above this the lining is of hollow tile, snpported at intervals of twenty-five feet by angle iron riveted to the steel shell. The foundation is made of steel rails and I beams laid in cement.

The Duquesne steel works resumed Monday morning after an idleness of four weeks, during which some extensive repairs were made. Trouble was expected on account of the reduction in wages, but all went to work. The wages of the tonnage men were reduced about sixty-five cents on the hundred ton. All the tonnage men were required to sign a paper before going to work. New machinery has been placed in the mill and many men have been laid off.

This is a good story from the South. A Savannah drummer says a drummer who had a great dealings with the Macon lawyers went out recently to Rosehill Cemetery and amused himself reading the inscriptions on the tombstones. He finally came across one that read : "Here lies a lawyer and an honest man." Turning to his friend, he said : "Bill, what made them bury those two fellows in the same grave?"—St. Joseph Journal of Commerce.

Still another device for ventilating or disinfecting apartments has been placed before the English public. There is fitted in the upper portion of the apparatus a fan actuated by a suitable motive power, the effect being to drive a current of air briskly upon the surface of liquid stored at the base. A sponge saturated with perfume or disinfectant is so placed in the liquid container that the air receives the perfume, or disinfectant, after it has been purified and cleansed from dust, etc., before passing to the occupants. When the fan is in operation the air is driven through a pipe into the lipuid container, thereby depriving it of particles of dust and other substances which it may contain.

Founders often forget that moulding sand gets the life burned out of it, and requires to be renewed from time to time. Facing sand, of course, helps to keep up the strength or life, but not all that is put into the mould remains in the sand ; part of it is dissipated, and part is carried away on the castings themselves—besides which, much of it gets out among the ramming sand and in the general supply. Of course the constant addition of new material raises the floor level, but it is always easy to get rid of this excess of material ; and experiments made to use the same sand over and over again without renewal have proven failures; scabs are sure to appear as the result sooner or later.

VENTILATION DATA.

Data concerning temperature and ventilation have of late years largely accumulated, and are certainly of great practical importance in their relation to health and comfort, especially in buildings where considerable numbers of people are habitual occupants. In an office building, for instance, assuming that each person or occupant requires 2,000 cubic feet, or about 147 pounds, of fresh air an hour, and that this air is at a temperature of 80°, the number of units of heat that must be abstracted in order to reduce the temperature to 70° is stated to be 350 an hour. Now, it is ascertained by careful scientific methods that a pound of coal used in making steam for a fairly efficient refrigerating machine will produce an actual cooling effect equal to that of sixteen to forty-six pounds of ice. Taking the lower of these limits, sixteen pounds of ice, which will abstract some 2,275 heat units while melting, it is seen that one pound of coal will, accordingly, reduce the temperature of the supply of air for one person for six and one-half hours under the above assumptions; and, estimating the price of coal at $3 per ton, and that the air is to be cooled for ten hours a day, the apparent cost is but 15 cents for one thousand people an hour.—Boston Journal of Commerce.

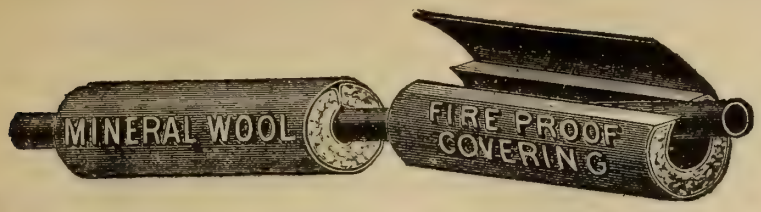
A TON OF COAL.

There is more in a heap of coal than most persons are aware of. Besides gas, a ton of gas coal will yield 1,500 pounds of coke, 20 gallons of ammonia water, and 140 pounds of coal tar. Destructive distillation of the coal tar gives 69.6 pounds of pitch, 17 pounds of creosote. 14 pounds of heavy oils, 9.5 pounds naphtha yellow, 6.3 pounds of naphthaline, 4 75 pounds of naphthal, 2.25 pounds of alizarine, 2.4 pounds of solvent naphtha.

CHAT WITH A BUSINESS MAN.

I ran against a group of city travellers on Saturday morning. "O," said one of them, as I cast an enquiring look at them, "we are merely out making the closing arrangements for our excursion to Niagara Falls and Buffalo, to be held July 17. But, say, don't you think it would be a good thing if the houses would call their travellers in on that day and give them a good time for once ? I think it would." "And so say we all," came in a chorus from his fellow knights of the grip sack.

BYSTANDER.



A GREAT LOSS?

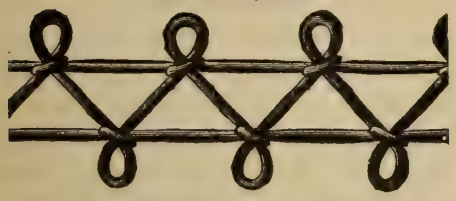
If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss. The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

THE HATHEWAY PATENT FENCE WIRE.

Pat. Nov. 19, 1889.



Above Cut Is One-half Actual Size.

The Hatheway Patent Fence Wire, the most popular fence wire throughout the United States, and fast gaining that position in the Dominion of Canada, as it contains all the requisite qualities of a fence wire, being handsome, strong, visible—seen at a long distance; will not sag or get out of shape; allowance for contraction and expansion, heat and cold; being broad, requires less strands to make a complete fence; easily put up, splices itself; will not injure stock. Put up in spools of 120 lbs. each. For sale by all the leading hardware stores in the Dominion.

Manufactured by THE COLLINS MFG. CO., 81 Adelaide st. E., Toronto.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.

Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.

FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,

CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co

MONTREAL.

PRINTERS
Apted Bros.
TORONTO

WEDDING SOCIETY INVITATIONS

AT HOME
VISITING
PROFESSIONAL CARDS
SOCIETY

Printed

Equal to Copper Plate or Lithography at less than one-half the cost

TRY US AND BE CONVINCED — 54 YONGE ST., TORONTO

COWAN & BRITTON

GANANOQUE, ONT.

Nails, Hinges AND Buts

Manufacturers of every description of these goods.

BROOKS' RELIABLE FORCE PUMP

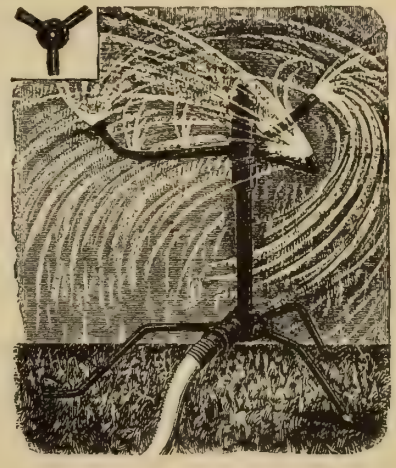
Brook's "Reliable" Force Pump

BRASS LINED. The best Spraying Pump in existence. Semi-automatic. Requires no foothold or other fastening. Will work in any position, and in any receptacle that will hold water.

"California" Lawn Sprinklers

For attaching to hose. An inexpensive lawn ornament, throw a splendid spray as per cut.

Lawn Mowers,
Lawn Rollers,
Lawn Rakes,
Garden Hose Reels, Etc.



THE JAMES SMART MFG. CO.

LIMITED

Brockville, Ont., Canada

Magee Mfg Co.

LONDON, ONT.

Manufacturers of all kinds of

Lumber and Log Rules
Counter Measures, etc.

IMPROVED

Eclipse Horse Poke
Navey Barrows . .

OF ALL DESCRIPTIONS

Special Lines Made to Order.
Write for Prices.



C. C. HARRIS

Manufacturer of Solders and Antimonial Alloys.

Cor. Wickson Ave. and Yonge St., Toronto.

E.O.W.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below, and in our Prices Current, necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, May 12, 1893.

HARDWARE.

While business generally is better, hardware merchants claim that orders are not coming quite so freely as is usual at this season of the year. They are kept busy, however, making delivery of goods purchased before the opening of navigation and which are now coming to hand. There is no special feature to note in connection with the market, which is generally quiet and prices unchanged.

IRON.

No new business of importance is reported in iron. The arrivals are heavy, but the receipts are generally to fill orders made previously, and everything is being rushed forward. The following quotations are ex wharf: Summerlee, $18.50 to $18.75; Eglinton, $17.50; Carnbroe, $17; Siemens No. 1, $18.50; Langloan, $20.50.

SCRAP IRON.

The offerings of scrap iron are larger, but no new business is reported, and wrought No. 1 is still quoted at $15 to $16.

BAR IRON.

Bar iron is in better demand, several fair-sized lots changing hands during the week at $1.90 to $1.95.

TIN PLATES.

Tin plates are quiet. No movement of importance is reported, and prices remain about the same, cokes being quoted at $3.15 to $3.20 and charcoals at $3.75 to $4.75.

CANADA PLATES.

The movement in Canada plates is small, but there is a fair demand for small lots at $2.50 to $2.60.

OTHER METALS

Copper and tin are quiet and prices unchanged at the following: Orford copper, 12½ to 13c.; ingot tin, 22½ to 23c.

LEADS AND PAINTS.

A good business is being done in paints at steady prices. The demand is general in character and the trade shows a general improvement.

OILS.

There is not much change in oils. Sales of steam refined seal are reported at 46c. to arrive; but it is doubtful if any further business could be done at this figure, 47½ to 50c. being about the idea, while the small stocks are held firm at 50 to 52c. Cod oil is quiet but steady at 40 to 41c. for Newfoundland and 39c. for Gaspe, and linseed holds steady and unchanged at 60c. for raw and 63c. for boiled.

GLASS.

Glass is moving out more freely, but business is on the whole still slow, and $1.35 is still the quotation for first break.

NAVAL STORES.

A better movement is reported in naval stores, but no large transactions are noted. Prices nominally unchanged. We quote turpentine, 50 to 53c.; resin, $2.40 to $4.50; coal tar, $3.50; pine pitch, $2.50; pine tar, $3.50 to $3.75; cotton waste, colored, 5¾ to 6½c.; do. white, 8 to 10c.; oakum, 5½ to 7½c.; cotton oakum, 10 to 12½c.

PETROLEUM.

A good seasonable demand is reported for refined petroleum. Canadian is still quoted at 12c. in car lots, but business is being done under this figure. We quote as follows: Canadian 12c. at shed in Montreal for round lots, and 12½c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c in 10-barrel lots, 19¼c. in 5 barrel lots, and 19¾c. for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c, ; Canadian benzine, 10¾c. Petrola; 12¾c. Montreal.

CEMENT, ETC.

The demand for cement shows considerable improvement. Stocks are arriving freely, and buyers who have been holding off for the opening of navigation are now liberal purchasers, $2.10 to $2.20 being about the idea for English brands ex steamer, and $1 90 to $2.10 for Belgium.

TORONTO MARKETS.

TORONTO, May 12, 1893.

HARDWARE.

There is a good healthy trade doing in shelf and heavy hardware. If anything the volume of general business is larger than a week ago. And is of a general sorting of character with orders small but numerous. Harvest and garden tools still head the list, but the enquiry for them is gradually growing less. Brass goods are beginning to occupy a good deal of attention. Green wire cloth and poultry netting are much enquired for, particularly the latter, and a good many hooks and hinges are going out. Large orders are being taken for jack chain and a number of bird cages are being sold. An increased demand is reported for Mrs. Potts' sad iron and piles of them are noticed in the shipping rooms ready to be sent off. Nails are selling freely. Rope of all sizes is in demand and chain is stiffening. Plumbers' supplies remain much as before—quiet and uninteresting. About the only change in prices to note is an advance of 10 per cent. in Gilmore's augurs and augur bits. Payments, although on the whole slow, are improving.

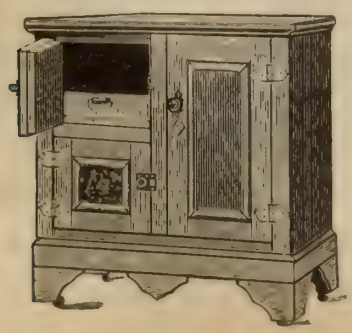
NAILS.—Merchants seem to have allowed themselves to run out of nails, for since it was known that the makers had decided to make no change, they have been free buyers of 20 and 25 keg lots.

ROPE—Demand is good for all sizes. The collapse of the National Cordage, has not interfered with business on this side although it was at one feared that it would.

CHAIN—Demand is good. Prices are stiffening a little, and it looks as if the present was opportune to place orders, jobbers claiming that it will cost them more to lay down new stocks.

TOOLS—There is still a fair movement in harvest and garden tools, but demand continues to drop off. All large orders are filled and manufacturers say they have caught up and are now prepared to execute orders. A

Refrigerators



Hardwood, Lined Galvanized Iron, Patent Locks, Four Sizes

These are highly finished and each season has shown an increasing demand. This year we are also making a cheaper line in above style, so as to meet all requirements.

Milk, Delivery and Creamery Can Trimmings.
All Sizes Body Stock for Cans and Cheese Vats.
Galvanized Iron Eave Troughs in 8 foot lengths.
Lithographed Tea Caddies and Signs.

We make and Supply everything used in the Stove and Tinware Trade.

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

. . . A Neat Parcel . . .

Is appreciated by your Customers, to make
a Neat Parcel you must have Good

PAPER

Which you can obtain at Lowest Mill Prices and
on the most Favorable Terms from

THE E. B. EDDY CO.,

BRANCHES AND AGENCIES:
Montreal, Toronto, Winnipeg, Hamilton,
Halifax, N.S., Quebec, St. John, N.B.,
Kingston, and Victoria, B.C.

MAMMOTH WORKS:
HULL, - - CANADA.

MARKETS—Continued

good sorting up trade in harvest tools is expected to continue for some time. Spades, shovels, and horse rakes are in good demand.

WARE—There is not much demand for tinware and not much is expected before the harvest commences. Enamelled ware and and Peerless and brass kettles for preserving are in good demand.

PLUMBERS' SUPPLIES—There is no improvement, business in this line being just as quiet as ever.

WIRE SCREENS—Demand continues active for door and window screens and green wire cloth, and manufacturers are still unable to supply the last named fast enough.

METALS.

A fairly good seasonable trade is being done in metals. About the only thing in which there has been any actual change is ingot tin which is ¼c. lower. Pig iron does not show any disposition as yet to put on more activity, but bar iron is in brisk demand. Galvanized iron is moving fairly well.

PIG IRON.—Not much doing. Import sales of twenty-five and fifty tons are reported at $20.75 for Summerlee and $20.25 for Ayresome.

BAR IRON.—There is a good brisk demand at the $1.95 basis, but there is no special feature to note.

TIN PLATES—Much about as before. Demand being good and prices unchanged.

SHEET IRON.—Demand continues much about the same as it has for some time past, and is good for this time of year, but not particularly heavy.

CANADA PLATES.—Orders are still being taken for import, but immediate business is quiet and featureless. Prices are unchanged, all dull being held at $2.65, half-half at $2.75 and all bright at $2.80 to $3 per box.

GALVANIZED IRON.—There is a good demand for this line. Stocks are sufficient for the supply, and prices are unchanged at 5 to 5¾c. for Queen's Head and Gordon brands.

ZINC SHEET.—Nothing doing and prices unchanged at 5¾ to 6c. for 5-cwt. casks and 6 to 6¼c. for part casks.

ZINC SPELTER.—Dull and unchanged at 4¾ to 5¾c.

LEAD.—Inactive and featureless. We quote 3½ to 3¾c. ordinarily and 3¼c. for 10-ton lots.

ANTIMONY. — Nothing special to note. Trade is quiet and prices unchanged at 13½ to 14c. for Cookson's and at 13 to 13½c. for other kinds. For large lots these figures would be shaded.

INGOT TIN.—Lower at 24c. Stocks are plentiful and the market weak.

INGOT COPPER.—Quiet and unchanged. Small lots of the better qualities selling at 12⅞ to 13c.

GLASS.

Import orders are coming forward, and this will, of course, cause a little lull in business from stock. There has been no change in prices, nor is it thought likely that there will be unless there is an advance in freights. For first break $1.25 to $1.30 is still the idea.

PAINTS AND OILS.

Trade is on the whole good although somewhat backward in the city. The paint and oil associations have had further meetings, but no changes have been made in prices. Linseed oil is in good demand, and steady at 60 to 62c. for raw, and 63 to 65c. for boiled, the outside figures being for outside points, freight allowed. Manufacturers of linseed oil are reported to be away behind with orders. Turpentine is quiet and steady, 50c. Toronto, and 52c. outside. A steady trade is being done in varnishes at unchanged prices. Demand for prepared paints continue brisk. A steady trade continues to be done in white lead on the basis of 4¾c. per pound.

OLD MATERIAL.

Demand for metals is a little slow and there is a good deal of it coming forward. Cast scrap is, on the other hand, in good demand. Rubber scrap is quoted lower, and country mixed rags 5 to 10c. per cwt. higher. We quote as follows; Agricultural scrap, 60c. per cwt.; machinery cast, 70c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 50 to 60c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c.; new light scrap copper, 8c.; heavy scrap copper 9c.; old copper bottoms, 8c; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1¾ to 2c.; scrap zinc, 2½c.; scrap rubber, 2½c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings and turnings, 15 to 20c.

SEEDS.

Demand has been gradually falling off during the week for alsike, timothy and red clover, all of which is lower in price. Hungarian, millet and ensilage corn are, on the other hand, receiving more attention. Prime red clover is quoted at $7.80 to $7.90; extra choice, $7.95 to $8, and $8.10 to $8.25 for Mammoth or Large Lake. Alsike runs all the way from $8 to $9.15 for choice. Timothy sells at $2.35 to $2.40 for choice, $2.40 to $2.45 for extra, and $2.60 to $2.75 for unhulled flail threshed.

SHEET STEEL BRICK
ABSOLUTELY FIRE PROOF.
METALLIC ROOFING Co.
CATALOGUE FREE
MF'RS TORONTO

HIDES, SKINS, WOOL, TALLOW.

Hides.—There is a weakness in the United States market, but the demand keeps the local market from exhibiting any sympathy. Good selections are quoted at 5 1-4c.

Skins.—There is no change. Jobbers are paying 7 to 8c. for calfskins and selling at 8 to 9c. Sheepskins are nominal at $1.35 to $1.45.

Tallow.—Not much doing. Dealers are paying 5 1-2c. for rendered and selling at 6 to 6 1-4c. Rough is unchanged at 2 1-2c.

Wool.—Fleece is not offering, and there is not much doing in pulled wools. The mills are reported to be still well employed. Fleece wool is nominal at 17 to 19c.; clothing, 25 to 26c.; Canada Southdown, 27 to 28c.; white Indian, suitable for blankets, 17 to 19c.; grey East Indian, 11 to 13c.; B.A.'s white clothing, 32 to 34c.; cross breeds, 26 to 28c.; Canada extra, 25 to 27c. Canada super is scarce and good selection would readily fetch 23c.

PETROLEUM.

The Petrolea Advertiser, in its weekly Review, says: "While the engagements of refined in barrels and bulk were not so large during the week past, it is no indication of a falling off in the demand. The requirements of the illuminating oil trade of the Dominion appear to be increasing, especially as this year, in consequence of the emigration veto of Uncle Sam, a much larger influx of consumers is expected to take up their abodes in Canada; and it is therefore more than probable that this year's business will show a very fair increase over the years preceding in the matter of consumption of illuminants and lubricants. Prices remain about the same, 10 cents per Imperial gallon, f.o.b. here. The crude market also remains in statu quo, and drilling operations are not so brisk, partly of course, on account of the very bad

"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

MARKETS—Continued.

weather we have had for the moving of rigs and tools, and there are dozens of derricks that have been laid low by the terrific wind storms which by all reports have been universal in their force and destruction all over this continent. Prices for the raw material f.o.b. refinery are $1.15 per barrel, with the Imperial Oil Co. being the only parties that are re-receiving any large amount of crude oil." Refined, 10c. in barrels, and 7 1-2c. in bulk.

There is no change in the Toronto market. We quote: Canada refined oil, 13 to 13 1-2c.; carbon safety, 17 1-2 to 18c.; Canada water white, 19c.; American water white, 21 to 22c.; photogene, 25c.

MARKET NOTES.

Chain is reported to be stiffening.

Quicksilver has been advanced in England to £6 15s. f.o.b.

An advance of 10 per cent is announced in Gilmore's augurs and augur bits.

H. S. Howland, Sons & Co. have a stock of Gibb's lawn rakes which is taking well.

M. & L. Samuel, Benjamin & Co. are pushing out their back orders for screen doors and window screens.

The Scotch Bar Association has broken down, and this has been followed by further reductions in manufactured iron there.

William McNally & Co. of Montreal have secured the contract for English imported cement required by the city of Toronto.

There is a rumor in circulation on the street to the effect that an effort is being made to compel all houses that do not carry iron to keep at least fifty tons in stock.

The Toronto Lead and Color Co. is putting in some new mixers and mills, more particularly adopted for the manufacture of ready mixed carriage paints and wood oil stains.

Chief Engineer Benson of the S. S. Plymouth, of the Fall River line, plying between New York and Boston, under date of April 29, 1893, thus writes the Magnolia Anti-Friction Metal Co. of New York: "In answer to your inquiry as to our experience with the Magnolia metal, we desire to say that we have it in the intermediate crank pin brasses of the Plymouth, and from our experience with it we cheerfully recommend it for such work."

Among the visitors in New York at present is Mr. De Lange, one of the members of the firm of H. E. Van Ysendijk, jr., the largest coffee roaster in Rotterdam, Holland. About two years ago he came here and placed a large order with the Hungerford Co. of New York for machinery. He attributes the phenomenal success of his firm to the introduction of American machinery. Mr. De Lange is en route to the World's Fair.

A. G. Kidston & Co. of Glasgow, in their circular of April 19, say: "The additional financial difficulties in Australia tend further to accentuate the gloomy prospects of trade. The general concensus of opinion among the older business men is that rarely, if ever, has a more trying time been encountered, and it is thought we must wait patiently yet awhile ere any solid improvement can be looked for. Low as prices undoubtedly are, it is by no means certain that we have seen the utmost limit of the fall. We wish we could write more cheerfully."

AMERICAN MARKETS.

NEW YORK, May 12, 1893.

PIG TIN—Heavy supply on the spot, active movement of stock from Europe to this point to escape the McKinley duty and the absence of anything more than ordinary trade demand, combine to keep the local market in a soft condition. Each little downward movement in prices proves to be a temptation for covering "short" sales that the "bear" interest seems unable to resist, and such support as might accrue from oversold accounts is thus taken away to a certain extent. This leaves the weight of excessive surplus stock here so heavy that it not only offsets the effect of London manipulations, but really makes London subservient to New York at the present time. There have arrived here from London thus far this month no less than 910 tons, and there is a total of 1,200 tons on the way from Europe. The latter, in connection with spot stock, leaves fully if not more than four months' consumption in first hands, and it is no secret that there is a good deal of tin to come forward during the next six weeks, and that large consumers are carrying more than their usual supply.

COPPER—Outside of routine sales of moderate quantities there was little or no business here, and demand was of strictly commonplace type.

LEAD—The market wore a dull and dejected appearance. Common Western was offered freely at 3.95c. here, without leading to business, and, in a few instances bids of 3 7-8 to 3.90c. were accepted for ordinary quantities. In St. Louis there was a decline to 3.70c., and advices from that quarter were to the effect that business continues slow. London cabled £9 15s. for soft Spanish.

SPELTER—Western brands were offered here at 4 1-2c. for prompt and 4.45c. for July and later delivery. From St. Louis there were advices of a decline to 4.20c., and London cabled a fall to £17 17s. 6d. for good merchant brands. There is more or less reserve in the offering for prompt and near future deliveries, but the demand is decidedly slow, and upon the whole the market presented a rather soft appearance.

ANTIMONY—Outside of a fair routine jobbing business there is little doing, but prices remain quite steady.

TIN PLATE—The market is without new feature, apart from slightly lower figures on light weight cokes, the spot supply and assortment of which is somewhat better. In other lines about the former line of prices is quoted. Business in both spot goods and future deliveries continues moderate.

IRON AND STEEL—The movement in American pig iron at this point continues slow, and the demand is without sign of improvement as compared with the general run previously this month.

In foreign pig iron there is little or no movement, except of comparatively small lots, and the demand continues extremely tame. Such as it is, the business passing is at practically the same prices that have ruled for some time past.

OLD MATERIAL—There have been sales of a few hundred tons of steel street rails at about $13; some parcels of wheels at the equivalent of $14 here; cast borings at $6.50 and wrought turnings at $10 to $10.50. Otherwise business continues slow and prices are rather soft.

MANUFACTURED IRON AND STEEL—In the steel rail branch there is no perceptible change. Business continues slow, the demand is very moderate also, and prices are irregular, with $29 f.o.b. mill quoted for heavy sections, but relatively lower figures rule on light sections.

Some fair orders are in hand for beams and other structural material, but competition continues keen, and prices are still weak all along the line. Ordinary merchant iron and steel is moving off in moderate quantities at about former prices.

A NEW USE FOR ELECTRICITY.

A discovery which may have some useful application in the tempering of steel by the electric current is described by MM. Lagrange and Hoho in "Comptes Rendus." These gentlemen have been experimenting on the principle observed by Plante and others, that if a sufficiently strong current is passed through an electrolyte, the negative electrode being a fine wire, and the positive electrode a conductor of considerable surface, a kind of luminous sheath is formed round the negative electrode. The heat developed by this sheath is found to be very great, and by its means a very intense heat may be applied at any point of a body, while, on account of the rapidity with which the heat is disengaged, the rest of the body remains cold. The experimenters have applied this method to the hardening of steel. They heated by this means the outside of a bar of steel to a bright red heat, and then by merely stopping the current the cold electrolyte was allowed to come in contact with the hot steel. The outside of the steel bar was thus hardened to any degree of hardness, while the interior of the steel, having not been heated to any extent, remained soft and tough.

If you want books, it is rarely wise to pay double price for them to a travelling book-seller

The trader who pays his way must sell at a profit, and cannot afford to cut below others in the same line.

Credit is often too cheap and overbuying far too common. Don't be guilty of the one, and don't abuse the other.

The neglect to look after minute details in the factory is a source of great loss to many producers.

HOW AN AXE IS MADE.

The largest axe factory in the world is in operation in Pittsburg, and is capable of turning out 3,000 or more axes a day. The following description of how an axe is made is from the Pittsburgh Times:

Entering the main workshop the first step in the operation which is seen is the formation of the axe head without the blade. The glowing flat iron bars are withdrawn from the furnace and are taken to a powerful and somewhat complicated machine, which performs upon them four distinct operations, shaping the metal to form the upper and lower part of the axe, then the eye, and finally doubling the piece over so that the whole can be welded together. Next the iron is put in a powerful natural gas furnace and heated to a white heat. Taken out it goes under a tilt hammer and is welded in a second. This done, one blow from the "drop" and the poll of the axe is completed and firmly welded. Two crews of men are doing this class of work and each crew can make 1,500 axes per day.

When the axe leaves the drop there is some superfluous metal still adhering to the edges and forming what is technically known as a "fin." To get rid of the fin the axe is again heated in a furnace and then taken in hand by a sawyer, who trims the ends and edges. The operator has a glass in front of him to protect his eyes from the sparks which fly off by hundreds as the hot metal is pressed against the rapidly revolving saw. The iron part of the axe is now complete. The steel for the blade, after being heated, is cut by machinery and shaped. It is then ready for the welding department. A groove is cut in the edge of the iron, the steel of the blade inserted and the whole firmly welded by machine hammers. Next comes the operation of tempering. The steel portion of the axe is heated by being inserted in pots of molten lead, the blade only being immersed. It is then cooled by dipping in water and goes to the hands of the inspector. An axe is subject to rigid tests before it is pronunced perfect. The steel must be of the required temper, the weight of all axes of the same sizes must be uniform, all must be ground alike and in various other ways conform to an established standard. The inspector who tests the quality of the steel does so by hammering the blade and striking the edge to ascertain whether it be too brittle or not. An axe that breaks during the test is thrown aside to be made over.

Before the material of the axe is in the proper shape it has been heated five times, including the tempering process, and the axe when completed has passed through the hands of about 40 workmen, each of whom has done something toward perfecting it. After passing inspection the axes go to the grinding department and from that to the polishers, who finish them upon emery wheels.

LOWER PRICES AND STRIKES.

Unless there be a speedy and quite decided advance in the prices of manufactured iron and steel, there will probably be a reduction in the wage scale next July, says a contemporary. In the best equipped mills the margin of profit is at present distressingly small, while from many mills it has absolutely taken its departure. That a strike, and a hard fought and long one, will follow, seems highly probable. It does not seem likely, however, that labor can now make successful stand against the capital invested in the iron trades. The iron makers and manufacturers of the country will not long continue to carry on their business at an absolute loss, or without profit, for that matter. With them the prospect is not encouraging. The iron producing and the iron working plants of the country are of vast proportions, in excess of our enormous consumption, and this alone will keep prices down, for the present at least. Added to this is the imminent prospect of a reduction in the tariff, which will have a still greater depressing effect on the market.

While, in the estimation of many, low prices are always a desideratum, an exception will surely be found in the present case. Lower prices for finished iron and steel mean the extinction of a large number of manufactories whose equipment will not permit them to compete with a few enormous concerns who have recently put in the very latest and most perfect machinery, by means of which labor, both skilled and unskilled, is largely done away with. It will prove a case of the survival of the fittest. Nor will the list of the concerns forced to close their doors be limited to those of small capacity. Some of the largest in the country lack the appliances without which they cannot compete for trade, and can only provide them at an enormous cost. We learn, from an authority that seems entirely reliable,, that steel is now being made at Pittsburg as cheaply as in England, labor cost included. This has been achieved, not by cutting wages, but by eliminating workmen. Improved machinery takes the place of labor, and great numbers of mechanics and laborers are turned adrift to seek employment in other mills and depress the labor market of the country.

That this refinement of labor-saving machinery means the extinction of many manufactories and the enlargement of the capacity of the remaining few, cannot be doubted for a moment. Once reduced to a monopoly, prices can be advanced until they meet those of foreign producers, plus the added duty. This view is not evry encouraging, but it seems to us correct. In view of these conditions, labor strikes this year do not look very promising.

WORK AND WAGES.

Robert Knight, secretary of the Shipbuilders and Boilermakers Society, in a recent circular to the men, after pointing to an improvement, goes on to observe that the unhealthy system of competition has been ruinous to the shipbuilding industry, and this we have attempted to conclusively prove for years past. Ships are articles that cannot be done without, for the imports and exports of the world must be carried on, and if shipbuilders can only afford to wait the ship owners must eventually offer remunerative prices to the shipbuilders, and the latter would then be enabled to pay a fair day's wage to the workmen, whereas the suicidal competition and cut-throat policy at present practised by shipbuilders means loss and suffering to both employers and employed. Speaking on behalf of our members, what we should like to see would be a stady, progressive development of shipbuilding that wouldb e likely to find continuous and permanent employment to the workmen. Referring to the notices of reduction in the shipbuilding and engineering trades, Mr. Knight says there are two more conditions of a very important character that, if agreed upon between the whole of the shipbuilders in the United Kingdom and ourselves, would steady trade much and prevent losses to them. First, let us fix a standard rate of payment, and when trade is good wages should be allowed to go above that rate—say, 5 or 7 1-2 per cent.; and when trade declines wages should move down the same percentage below the standard; but the movement should only be at the rate of 5 per cent., either up or down. Second, six months' notice should be given on either side for either reductions or advances. This would benefit employers very much, and secure them from losses. We know that on the last occasion when the depression reached the lowest point and the trade turned, a number of orders were suddenly given out and eagerly booked by the shipbuilders at the low rates then prevailing. It was then soon seen by the men that work was plentiful, and quite natural they at once asked for a return of a portion of the wages that had been taken from them. This demand was conceded by the employers, but the result was disastrous to many, as it turned what they expected would have been a profitable job into one of considerable loss. Now, if the six months' notice had been in operation they would have been enabled to complete their contracts taken at the low figure, and future contracts cooked be booked at a higher rate to enable them to meet the increased rate of wages. We want employers to make profits by their contracts and not suffer losses, as they will then be in a position to deal liberally with their workmen.



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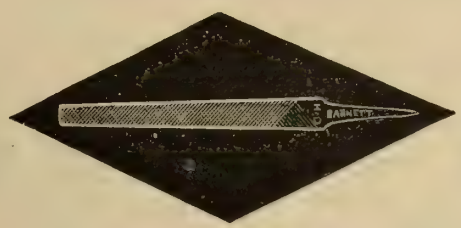
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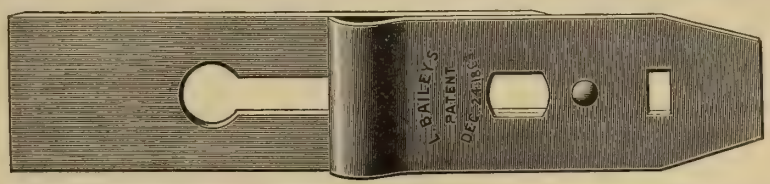
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STANLEY'S PATENT IMPROVED PLANE IRONS

The improved form of this Plane Iron renders it unnecessary to detach the Cap-Iron *at any time.* The connecting screw will slide back to the end of the slot in the Plane Iron, without falling out; and the parts are thus always kept together, preventing any loss of time in hunting about a bench or shop floor for them. The Cap-Iron will serve as a convenient handle or rest, in sharpening the Plane Iron.



The circular enlargement of the slot in the Plane Iron being nearest the cutting edge, it can be safely tempered up to, or above, the lower side of the opening; as a perfect circle located at this point in the Plane Iron insures equal expansion and contraction of the metal. The owner can use this Iron up much closer than formerly, without liability of its being broken or cracked at the corners of the slot as heretofore formed.

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FIRE BRICK, DRAIN PIPES,

Best Quality and Lowest Prices.

F. HYDE & CO.

31 Wellington Street.
MONTREAL

IRON CEILING OVER PLASTER.

A correspondent of American Artizan gives the following method for putting on iron ceiling over plaster: "If a neat, tight finish is desired, furring strips are always used, 1x2 to 4 inches, both in placing over old plaster and on the joist direct. These are put on all lines for mouldings in panelled ceiling, and where laps are to be made, also in centres of any panels where rosettes are to be placed. They are put on across the joists first, and the cross pieces or struts nailed in between and all made level, ready for the metal ceiling, which are made in a great variety of designs, in smooth and stamped raised panels, fluted and twilled panels with contrasting borders, and mouldings to bring designs in strong relief, complete with rosettes and cornice of any size desired. In putting furring strips on old plaster long nails should be used, to reach through the plaster into the joist. Where the joists are bare and level, beaded (oval crimp) ceiling can be put on direct, saving cost of furring strips, but strips must be used if this style is put on over plaster to make a nice finish."

BALL-BEARING WAGGON WHEELS.

Ever since it was practically demonstrated that the ball-bearing invention could be successfully used in connection with trotting sulkies, it has been conceded by every one that the man who should succeed in applying the balls to general purpose vehicles would have a fortune within easy reach.

It is less than a year since these queer little things were applied to a sulky, but it is not unlikely that from the moment their success on those vehicles was assured, a thousand busy brains have been trying to solve the problem of their application to other vehicles. It looks very much as if a Connecticut citizen would have the credit of having solved the problem. C. H. Cook, of Windsor, whose inventive genius has already been mentioned, and who has given much thought and study to the ball-bearers, has succeeded in adapting them to the use of any vehicle that runs on wheels, and his invention is at once so simple, effective and withal so inexpensive, that its general use seems only a question its general use seems only a question of time.

It might be a difficult matter to describe the thing so that the average reader can understand it without first looking at the model hub, but with that in hand it is simple enough.

Take, for example, an old wheel upon which it is desired to apply the ball-bearers. Eevryone knows that the box of a wheel is firmly fastened within the hub on the old plan, the box, of course, revolving on the axle. To apply the invention the box is removed and turned down—that is, its circumference reduced by the lathe until there is no bearing upon it by the hub. A cup is now fitted into either end into which the balls are to be placed, seven of these being used at one end, eight at the other, these forming a complete circle of the cup, and, of course, half of them taking the weight of the load at all times, so that the individual wear is trifling. In time, if the balls wear in the least, a simple device, arranged to adjust to the two thousandth part of an inch, closes the lost space and the apparatus is as good as on the first day of its application. The shoulder of the axle acts as a cover for the inside cup, keeping the bearers in proper place. t the outer end a cone-A shaped nut is turned on. When this is done the axle and box are practically one, the wheel revolving upon the box, which is stationary with the axle. There is absolutely no friction at any point, and it works so smoothly that a wheel lifted off the ground and set in motion will continue to revolve twelve or fifteen minutes, and even longer.

There is no possibility of dirt gathering in the box, no oil escapes to work its way into the hub and thence to the spokes. In fact, oil need not be applied oftner than once in six months, and then only moderately. There is no possibility of hot boxes in any event, and when it is desired to remove the wheel it can be done without tipping the vehicle, the process being quite as simple as under the old system. No other ball-bearing invention allows of this.

The use of the invention upon waggons used for heavy work will greatly relieve teams, it having been demonstrated that one horse will draw a given load with the new-fangled apparatus with quite as much ease as four would with the old gear. The well-known contractor, Ed. Balfe, has already ordered one of his big waggons rigged with the invention. Its adaptability covers the entire range, from the heaviest waggon to a road cart, its use upon road waggons and carriages being especially convenient.

Next to its usefulness, the comparative cheapness of the new affair is worthy of mention. As a rule, an invention of such utility is so expensive that its use seldom or never becomes general. A carriage can be hung up with the new invention for $25, the extreme price being $35 for heavy waggons, while a sulky can be rigged for $15, and each is fully warranted for twenty years. The cost at present for these changes is $80.

Neil Stalker, of this city, himself an inventor and patentee, is associated with Mr. Cook in the patent, and they have temporarily leased a factory near the Windsor depot, machinery for the business being already in place. When the patents reach them and the gentlemen are able to demonstrate the utility of the invention, it is proposed to form a joint stock company, and if conditions are sufficiently favorable the works will be removed to this city. The firm expect to be ready for business by the latter part of the week, and they have already had more than a hundred vehicles booked to be hung with the new affair.—Hartford Courant.

GLOOMY IRON OUTLOOK.

The statistical report of the American Iron and Steel Association for 1892 has just been issued. Reviewing the domestic iron trade for 1892 the report says that prices utterly failed to respond to the very great demand for consumption, and it cannot therefore be truly said that our iron and steel industries were prosperous in 1892. It was a year of good profits for very few iron and steel manufacturers, of small profits of many, and of no profits at all for a large number. Seeking for the cause of the depression, the opinion is advanced that, while other influences have had their part, the principal cause is to be found in our capacity to produce much more iron and steel than the country could consume notwithstanding the enormous consumption the last few years. A somewhat gloomy view of the future is taken.

HOW IT IS DONE.

The enigma involved in the fact that sheet iron of British make, imported to Germany and re-imported in the form of enamelled hollowares, and underselling the British manufacturer, is hardly so intricate as heretofore. The lower rate of wages in Germany counts for something, but the longer hours of labor cut an equal figure in the competition. To this must be added ths fact that Sunday labor in Continental Europe is not prohibited as in Great Britain. As economic factor in internationa l competition, longer hours of labor in connection with lower rates of wages will always count as a complication in the situation. It would be well in all discussions as to shorter hours, especially in the direction of fixing the limits by law, that the economic effects in foreign trade should have their due consideration.—Age of Steel.

Steam forgings in iron and steel for all sorts of purposes, which are being produced on a large scale in the Black Country, experience great and increasing competition from the malleable iron castings of the district, which, on account of their emparative cheapness, are being largely substituted for the wrought article, even in such articles as cycle fittings, in which one would have thought that the tougher fibre of the material would have more than compensated for the extra cost.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

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First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

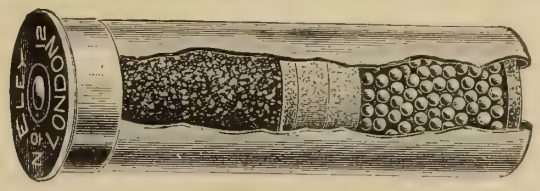
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Corner Front and Yonge Streets, TORONTO.

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ENGLISH HOUSE: **SAMUEL, SONS & BENJAMIN**
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RUBBER GARDEN HOSE
GARDEN SHEARS and SYRINGES
LADIES' FLORAL SETS . . .
HOSE REELS . . . .

Lawn Rakes and Sprinklers

CONTINUOUS RAILWAY RAILS.

An old idea, that of using continuous rails on railways, has been revived in the United States during the past four years, and apparently with some success. Forty years ago the subject was discussed, and trials were even made, but for some reason the matter was dropped. It always has been a fascinating idea, not only for railway men, but also for people who understand nothing about permanent way. The idea, of course, is that the train should always be travelling on a uniform surface, and that jolting due to the imperfection of the rail joints should be avoided. In recent years the length of the rails have been increased, and the joints have been made much more perfect, but still the rail is not uniform. Besides this, the joints are always giving trouble, as the nuts on the fish-bolts get slack and have to be tightened at frequent intervals. If the joints are left slack there is an increased give, and the rail heads become battered and deformed so that the jolting increases in a geometrical ratio.

To increase the smoothness of running it is frequently suggested that the rail ends should be scarfed or cut at an angle, so that at the joints the wheels rest on two rails at the same time. This form of joint has been used on one American line for ten years, and appears to be well spoken of, says the Colliery Guardian. They only thing against it is the increased expense of sawing the rails at the rolling mill.

The use of continuous rails would at first sight appear to offer insuperable objections on account of expansions. As at present laid, an interval is always allowed between the rails to take up expansion due to increase of temperature. The spacing has, however, been lessened of late years, and in specifications for fish-plate, the gap between the rails, which in some cases was given as ⅜ inch, is often reduced to 3-16 or even ⅛ inch only being allowed, with a range of temperature of 50 degrees Fahrenheit or more. Continuous rails may be made by welding the adjacent rails ends in situ by means of electricity or by simply abutting the ends and securing them by heavy fish-plates riveted in position. In one case, three-quarters of the rails on a length of 1,080 feet are laid with butt joints. This line has 80 pound rails in 30 feet lengths, and is on a slight curve and gradient, yet the alignment remains in good condition. The largest piece of line, however, is three miles in length, and was laid in June 1889 on a new earthen road and ballasted with clayey soil. Three hundred feet is through clay cuttings full of springs. The only damage incurred has been through settlement, the alignment being practically perfect. In fact this part of the line is a favorite one with drivers for making up lost time, according to Mr. R. T. Gleaves. During eighteen months the cost of repairs on this section of the line was nothing, while the adjacent three-mile section each cost about $1,900, and this part of the line has now been in use for four years. The rails are now laid according to Noonan's American patent with expansion joints at crossings and at the bottom of heavy grades. The rails are abutted and connected by two fish-plates, ¾ inch thick and 4 inch rivets. Electric welding was too expensive or it would have been employed. At the expansion places the main rails are turned outwardly, but the line is continued by the use of ordinary switch tongues. The rail that is turned aside passes through a kind of clutch held by a spring, and the arrangement is such that the creep of the rail is taken up whilst the rail is prevented from returning. The truck is ballasted level to about half the height of the webs of the rails and has been turfed and sown with grass, so that the "surfaceman simply runs a lawn mower over it." Flange rails, as is the usual American practice, are employed and are spiked to the sleepers, the spikes not being driven home by ⅜ of an inch. Three inch drain pipes are put in from 100 to 300 feet apart, to let the water run out from between the rails.

When a train passes over this line, the rails have a kind of wavy motion and are forced forward in front of the engine. At first as much as 4 inches creep was noticed on some occasions, but now the creep is only a fraction of an inch, although engines of fifty tons have been run over it at fifty miles per hour. What becomes of the expansion and contraction is a mystery, as the rails do not move. It has been suggested that all the expansion is lateral instead of longitudinal, and that instead of longitudinal expansion there is a longitudinal strain set up.

EFFECTS OF ACID ON IRON.

A correspondent writing to an exchange states a case that recently came under his notice. A lot of Swede's iron wire was received from the manufacturers, where it had been drawn into flat wire for special use; it was necessary to be soft, and was annealed after being drawn, and seemed to be very nice; and much satisfaction was felt that it promised to be such fine material for the required product; however, as all samples are tested by breaking small lots of the finished goods, in the tests it was found to be so very brittle—apparently crystalized—that it was pronounced "burned in annealing." Reporting the facts to the mill men, they said it was owing to the acid used on it after annealing, and, if it was placed in a hot room for a short time, it would be restored. Accordingly it was placed in a hot room, and heated to a temperature of 300° or so; and, after being worked same as before, it stood, when it was tested, 25 times the punishment that it did before it was so warmed; i. e., where it broke at one bending, it stood 25 after being treated in the warm room.

The question is asked how the trace of acid on the surface could affect the structure of the iron, changing it from a fibrous to a crystalized condition, although it had been washed off in lime water, in the first instance? Some of the finished product was heated to various temperatures, but it did not restore the quality of that which was worked just as it came from the mill.

WIRE GLASS MANUFACTURING.

Some of the recent improvements made in the manufacture of wire glass leave no doubt as to the practical value of that new and novel article says a contemporary. The form of apparatus, by means of which the most staisfactory results are being produced, is found to be a glass rolling table, having a three-roller carriage moving over it, running on the side ledges, and upon this table the glass is rolled out, the ledges regulating its thickness; two of the rollers are smooth, the central roller has a series of grooves running around it, and between the leading and corrugated roller a slide is placed for the reception of a sheet of wire gauze. Now, a proper quantity of melted glass being poured out upon the table, the hot sheet of wire gauze is placed in its carrier, and the roller carrier started; the latter having progressed a little, the wire is dropped; the first roller has rolled out the glass; the wire gauze strikes the partly-fluid glass, and is drawn under the corrugated roller; the latter sizes it, and, by its corrugations, forces it into the pasty glass to the required depth. At this stage the compound mass goes under the third roller, where it is rolled to the smoothest possible condition, and the operation is completed. The sheet is subsequently annealed in the usual way, and is ready for use.

A press dispatch from Guyanjuato, Mexico states that there is quite a stir in mining circles there over the discovery of extensive and rich deposits of tin south of that city. The find was made by Frank Gordon, an American prospector, who has been making investigations of the mineral resources of that state in behalf of a Philadelphia syndicate. The new tin properties bore evidence of having been worked by the Aztecs or some other race centuries ago. The work of developing the deposits will begin as soon as the machinery can be obtained.

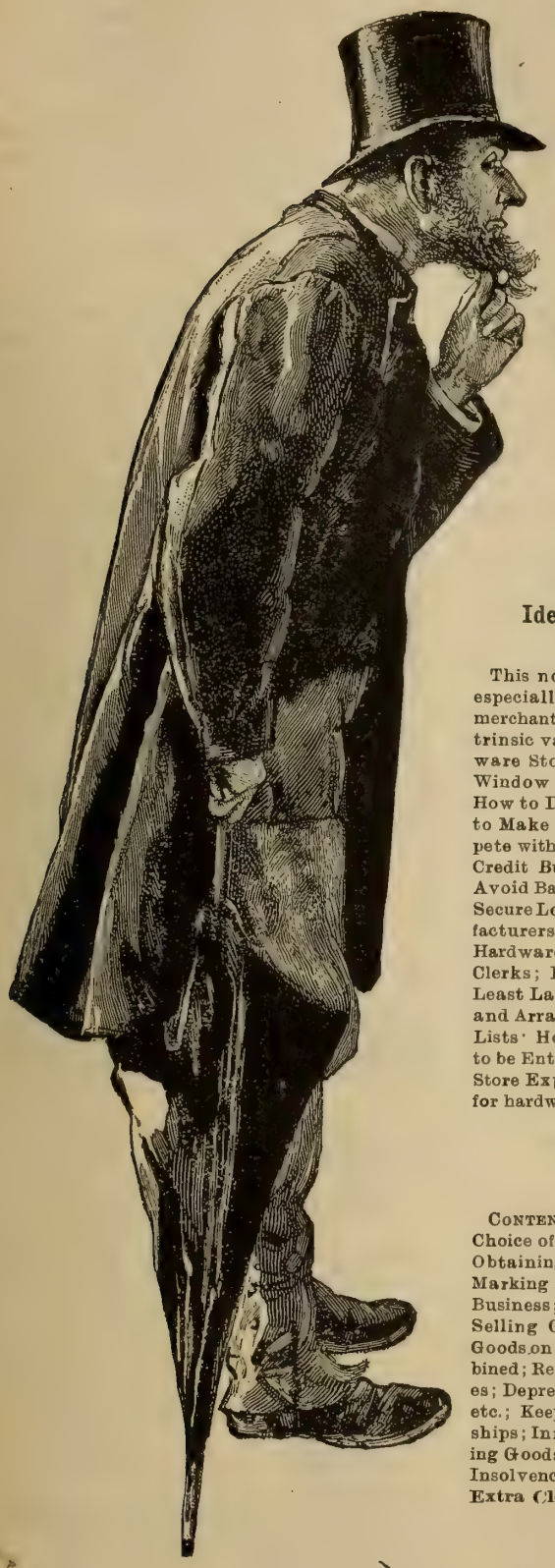
A feather duster disperses but does not remove the dust from the store.

Restore goods to their proper places as s on after using as possible

Goods conveniently located save time, money and temper in showing.

No young man can possibly have mistaken his calling who finds in it what the world wants done

Competition is keen and active and the only way to meet it successfully is to buy from the best houses, and at lowest prices.



It is more honorable to have built a dog-house than to have dreamed of building a palace. . . . . .

Books for Business Men.

Ideas for Hardware Merchants.

By D. T. Mallet.

This novel book is the only book ever written especially for hardware men, and every hardware merchant will find it of decided help and of intrinsic value. It tells How to Advertise a Hardware Store; How to Dress a Hardware Store Window; How to Select Seasonable Goods and How to Display Them to Best Advantage: How to Make a Success with Hardware; How to Compete with "Department Stores;" How to Turn a Credit Business into a Cash Business; How to Avoid Bad Debts and Increase Trade; How to Secure Low Quotations from Jobbers and Manufacturers; How to Arrange the Fixtures in a Hardware Store; How to Treat and Manage Clerks; How to Keep Your Accounts with the Least Labor; How to Systematize Your Business and Arrange Its Details; How to Arrange Price Lists· How to Meet Close Competitors and How to be Enterprising; How to Properly Proportion Store Expenses, and thousands of practical hints for hardware merchants. **Paper cover, $1.**

How to Keep a Store.

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Contents: The Selection of a Business; The Choice of a Locality; On Buying a Stock of Goods; Obtaining Credit on Purchases; Examination, Marking and Arranging of Goods; Advertising a Business; Employment of Clerks; The Art of Selling Goods; Selling Goods for Cash; Selling Goods on Credit; Selling for Cash and Credit Combined; Replenishing Stock; Settling for Purchases; Depreciation of Goods; Losses by Fire, Theft, etc.; Keeping Accounts; Expenses; Co-partnerships; Influence of Social Life on Business; Buying Goods at Auction· Investment of the Profits; Insolvency; Business Qualifications, etc. **12 mo, Extra Cloth, $1.50.**

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Fully explained. For grocers, general dealers and all lines of business. 250 pages, 150 illustrations. Price, post paid, $1.75. This includes a nickel hammer and a pamphlet on show windows. **SENT FREE**, a sample of Bon Ami; cleans windows, show cases, brass, etc., with a 44 page catalogue of window supplies.

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Nath'l C. Fowler, jr., the eminent advertising doctor and expert at business, has written a book all about advertising in daily papers, weeklies, magazines, religious and agricultural papers, in street cars, signs, lithographs, novelties, calendars; about cuts and how to use them; window dressing; store decoration; points on selling; keeping accounts; everything about publicity and business outside, written from the merchant's standpoint—a book worth its price to the man who spends $25 for printing, and the more to the extensive advertiser and merchant; 177 great advertisers answer the vexed questions of advertising, presenting individual and collective opinion of positive value—most important chapter written. **Cloth $3.75, half leather $4.50, full leather, $5.**

Self Instruction in Practical Business Qualifications.

By Chas. S. McNair.

Size, 8½ x 11 inches, 256 pages. **$2.50**

How to Sell Goods.

By B. F. Cummings.

A Prize Essay, **10c.**

METHOD IS THE SECRET OF SUCCESS.

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The J. B. McLEAN PUB. CO., Ltd.
10 FRONT ST. EAST,
TORONTO.

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES

John Webe, lumber, Gretna, has assigned.

J. W. Collins, lumber dealer, Montreal, has assigned.

Deacon & Doyle, hardware merchants, of Belleville, have assigned.

W. M. Shannon, tinsmith, Walkerton, has assigned to R. Millons.

Smith & Taylor, furniture dealers, Brandon, Man., have assigned.

Freres McKay, general merchant. Papineauville, Que., has assigned.

J. C. Arnold, blacksmith, Woodstock, N.B., has assigned to F. B. Carvel.

Edward O. Brook, general storekeeper, Greenbank, has assigned to William Ross.

Charles Smith & Co., general merchants, Chester, N.S., are offering to compromise.

Wigle Bros., general merchants, Essex, have assigned to C. B. Armstrong, of London.

Mrs. A. Hardy, storekeeper, Bridgewater, has failed, with liabilities of $4,000; assets small.

Robert Gooding, brick maker, Fairbank, has assigned to G. M. Gardner. Liabilities are about $2,000 and assets the same.

A. & R. Fleming, coal and wood dealers, have assigned to Henry Barber. The liabilities are $53,000 and assets $73,000. The firm will be organized into a joint stock company and continue business.

The Standard Type Foundry, 34 to 38 Centre avenue, has assigned to T. M. Higgins, 120 Yonge street, Toronto. It was involved in the Polson difficulties. The assets are put at $5,000 and the liabilities $6,000. The proprietors of the company are Thomas Alcock and Horatio Goodes. The heaviest creditors are A. C. Leslie & Co., of Montreal, whose claim of $3,000 is secured. Plews & Scott, of Toronto, are also creditors.

Whatmough & Co., dealers in house furnishings, 145 ing street east, Toronto, are financially embarrassed and an assignment has been made to George Edwards. The liabilities are some $2,000, and the assets are placed at the same figure. The firm was composed of Mrs. Jane Whatmough. The Whatmough business was formerly large. I. A. Whatmough conducted it for many years, but assigned about three years ago. Since then Mrs. Whatmough ran it.

PARTNERSHIPS FORMED AND DISSOLVED.

A. Deloge & Co., painters, Montreal, have dissolved.

Duscault & Lamaureux, foundry, St. Hyacinthe, Que., have dissolved.

W. Lemieux and A. Girard have been registered partners to carry on business as such.

Robert White has been registered proprietor of the Laurentian Spring and Bath Co.

The Dominion Foundry Supply Co., of Montreal, has dissolved. George H. Weaver will continue under the old firm name.

SALES MADE OR PENDING.

The general stock of Buchanan & Co., Saltcoals, Man., has been sold out at 50 cents on the dollar.

The general stock of Johnston Bros., Walkerton, Wiarton, Tara, Paisley and Chesley, is advertised for sale by auction May 16.

Hugo Block, broker, 9 Toronto street, has purchased the entire stock of China Hall from the executors of the Glover Harrison estate. It is estimated at from $60,000 to $80,000.

CHANGES.

Mrs. Jesse Hogg, blacksmith, has been succeeded by G. Wise.

F. Morrison, blacksmith, Mission City, B.C., is giving up business.

A. Ludlam, planing mill, Comber, is removing to Leamington.

John Lutes, blacksmith, Round Plains, Ont., has removed to Varnessa.

A. G. Williams, general store, Lakeside, has sold out to William Daupe.

Charles Chambers, saw mill, Bloomsburg, has removed to Oakland.

Obed Mannel, planing and turning factory, Windham Centre, has removed to Burford.

Rennie & Patterson, carriage makers, Vancouver, B.C., have been succeeded by Rennie & Campbell.

The Rathbun Company has purchased the saw mill at Gilmour formerly owned by Caverly Bros., for $3,000.

Lewis Delatisky, and Joshua Delatisky, of Montreal, have registered as partners to carry on the business of general traders under the firm name of Delatisky & Son.

DEATHS.

D. H. Taylor, general merchant, Cathcart, is dead.

Alonzo Oatman, blacksmith, Bowmanville, is dead.

Benjamin Bavin, general merchant, River Hebert, N.S., is dead.

I. W. Bennett, hardware merchant, Gananoque, is dead. Deceased settled in Gananoque about forty years ago, starting business as a tinsmith and general jobber. For some years past he has had a large hardware trade in his present place of business, opposite the old Catholic church on King street. About four years ago his son Walter was admitted into partnership with him, under the name of I. W. Bennett & Son. He has been in failing health for some few years past, but never was confined to the house until 4 o'clock on Sunday last, when he was prostrated with rheumatism of the heart. Physicians were called in, but to no avail. At 7.45 he passed away after four hours of intense agony. He leaves a wife and son, Walter W. Bennett, who will carry on the business.

FIRES.

W. Geiss, machinist, Hamilton, is dead.

J. P. Alport, general merchant, Alder Grove, B.C., has been burned out.

The Sheppard hardware factory at Black Rock, N.Y., was burned the other night. Loss $250,000.

The engine and boiler sheds of the Grand Trunk Railway coal hoist, Belleville, have been destroyed by fire.

A HANDY BEATER.



The accompanying cut is an illustration of the Keystone Egg Beater, a stock of which is carried by Messrs. H. S. Howland, Sons & Co., Toronto. This machine is by no means exclusively an egg beater. It is a general beating and mashing machine. It frequently saves the trouble of chopping and pressing through a sieve. For instance, in making fruit ice cream, fruit omelets, fruit pancakes, etc., it is always necessary to mash the fruit through a colander, but with this beater, in a moment, all kinds of fruit can be reduced to a pulp.

FIRE!

McCAUSLAND & SON

Beg to inform their customers and friends that they are in a position to fill all orders with promptness and dispatch, notwithstanding the recent fire in their premises. . . .

72 to 76 King St. E.



"Build to-day then, e Strong and sure, With a firm and ample base."
—Longfellow.

DO YOU?

WISH THUS TO BUILD. an advertisement in the CONTRACT-RECORD, TORONTO will bring you tenders from the best contractors.

TORONTO CUTLERY CO.,

M. MAYER, Propr.

65 and 67 Yonge Street, Toronto

Imperial Razors

Joseph Allen's NON-XLL Cutlery

T. C. Co.'s Shears and Scissors

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The Most Complete Lines of all Kinds of Cutlery in the Market.



S.S. SMOKELESS POWDER is the best. Made by the Smokeless Powder Co., of London, Eng. A stock kept in Montreal. 25 lb. Drums, 2 lb. Cannisters, ½ lb. Cannisters. Send for Prices. **WILLIAM DARLING & CO**, Wholesale Hardware Merchants, 30 St. Sulpice Street, Montreal.

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They are guaranteed in every particular by the manufacturers.

They are made of the very best material and workmanship

They are sold at closest possible prices.

They are finished and put up in neat and attractive shape.

They are well known throughout the Dominion and are popular with all classes of consumers.

They are handled by all leading Hardware and Paint and Oil trade.

See that the name "BOECKH" Is on every brush.

Boeckh's Flexible Bridled Brushes.

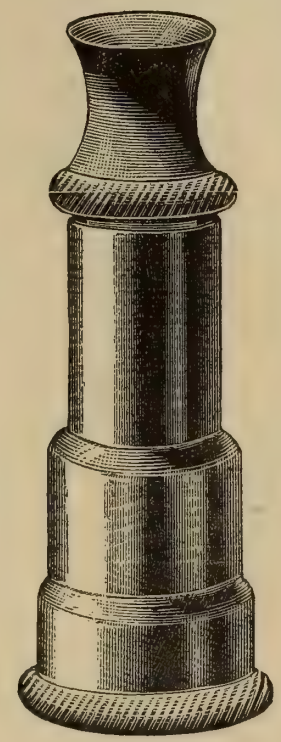
Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

TORONTO, - CANADA.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it.

It is impossible for this pipe to get out of order

Give it a trial and you will use no other.

Hamilton Brass Manufacturing Co.

HAMILTON, ONT.



JOSEPH RODGERS & SONS

LIMITED.

CELEBRATED CUTLERY : : :

Still Leads the World.

OUR REGISTERED TRADE MARK

GRANTED IN 1764, IS STAMPED ON EVERY ARTICLE.

AGENTS:

JAS. HUTTON & CO

MONTREAL

AND

TORONTO.

WHAT MAKES A GOOD CLERK.

The following is the essay that secured the first prize offered by N. Y. Metal on the subject: "What are the points which make a clerk most useful; what should he know and do?"

First.—A clerk should at all times study, practice, and acquire an obliging and cheerful disposition toward all he may come in contact with, never let his temper be ruffled by some petty, trifling incident, which might thus unfit him for business for several hours after. This is one of the greatest secrets of a good salesman, and can be accomplished to a great extent if a person will only make an earnest effort in that direction.

Second.—It is necessary that he be of good address, that is, that he must not seem over-important, foppish, slow and indifferent on one side, nor untidy, ignorant and a rattle-head on the other, but can present himself to his prospective customer in such a manner that the latter will at once acquire a good impression. This cannot be assumed for effect, but must be natural, and can be acquired by giving strict attention to my first statement. Notice a cler kof this type for a few moments. He smiles you a welcome, he greets you with an extended hand. or a friendly bow, he speaks cheerfully of some topic of the day. He is cheerful because affability has taught him to be so, and wisdom has hinted the expediency of so doing. He has contributed to your enjoyment, increased his stock of happiness, won your regard, and the effort has cost him nothing, and you proceed with your business in a pleased frame of mind.

Third.—He must know how to use language, so that he can explain the workings and merits of his goods in a short, concise statement. He must, when a customer raises an objection to some detail, be ready to give some reason, and state the advantages of certain construction or arrangement, as the case may be, and have a knowledge of the goods that his customer refers to, that he may know his ground for statements, which must be made readily in a clear, concise and distinct manner, which will convince a customer that he is talking to a man who is qualified in his business, knows what he is talking about, and does so without saying anything disparaging of other goods which may be equally as good, and of which the customer is most cases has a better knowledge of than those under consideration. I think that this is known as tact, and some say that it is a gift of nature. I will not dispute that, but I believe with a reasonable amount of talent a man can acquire tact.

Fourth.—He must possess or acquire tact. It requires tact to exhibit an article to a buyer in such a way that the customer will be favorably impressed with it at first glance. This can be done by presenting it in a natural position: If he is selling cutlery, by placing the articles before the buyer in systematic order, stating their merits, and awaiting the customer's enquiries. If it be a lock, he should present it with its trimmings, without any undue waste of time in searching for them. If it is necessary to show its interior construction, he should be able to remove the cover in a quick and graceful manner, explain the functions of the different parts, and the advantage of each arrangement, replace the parts and cap, and hand it to the buyer for inspection with confidence that it will work without a catch. If it be a stove, he should have the tact to ascertain, first, what his customer desires in the way of style, and then price. Then he should know just where he has the stove, and that it is in shape for exhibit, and conduct his customer to it and place him where he can present the stove to its best advantage. It may be necessary to show the assortment before making the sale, but I have found that four out of five will come back to the first if the clerk knows his business. It is the same in all lines of goods. The reason for this is that a good clerk with tact weighs his customer, as it were, forms a right idea of exactly what is wanted, and through a certain characteristic, which we call influence, dictates to his customer what he shall buy.

Fifth.—A clerk, with familiar surroundings about him, has a certain power over a person entering his domain, which I have experienced at certain times. I have made a study of the cause of this, and it was a long time before I could find a satisfactory reason for it. I know instances where I have entered a store for the full purpose of making a purchase of something of which I was in need. I have gone out without purchasing, feeling that it was of no moment anyway. Again, I have entered a store, transacted my business, and was about to leave, when my attentionn would be called to something for which I had no use for, but which was really convenient, neat and handy, and I would take it along. Next day, as I regard it, I wonder what prompted me to buy it. The influence of a good salesman. What a great hint to a clerk who is seeking the secrets of success! It is something which we all possess. We neither hear nor see it, yet consciously we all possess it. If we ignore this very important fact, the false idea had been adopted that what we do, think or say, can affect no one but ourselves. I say most solemnly that our very thoughts are published and portrayed to the world in inexplicable ways. This influence is silent, magnetic, and a most wonderful thing, filling earth, air and sea, and sending around the world, with unerring accuracy, blessing or cursing every thought of our hearts, every word that falls thoughtfully or thoughtlessly from our lips, and every act that we do. Our influence if worldwide for good or evil, and it never dies. Therefore, a customer, upon entering the presence of a salesman comes at once under his influence and is guided by him. If the clerk is a novice and does not know his ground he will so inform his customer by thought and action, although he may make an effort to convey an idea to the contrary to his words, and the clerk will wonder why he was unable to make the sale.

The preceding points are among the foremost that it is absolutely necessary for a clerk to not only know but to practice, study and improve himself in, constantly by and through such associations as will promote them, if he hopes to make himself a success, by becoming useful to his employer. I would like to add more to this, but the field is very large to cover in one article, so I will proceed by giving a review of the points which make a clerk most useful.

Order.—This is necessary in order that everything about the store may be found in its proper place when called for, and present a clean and attractive appearance.

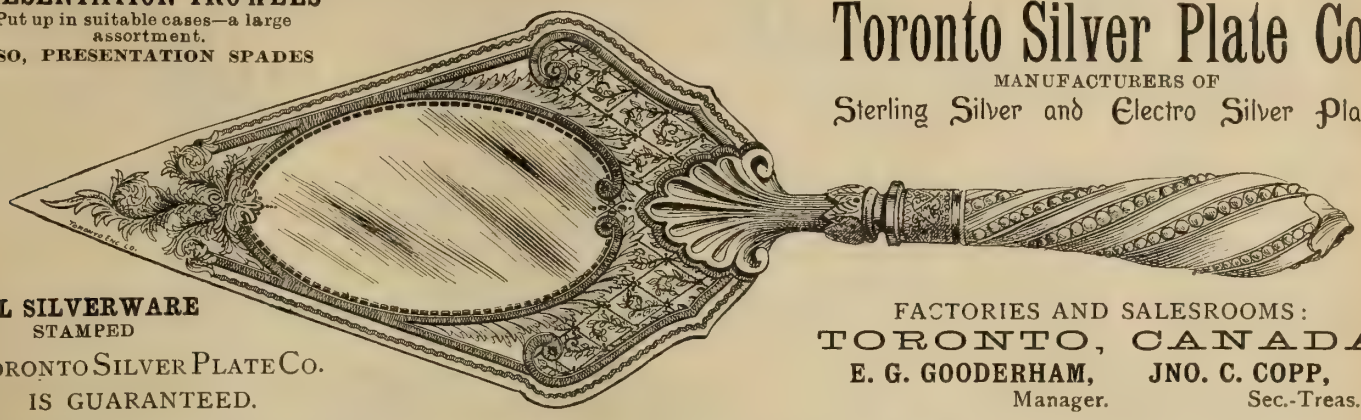
Punctuality.—That a customer may be attended to with promptness and business entrusted to the clerk with a confident knowledge that it will receive prompt attention.

Judgment and Decision.—Judgment in knowing what to say and do at the proper time; judgment to attend to business details without bothering his employer or manager, and finally to know right from wrong. Decision to stand by his statements once made, in all his dealings, whether it places him at a loss or disadvantage.

Civility and politeness with industry may successfully measure swords with capital unadorned with these virtues, and they are therefore very essential in the combat for trade. Somewhere I have seen the quotation that "We must wrestle in this world if we do not care to lie down and form a pavement for other men's cars of triumph," and for success in this contest we must rely upon the strength of civility as much as anything. I will say in conclusion, especially to those young men who may now be entering upon the duties of clerks, heed well the foregoing suggestions, do not pass them by with a glance, qualify yourself for your business. "Read, mark, learn and inwardly digest," everything pertaining to the trade. Be honest, be diligent, be temperate; in short, be a man. As I review the line of clerks before my memory, how few there are who know thoroughly their profession!

What is the matter with the stove trade, the hardware business? Incompetent clerks and salesmen. No complaints arise where competency reigns. Qualify the clerks and the business will follow. How often we have seen a clerk and even proprietors attempt to sell goods who did not have the tact or ability to handle their own end of the business.

PRESENTATION TROWELS
Put up in suitable cases—a large assortment.
ALSO, PRESENTATION SPADES



ALL SILVERWARE STAMPED
TORONTO SILVER PLATE CO.
IS GUARANTEED.

— THE —
Toronto Silver Plate Co.
MANUFACTURERS OF
Sterling Silver and Electro Silver Plate

FACTORIES AND SALESROOMS:
TORONTO, CANADA
E. G. GOODERHAM, Manager.
JNO. C. COPP, Sec.-Treas.

This Machine cannot be surpassed for smooth work, light running and durability. The drive wheels are 10½ inches in diameter, and warranted to cut grass 6 to 8 inches high. ALL GOODS WARRANTED.

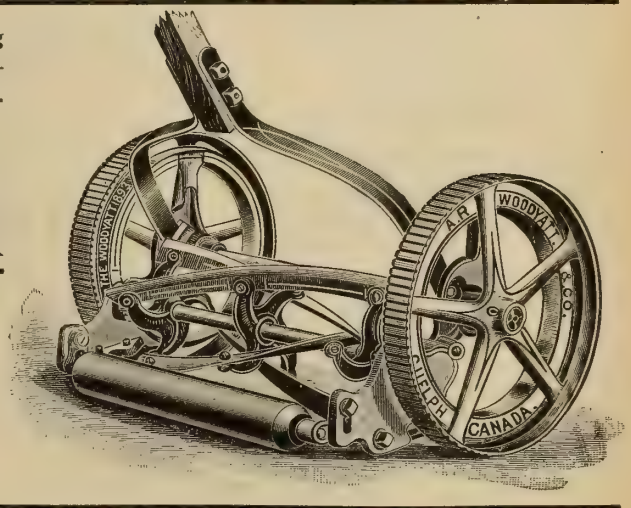
. . **1893** . .

THE "WOODYATT" LAWN MOWER

Light, Durable, and Efficient.

Now On Sale by all Wholesalers.

A. R. WOODYATT & CO. GUELPH, ONT.



Wm. Clendinneng & Son.

Iron Founders and Stove Manufacturers

Makers of the "Etna" Hot Water Boilers, Soil Pipe and Fittings, Stable Fixtures, Machinery, Builders and Special Castings

WRITE FOR ESTIMATES

WORKS: Cor. William and Inspector Sts.,

OFFICE and WAREHOUSE: 145 to 179 William Street

MONTREAL

BUYERS OF CUTLERY

WILL find it to their interest to see our samples before placing Spring orders. A choice assortment in stock of Jas. Rodgers & Co.'s and E. M. Dickinson's goods at special prices.

A. C. LESLIE & CO., MFRS. AGENTS,
MONTREAL and TORONTO

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,
McRAE & CO., OTTAWA

MUNN'S LIQUID GLUE

IS THE BEST.

Kennedy Bros., Agents
101 Bay Street, TORONTO.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.
26 Wellington St. East, TORONTO

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.

GALVANIZED SHEET IRON. SP



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—
56 and 28 lb ingots, per lb .. 24, 24½
Strip " 25, 25½

Tin Plates—Charcoal Plates, Bright.

M.L.S. equal to Bradley — Per box
I.C., usual sizes $5 75 $6 00
I.X., " 7 00 7 25
I.X.X., " 8 25 8 50
Raven & P.D. Grades—
I.C., usual sizes 4 25 4 50
I.X., " 5 25 5 50
I.X.X., " 6 25 6 50
I.XXX., " 7 25 7 50
D.C., 12½ x 17 ..... 3 75 4 00
D.X., " 4 75 5 00
D.X.X. " 5 75 6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—
I.C., usual sizes 4 00 4 25
I.C., special sizes 5 00 5 25
B.V. Grade, I.C., usual sizes 4 85 5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—
I.C. 20 x 28, 112 sheets .. 7 50 7 75
I.X. Terne Tin 9 50 9 75
Old process I.C. 13 00
" " I.X. 16 00

Charcoal Tin Boiler Plates.

Cookley Grade— Per lb.
I.X.X., 14x56, 50 sheet bxs } 6½c, 7c
" 14x60, " }
" 14x65. }

Tinned Plates

72x30 up to 24 gauge..... 6½ 6½
26 " 6¾ 7
28 " 7¼ 7½

Iron and Steel.

Base Price

Common Bar, per 100 lb .. $1 95 ....
Refined " " .. 2 35 2 65
Horse Shoe " " .. 2 60 2 75
Band " " .. 2 50 2 60
Hoop " " 2 60
Swedish " " .. 4 00 4 25
Sleigh Shoe Steel 2 50
Tire Steel 3 00 3 25
Machinery 2 75 3 00
Cast Steel, per lb 0 10 0 14
Russian Sheet " 0 10½ 0 11
Tank Plates1-5 and thicker 2 00 2 25
Boiler Rivets... ..... 4 50 5 00

Boiler Tubes.

2-inch 10½c
3-inch 13½

Steel Boiler Plate.

¼inch $2 45
16 " 2 35
¾ " and thicker 2 25

Sheet Iron,

1 to 20 gauge 2⅞, 3
22 to 24 " 2⅞, 2⅞
26 " 2⅞, 3
28 " ..... 3 , 3¼

Canada Plates.

Blaina..... ½ bright 2 75 ....
Abercarne ..... 2 75 ....
Lion ....

Iron Pipe.

Wrought 62½ and 5 p. c. to 65 p. c.
Galvanized, 37½ to 40 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head
16 to 24 gauge, per lb 5, 5½
26 gauge, " 5½, 5½
28 " " 5½, 5¾
Gordon Crown—
16 to 24 gauge, per lb 5, 5½
26 gauge, " 5½, 5½
28 " " 5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb..... 6 6 3-5
" ¼ " " 4⅞ 5
" 5-16 " " 4½ 4⅝
" ⅜ " " 4⅜ 4⅜
" 7-16 " " 4¼ 4½
" ½ " " 3¾ 4
" ⅝ " " 3⅜ 3⅜
" ¾ " " 3 1-5
Trace, per doz. pairs $3 60 5 90
German coil, per 100 ft 1 65 2 70
Jack chain, iron, single, per doz yards 0 13 0 50
Jack chain, double, per doz yards..... 0 15 ....
Jack chain, brass, single, per doz yards 0 20 1 10

Copper—*Ingot.*

English B.S " 0 13½ 0 14
Lake Superior 0 13 0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in .$0 22 $0 25
" round & square
1 to 2 in 0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60 .....$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes 0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60 ..... 0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb.. 0 20 0 22
" 35 to 45 " " .. 0 19 0 20
" 50 lb and above per lb 0 18 0 19

Boiler & T. K. Pitts.

Plain Tinned per lb..... .... 0 21
Spun " " 0 25

Wire.

Pure, in coils—
From 1 to 20 gauge..... 0 25 0 27
From 20 gauge, up 0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge. 0 20 0 21
" " 27 to 30 " .. 0 23 0 25
" " 30 and up..... 0 26 0 28
Sheets, hard-rolled 2x4 ft... 0 21 0 23

Zinc Spelter.

Foreign, per lb..... 0 05 0 05½
Domestic " 0 04¾ 0 05

Zinc Sheet.

5 cwt casks..... 0 05¾ 0 06
Part casks 0 06 0 06¼

Lead.

Imported Pig, per lb..... 0 03½ 0 03¾
Domestic " 0 03¼
Bar, 1 pound 0 05
Sheets, 2½ lbs, sq. ft, by roll 0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll 0 04⅝ 0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder. per lb.

Bar Half-and-half (guar.)... 0 17 0 19
Standard 0 16 0 18
Wire 0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb $0 13½ 0 14
Other makes " 0 13 0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt 4 75
No. 1 Do..... " 4 50
No. 2 Do..... " 4 25
No. 3 Do..... " 4 00

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon $1 20
2nd qualities " 1 00
Barn (in bbls) 0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb..... 0 05
Chrome Yellow " 0 11
Golden Ochre 0 06
French " 0 05
Marine Black 0 09
" Green 0 09
Chrome " 0 08
French Imperial Green 0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt 1 35 1 40
" " (J.F.L.S.) " " 2 75
" " Royal " " 1 10 1 15
Venetian Red (R.C.2) " " 1 50
Venetian Red, (best) " 1 80 1 90
English Oxides per cwt 3 25
American " " " 2 25
Canadian " " " 1 75
Paris Green, per lb 0 13 0 15
Burnt Sienna, per lb..... 0 08½
Burnt Umber " 0 05
do pure 0 08
Drop Black " 0 09
Chrome Yellows " 0 12
" " Lemon pure,
8 lb. tins, per lb..... 0 19
Chrome Greens " 0 12
Golden Ochre 0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal 0 70
Extra " 0 90
Brown Japan " 0 55
Brown Japan, Turpentine p. gal. 0 71
No. 1 Carriage ..... " 1 30
Gold Size Japan ..... " 1 00
Pure Orange Shellac..... " 2 00
Hard Oil Finish ..... " 1 30

Linseed Oil (in bbls)

Raw, per gal 0 60 0 62
Boiled " 0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal 0 50 0 52

Castor Oil.

Best, per lb..... 0 09 0 09½

Cod Oil.

Cod Oil, per gal. 0 48 0 50

Glue (in bbls)

Common, broken 0 10 0 11
French medal 0 11 0 13
Cabinet makers 0 17 0 18
White..... 0 16 0 17
London Town..... 0 7½ 0 08½
Gelatine..... 0 22 0 27
Stripped..... 0 16 0 17
Coopers..... 0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis.40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

per lb
Best thick white felt wadding, in ½ lb. bags..... 1 00
Best thick brown or grey felt wads, in ½ lb. bags 0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges..... 0 99
Best thick white card wads, in boxes of 500 each, 10 gauge..... 0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge.... 0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50,50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—Socket, Framing and Firmer

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 45 to 47½ p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c:

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.25	....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb . 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05
Screw hook and hinge—
6 to 12 in., per set 0 00 0 04½
14 to 20 in., " 0 00 0 03⅔
21 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

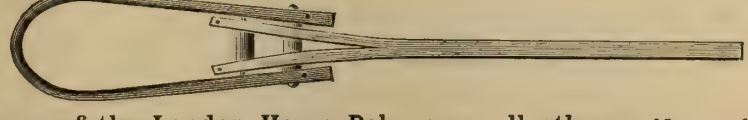
Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

THE LONDON HORSE POKE.

DURABLE  STRONG

Some of the Advantages of the London Horse Poke over all others.—No wooden pins to break or loose. No wire spring to rust or get out of order. The London Poke is the only one made with iron bolts, which cannot get lost or broken in shipping. It is the only adjustable Poke made to fit any size horse from a Pony to Clydesdale.

Send for Sample Order. BOWMAN, KENNEDY & CO., London, Western Agen

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

anadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
ronze, Berlin, per doz .. 2 75 3 25
ronze, Gem, " 6 00 9 00
ass " 8 75 10 00
hutter, porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz..... 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent. 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   Basis—50 to 60 dy..... 2 30
   40dy..... 2 35
   30 dy..... 2 40
   20, 16 & 12 dy..... 2 45
   10 dy..... 2 50
   8 & 9 dy..... 2 55
   6 & 7 dy..... 2 70
   American Pattern Only from 4 to 5 dy 2 90
   3 dy. (lath)..... 3 30
3. Canada Pattern Only from 4 to 5 dy 2 80
   3 dy. (lath)..... 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Nails.

Galvanized, per doz..... ... 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... .... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3¼ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	18	20
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set .75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B.& A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.

Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 60 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen 1 25

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 65 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 51½ per cent.
Channel nails 5c. lb. off list.

Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

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Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
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Pieced, " " "

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Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

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Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

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Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
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Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
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Steel staples 0 04½ 0 04¾
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Ordinary, discount 25 p.c.
Painted Screen, p.100 sq ft 1 80 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

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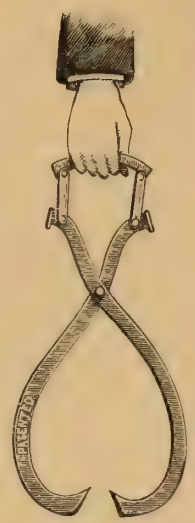
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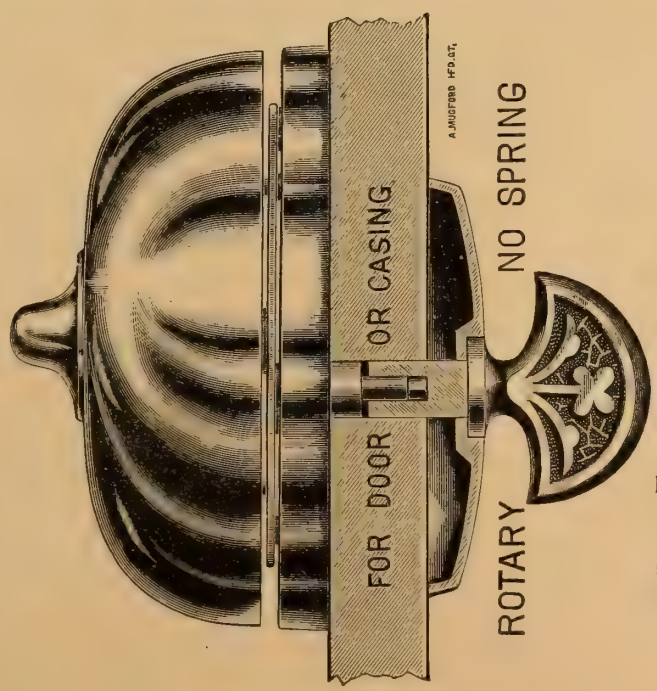
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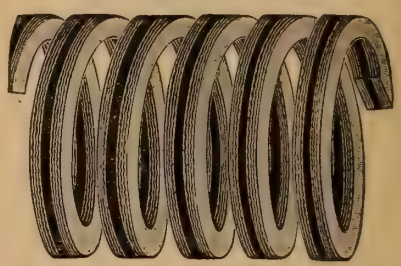
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VOL. V. TORONTO, MAY 20, 1893. No. 20.

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Vol. V. TORONTO, MAY 20, 1893 No. 20

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

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Engineering skill is gradually circumscribing the limits of oceans and drawing nearer cities that are geographically far apart. The second week in May will be remembered for two remarkable triumphs achieved in this respect. One is the speed attained by a New York Central train in a run between Syracuse and Buffalo. In one hour the remarkable distance of 102 miles was covered, while a single mile was done in 32 seconds. And at this lightning speed we are told that the oscillation was but slight. The other achievement has been on everyone's tongue. We refer to the remarkable easterly trip of the Campania, which has set people wondering when the limit of swift ocean travel will be reached. This steamship—within about ten feet as long as the famous Great Eastern, but with a horsepower something like 24,000 in excess of that vessel—made the passage from Sandy Hook to Queenstown in 5 days, 17 hours, and 27 minutes. This is all the more remarkable when it it taken into account that this was only her second trip across the Atlantic. As her machinery gets into better working order the record will again be lowered. There is no doubt about it. And a good many expect to see five day trips before the summer is over. An interesting feature about this new ocean greyhound is in regard to fuel consumption. When she left Liverpool for her maiden trip to New York she took on board 3,400 tons of coal, and when she sailed from New York on her return trip 3,100 tons of coal were stored away in her hold. Enormous as is this consumption, it is smaller in comparison with the tonnage and capacity of the steamer than the average consumption of the same company's steamers forty years ago. Then a steamer like the Persia consumed over six tons of coal to carry one ton of cargo from Liverpool to New York, a much greater pro rata consumption than the Campania's.

• • •

In the evolution of methods of locomotion by sea and land that pertaining to the former has kept abreast if not ahead of the latter. In 1836 it was held that while it was possible to build a steamer that might reach New York by starting from the west coast of Ireland and calling at St. John's, Newfoundland, for fuel, it was absurd to talk of the trip being made without stopping somewhere en route. Two years later, however, it was demonstrated that there was nothing absurd about such a supposition. In 1842 the Great Britain, of about 300 feet long, 2,000 tons burden, and 1,000 horse-power, was built at Bristol. She created considerable interest, and was familiarly known as "The Mammoth." From that out the evolution of the steamboat has been steady, until to-day it has reached the status represented in the Campania. But he would be a rash man who would say that the finalty has been attained. Not only will the Campania in a few weeks have as a competitor a sister ship, but there is at present building at Belfast a steamer which will be inferior to the Great Eastern in gross bulk only. She will be known as the Gigantic, and applicable is the name, for she will be 700 feet long, and her engines are to be 45,000 horsepower, against Brunell's leviathan of 680 feet long and 7,650 horsepower. It is claimed that she will rival the speed of an ordinary railway train and cross the Atlantic in four days from the Irish coast.

• • •

The average gas meter is deceitful above all things. Occasionally when you are planning to economize you discover that there has been as many—sometimes even more—thousand feet consumed as under ordinary circumstances, while at other times, when you were burning no gas worth mentioning the quarterly bill announces that you had been quite a good customer. The wherewithal of these things could never be satisfactorily explained, at any rate sufficiently so to induce the gas company to grant a rebate. It had the whip handle and the poor customer was unable to show cause why he should not receive the lash. A few days ago an interview was published in a daily paper with a man posted in the matter, who offered a solution of the problem. His contention seems plausible, and was to the effect that when the pressure is increased, as it usually is towards evening, the gas is forced through the meter and into the pipes in the store or dwelling, every foot being registered. About midnight, when the pressure is reduced, some of the gas goes back again through the meter into the mains, but of course failing to turn the arrows on the register back to allow for the reduction. Whatever there may be in this solution, this advice is apparent, turn off your gas at the meter when you are not using it.

• • •

Alfred Dolge & Son, of Dolgeville, N.Y., are noted as a firm of manufacturers who annually share their earnings with their employees. At a meeting of the Brooklyn Electrical Association held some time since, Mr. Dolge revealed his plan. He termed it "A Just Distribution of the Earnings," and, as detailed by him, contains three main features. The first is a system of pensions. According to this employees can retire with a pension of from 40 to 100 per cent. of their wages, according to the length of service. After 25 years' service employees can retire on a pension of their full wages. The second feature is in regard to life insurance. By this system each employee receives a policy of $1,000 after

a five consecutive years' service, another $1,000 after another five years of such service, and a third thousand after the third term of five years of consecutive service. A system of endowment is the third feature of the plan. It stipulates that all employees who by their skill improve methods of manufacturing, save material, or benefit the firm in any way outside of their regular work, shall be credited with such portion of the firm's earnings due to such efforts as the books show they are entitled to, after all proper charges have been deducted. These sums draw six per cent. interest per annum, but the capital is only payable when the beneficiary is 60 years of age or to his family at his death. The system of pensions is by no means in its experimental stage. It has been in existence in the Dolge & Sons works for sixteen years, and the results are said to be most satisfactory. One pleasing illustration of the effects of this system was seen in the case of a man who for 17 years had been a most faithful worker, but who had passed the stage of "economic efficiency. Instead of being thrown upon the world, he was able to gracefully lay down his tools and draw his pension. For the last thre years, Mr. Dolge said, he had been drawing a pension of $500 per annum, and the business had been benefited by having a more effective worker in his place. Towards the close of his remarks Mr. Dolge expressed an opinion that is shared in by a growing class of students of the labor question, and that is that the tendency of the times is in the direction of securing the greatest economic efficiency at the lowest possible cost, and will ultimately force a closer union of wage-earners and employers. In other words, that the employees will virtually become partners of the employers.

* * *

If cleanliness in a hardware store does not appeal to the stomach, it does to the eye. And what gets in through the eye is impressed on the mind. Dusty counters, show cases and goods, badly arranged stock, and dirty floors and windows denote want of life. People know that decay begins where life ends, and transfer their patronage to the merchant that is wide-awake and the store that is bright.

* * *

Provincial Secretary Gibson, during a discussion in the Ontario Legislature Tuesday, gave the public some enlightenment as to the intentions of the Government regarding the binder twine industry at the Central Prison. The discussion cropped up during the introduction of a measure empowering the Government to open up a special bank account for the Central Prison workshops in order that money for the purchase of raw material may be easily available. The information came as the result of a query put by the leader of the Opposition. Briefly stated, it was to the effect that the twine would be sold direct to the farmers, and at such a price as would enable the Government to realize fifty cents a day for the prison labor. So far the twine turned out by the prison had been made of manilla, and as to brand, the Government might make a special one of its own.

* * *

A pleasant demeanor is capital to a business man, and none realize it more than the live merchant. He may feel cross and disgruntled because of the many little annoyances that fall, more or less, to every business man's lot; he may take satisfaction out of his clerks or—his pipe; but the moment a customer enters his store the clouds vanish and he is all attention, with smiles and sunshine playing about his features, although within him may be the rumblings of a storm. There are many men possessing the qualifications of capital, experience and enterprise who never make business anything more than an ordinary success at the best, because lacking in this particular. When customers enter a store, be they men, women or children, they expect to be waited upon pleasantly as well as promptly. And there is scarcely anything that jars on their feelings so much as to be disappointed in this respect. If it be a woman she stamps her pretty little foot and vows she will never enter Blank's store again. And when a woman says "she won't, she won't." If it be a man who has been offended he will probably say some strong things to his better half when he gets home and inform her that when she wants any more goods from Blank's she had better go for them herself. If he "rules his own household" he will not only refuse to go to Blank's himself but will, in all likelihood, abjure his wife from going there. A pleasant manner towards customers is a qualification that every merchant should demand of his clerks. Merchants and their clerks have no doubt a good deal to bother them. Here is a customer that will keep you trotting attendance and then not make a purchase. There is another who is always finding fault, and without apparent reason, while another persistently tries to beat down in price, telling you probably that it can be got for so much at your nearest competitor's. Under such and similar circumstances it is difficult to preserve the spirit of an angel or the patience of a Job, but that is what is demanded, nevertheless.

* * *

A bill to shorten the limit of time to ten years when action may be taken upon the covenant in a mortgage has been read a second time in the Ontario Legislature. The limit is now twenty years. And the promoters of the bill have no doubt been influenced by the experience of Toronto during the past year or two. To every mortgage there is a clause in which the maker covenants to see that the conditions there entered into are carried out. As everybody knows Toronto has during the last two or three years been reaping the whirlwind of a real estate boom. When the slump in values occurred many men found themselves burdened with property they could not realize upon, or for which, even did they find a purchaser, they could not get enough to retire the mortgage. Hundreds of them could not pay interest let alone principal. Then there was the consequent foreclosures. In many instances the land had passed through more or one hands since the mortgage was made. In such instances the mortgagee often looked to the original mortgagor for indemnity. If he failed to comply the land would be sold, usually at a sacrifice, and then a demand would be made upon the latter for the difference in the price obtained by the property at a forced sale and the amount of the mortgage, plus interest, costs, etc. In the event of non-compliance there was the inevitable writ. By this means numbers of men who thought themselves even wealthy suddenly found themselves penniless. Never dreaming in the boom time, that there would be any difficulty, some speculators were on covenants for, in the aggregate, enormous sums. One well-known legal man was reputed to have his name to covenants to the extent of over a million dollars. But whatever the amount might have been he found it necessary to take a trip to Eng-

land to get the necessary assistance to tide him over. In other instances, where the prospects were good, the banks came to the rescue by granting periods of extension spreading over one, two and three years. In the avalanche were swallowed up numbers of business men.

* * *

Then it was that the innocent-looking covenant clause, of whose existence some had forgotten and others considered old-fashioned and harmless was found to be a pretty effective weapon when mounted and put into operation. With this discovery came an agitation for an amendment to the law. Some went to the extreme of advocating the expurgation of the covenant clause. But no law could prevent two parties entering into an agreement, one of whom covenanted to pay the other for value received. Even, however, did it come within the province of the law capitalists would demand higher rates of interest to compensate them for the decreased security. Some of those who took the radical view boasted that they did not care even if the rate of interest was increased so long as they got the obnoxious covenant clause wiped out. Others again desired that the clause should remain as at present, but that its life should be limited from five to ten years. The men who took this view were usually of the more responsible class of citizens, and it is their views that have been crystalized into the bill now before the House. Ten years seems to be a reasonable limit to the life of a covenant, especially in view of the fact that a note is outlawed at the expiry of six years, and, as the Hon. Mr. Fraser, who at first strongly opposed the bill, is now in favor of it, there is a probability of its being adopted. It will, of course, not be retroactive, and those whose names are already on covenants will receive no benefit. It is future covenant makers that will reap the results of the present sowing.

"TREATING" CUSTOMERS.

Customs are ever changing. It is noticeable in the commercial as well as in the social world. In the one the process may be slower than in the other, but it is nevertheless going on with irresistible force. One instance will at the moment suffice. Not many years ago the idea was common that treating customers was part and parcel of a commercial traveller's duties. A glass of grog or a bottle of wine or beer was necessary to wash away obstacles that may have been in the way of securing an order. The greater the obstacle or the more porus the customer the greater was often the quantity of liquor consumed, and this usually had to be topped off with a choice Havanna or two. Not unfrequently this would be the introduction to a drunken orgie, and sometimes a night of gambling. The condition of both seller and buyer the next morning to do business is obvious. The custom was even then looked upon as pernicious, but it was thought to be a necessary evil which, like a dose of bad medicine, had to be swallowed. But with the spread of the temperance sentiment came a movement to at least curtail the liberality of the traveller, and the result is a marked change compared with even ten years ago. True, the system still obtains, and, to a more or less extent, always will, but its excesses are by no means as frequent.

Houses to-day would not—in fact, they could not—countenance the excesses of the past. And for more reasons than one. Competition is keener, and, what always follows, profits smaller. To meet this falling off in the profits there must of necessity be a pruning of expenditure, and of the "mouldering branches" none are probably more accessible than that of treating customers. Then the country is overrun with an army of commercial travellers. They are usually the best men the respective houses can put on the road, and are well-trained, wide-awake, and pushing. In the face of this it stands to reason that every house demands sobriety and strict attention to business on the part of their travellers. If the first does not obtain, it is obvious that the second cannot. And it is plain that tarrying long at the wine cup with customers does not tend to cultivate either of these desirable qualities.

When the wholesale house is putting a price on goods a certain percentage has to be allowed for travellers' expenses. Although treating customers is being frowned down, yet the amount still spent in this way is, in the aggregate, large. It is obviously then in the interest of retailers themselves that the practice should become obsolete, for it is they after all who have got to pay the piper. In other words, the merchant who shares a bottle of wine or beer ostensibly at the traveller's expense is in reality paying for it himself. There are probably some merchants who will not agree with this. In fact we have in mind at the moment at least one country dealer whom we fancy will not. "Ain't you going to buy us a bottle of wine?" or, "Ain't you going to buy us a bottle of beer?" is the stereotyped query he keeps hung up for every drummer. And as he is a big buyer he invariably succeeds; but, of course he pays for it himself in the not drin khelp him and all who do to not drink help him and all who de to reimburse the house that provided the means for tickling his palate. Some may say that the wholesaler would reap all the benefits from a decrease in expenditure. But the keenness of competition may be trusted to prevent him from appropriating at least the whole of it. Aside, however, from this view of the matter, the practice of treating customers is unbusinesslike and pernicious in its results, and the sooner it becomes obsolete the better for all concerned.

RESISTENCE OF BENDS IN PIPES.

The resistance offered to the flow of any liquid by bends in pipes, is well known, but is too seldom considered in the installation of machinery. The capacity of pumps is often decreased greatly by too great a number of short bends in feed and suction pipes. Similar effects are noticed in steam pipes, but in the case of either liquid or steam the resistance offered by the bends is usually overcome by an increase of pressure, at a loss of fuel and greater wear and tear on the machinery. An expert pipe fitter can nearly always overcome the greater part of such loss by making long bends in the pipe, where there is sufficient room for them, which should always be provided, and although the job may not appear as neat to the eye of those accustomed to the use of square ells, yet the beauty of the longer curves is apparent to those who are not prejudiced in favor of the old-style fittings.

Cast iron fittings should be avoided wherever possible, and instead the pipes should be bent to conform to the requirements. Bending pipe is not a very difficult matter if a person goes at it in the proper manner, for they can make long bends that will serve the purpose exceedingly well, and not decrease the area of the pipe appreciably, as would be the case if shorter bends were employed.

In the use of ammonia and some other substances the ordinary style of fittings are not suitable on account of the leakage which would be produced; consequently bends are preferable, and as they are easily made they should be employed wherever possible, for even in ordinary feed pump work considerable will be gained by such arrangement.

In bending pipes the bends should not all be made at one heat, as it is almost impossible to do so to good advantage unless a special device is employed for the purpose; but by laying off that part of the pipe where the heat is to occur, several heats should be taken and short bends made at different places along the length, giving a fine contour, retaining the area of the pipe, and making the angle of the pipe just what is required. More long bends and less ells should be used in pipe fitting for steam and water. —Stationary Engineer.

MINERAL PRODUCTION IN CANADA.

The Canadian geological survey department has prepared tabulated statistics showing the mineral productions every year from 1886 to 1892 inclusive, and a study of the figures shows that while there has been a steady increase in the mineral production, on the whole it is small compared with our mineral wealth. The production of copper shows an increase from $354,000 in 1886 to $1,160,740 in 1891, but it fell to $925,589 in 1892. Gold started with $1,330,482 in 1886 and the output has declined year by year, until in 1892 it amounted to $900,483. The silver production in 1886 was $209,090, and steadily increased till 1890, when it was $402,662, then declined to $264,510 in 1892. Iron ore to the value of $126,982 was produced in 1886, and has slowly increased with some fluctuations to $142,005 in 1891; in 1892 it went up to $254,206. Nickel statistics are given only for the last three years. The figures are $933,282, $2,775,976 and $3,513,339, a very gratifying increase. The coal production shows an increase. In 1886 the value of the output was $5,017,225; in 1891 it had gone up to $8,144,247, but fell last year to $7,181,610. In mica the output in 1886 was $29,008, and it has steadily increased to $100,923 in 1892. The phosphate production, on the contrary, is decreasing. In 1886 it was $804,338 worth; in 1891 $241,603; in 1892 $157,424. The total output of metallic ores in 1886 was $2,021,549; in 1890, $3,570,685; in 1891, $5,551,195; in 1892, $5,807,049. The increase is almost entirely from nickel; most other minerals showed a decrease last year. The non-metallic ore production was $9,096,719 in 1886; $14,359,174 in 1891, and $13,334,267 in 1892, the largest increase being in coal.

EXEMPTING PERSONALTY.

Mr. Water's bill to amend the Municipal Act was before the Municipal Law Committee of the Ontario Legislature Wednesday, and excited much interest. The bill provides that personal property shall not be assessed, but instead thereof the income derived from it. The injustice he sought to remove arises in this way:—A merchant who carries $10,000 stock, which he has paid for, is assessed for the whole amount, while another merchant with the same amount of stock, which he owes for, does not have to pay a cent of taxes. Both do the same business, but the burden falls on one. Mr. Waters would remedy the injustice by taxing the net income of each business irrespective of the stock. Messrs. Paul Campbell, Hugh Blain, G. H. Bertram, Toronto, and J. W. Bowlby, Woodstock, appeared for the wholesale merchants, and spoke in favor of the bill. They said it was unfair to tax the merchant on his stock when the stocks of others were exempt. Taxation, they thought, should be imposed on real estate. Dr. Barrick and Mr. Robert Jaffray strenously opposed the measure. They contended that real estate men now pay ten times as much as other classes of the community in taxation, and that the effect of the bill would be to increase the tax on the farmers. M. D. R. Wilkie, of the Imperial Bank, said that the bank had 7,000 or 8,000 small bank accounts in Toronto alone, and that to tax these accounts would be to tax the more saving of the depositors. The committee adjourned after hearing the views of the people interested.

LABOR STRIKES IN ONTARIO.

Considerable attention was given during 1892 by the Ontario Bureau of Industries to labor matters. A batch of Circulars were issued to the various unions and assemblies soliciting information, but the answers were far from numerous. Eighty-seven returns were received, and of these only fifty were useful. One subject on which the bureau sought information was the number and result of the labor strikes in Ontario since 1888. Altogether eleven strikes and five lockouts were reported. Of the strikes six were successful, three were unsuccessful, one was doubtful, and one is undecided. The strikes were among the following trades:—Cigarmakers, in 1888, 1891 and 1892; iron moulders, in 1889, 1890, and two in 1892; painters, in 1888; stonemasons, in 1890; tailors, in 1890, 1891. The following lockouts were reported:—Iron moulders, two in 1890; K. of L, custom shoemakers, in 1889; painters and decorators, in 1891; and printers, in 1888.

WAGES IN THE IRON TRADE.

The sensational reports set afloat regarding wholesale cuts in the wages of iron and steel workers, especially the iron and steel sheet-mill men, were wide of the mark, so far as facts are concerned. The horizontal reduction said to be in contemplation by the Iron and Steel Sheet Manufacturers' Association, and which was said to be ready for a beginning in the form of a scale at Tuesday's meeting, will not be given life because of a premature sensation. The Sheet Manufacturers' Association were said to have decided upon a new scale for the coming year that would be materially different from the one now in force, and that the change in wages would amount to 10 per cent. at least. Yesterday was the time designated when the work of revision was to begin. The meeting of the manufacturers was held, but no new scale was formulated, none was begun, and that work will not be taken up until next month. It may be said further that no scale will be prepared which will differ in essential points from the one in use. —Pittsburg Commercial Gazette.

ENGINEERING AND LITERATURE.

One of the most interesting speeches given at the recent annual banquet of the Institution of Civil Engineers in London was that of Prof. James Bryce, M.P., the eminent historian and author of "The American Commonwealth." Mr. Bryce, in replying to the toast of "Literature," said that he felt a little difficulty in speaking, due to the apparent remoteness of literature from the work and business of the Institution of Civil Engineers. Literature must appear to them, as practical men, a vague and unsubstantial thing, and he could not even find any points of similarity in the results which the two professions of engineering and literature produced upon those who followed them. Engineers were nearly always men of great wealth, whereas most literary men starved in their garrets. And if he came to the great branches of literature, if he began with the highest form of literature—poetry—he found what seemed to be an antagonism between it and engineering. Wordsworth was anxious to keep engineers and railways connected with them out of his Lake Country, and Lord Tennyson was no less anxious to keep them out of his end of the Isle of Wight. He believed that our two great living poets, Mr. Swinburne and William Morris, were of the same opinion as the two last laureates. They might perhaps consider that they had met with better treatment from the writers of imaginative fiction, whom they had enabled to transfer their characters from place to place and give them an opportunity of striking scenes in railway and colliery accidents. He had never yet heard of an engineer being represented in a novel as a villain. Clergymen were often represented as hypocrites, lawyers as betraying the interests of their clients, doctors as poisoning their patients; but he had never yet read in a novel of a wicked engineer, not even if that engineer happened to be a baronet, and they knew, he said, that of all grades of society baronets were most frequently wicked men in novels. Engineers, in changing the face of this globe, were, he said, supplying new materials for the historian and the student of economic science, and were creating new factors in commerce and the history of commerce. They pierced mountains, changed the course of rivers, and connected islands to continents. There was perhaps another aspect in which he might compare engineering with literature, and it was by their work they developed and represented one side and aspect of the life and efforts of an age, as literature did another side and another aspect. Literature claimed to be the fullest and the truest exponent of the thoughts and emotions of each generation. Literature was the record by which each generation transmitted its intellectual life to those

who were to come after it, and similarly the engineer, inscribing upon the face of the earth in enduring characters of stone and iron the records of his skill, was handing down to future generations one great part of what our age was doing, and making it memorable and intelligible to them. As ancient Rome had left for herself a perpetual memorial, not only in the enduring influence of her law, and the works of her great poets, but also in the roads and bridges and aqueducts with which she decked her empire, and which had been constructed with such strength as scarcely to feel the touch of time, so our production in this Victorian age would live into a distant future, not only by the brilliance of its literature, which, as we hoped, was destined to last as long as the calculations of Lord Kelvin would allow our globe itself to last, but also by those monuments of skill and industry with which British engineers had filled not only this island of ours, but our wide dominions beyond the sea.

MINING MACHINERY.

A meeting of the committee of the General Mining Association of the Province of Quebec, appointed to consider a statement of the various kinds of mining machinery manufactured in Canada to be filed for reference in the Department of Customs at Ottawa, was held at Sherbrooke, Que., Friday. There were present John Blue, Eustis Copper Company, Capelton; James S. Mitchell, Beaver Asbestos Company, Sherbrooke; J. Burley Smith, British Phosphate Company, Glen Almond, Que.; George R. Smith, Bell's Asbestos Company, Thetford; L. A. Klein, American Asbestos Company, Black Lake; F. A. Halsey, Canadian Rand Drill Company, Sherbrooke; John M. Jenckes, Jenckes Machine Company, Sherbrooke; B. Rising, Moulton Hill, and R. T. A. Bell, editor Canadian Mining Review, Ottawa, secretary. After the discussion of the operation of the act it was resolved on the suggestion of the secretary to recommend that the association memoralize the Government to extend the present law so as to read, "that all mining, quarrying, concentrating, smelting, and refining machinery and appliances of a class or kind not manufactured in Canada be admitted free of duty." The present law is restricted to the admission of such machinery as is used for the extraction of the minerals only. This change in the law, it is claimed, will be of immense benefit to the development of the mineral industries of Canada in as much as it would permit the importation of a larger variety of machinery used in the treatment of ores and minerals, not at present manufactured in the Dominion. A statement of the various classes and kinds of mining machinery manufactured in Canada was carefully considered, and after some discussion was adopted. The statement will be forwarded to the various Canadian mining associations for approval and adoption before being forwarded for reference to the department.

SHEET METAL WORKERS.

If it is true, as many of our correspondents say, that the educated workman is becoming more scarce, is it not the employer's fault to a considerable extent? In the sheet-metal trade the conditions are very much changed from even a quarter of a century ago. Instead of the old-time apprentice taken to learn a trade because he was not quite competent to become a professional man, but could turn a crank and grind out tinware, the present need is for a class of young men educated fairly, and able to use drawing instruments and above all possessing the mental ability and mechanical taste to enable them to work from drawings and do a different piece of job work every day in the month. Such a person can get familiar with the use of the tools and machines in a very short time and make himself profitable from the start. The conditions needed to bring this class of men into the trade lies very much with the employer. A pleasant workshop, light and clean, a foreman who will instruct, but who at the same time will give the boy to understand that he must use his own brains for all they are worth, and pay that is graduated with advancement, will attract the better class of young men into the trade. —Metal Worker.

HEATING VEHICLES.

There are those living who well remember when many country churches were either not heated at all in winter, or so imperfectly warmed that they might nearly as well have been left entirely cold. The foot-stove, as it was then called, exists no longer, except perhaps as a relic of a past order of things. Not one in 10,000 of the younger generation has ever seen this contrivance. It usually consisted of a sheet brass or tin case, perforated in fancy patterns, and having a receptacle for live coals of wood in the interior. Air entered to support combustion, and gases fo combustion found egress through the holes in the case. This foot-stove was placed under the feet to keep them warm in church, while the good minister, as was his wont in those days, devoted much of his eloquence to what under the circumstances was almost an alluring description of unquenchable fire. People were then also in the habit of using foot-stoves to keep the feet warm in vehicles in cold weather. Heated blocks of wood wrapped in a woollen blanket, hot bricks, or jugs of hot water, corked and wrapped in the same manner, were common makeshifts, used as substitutes for the foot-stove. Since the advent of railroads attention has been given to the warming of large vehicles; cars on steam railways and later cars drawn by horses on street railways have been rendered quite comfortable by artificial heating. There is still room for improvement in methods. Within a few years the substitution of steam and hot water heating appliances for stoves in cars has been made the subject of numerous patents, and some of these have gone into extensive use. There seems no reason why smaller vehicles cannot be practically warmed, and at the same time ventilated without the discomfort of opening windows in cold windy weather.

At least this idea has been thought feasible in Germany. A patent for an apparatus for heating vehicles has been issued in that country, and a recent trial of the invention in Berlin is said to have given satisfactory results. The application was made to that kind of a carriage known as a brougham, the body of which is quite low, so that it is easy to step into it from the ground. The fuel used by the German patentee is petroleum oil, carried in a small cistern on the roof of the carriage, and a sort of lamp placed under the seat between the hind wheels is fed by a tube from the reservoir. The descriptions of the apparatus yet seen do not set forth the manner in which air, after being heated, is introduced into the carriage without also carrying in the smoke of the burner, and, altogether, the contrivance does not seem to be an arrangement that a Yankee would be particularly proud of. Notwithstanding its crude character, it contains a hint of a want in this country and in all cold climates; and it points to the most convenient fuel for supplying the want. Country physicians often suffer much from cold during their long rides in winter, and a cheap practical method of heating covered vehicles would be appreciated by many other people as well. —Metal Worker.

SHORT BUSINESS POINTERS.

The best credit is no credit. But when you cannot do a strictly cash business, truthfulness is next to cash. Ability and integrity are corner stones. Laying ever so deftly is no sign of enterprise.

Watch the market and all its changes as the seasons go by, and try to be first in the introduction of new goods that promise well.

Build up your paying and payment trade by selling such goods as reasonable as you can afford. Then your patrons will tell their neighbors and friends.

Do children readily recognize you as one who is interested in them, and will they remember you as one who has treated them kindly? Such are good advertisers. Can't promise profits on the other treatment.

It is nice to have credit at the bank, to be able to get your note discounted any time, but far better is discounting your bills for net cash, even thought hey be not so large.

Be courteous, there's wealth and comfort in it. Be natural but be courteous, even to parting with an impudent employee as though he were a gentleman.

Steady advertising in reliable channels has the test of the best and the longest experience to back it.

STOVES and TINWARE

A HISTORIC STOVE.

Stove history is interesting as well as any other kind of history. This is demonstrated by a study of it. The accompanying cut furnishes an idea of what some of the stoves were like before the United States declared for independence. For the information concerning it HARDWARE is indebted to N. Y. Metal. It is claimed to be the oldest stove in the world, and is something that is preserved as a relic in the capitol of Virginia. This stove goes back to the history of the industry in America. It was made in England in 1770, by Buzaglo, and presented to the colony of Virginia by the Duke of Beaufort, and used to heat the Houses of Burgesses, Williamsburg, Va. As will be seen by



glancing at the cut there was a considerable effort of ornamentation at the time this stove was produced. Some ambitions scrolls and figures are used as well as coats-of-arms, emblems, etc. It was the pride of the manufacturer of the period to turn out handsome art goods, and to quote the language of the founder who cast this stove, he said: "It excels in grandeur anything ever seen of its kind, and is a masterpiece not to be equalled in all Europe." What this founder would say to the modern art stove if he could stand before the two side by side at the present time, of course we can only guess. Certain it is that the founders of the present day have just as much confidence in the goods of the period as this founder had in goods made one hundred and twenty years ago.

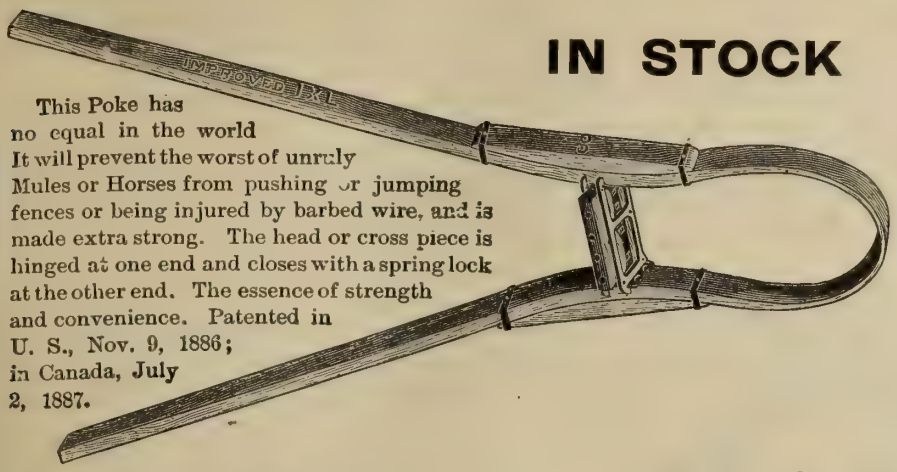
DRAFT OF CHIMNEYS AND STOVES.

An article on the draft of chimneys might, writes a correspondent of N. Y. Metal, very properly be modeled on the plan of the famous chapter in regard to the snakes in Ireland, which consisted of the words: "There are no snakes." In the ordinary acceptance of the term there is no such thing as a "draft" to a chimney. The common, I might say the universal, idea is that a chimney has an action upon the air in it, somewhat similar to that of a man pulling at the upper end of a chain. The word "draft" comes from our word "draw," which means "to give motion by pulling;" "to cause something to move toward the force applied." Now, this is precisely what a chimney does not do, for the force is applied at the bottom, and not at the top. Again, it is the common theory that a current of air in a chimney is always upward. This probably comes from the fact that at those seasons of the year when a downward current is possible nobody has, in ordinary circumstances, anything to do with a chimney. It is from these mistaken uses of words that the mistaken idea in regard to what is possible with chimneys prevails almost everywhere.

First, then, the current of air in a chimney is produced by a push of the cold air at the bottom or outside of it. The air within the chimney is heated. This makes a given weight of it occupy more space, and consequently the air weighs less for a given bulk. Weighing less, the cold and heavier air lifts it just as the water lifts a piece of wood which is put into it. This, of course, holds true not only in chimneys, but in flues, stove pipes or in any other place where a difference in the temperature can exist. It is most forcibly observed in a great fire, where the inward rush of the cold air is very marked. In old times it was an unheard-of thing to find fireplaces, which would never "draw" when all the doors and windows were shut. In other words, although the air was heated in the flue there was no opportunity for a sufficient quantity of cold air to enter and push the light air up.

Heat is the motive power which expands the air inside of the fire, and it is lighter just in proportion to the degree of expansion, but a reversed draft, or, correctly speaking, a down current, can be at any time set up in a chimney by making the chimney cooler than the external air. If any one needs proof of this it is only necessary to observe the action of chimneys during the months of June and the early part of July, when the external air has become very hot and the houses still remain cool. Any chimney which is unused, or is artificially heated, will then show, if tested, a downward current of air, the strength being just in proportion to the difference of temperature between the chimney and outside air. In a sudden hot spell this is frequently very great. At such times it is almost impossible to start a fire in a stove. The true cause of this is dimly recognized when people say, "the chimney is cold, and we cannot start a fire until it is warmed up." What I have said explains many things which are usually regarded as extraordinary. In very many cases we meet with chimneys which no form of chimney cap is capable of improving. It explains, too, why some chimneys always smoke without a chimney cap and yet upon occasion behaved just as badly after the application of the cap as before. A cap may act in one of several ways—it can stop down drafts, and thus cure a smoky chimney which smokes from this cause only; it may help a chimney by making a vacuum when the wind is blowing over it, on the principle of an ejector. Recognizing this, it is easy to see that in calm weather the chimney cap is unable to increase the upward current in a chim-

IMPROVED I. X. L.



CHAMPION.



IN STOCK

This Poke has no equal in the world It will prevent the worst of unruly Mules or Horses from pushing or jumping fences or being injured by barbed wire, and is made extra strong. The head or cross piece is hinged at one end and closes with a spring lock at the other end. The essence of strength and convenience. Patented in U. S., Nov. 9, 1886; in Canada, July 2, 1887.



DICTATOR.



CLIMAX.

Also—
The Pearson
No. 1 & 2.

H. S. Howland, Sons & Co.,
WHOLESALE HARDWARE, - - 37 Front St. West, TORONTO.

Carriage Paints . . .
Superfine Coach Colors
Varnishes . . . . .
Linseed Oil . . . .
Turpentine . . . . .

Our Pure Prepared Paints
Are the
STANDARD CANADIAN MAKE
EVERY PACKAGE GUARANTEED
THE TORONTO LEAD & COLOR CO. LTD
14 16 18 & 20 PEARL ST
TORONTO.
SPECIAL ATTENTION AND PROMPT SHIPMENT.

White Lead . . . .
Colors in Oil . . . .
Oil Stains . . . . .
Harness Oil . . . .
Carriage Top Dressing
Etc., Etc. . . . .

ney. Sometimes chimney caps fail when applied to small buildings set at angles of large ones. They sometimes fail when placed upon a building where the current of air is capable of increasing the actual pressure on one side of a building and decreasing it on the other.

Some years ago, Prof. Plympton, of Brooklyn, in experimenting with aneroid barometers upon the Brooklyn bridge, found that when the wind was blowing there might be a difference of pressure at the two sides of the same tower which could be distinctly read upon his instrument. If I remember rightly, it amounted to as much as ten or twelve feet difference in elevation. If a strong wind, without directly touching or affecting a chimney, produces an increased pressure upon the roof and sides of a house, it is not reasonable to expect that a chimney cap could prevent this pressure from reversing the current in the chimney. The air would simply be forced out of the leeward side of the house. A clear understanding of how the current in a chimney is produced leads to a better understanding of why leaks or openings into chimney or stovepipe stop the draft to a greater extent than the quantity of air would seem to justify. It is the entrance of cold air which cools off the flue and thus takes away the motive power.

A SHORT HISTORY OF STOVES.

The cook stove, as well as that for heating, is in its comparative perfection a matter of the past fifty years. To those who can go back to that time the expedients by which our grandmothers brought their edibles to such a state that they were even digestible would be a marvel to those who never had the fortune to have the experience of genuine camp life. The tin baker and the bake kettle have passed away, and through many evolutions the modern range, with hot water attachments, and the folding gas stove, have left little to be desired. The stove is an invention, however, of antiquity, traces of it having been found in the historical annals of China and fragments unmistakeably pointing to such an article were found in the ruins of Pompeii.

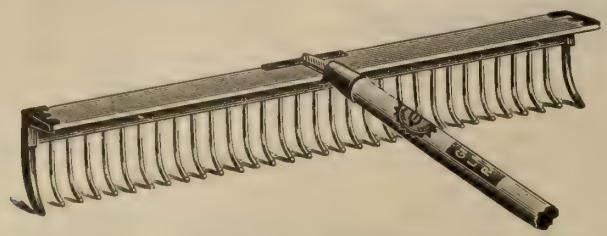
Large, clumsy stoves were made at an early day in Holland, Germany and England, and to this day in those countries the same forms and styles to a considerable extent are used. In Italy at the present time, in small towns, an iron box resting on the ground, with side handles and rude holes cut for draught, is used. In some cases even iron is not employed, but in its place terra cotta and stone are substituted.

The stove in America is chief in its civilizing tendencies. To get a good stove in the country districts is the first thought of a married couple, and the advantages of every available pattern are fully discussed in advance.

Competition is keen and active and the only way to meet it successfully is to buy from the best houses, and at lowest prices.

A RAKE THAT IS A RAKE.

The accompanying cut is an illustration of the "Gibbs" Lawn Rake, a full stock of which is carried by H. S. Howland, Sons & Co., Toronto. The "Gibbs" rake has the correctly formed teeth to clean lawns quickly and do good work without digging up the sod or clogging with grass or leaves. A backward motion of rake without raising it



(the usnal way of raking) cleans all the teeth perfectly. The teeth will never work loose in rake-head nor come out. It has the only closed hood, which prevents grass, etc, from passing over it, so that one passage of the rake perfects its work. In raking lawns it is of special value. The handle socket is made of malleable iron, as is also the end runners; both are securely fastened to head.

A DROP IN MATCHES.

Competition in the match trade of Canada has been pretty brisk of late, and the E. B. Eddy Co., of Hull, Que., have added new interest to it by announcing a substantial reduction in price and an important change in the matter of deliveries.

In "Telegraph," "Telephone" and "Tiger" a reduction of 20 a case is ordered, usual discounts and terms. But the most important change of all is the announcement that the firm will pay freight on five case lots of their own make, where heretofore the privilege was only accorded purchasers of 25 case lots. Carnivals, Dominions and Stars will be sold to meet any and all competition. Circulars will be in the hands of the trade in a few days. Further particulars can be obtained from Thomas A. Weldon, manager of the Toronto branch, 29 Front street west.

SENSIBLE GAME COMMISSIONERS.

This year the game and fish commissioners want $10,000 to enable them to carry on their work. In their repot, which was presented to the House Friday, they make the following suggestions for amendments to the law: The clause prohibiting the killing and sale of fawns should be struck out, because when taking long or snap-shots sportsmen cannot distinguish between a fawn doe or young buck; the law should provide that wood-hares may be killed at sight if found damaging fruit trees or other property; trapping of musk rats might be permitted during April; a bounty of $1 per head should be paid for the destruction of full-grown foxes, and fifty cents per head for young ones; the clause of the Game Act providing that no person shall take or kill more than one hundred ducks in a season should be repealed, for the reason that it cannot be enforced; the commissioners should control the issue of permits for the killing of insectiverous birds and collections of eggs for scientific purposes; the game and fishery laws should be consolidated; masked hunters should be prohibited; foreign sportsmen should be required to take out a license, no matter for what they desire to hunt, and wardens should not be allowed to issue permits.

KNOWLEDGE OF THE GOODS.

One good clerk is worth half a dozen poor ones, writes a correspondent of N. Y. Metal. The one is a help to business, the other a detriment to it. The former relieves the proprietor of his attention to such duties as are entrusted to him; the latter, by mistakes and ignorance, makes it not only necessary to look after him, but also after work entrusted to him, to see that it is properly done. A good clerk should have the faculty of acquiring information from observation and daily consideration as to how he can increase his sales and keep goods in order. He should have the ability to discriminate individual character quickly, appreciate the necessities of the case, be quick of speech, and possess a wide variety of information showing versatility of mind. He should also have a comprehensive knowledge of the goods he sells, their make and advantages over other goods of a similar character, and the uses to which they are to be put by the buyer, suggesting the peculiar advantage of one and the disadvantage of the other. He should know their defects also, that he may apologize for them. He should be of good address, and be able to express himself clearly, and should not only wish to sell goods, but he should have the desire to satisfy his customers, and have willingness to show more goods than are asked for.

A clerk fails to become useful when there is a reluctance to show goods, or if his speech is rude, or when he thinks himself of more importance than the buyer, or is arrogant when the customer does not readily take the goods shown him, and through folly enters into an argument with him. The best clerks are those who are interested in the welfare of the proprietor, keeping his interest in view, and doing things which he sees need attention without waiting for someone to tell him what to do, and not being impatient if detained a little while after the noon or evening hour.

The proprietor soon notices these different qualifications, and is naturally willing to pay more salary and to retain him longer if the clerk shows a personal interest. Business men have but poor opinion of the clerks who can never see anything to do except what they are told, and are constantly watching for the end of the day to come round.

There is the ideal clerk that knows his business in all its branches, always on hand meeting customers with pleasant words, and being constantly on the alert to see that his customers are promptly served, and keeping the best interests of his employer in view, and making himself so useful that he is quickly missed if detained by sickness from being at his post of duty.

With what difference does the proprietor look upon the everyday clerk who thinks it an effort to get to the store on time in the morning, with the hope that his companions have done the sweeping, dusting, and arranging of goods at the beginning of the day, and waiting on customers as though it was a duty very much to his distaste, and is only watching for the signal that will call him from labor to refreshment. This latter class can hardly expect to command a very good salary or be retained beyond the press of the busy season. Years of service do not make good clerks in all cases, as many young men, but a short time in the service, by their hard-working, pains-taking, and knowledge-seeking qualifications, find their reward in an advance of salary, and experience little trouble in finding and keeping a situation.

So I would say to the young man who expects to succeed as a clerk, upon first engaging as such with a firm new to him, to spend what time he can in going through the stock, examining the goods, remembering their location, finding prices, and posting himself on any goods he may find with which he is not familiar. When not otherwise engaged, see that the stock is kept in good order and samples clean by changing and making a memorandum of goods that are nearly out of stock.

Be among the first to show a willingness to wait on customers, study their wants and the wants of your employer, and your success is assured.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOT NAILS, ETC.
Hamilton. Ontario.
SP

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friends against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

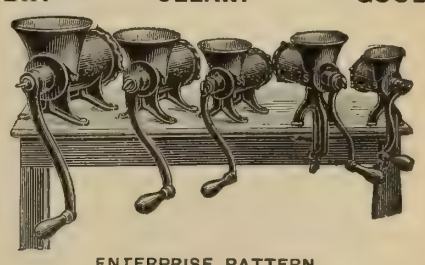
THE BEST
English Sporting Gunpowder
USE THE
"ALLIANCE"
PRIZE POWDER
—Made only by—
Pigou, Wilks & Laurence, L'd.
11 Queen Victoria St., London, E. C.

Always obtainable from
Frank S. Taggart & Co., Toronto.
The Hingston-Smith Arms Co., Winnipeg
John Barnsley & Co., Victoria, B. C.

Canada Iron Furnace Co., Ltd.
Manufacturers of
CHARCOAL PIG IRON
MONTREAL.
BRAND **"C. I. F."** THREE RIVERS
PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

NEW. CLEAN. GOOD.



ENTERPRISE PATTERN.

Meat - Cutter

White Enamelled Inside, and Brown Japanned outside.

For sale by Leading Wholesale Houses.

VIEWS AND INTERVIEWS.

J. W. Kennedy, one of Georgetown's hardware dealers, was in Toronto Wednesday. He told a friend of mine that he had left Georgetown to get out of the rain. But it strikes me that it was out of the frying pan into the fire—or rather out of the shower into the waterspout—that he got.

* * *

"The railway people have issued a special commodity tariff to us," smilingly remarked a wholesaler to me Wednesday. "It is on heavy hardware, cordage, binding twine and soforth. It is about 20 per cent. lower than the April 3rd tariff. It took effect on the 15th—last Monday."

* * *

During the last few days I have had chats with drummers whose routes lie east, west and north. They all tell me that the farmers are busy seeding, and that the country towns and villages are in consequence practically deserted. "But the crops, they are looking fine, and the prospects are good for the summer trade," was in effect what about the whole of them said to me.

* * *

"Did you hear the latest regarding the establishment of rolling mills here?" said a manufacturer to me Thursday. "Well, a friend of mine who seems to be on the inside track says that Mrs. McDonald, who you will remember proposed to establish works at the old Parkdale pumping station, has secured fifteen acres of land just south of the New Toronto station, and is going to locate rolling mills there. I tell you, that woman is progressive, and, what is more, has got a great business head," admiringly remarked my friend as he walked off.

* * *

"There is one point in which the manufacturers of this country are lacking," said a hardware man to me Thursday. "They don't anticipate enough. For instance, say we order 500 shears, or in fact almost anything you like, they'll make that 500 and no more. As a result, in a busy season like this they get behind in their orders. Why, orders that we placed a month ago for nails have not been filled yet. And the lame excuses these manufacturers often send in when we begin to push them! The man that did this and that part of the work has got his finger cut off, or the man who painted a certain part of the article is away, or that the water is out of the canal. O, pshaw! I get disgusted. Why don't they have more push," he pertinently added.

* * *

"I don't know whether you are aware of it or not," remarked a wholesale man, "but there is a considerable quantity of glass on board the Wandhram, ashore below Father Point, consigned to Toronto and Montreal houses. As a result there is likely to be a shortage in some sizes for a little time. The Hurona, which also ran ashore near the same point, but was subsequently got off, also had a lot of stuff for Toronto and Montreal, and as far as some of the Toronto houses are concerned, I know they have refused to accept their goods owing to their being damaged by saltwater."

BYSTANDER.

SHIPBUILDING ON THE LAKES.

The Western shipyards are turning out some big and strong steamships for mercantile service on the lakes. Only last month one of them, which has a carrying capacity of 4,000 tons and a keel measurement of 360 feet, was launched at the port of Bay City on Saginaw Bay, in Michigan, a State which borders upon four of the great lakes of the West. Another twin-screw steamship of the same size was launched from the same yard in March, and yet another is under construction, each of them with quadruple expansion engines of 7,000 horse power and a battery of twenty-eight tubular boilers. The two already afloat are fitted up, as the other will be, in first-class style for the carriage of passengers, and are to make fourteen miles an hour under a carriage of 4,000 tons. These are said to be the largest steamships yet built at any lake port, but several of about the same size, tonnage and power are on the stocks at Cleveland. The commercial marine of the lakes has grown wonderfully within the past ten or twelve years, and the shipyards of Bay City are especially thriving just now.

FIGHTING THE HARROW TRUST.

E. E. Whipple, of the Whipple Harrow Co., of St. Johns, Mich., has begun in the United States Circuit Court in Pittsburg a civil action for $1,800 against B. A. Hileman, a hardware dealer of Kittanning. This action is important in that it is the first ever ever brought under one important section of the Sherman Anti-Trust law, and is to be followed by many others, the object being to compel dealers to stop discriminating in favor of the goods of the Harrow Trust. The suits are to be brought against the dealer rather than against the Trust, because the Trust itself has forced hardwaremen into patronizing it by threats of suits against everybody who bought or sold the goods of any independent company. The bills sets forth that that this unlawful Trust was formed for the purpose of restraining commerce among the several States; increasing the price of harrows throughout the United States; excluding from the markets the harrows of all other manufacturers than those of the persons composing the Trust and driving into solvency all other persons who might attempt to manufacture harrows. It is claimed that the defendant combined unlawfully with a certain trust, combination or monopoly, organized in the State of New Jersey, and called the National Harrow Co. —Daily Commercial Bulletin.

PERSONAL MENTION.

Mr. Moore, of Bowman, Moore & Co., and the representative of Bowman Hardware Co., were paying their respects to the trade Thursday.

S. Frankel, of Frankel Bros., dealers in old material, George street, is in Germany. He is combining business with pleasure, and will not return until about October.

These country dealers were touring the warehouses this week:—Mr. Paget, of Paget & Hay, Unionville; F. Hatch, Whitby; H. A. Manning, Coldwater; George Morris, Cuelph; J. B. Eager, Aurora; A. D. Carley, King; H. Keys, Weston; J. W. Kennedy, of J. W. Kennedy & Co., Georgetown; E. Seeber, Carlsrube.

A JUMP IN SHELLAC.

The shellac market has been excited for a considerable time, and prices for the gum have advanced fully 50 per cent., and this must have the effect of increasing prices very much on the mixed article. On the Toronto market barrel lots are higher at $2 to $2.25, according to quality. Latest advices from England report the market very excited and oversold for May. Prices for June and July may be lower, but the impression is that they will be higher.

THE WIRE CLOTH SITUATION.

The wire cloth business has resolved itself into a peculiar position. To go back a year, the prices by undue competition had become so low that this year some of the mills were not started, the fear being that this season would be a repetition of the last, and probably no profits would result from any energy that was put into the business. This, of course, reduced the output to a large extent. Then the owners of the mills which did start, did so in a half-hearted way, not taking pains to furnish themselves with more than a minimum of material which was soon and unexpectedly exhausted. Then the spring was late, and jobbers did not seem willing to supply themselves in advance with stock. The picture suddenly changed. The belated spring opened, and every jobber wanted goods, and at once. The demand turned out to be larger than usual even if a short season was taken into consideration. Then the Clinton Wire Cloth Co. lost their factory; in short, there was a succession of events that have surprised the trade and delayed deliveries. The idle mills could be started were it not that the labor had scattered, and it takes four months to season a new workman after he is secured. The season generally ends in July, and the hope is entertained that by that time the supply will have overtaken the demand.—N. Y. Hardware.

CENTRES OF IRON MANUFACTURE.

The persistence of certain industries in certain localities may have struck most thoughtful observers. Numerous illustrations spring up in the mind, as, for instance, the cotton trade in and around Manchester, the engineering trade of Leeds, the shipbuilding industries of the Clyde and the North-east coast of England, and the tin-plate manufacture in South Wales. It will be said, of course, that a particular industry would naturally take root in a spot where circumstances and conditions were favorable, and that it is only reasonable and to be expected that the tendency should be for it to remain and flourish there. This is, no doubt, the explanation to a certain extent, but it does not nearly cover the whole ground. There are other influences at work, some of them of a complex nature, which we shall attempt to indicate; and there can also be little doubt that the disposition of things to get into a groove and remain there, which is a more potent factor in human affairs than is, perhaps, generally appreciated, has not been without its influence in this matter. The iron and steel industries, although more widely distributed than some others, afford perhaps a better illustration of our meaning. The large trade which has sprung up on the north-west coast of England was doubtless first attracted to the spot on account of the rich deposits of ore found there suitable for the manufacture of steel by the Bessemer process, and it has established itself in spite of the drawback arising out of the distance at which it is situated from its supplies of fuel. The remarkable development of the iron trade of Cleveland had its first origin undoubtedly in the fortunate proximity in which its vast deposits of ironstone were found in relation to the Durham coalfields. South Wales, again, it may safely be asserted, came into prominence as an iron-producing district on account of the convenient juxtaposition of ore and fuel; but, and here comes our point, it is many years since iron ore has been raised in any quantity in the principality and yet South Wales continues in some respects, at the head of the trade. In 1890, for instance, it ranked second in the production of pig iron, although the distance by which it was outstripped by Cleveland was very great; but in point of the production of Bessemer steel it surpassed considerably all other districts, having made some 160,000 tons more than Cleveland, its nearest competitor. If we take the total output of Bessemer and open-hearth steel, it still ranks second, being beaten in this case, but not badly, by Cleveland.

Now, in spite of the almost complete exhaustion of its supplies of native ore, how is it that the steel trade of South Wales continues to exhibit such great vitality? It has to get by far the greater part of the necessary ore from the north of Spain, and this ore, after it arrives at a port has to be conveyed by rail some distance up country, which are drawbacks that Cleveland and Cumberland have not to contend with, although in the latter case there is a set-off in the distance the fuel has to be carried, whilst the South Wales iron works are in the midst of one of the most productive coalfields of the country. It is difficult to avoid the reflection that but for the command which it has had of the tin plate industry, South Wales might latterly have fared very badly, although it is possible that had not that outlet been at hand, the enterprise of its ironmasters might have discovered some other means of disposing of their product. In like manner the development of the Cleveland district appears to be closely associated with the establishment of the extensive ship-building industry of the north-eastern coast. In olden times, no doubt, the first consideration was to establish the forges and bloomeries of the period where the necessary materials were most convenient; but with the vast strides which have been made in the means of communication during the last fifty years, this is no longer of paramount importance, the ore and fuel now being brought from considerable distances at comparatively small expense. Another reason which operates to no small extent is the enormous size of any important ironmaking concern now-a-days. In most cases it has been the slow growth of years, and as such is less likely to have an ephemeral existence, whilst few capitalists would be found who would now care to stake the necessary amount of capital to establish a rival concern even in a theoretically more advantageous locality. In addition to this, in established centres of the iron trade there are to be found numerous industries that have sprung up around the main one, which, at one and the same time, are dependent upon it, and contribute to its support. After all, accessibility to a market seems, perhaps, the most important consideration; for, to take one instance alone, we see agricultural implement makers established far away from the sources from which they draw their supplies of raw material, but in the midst of a district that constitutes their market to a great extent.

It is not only in this country that the tendency to which we have drawn attention is noticeable. In the United States, with all the peculiar advantages they enjoy, and with a population ever tending to fill up the more thinly inhabited tracts, we find the iron and steel trades disposed to centralize very much in localities where they have been already established some time, notwithstanding that the ore has in some cases to be conveyed a thousand miles, and the fuel and limestone upwards of a hundred miles. It seems to be a case also of subdivision of labor. Instead of Lake Superior, because it possesses vast deposits of ore, attempting to establish iron manufacturing, it finds it better to confine its attention to the economical raising and despatching to market of the ore, leaving Pittsburg to do its share by converting such ore into marketable shapes and sizes. In these days, moreover, in the great multiplicity in the various characters of steel required, according to the purpose for which they are wanted, it is necessary for a manufacturer to have access to various supplies, and this can be more readily obtained at a convenient centre than by identifying himself with a peculiar deposit, as would often be the case if iron manufacturers were to attempt to follow the ore. All these various influences have no doubt been at work to bring about a position of matters which, at first sight, seems rather opposed to the natural order of things.—Iron.

Estate Toronto Drop Forge Company

For sale by private treaty, patent for the manufacture of the Champion Iron Fence, with complete set of patterns and a quantity of stock. The fence has been long and favorably known, and orders are being constantly received for it. Full particulars on application to the undersigned.

E. R. C. CLARKSON, Liquidator,
26 Wellington st. East, Toronto.

THE

Oxford Gas Range

The latest production of the great Schneider Frenkamp Co., of Cleveland, the largest and most successful manufacturers in the world of Gas Stoves and Ranges.

See this Range before Spending your money

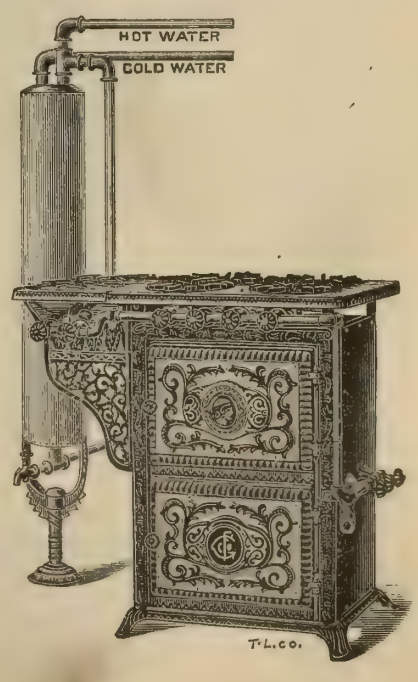
The only perfect Water Heater, will heat water faster than a coal range.

All burners are operated with Steel Needle Valves which produce sharp blue flames. The body is made of heavy Cold Rolled Sheet Steel Asbestis lined. The front and top are beautifully carved, heavy smooth castings with nickel-plated medallions and Tell panels.

Send for Price List and get our record of Water Heaters

Manufactured by

The Gurney Foundry Co., Ltd., TORONTO



TRADE CHAT

[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Tuesday.]

The latest request to come from the proprietors of the smelting works at Hamilton is that the plant and machinery should be admitted free of duty.

According to the Halifax Critic, the works of the Truro Foundry and Machine Company present a busy appearance just now. A large amount of gold mining machinery is being turned out.

H. D. Simmons, who represents in Canada the Shepard Hardware Company, writes: "The fire was a scorcher, leaving nothing but a mass of ruins in an hour and a half. Loss about $175,000; insurance $140,000.

The Record Foundry and Machine Company, of Moncton, are shipping goods to Montreal for the branch office and warerooms recently located there. A member of the company will go to Montreal to push the business there.

The lake carrying trade this spring is claimed to be absolutely profitless, the bottom having suddenly fallen out from the lack of both ore and coal seeking transportation. The trade is said to be more depressed than for fifteen years.

There is a rush of work at the Deseronto car works. A fine auxiliary car was recently completed for the Lake Erie and Detroit River Railway. Four passenger coaches for the Ottawa and Gatineau Valley Railway are being hurried to completion, as they have to be finished at a very early date.

The Bank of Montreal statement for the year ending April 30th was issued Friday. The profits for the year ending April 30, 1893, after deducting charges of management, and making full provision for all bad and doubtful debts, was $1,325,810, or $77 less than the profits of the previous year.

Before the Master-in-Ordinary the other day the claim of the American Watch Case Company against the Charles Stark Company for $64,000, was up for hearing. The claim is for damages for the non-fulfilment of agreement by which, it is alleged, Stark agreed to purchase $200,000 of the Watch Case Company's goods.

The Dominion Government has been informed that a commercial convention has been ratified between Great Britain and Roumania. Canada has the privilege of subscribing to the convention by giving notice within two years, but the Government has decided to notify the Secretary of State that it is not considered expedient that Canada should be be made a party to the treaty.

Twenty-five thousand tons of steel rails will be shipped through Owen Sound this season for branches in the Northwest. The first shipment of fifteen car loads has already arrived there and is being loaded on the steamship Manitoba. Each of the company's boats is expected to carry two or three hundred tons each trip during navigation.

Forty years ago Tuesday last the first railway in Ontario, the Ontario, Simcoe and Huron, now the Northern division of the Grand Trunk, was opened for traffic. The road was promoted by the late F. C. Capreol, who thought it would do much to develop traffic on Lakes Simcoe, Hurno and Ontario. The train that opened the road ran only to Belle Ewart.

It is announced that the well-known English shipbuilding works of Samuda Bros., on the Thames, are to be brought under the hammer. The Thames has for years been declining as a shipbuilding centre, the industry being now, as regards large vessels, transferred to the Clyde and Tyne. Belfast and Southampton, however, are both taking a good share of orders.

A test of the anti-friction properties of magnolia metal was recently made at the shipbuilding works of Messrs. W. B. Thompson & Co., Dundee. The footstep bearing of a grindstone 5 feet 10 inches in diameter and 12 inches thick was lined with this metal, and the stone caused to revolve at 241 revolutions per minute. On stopping the driving power the wheel continued to revolve for seventy minutes. The best result previously obtained with other metals on the footstep was a run of forty-five minutes.

The Rathbun Company's sash and door factory is very busy, orders being large. An order was received for 5,000 doors one day last week from England, and shipments are frequently made to Africa, Australia, etc. Three car loads of doors, sash, blind, stairing, and the complete sash shop furnishing of a house were shipped the other day to St. John's, Newfoundland. Orders have been received lately from Prince Edward Island.—Deseronto Tribune.

A new metal for bearings, presumably an alloy, is said to have some remarkable properties, among which are its great affinity for most metals, its low fusing temperature, its hardness when set, and its wearing qualities. It is called "Cauricedale metal," and melts at 500 degrees Fahrenheit, low enough for ease of working in lining up boxes, and yet high enough to prevent melting from heating bearings under ordinary circumstances. Its chief use is in lining up worn-out boxes to their original state, the affinity for the metals making this particularly easy, as no tinning is required. The metal is simply run on the bearings and it adheres with no further precaution than having the metal run free from any grease. It is melted in a ladle or otherwise, and poured into the bearing around the shaft or some mandrel, when it sets and hardens, and forms an excellent bearing metal.

Negotiations are in progress for the amalgamation of the Radial Railway Company and the Hamilton, Waterdown and Guelph Electric Railway Company. The latter hold a charter for an electric road from Hamilton to Guelph, and is opposing the efforts of the Radial company to secure a charter through the same district. The proposition is that the Radial railway projectors take $40,000 stock in the H. W. & G. road, and the latter company will withdraw its opposition and join forces with its former rival. The terms have not yet been accepted.

The nine-inch nickel-steel armor plate, manufactured by the Carnegie Steel Company, was tested at Washington last week. It represented 355 tons, and is to be used by the Amphitritre. It proved highly satisfactory, and earned a premium of $30 per ton. Two rounds were fired from an eight-inch breech loading rifle. The first shot penetrated the plate and the second passed through the plate and slightly into the backing, but no cracks were made in the plate in either instance.

The production of lead in the United States has more than doubled since the year 1880. In 1891 it over-reached the 200,000 ton mark. In 1825 the output was but 1,500 short tons, in ten years from that date showing an increase to 15,000 tons, capping the next decade at 25,000 tons. From this on to 1874 production hovered at a lower notch, with a marked evidence of improvement from 1871 to the date named. During that year it rolled up a total of 52,000 tons. Later on, deducting the lead products of Mexican ores imported, the output of metal from American ores rose from about 145,005 short tons in 1887 to 152,000 tons in 1888, and to 156,000 in 1889. It declined to 143,630 tons in 1890, but rose again to 181,254 in 1891.

Owing to the unwisdom of our government in unduly bolstering up silver and making 61 cents worth of that metal pass for a dollar, says an American exchange, counterfeiters are getting out a dollar containing the same amount of silver as the genuine and indistinguishable from the output of the government mint. In former days, when a silver dollar was worth 100 cents, counterfeiters had to use baser metals, of course, and were soon detected. But when the government itself gives a fictitious value to its coinage then it opens a fine opportunity to dishonest men to establish mints of their own. We mention this matter, as it admirably shows the fallacy of the Government's present attitude on silver. Think of it, a regular gold mine in the private coinage of silver dollars, grain for grain identical with the coinage of the United States mint. What a commentary on our silver policy!



PRIZE . CUPS . TROPHIES and MEDALS

Suitable for any Athletic Competition. Special designs prepared and estimates furnished on application. . . . . .

The Toronto Silver Plate Co.,

570 King St. West,

TORONTO, - CANADA.

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WE CAN SELL YOU

Solder and Babbitt

Cheaper than You can Make It

TORONTO SMELTING and REFINING WORKS

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92 and 94 Queen St. East, TORONTO.

Daily Capacity 10,000 Pounds.

Hamilton and Toronto

SEWER PIPE

—AND—

WATER PIPE CO.

HEAD OFFICE: HAMILTON, CANADA

¼ the PRICE of Iron. Write for Discounts

READY

MIXED PAINTS

TRADE 

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Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

Manufactured by A. RAMSAY & SON MONTREAL

IT WILL MAKE NO DIFFERENCE

We beg to advise our customers that the fire which occurred some time ago does not interfere with our business. The fire was confined to our LEAD WORKS building. We have arranged to CONTINUE OUR USUAL LINES.

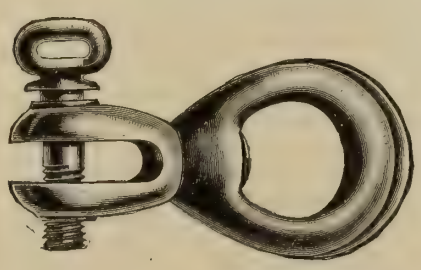
Yours Respectfully,

The JAS. ROBERTSON CO.,

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THE WHITMAN & BARNES MFG. CO.

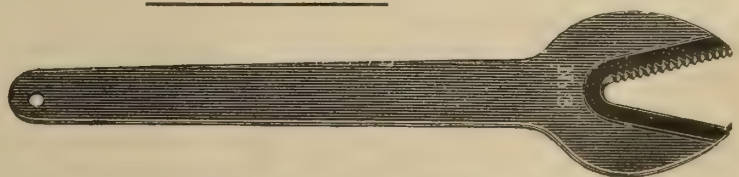
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This new **Swivel Clevis** can be attached to any Plow Clevis, used in place of Shackle or End Clevis.

MADE OF MALLEABLE IRON.

ALLIGATOR WRENCHES



Write us for Description and Prices

STARTING A BLAST FURNACE.

The Mayor has received a letter from Geo. E. Drummond on behalf of the Canada Iron Furnace Company (Ltd.), in which he says the question of establishing a blast furnace at Ashbridge's Bay has been carefully considered. He states that the ore supply of Ontario must be investigated in the interest of Toronto as well as of the company before taking any steps to establish such works. The letter goes on to say :

"We understand that certain parties now negotiating with Hamilton have stated that it is their intention to use American ore in their furnace. This means that the establishment of a blast furnace would be of little use to the community in which it is situated, inasmuch as the number of employes attached to the furnace itself will be comparatively small, and certainly not of sufficient account to warrant a large bonus being granted. As you are aware, the bulk of the labor employed in the carrying on of the pig iron industry will be for the working of the mines and the production and shipment of ore and fuel. If this work is done in the United States the enterprise, as stated, will be of comparatively little value in the Province of Ontario and to the city of Toronto. In our opinion it would be unwise for either Toronto or Hamilton to make arrangements with any concern until prospectors have time to prove beyond a doubt that a full supply of iron ore can be secured in your province. We are fully aware that a great number of mines have been located, and in many cases the ore is of exceptionally good quality. We have yet to learn, however, that any of these mines have been fully proved to be capable of supplying the necessary quantity of ore to keep a furnace of 100 tons daily capacity running. You understand that a furnace of this capacity will require from 75,000 to 100,000 tons of ore per annum, and the securing and delivering of this large quantity of raw material would be of incalculable benefit to your city, and would certainly warrant you in making a very liberal grant of land for the erection of a blast furnace. inasmuch as all the supplies required by the men at the mines would unquestionably be drawn from the furnace centre and the benefits would be very far reaching, whereas, as already pointed out, if all this work is done in the United States, American labor will be benefitted at the expense of Ontario.

"In our opinion the settlement of the matter should be delayed for at least six months, and time given for a full and complete investigation into the ore question. We are willing to take up this matter provided the City Council of Toronto can give us some satisfactory assurance that in the event of the investigations proving satisfactory the city of Toronto will be ready to deed us a sufficient acreage of Ashbridge Marsh, together with sufficient perfectod land to admit the erection of a furnace and accessories, also necessary bridges, etc. To take up this work on any other lines than the foregoing would be to do it on a speculative basis, and we are not speculators. Our desire is to establish an iron industry in your centre, but it must be on solid business principles. We have no wish to go into the venture, for the sake of merely securing the land or a bonus, nor yet with the idea of unloading furnace plant."

MAKING HARD COKE.

Messrs. J. J. Fronheiser and C. S. Price, connected with the extensive works of the Cambria Iron Company, Johnstown, Pa., are the originators of an improvement in coke manufacture by which coke of any degree of hardness may be turned out, says the American Manufacturer. In the manufacture of coke from soft coal in retort ovens, particularly in those constructed so as to save the by-products formed in the coking operations, the coke has the disadvantage of being more porous, softer, with more easily crushed cell-walls than when the same coal is coked in the ordinary beehive oven. This softer coke has the advantage of being easily acted on or dissolved, as it were, in the upper part of the blast furnace and cupola by the carbonic acid gas generated in the lower zones of the apparatus, which, taking up carbon from the coke, forms carbonic acid gas thus :—CO_2 plus C equal 2 (CO). Owing to the property of the carbonic acid of being readily converted into carbonic oxide in this manner at the expense of the solid carbon of coke, it will require a greater quantity of such soft coke to furnish the same number of heat units in the hearth of the blast furnace or cupola than of the harder variety.

The object of this invention is to render the coke harder and denser, which is accomplished by first grinding the coal to a coarse powder and mixing it with a hydrate of lime (air or water slacked caustic lime) before it is charged into the coke ovens. The inventors have found that quite a number of solid substances, such as limestone, blast furnace spiegeleisen slag, fusible clays, etc., the waste lime and fluoride-of-sodium mixture obtained in the manufacture of soda from cryolite, etc., or other solid matter suitable for a flux in the blast furnace or cupola, will all answer this purpose. A suitable solid hardening substance is one which will satisfy part of the sulphur contained in the coal, will unite with the free silicia, forming a silicate of the base, and by mechanical mixture will fill up the pores of the coke, thereby rendering it more dense. One great advantage gained by the use of lime or other basic material is that the excessive quantity used will serve the purpose of uniting with the free silica in the blast furnace or cupola charge to form a proper flux, and as substances containing any free silica will not do this, it is not desirable to use them. An additional advantage claimed for the mixing of the coal with lime before coking is that it unites with the sulphur, rendering it inert in the blast furnace and cupola.

Among the reasons for preferring caustic lime is its cheapness as compared with that of other suitable materials, and also its usefulness in the blast furnace or cupola as a base to unite with the silica of the charge for the formation of a slag. While limestone and carbonate of lime in their different forms of combination may be used, they have the disadvantage that their carbonic acid eliminated in the process of coking acts on the carbon of the coal in the formation of carbonic oxide, thereby wasting part of the carbon of the coal.

The inventors of this process, in their practice, grind the coal by any of the well-known methods which will reduce it to a coarse powder. They then add to this mass a fluxing material, preferably caustic lime, either in dry state or in a wetted and pasty condition, mixing the same thoroughly, after which it is charged into the coke oven, as in the ordinary practice. There is an advantage in introducing into the cupola or furnace, in combination with the coke, a fluxing material such as is needed in the metallurgical operation carried on therein, and this is effected in their practice, as the caustic lime or other fluxing material used is mechanically combined with the coke, filling up its cell walls. It has been found that about 5 per cent. by weight of caustic lime mixed with the fine coal gives the best results. However, a larger quantity of lime can be added to coals containing more than 5 to 7 per cent. of ash.

INTERESTING TO SHIP BUILDERS.

Controller Wallace has approved of new regulations governing the payment of drawbacks on material used in the construction of ships. In future such drawbacks will only be paid on new versels, and all claims must be filed within six months of the date of the registration of the vessel. Pressure has been brought to bear on the department to pay claims for drawbacks on vessels built many years ago, and in regard to which there is but the slenderest evidence forthcoming that the parties are really entitled to the drawbacks. Two or three individuals in the Province of Quebec have been buying up these claims and filing them in bulk, but the decision just reached will shut them out.

James Morrison, metal worker, Toronto is preparing to publish a large catalogue.

Joseph McCausland & Son have donated $35 to the firemen's benefit fund in recognition of the efforts of the firemen to save their building on May 8.

The Michigan Legislature has endorsed an automatic vote recorder. A row of perpendicular keys or buttons indicate the parties, and rows of horizontal keys or buttons the offices. The political parties are further distinguished by colors, as for example, blue stands for Republicans, red for Democrats, white for Prohibition and green for Populist. You press the key or button for each candidate you desire to vote for and the automatic recorder does the rest.

CANADIAN NICKEL MINES.

H. A. Hilyard, of Toronto, has received a letter from a smelting company in the United States in which it offers under certain conditions, to erect a custom smelter in Sudbury district. "While we are still quite busy with other propositions," it writes, "and would not at this time care to go into the nickel district to work up a nickel proposition, if the parties owning nickel properties are in shape to make us a proposition to reduce their ore to a matte at a fixed rate per ton, to be agreed upon, and to supply us with at least 100 tons of ore per day for a length of time sufficient to justify the investment of the capital necessary to erect a plant to treat that quantity of ore per day, we would be willing to take up the proposition and see if we could agree upon terms.

"We are fully prepared to erect a plant at our own expense, and guarantee a saving of say 90 per cent. of the values and to concentrate a specified number of tons of ore into one of matte (the number of tons to be thus concentrated could not be determined until after tests of the ore have been made.)

"We should expect to run the smelter every day in the year. Of course the probabilities are that there would be some breakdowns and some delays, but our aim would be to keep these down to the minimum.

"Our furnaces are not for sale, therefore there is no upset price on them. We own the patent rights for Canada, and intend to operate the smelters ourselves.

"Are you sure that you can find sale for your matte? This is a very important matter in this connection. We would probably concentrate from eight to ten tons of ore into one of matte. This would give you either 12 tons of mattee, carrying 24 per cent. nickel and 40 per cent. copper, or 10 tons of matte, carrying 30 per cent. nickel and 50 per cent. copper per day. Have you looked into this, and are you sure that you can market this product, and if so, where? If that can be done, and your people can supply 100 tons of ore per day, we could probably arrange the rest of the deal without trouble."

Mr. Hilyard, in speaking about the letter, said the firm writing it was a very extensive one, and fully able to do whatever they undertook. In regard to the last paragraph, he said that Mr. Charles M. Howe had already applied to the city council for a site to erect a refinery and nickel-steel works to manufacture nickel-steel, nickel-steel wire and nickel cooking utensils. This refinery would use 37 tons of matte per day when running in full blast. While there is not so much demand at present for matte, yet there will be a large market for pure nickel as soon as it is produced in large quantities.

Mr. Hilyard also stated that correspondence had been going on between Mr. Harvey and people in Italy and Russia, offering to erect refineries in this country if they can be assured of a supply of matte.

THE TORONTO SILVER CO.

This enterprising Company report business exceptionally good with them. Although employing a larger staff of workmen than at a corresponding date last year, they are now running their factory two hours per day longer time. Last week they made shipment of the silver ware for two more of the Canadian Pacific dining cars, and among many of the large orders now in hand, they have in the course of manufacture, the silver ware for the Chateau Frontenac, Quebec, steamer Chippewa of the Niagara Navigation Co., and the new steamer being built by the Muskoka Navigation Co., also the $350 Toronto Mail Trap Shooting Trophy.

THE COAL OF THE WORLD.

During the last twenty years there has been a marked increase in the consumption of coal, a fact plainly due to the increased industrial activities of that period. This demand is not likely to diminish, as the area of coal use is constantly widening, the map of the two hemispheres being its only limit. In older countries where the deposits of coal have been gradually reducing for centuries, the prospects of exhaustion are necessarily less remote than in the later developed hemisphere. As mines deepen and the pick of the miner travels further from the mouth of the pit, the cost of production increases; and as international competition becomes increasingly acute, the economies of production are being carefully studied and what has hitherto been wasted is rapidly being utilized as a commercial factor.

In an investigation made by a royal commissioner as to the ascertainable sources of coal in Great Britain, it was calculated that about 146,773,000,000 tons were available at depths not exceeding 4,000 feet from the surface, a reserve which, at the present rate of increase of population and of coal consumption, would be practically exhausted in about three hundred years. The production of coal as totalized in the world's output for 1891 was 519,083,731 tons, against a total output in the preceding year of 499,416,380 tons. In this total Great Britain is credited with an output of about 185,000,000 gross tons per annum, Germany with a product of 90,000,000 gross tons, and the United States with 140,000,000 tons, an aggregate yearly production for the three countries of 415,000,000 gross tons. The coal area of the United States is roughly estimated at 192,000 square miles, of which 120,000 can be profitably worked. This area, so far as present knowledge goes, is placed as being more than three times that of the rest of the world combined. These figures are, of course, but approximate, and are to be accepted with the necessary pinch of salt, but they are sufficiently accurate to outline the situation as bearing on coal supplies and consumption.

There are twenty-seven States and Territories in the United States producing coal, the output of which in 1891 was 149,752,410 tons, and in 1892 made a total of 154,996,666 tons. Of anthracite coal the present annual consumption is about 40,000,000 tons, the consumption increasing at the rate of 4 per cent. per annum. The bituminous output, as the steam fuel of nearly every part of the country, and the domestic fuel of an extensive area, keeps pace with the development of steam motor power and population. Its uses in these directions are practically stable and permanent. As a smoke producer it carries the banner, but as smoke is declared a public nuisance and a very expensive one at that, the inventive genius of man will sooner or later remedy the evil, and give bituminous coal a broader area of use than ever. The coal industry of the United States represents interests of considerable magnitude both of capital and labor, and as a national industry is at the foundation of our prosperity. There is no dearth or scarcity of this resource in sight for centuries to come, and as the nation rounds out to its full capacity of industrial growth, the use of coal and its service to our national development cannot fail to be continous and indispensable.—Age of Steet.

WORKMEN COMPENSATE IRONMASTERS.

It is a rather rare occurrence in these days of fierce strife between capital and labor for men who have been on strike to acknowledge the error of their ways and tender compensation to their employers in order to recoup them in some measure for loss sustained by an unwarranted cessation of operations, remarks an English exchange. Sensible workers of this class are, however, to be found in the neighborhood of Newcastle-under-Lyme. On April 24, the Silverdale Forge men refused, it appears, to accept the trifling reduction of 2½ per cent. in their earnings, which had been ordered by the Wage Board, and left work. But they soon saw that the stoppage was ill-advised, and a meeting of the ironworkers was held, at which it was not only decided to recommence operations, but to offer "terms of compensation to the masters for loss caused by waste of fuel, delayed contracts, etc. Twenty-five pounds sterling was considered by the men a sufficient solatium for the lightened pockets of the employers, and this sum was accepted by the forgemasters, "not because it covered the loss in any way, but because the employers considered it was a sign that the men themselves realised the error of their action, and the difficulties they had raised with their employers and the other workmen of the district."

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below, and in our Prices Current, necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, May 19, 1893.

HARDWARE.

Iron and hardware have not manifested any particular life during the past week, and the tone of values on the crude material and heavier lines of general hardware show a decided easiness. In fact, British firms who never bothered with the Canadian market at all for their lines are devoting attention to us, because they are sick apparently of the Australian market. No active change is to note on spot, however, in prices, as compared with a week ago, but it is more than likely that this easy tone shown by British exporters would result in concession of an order, for a round lot of goods was under consideration. The sorting-up trade in lines of shelf hardware has been fair.

In nails makers say that they are not booking orders ahead to any great extent, but they report a steady movement of business in moderate sized lots, the aggregate of which is considerable.

In tools jobbers have been doing a fair sorting-up trade, notably in lines of gardening articles, etc.

Builders' supplies have been rather quiet, buyers both urban and country having supplied themselves.

PIG IRON.

In accordance with advices from Great Britain the pig iron market has manifested an easy tone during the week, and although no actual change is to note, it is quite likely that an order for a round quantity would lead to concession. Limited quantities of Summerlee and Gartsherrie have changed hands at $18.50 to $18.75, but it is now thought probable that business for future delivery could be done on the basis of $18.00 to $18.25. Carnbroe is offered at $17, and Eglinton the same price.

BAR IRON.

There is no change in foreign, $1.95 being the trade price for jobbing lots and $1.90 for round quantities from the mills.

TIN PLATES.

There is very little doing in tin plate, but sales of coke are reported at $2.15 to $2.20 for round lots and $2.25 for smaller lots. The tone is easy, and although no decline on the above can be quoted it is hard to say whether a good round order would not tempt a cut from makers' agents here. Charcoal is quoted at $3.75.

CANADA PLATES.

Several fair-sized lots of Canada plates have changed hands at $2.50, and we give this as the market price at present.

OTHER METALS

The metal market generally is easier all round. Copper cables shows an easy tendency, and tin has also shown a similar disposition. Spelter and pig lead furnish no decided change in tone.

LEADS AND PAINTS.

The better weather experienced toward the close of last week brightened up the lead and color business a trifle, but the rainy weather of this week has spoiled it again. Choice brands which bear Government standard are quoted at $4 75 to $5; do. No. 1, $4.50; do. No. 2, $4.25 ; do. No. 3 $4 ; do. No. 4, $3.75 ; dry white lead, 4¾c. ; red lead, pure, 4¼c. ; do. No. 1, 4c.; zinc white, pure, $7 ; do. No. 1, $6 ; No. 2, $5.

OILS.

Linseed oil, etc., remain as last quoted, round lots changing hands at 60c. for raw and 63c. for boiled. Seal oil continues as firm as ever, cables quoting advances both in Newfoundland and England. Prices are quoted firm at 47½ to 50c. for new steam refined for future delivery, but on spot holders are asking 50 to 52c. Newfoundland cod oil is steady at 40 to 41c., and 39c. for Gaspe. Cod liver oil is steady at 65 to 75c.

GLASS.

A good, fair business has been done in window glass at steady prices. We quote first break $1.35, second $1.45, and so on. Putty in bulk is steady at $1.85.

NAVAL STORES.

Turpentine is in good demand and prices are steady at 52 to 53c., but it is possible the inside would be shaded for a round lot. Rosins are also enquired after. We quote turpentine, 50 to 53c. ; resin, $2.40 to $4.50 ; coal tar, $3.50 ; pine pitch, $2.50 ; pine tar, $3.50 to $3.75 ; cotton waste, colored, 5¾ to 6½c. ; do. white, 8 to 10c. ; oakum, 5½ to 7½c.; cotton oakum, 10 to 12½c.

CEMENT.

There is a good demand for cement both for local and Western account, and round lots have changed hands at $2.10 to $2.15 for best London brands with Belgium $1.95 to $2.50. Firebricks meet with a good enquiry, sales of good sized lots occurring at $16 per 1000.

PETROLEUM.

There is no particular change in this market, refined oil being in fair demand for the season, sales of car lots being reported at 12c. We quote Canadian 12c. at shed in Montreal for round lots, and 12½c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c in 10-barrel lots, 19¼c. in 5 barrel lots, and 19¾c. for single barrels, 2 per cent. off for cash ; American benzine, 23 to 25c, ; Canadian benzine, 10¾c. Petrola ; 12¾c. Montreal.

MONTREAL TRADE NOTES.

A. Ramsay & Son have been placing a lot of special orders for plate glass recently.

The Canada Iron Furnace Co. report some encouraging returns for the charcoal iron west of Toronto.

Pilkington & Sons have been placing quite a quantity of colored and lines of fancy shaded glass with the city trade.

Wm. McNally & Co. have ben receiving some round lots of standard English cement, and are now executing orders ex wharf.

W. H. Cottingham & Co. have been doing a good sorting up trade east of Kingston, especially in fine bronzes, powders, leafs, etc.

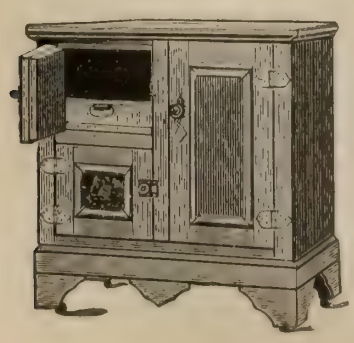
The new premises of the agency of the Safford radiator in Montreal on Craig street, present a conspicuous and attractive appearance.

The 117 drop annunciator which is being placed in the new Queen's Hotel by Messrs. McCrae & Watson was manufactured by T. W. Ness, of Montreal.

The Roherval Telephone Company, of Roherval, Que., have been increasing their number of subscribers recently. The telephones and switchboards were all manufactured by T. W. Ness, of Montreal.

The telephone business of the Citizens' Telephone Co., at Sherbrooke, Que., has increased so rapidly that the central operators are now using head receivers. These are being made by T. W. Ness, of Montreal.

Refrigerators



Hardwood, Lined Galvanized Iron, Patent Locks, Four Sizes

These are **highly finished** and each season has shown an increasing demand. This year we are also **making a cheaper line** in above style, so as to meet all requirements.

Milk, Delivery and Creamery Can Trimmings.
All Sizes Body Stock for Cans and Cheese Vats.
Galvanized Iron Eave Troughs in 8 foot lengths.
Lithographed Tea Caddies and Signs.

We make and Supply everything used in the Stove and Tinware Trade.

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

1893 - OUR LATEST - 1893

Safford Radiators

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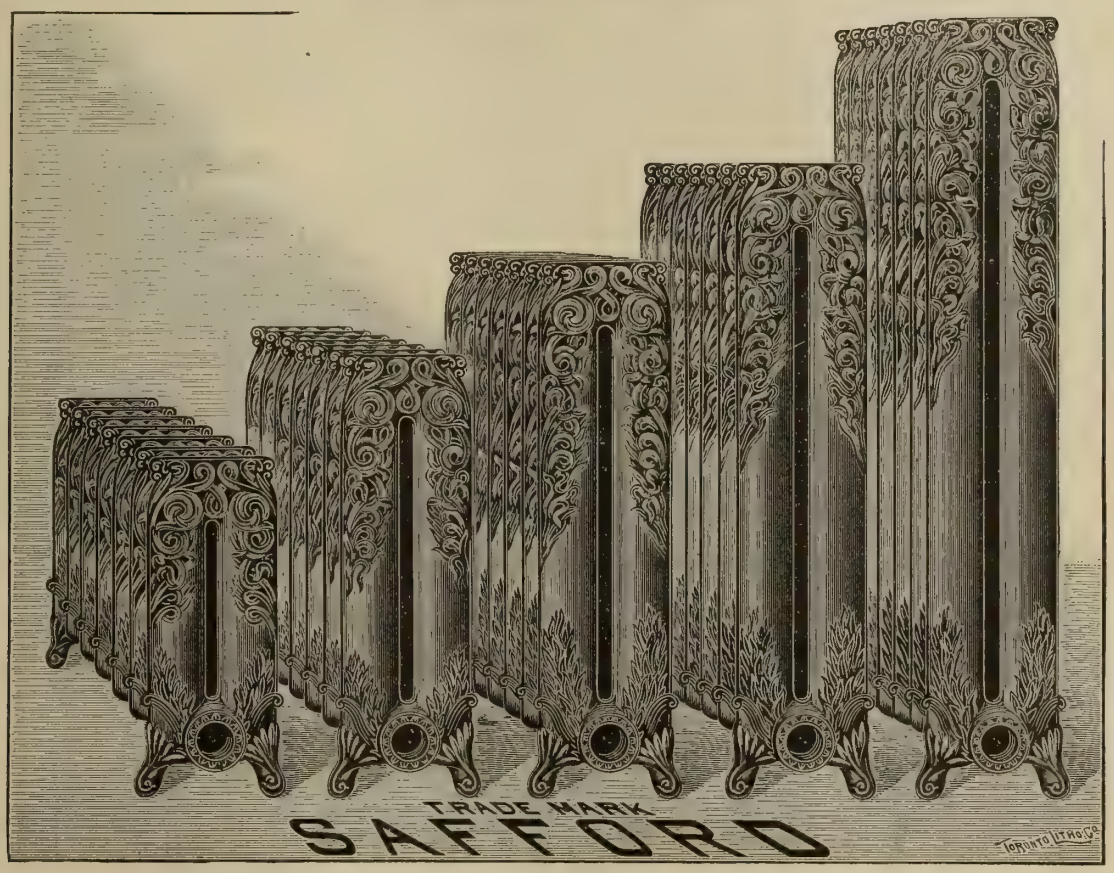
Steam and Hot Water

ARE UP TO DATE

Trade Mark Registered

MOST EFFICIENT
NEWEST DESIGNS
BEST CONSTRUCTION

ALL SCREWED CONNECTIONS



RADIATORS PATENTED AND ALL DESIGNS REGISTERED

References: New Parliament Buildings, Board of Trade, Confederation Life Buildings, Freehold Loan Building, University Buildings, Toronto; McGill University Building, Montreal; and many thousands of others which will be named in response to enquiries.

MADE ONLY BY

THE Toronto Radiator Mfg. Co. LTD.

TORONTO, ONT.

MONTREAL. QUEBEC. ST. JOHN, N.B. WINNIPEG. VICTORIA, B.C.

TORONTO MARKETS.

TORONTO, May 19, 1893.

HARDWARE.

Trade is not so active as a week ago. In the face of the heavy rains we have been getting little else could be expected. Urban trade seems to have been, if anything, the greatest sufferer. Taken as a whole the volume of business is not so bad, while the situation has lost none of its healthy conditions. There have been a number of country customers in the city and they all anticipate a good spring and summer trade. As a tangible evidence of their expectations, they are evincing a little more tendency to anticipate their wants. Orders are largely for shelf goods and are of a sorting up character. A large number of shears are going out, and there is is still a good demand for lawn mowers, but the difficulty is in getting the goods to satisfy it. Green wove wire cloth, screen doors and windows are moving freely. A fair sorting up trade is doing in nails, and there is an increasing demand for certain sizes of rope. Ship chandlery generally is in fair request. There is still quite a demand for garden and harvest tools, although the trade is now pretty well supplied. Preserving kettles are being a good deal enquired after. There is a good sale for spring hinges. Oiled and annealed wire is not so much sought after as a week or so ago, but the falling off is only looked upon as temporary. Brass case tubing is weaker in price than a week ago. Iron piping for steamfitting purposes is in good demand. No complaints are heard regarding payments.

NAILS—The demand for carload lots has, of course, been satisfied, but a good trade has been done is 20 and 40 keg lots. Some of the makers are still experiencing some difficulty in filling orders.

WIRE—Trade is not as good as a week ago. The demand for oiled and annealed wire has dropped off considerably owing to the farmers being busy seeding, but in the course of a week or ten days a brisk trade is anticipated in this article.

ROPE—Demand is good for ⅞ to 1¼ inch sizes for hay forks and pulleys. Outside these sizes trade is only fair.

CHAIN—Not much doing, and there is no change in the situation in England.

TOOLS—Demand for garden and harvest tools is slackening off perceptibly, but there is still a fair quantity moving out. A good many wheel barrels are being sold. In carpenters' tools there is scarcely anything doing.

WARE—The demand for preserving kettles, enameled, peerless and brass, continues to improve.

PLUMBERS' SUPPLIES—Are still but little enquired after, and there is no immediate prospect of an improvement.

WIRE SCREENS—There is a continued good demand for screen doors and windows, and there is still a dearth of green wire cloth.

METALS.

No material change is reported. Boiler plates, bar iron, sheet iron, galvanized iron are all in fairly good demand. Outside the lines here enumerated there is not much doing. Prices are steady.

PIG IRON—Trade in this line continues quiet and uninteresting with the movement confined to a few carloads of soft southern, which have been taken at former prices, $19.

Rogers, Brown & Co., Buffalo, report Toronto pig iron market as follows: The great financial depression continues to have a marked effect on the market. Buying is confined to small amounts. Further than this makers are exhibiting great caution in making large contracts. Already the usual summer reduction in consumption is beginning to be felt. Iron is moving forward more slowly on contracts. We quote for cash f. o. b. cars, Toronto, in bond: IX Foundry Strong Coke Iron, Lake Superior ore, $15.70; 2X Foundry Strong Coke Iron Lake Superior ore, $14.70; 2 Foundry Strong Coke Iron Lake Superior ore, $14.20; Jackson County Silvery 1, $18.00 to $18.30; Jackson County Silvery 2, $17.30 to $17.80; Lake Superior Charcoal, $17 70; Southern Soft 1, $14.10 to $14.35; Southern Soft 2, $13.85.

BAR IRON—Demand is being well maintained, business of a sorting-up character being good on the basis of $1.95.

TIN PLATES—Are in demand and supply is ample. There is no change in price.

SHEET IRON—Not much doing and prices are unchanged at from 2⅝c. up.

CANADA PLATES—There is nothing doing. Import orders are still being booked. Prices are unchanged, all dull being held at $2.65, half-half at $2.75, and all bright at $2.80 to $3 per box.

GALVANIZED IRON—Demand is good, but supplies are quite sufficient. Prices are unchanged at 5 to 5¾c. for Queen's Head and Gordon brands.

HAYES' PATENT
MANUFACTURED BY
METALLIC ROOFING Co.
TORONTO
ILLUSTRATED CATALOGUE FREE
STEEL LATHING

ZINC SHEET—Dull and featureless, with prices unchanged at 5¾ to 6c. for 5-cwt. casks and 6 to 6¼c. for part casks.

ZINC SPELTER—Nothing doing. Prices unchanged, at 4¾ to 5¾c.

LEAD—Much as before. We quote 3½ to 3¾c. ordinarily, and 3¼c. for 10-ton lots.

ANTIMONY—We quote as before: 12½ to 14c. for Cookson's and at 13 to 14¼c. for other kinds. These figures would be shaded for large lots.

INGOT TIN—No change, and movement is good at 24c.

INGOT COPPER—A little is being done of a sorting up character, but as people are pretty well supplied in this line, business is only limited; 12⅞ to 13c. is still the idea for small lots of the better qualities.

GLASS.

Trade is fairly active, although devoid of any particular feature. Stocks continue to arrive and prices are unchanged, at $1.25 to $1.30 for first break.

PAINTS AND OILS.

Trade quiet. A good deal of difficulty is experienced in getting linseed oil from the Canadian manufacturers, and as this seems to be about the only line in which there is anything approaching activity, business feels it all the more keenly. Prices are unchanged, at 60 to 62c for raw and 63 to 65c for boiled, the outside figures being for outside points, freight allowed. In England shipments of linseed oil have been heavy and has weakened the market considerably, but there is not much crushing being done and very little stocks, so that any improvement in the demand would put prices up there. There have been some variations in the Southern market in turpentine. It was up ¾c. at one time, but it has gone back about ½c. This market was not affected. Locally turpentine is quiet. White lead is quiet and unchanged on the basis of 4¾c. Shellac is higher at $2 to $2.25 in sympathy with the English market. Prepared paints are in fair demand and unchanged. The bulk of the trade is over in castor oil, and prices are unchanged.

"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are:—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

MONTREAL Markets Continued.

OLD MATERIAL.

Demand has fallen off for scrap and dealers are only taking few small lots, while offerings are liberal. Supplies of rags are freer than a week ago. We quote : Agricultural scrap, 60c. per cwt. ; machinery cast, 70c. per cwt. ; stove cast scrap 40 to 45c. ; No. 1 wrought scrap 50 to 60c. ; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c. ; new light scrap copper, 8c. ; heavy scrap copper 9c. ; old copper bottoms, 8c; light scrap brass 5½c. ; heavy yellow scrap brass 7c. ; heavy red scrap brass 8¼ to 8½c. ; scrap lead 1¾ to 2c. ; scrap zinc, 2½c. ; scrap rubber, 2½c. ; country mixed rags, 75 to 95c. per 100 lbs. ; clean dry bones, 50 to 60c. per 100 lbs. ; borings and turnings, 15 to 20c.

SEEDS.

The season is about over as far as timothy and clover is concerned, although jobbers are still receiving numerous small orders, which are being filled at from $7.80 to $8 per bushel for red clover, as to quantity and quality and mammoth at $8.10 to $8.55 per bushel. Alsike continues scarce ; small orders are being filled at $8 to $9 per bushel according to quality. In timothy, choice to extra sells at $2.50 per bushel. Jobbers are experiencing more demand for Hungarian grass seed, millet, and ensilage corn. Hungarian is quoted at $1 to $1.10 per bushel, millett at 85 to 90c. per bushel, and ensalage at 62 to 72c. per bushel, according to quality and grade.

HIDES, SKINS, TALLOW, WOOL.

HIDES—There is no change in price. Good hides continue scarce. Good selections are worth 5¼c.

SKINS—Calfskins are easier, in sympathy with the drop of 10 to 15c. a skin in the States. No quotable change has been made here yet, but lower prices are expected soon. Jobbers are paying 7 to 8c. and selling at 8 to 9c. Sheepskins are normal at $1.35 to $1.45.

TALLOW—Seems to be a little steadier since the decline. Dealers are paying 5½c. and selling at 6c. Rough is lower at 2c. There is not much doing.

WOOL—There is still a moderate demand from the factories at unchanged prices. Pulled wool is offering in limited quantities, and there is not much selling. Fleece wool is nominal at 17 to 19c., clothing 25 to 26c., Canada South Down, 27 to 28c. ; white Indian, suitable for blankets, 17 to 19c. ; grey East Indian, 11 to 13c. ; B.A.'s white clothing 32 to 34c. ; cross breeds, 26 to 28c. ; Canada extra, 25 to 27c. Canada super is scarce and good selection would readily fetch 23c.

PETROLEUM.

There is no special feature to note. Lubricating oils are pretty well picked up and season is over for burning oils. The trade is now awaiting the tariff changes which go into effect July 1. In the meantime dealers are not much concerned about business. We quote:- Canada refined oil, 13 to 13½c. ; carbon safety, 17½ to 18c : Canada water white, 19c. ; American water white, 21 to 22c : photogene, 25c.

MARKET NOTES.

Brass case tubing is lower.

Shellac is excited and higher, at $2 to $2.25 in barrel lots.

A new glue, at least to this market, has been received by Stewart & Wood. It is known as the Cabinet.

Manufacturers are still experiencing a good deal of difficulty in turning cut lawn mowers fast enough for the demand.

Covert's Saddlery Works, Farmer's, N Y., have no soliciting agent in Canada, and all orders should therefore be mailed direct to them.

M. & L. Samuel, Benjamin & Co. have a good stock of Iwan's post-hole diggers and drain cleaners, and are now in a position to fill back orders.

H. S. Howland, Sons & Co. have got up an attractive nail card. Should there be any of their customers that have been overlooked they will be supplied on notifying the house.

AMERICAN MARKETS.

New York, May 19, 1893.

PIG TIN.—London cables of slightly higher prices in that market prompted somewhat freer bidding here, under the influence of which values rallied a little, and previous depression gave place to a rather more cheerful spirit. Speculation was entered into with decided caution, however, although the extremely low prices ruling of late have enlivened the movement of stock into the channels of distribution and consumption. However, the weight of supplies in first hands is still a factor of no mean importance, and one that seems likely to stand in the way of any sharp advance in prices unless the bear interest becomes entangled through excessive short sales. At the early gathering on 'Change there were bids of 19.55c. for May, 19.60c. for June, 19.70c. for July, and 19.90c. for August delivery.

COPPER.—No business of important volume was reported, but enquiries were more numerous than they have been for several days, and encouraged the belief that some revival of buying interest is likely to be experienced very soon. The call was chiefly for Lake Superior ingot but other varieties received a fair degree of attention. On the Metal Exchange there were offers to sell Lake Superior ingot at 10.90 for May and June and 10.85 for July to September delivery, inclusive, but otherwise very little, if anything, was on the market at less than 11c. Prices for electrolytic stand at 10 1-2 to 10 3-4c., and for casting 10 1-8 to 10 1-4c. was repeated. London cables reported the market there as being steady, with £43 prompt delivery and £43 10s. future quoted for merchant bars.

PIG LEAD.—The market showed additional signs of depression, and among which was the sale here of about 300 tons at 3.80c. and a drop in St. Louis market price to 3.57 1-2c. Back of that was additional offering at 3.80c. here, while bids of 3 3-4c. were limited to moderate quantities involving a few hundred tons only. London cables quoted a decline to £9 12s. 6d. for soft Spanish.

SPELTER.—Western brands were quite freely offered for delivery two to six months ahead, at 4 1-4 to 4.30c. landed in the East, and St. Louis wires noted a drop there to 4 to 4.05c. There was evidence of pressure to sell at the decline, while buyers continue extremely conservative, making altogether a sorry looking market. London furnished additional depressing material in the shape of a weak tone at £17 10s. there for good merchant brands.

ANTIMONY.—Of ordinary jobbing parcels there is a fair movement, and prices remain about steady at 9.90 to 10c. for Hallett's, 10 1-4 to 10 3-8c. for LX, and 10 1-2 to 10 3-4c. for Cookson's.

TIN PLATE.—The general report indicated a slow market for all varieties of tin plate. Spot purchases were referred to as having been ordinary, and the interest in forward deliveries quite tame. Prices are without quotable change, but barely steady.

PIG IRON.—The demand for American pig iron continues slow, and is chiefly for supplies for delivery during the next thirty or sixty days. There is nothing indicative of inclination to anticipate future wants further ahead except at prices below the average reached thus far this year. There is still some irregularity in values, more particularly on the least favored brands, yet no radical change.

In foreign pig the business passing is confined to comparatively small lots, and the demand continues slow. Prices about the same as for some time past. Importers quote Scotch pig iron at $21.50 to $22 for Coltness, $21 to $21.50 for Summerlee, $20 to $20.50 for Carnbroe, and $19.50 to $20 for Eglinton. Foreign ferro-manganese, 80 per cent., is quoted at $57 to $57.50, and spiegeleisen $25.50 to $26 for 20 per cent., with moderate business and slow demand.

OLD MATERIAL.—Occasional sales of a few hundred tons covering about all that is doing in this line, and prices are still rather soft, although showing no radical change.

MANUFACTURED IRON AND STEEL.—The demand for steel rails and track fastenings is without sign of improvement. Some few enquiries involving fair-sized lots, are on the market, but the entire quantity under negotiation is comparatively small, and where competition is not curbed by manufacturers' agreement prices continue irregular. Heavy section rails are quoted at $29 f.o.b. mill, but light sections are relatively lower. Track fastenings are offered at 1.90 to 1.95c. for spikes, 1.55 to 1.60c. for fish plates, 2.45 to 2.50c. for bolts and square nuts and 2.55 to 2.60c. for hexagon nuts.

A fair amount of new business is passing in structural material, bars, sheets, hoops, etc., but competition continues keen in nearly all departments, and prices are still unsettled.

Unsettled and weak markets are still reported for billets, rods and other forms of soft steel, and business continues backward throughout.

A curious stone is said to be found in Finland, where it occurs in many places. It is a natural barometer, and actually foretells probable changes in the weather. It is called semakuir, and turns black shortly before an approaching rain, while in fine weather it is mottled with spots of white. For a long time this curious phenomenon was a mystery, but an analysis of the stone shows it to be a fossil mixed with clay, and containing a portion of rock salt and nitre. The fact being known, the explanation was easy. The salt, absorbing the moisture, turned black when the conditions were favorable for rail, while the dryness of the atmosphere brought out the salt from the interior of the stone in white spots on the surface.

SEVEN YEARS OF IRON TRADE.

The concentration of the iron and steel industry is exhibited in the reports of the Iron and Steel Association for 1885 and 1892. In the former year the industry was just recovering from a protracted period of low prices and general dullness. During the following seven years 55,000 miles of railroad track were laid in the United States. Three hundred and forty iron and steel vessels, of a tonnage of about 380,000, were built for the merchant marine, and something like $50,000,000 has been spent on war vessels and their armaments.

The increase in the production of iron and steel has been notable; the increase in the number of establishments has been singularly small. The means are not furnished for comparisons all the way through, but enough comparisons are possible to show that if concentration tends towards economy, the cost of production must have been reduced very low.

The production of pig iron in 1885 was 4,044,526 gross tons. In 1892 it was 9,157,000. The quantity slightly more than doubled. But at the end of 1892 there were 23 less furnaces in blast than at the end of 1885, and the number of furnaces at the end of 1892 "that were active or likely some day to be active," was 27 less than at the end of 1885, and the figures for 1885 show a reduction for one year in the number of "active furnaces and those which are likely to become active" of 78. The output of pig iron then, per furnace, had considerably more than doubled in the seven years. At the close of 1885 23 furnaces, and at the close of 1892 only seven furnaces were being erected.

The production of Bessemer ingots in 1885 was the largest on record up to that time. It amounted to 1,519,430 gross tons. In 1892 it was 4,168,435 tons. The increase is about 166 per cent. At the date of Mr. Swank's report for 1885 28 concerns were making Bessemer steel other than rails. At the end of 1892 there were 45 completed works for Bessemer ingots, an increase of not quite 60 per cent. Of the 45 concerns 10 were not in operation in 1892. Omitting these the output for each concern had considerably more than doubled.

The steel rails made in 1885 amounted to 959,471 gross tons. In 1892 the figures were 1,537,588 gross tons, an increase of nearly two-thirds. Mr. Swank does not give the number of establishments engaged, but it would appear that there has been no material increase from the fact that Bessemer rails were made in 1885 in only eight States, of which Pennsylvania and Illinois made 96 per cent. of the total, and in 1892 eight States made Bessemer rails, of which Pennsylvania and Illinois made more than 91 per cent. of the total.

The average price of steel rails in 1885 was only $28.50 per ton, but the price got up to $34.50 at the end of the year, and was held at that figure in the early part of 1886. In spite of the low price prevailing during most of the year, and the fact that while rails fell to $26, Bessemer pig did not fall below $17, so that there was at times less than $10 difference between the rail and the pig. Mr. Swank's report for 1885 is in a more cheerful tone than his report for 1892. The rail manufacturers formed a combination "to prevent the severe competition which had characterized the trade of 1884 and 1885." Of the estimated demand "each company agreed to take orders for a certain percentage, and not to exceed its quota." The price of rails did not reach $29 till September, but under the influence of a further advance at the very end of the year, and a demand that exceeded the estimates when the mills made a pool, the tone of the report was decidedly more cheerful than that of the report of 1892, with the price of rails $1.50 higher than in 1885, and the price of Bessemer pig lower by four or five dollars a ton.

Particularly is the report of 1885 interesting in comparison with that of 1892 when Bessemer ingots are considered. No comparative prices are given, and owing to the different shapes and uses of the ingots, prices cannot be compared as in the case of pigs and rails. But as rails were $1.50 a ton less in 1885 than in 1892, averaging the year, and for eight months of the year were three or four dollars a ton less, the year could not have been but one of high prices for ingots. The output, however, was 10 per cent. greater than the previous year, and in spite of the complaint that tin plates were imported, and that steel wire rods had insufficient protection, the report to the Iron and Steel Association says: "The year 1885 was a year of unprecedented activity in the erection of Bessemer steel works." Eight works had been put in operation during the year preceding the report, "eight more in course of erection, and others projected." "Only the Bessemer steel works was idle throughout 1885." The report for 1892 says "ten of the old plants made no steel for 1892."

There is one other point of comparison between the reports for 1885 and 1892 that has some interest. The earlier report says: "In the matter of tariff literature it may be pertinently mentioned that during the past six months it (the Iron and Steel Association) has co-operated most actively through the Industrial League, with representatives of other industries, in the publication and free distribution of 200,000 books and tracts which advocate the protective policy." The latter report says: "I will frankly say that in 1892 we did not distribute as many tariff tracts as in other recent years, and for the reason that they were not so widely called for, although offered free of cost. . . . Although the tariff question was declared by both the great parties of the country to be the leading political issue in the campaign of 1892, the usefulness of the tariff tract as an educational influence appears to have largely waned before that campaign commenced.—N.Y. Bulletin.

COMPOSITION OF SMOKE.

The following is from an English exchange:

In a paper before the Russian Technical Society, by P. Laktine, on "The Composition of Smoke," the author observes that all the efforts made to suppress smoke have been unsuccessful because its elements have not been sufficiently studied, the gaseous portion having always been analyzed, while the solid and liquid constituents have remained but little known. It is, however, to the latter that smoke owes its injurious qualities, which are especially manifest in large towns. When substances, such as coal, peat, lignite and wood, containing a large proportion of hydrogen, are burnt, light products of decomposition, especially those containing dydrogen and carbon, are disengaged under the influence of heat; and their disengagement is complete or partial, so that the solid carbides, which contain less hydrogen and carbon, and which are present in a state of incomplete combustion, are drawn along by the light products. It is in this case that carbonic acid, nitrogen and the remainder of the oxygen unite, not only with carbonic oxide, but also with the substances not burnt, consisting of carbon, hydrogen, oxygen and a little nitrogen, while pure carbon is disengaged in the state of fine powder. All the above substances form a mass of light gray, yellowish gray or dark gray color, called smoke. The greater disengagement of smoke when a fresh quantity of fuel is thrown on a fire grate is explained by the difficulty which air has in reaching the furnace across the coal, thus causing a cooling down. The following are the conclusions arrived at by the author: 1. The formation of smoke is inevitable, even with the most perfect stoking, if the fuel contains ash and water. 2. Suppression of smoke by means of complete combusion is impossible. 3. A small portion of the fuel is always lost through becoming volatilized with the smoke or combining with the ash. 4. The ordinary methods of analyzing ash by direct calcination are incorrect, and should be superseded by others.

The Western Foundrymen's Association of the United States will hold a meeting May 25. The Iron Trade Review, in referring to the contemplated meeting, says: "It was suggested that the scope of such an association should be the discussion of practical questions of foundry operations, of the lines on which progress could be made, and of practices in the commercial side of the business that might well be changed; the gathering and distribution of statistics concerning the trade; the establishment of such relations among foundrymen, through personal contact, as should check demoralization, and tend to establish the foundry interest on a better basis. The idea of attempting directly to fix prices, either of product or of labor, was spoken of as impracticable, besides being undesirable; a broader mission was indicated as the only guarantee of permanence."

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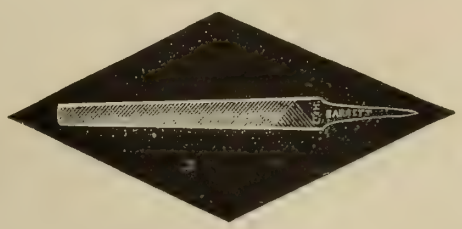
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ARE THEY DOING THEIR BEST?

This query naturally arises, we think, when we read statements which convey the impression that in many branches of the iron, steel or hardware trades we are being either undersold or out-manoeuvred by continental and American manufacturers. Such statements are cropping up continually. If they could all be easily disproved or as easily explained away there would be no need for us to refer to them seriously; but that is not the case, unfortunately, the fact being in many instances decidedly in favor of the assumption that British manufacturers are not doing their best, or, if they think they are, then their best is not good enough to achieve the end they have in view. It goes without saying that we of this journal would very much prefer to be able to say pleasant things of our own manufacturers, and be in the happy position of holding them up at all times and under all conditions as being pinks of perfection. Speaking broadly, we can do so with a clear conscience, yet we should be no friends to our manufacturers if we failed to speak out and give them wholesome reminders of their faults as and when occasion seems to us to so require. In some departments we are of opinion that such an occasion is now at hand, hence these comments. For one thing, we are convinced that far too many of our manufacturers are content to move in ancient grooves. They do what their fathers of grandfathers did, and will not move with the times. Others think it necessary to go in for "new-fangled" machinery or methods of doing business. In both cases they are "getting left," and at no distant date their once fine businesses will not be worth having as gifts. There are other firms which are fairly abreast of the times, as they think, but in reality they are a quarter of a century in arrears—not only as regards their plant and machinery, but in respect of their rates of profit, their way of securing and filling orders, their methods of packing, and in many other essential details of their respective businesses. Others have not kept pace with modern processes and discoveries, and are being hopelessly distanced by the more enterprising, more methodical, and more scientific German, Belgian or American houses. Every observant man who moves about the world can give scores of instances of firms falling within one or other of the categories we have just mentioned, and every such man must and does ask himself why such things should be. We think we are fully justified in putting the question in its bluntest and most terse form. Why should British manufacturers allow themselves to be beaten by any of their competitors? In sober earnest there is no good reason whatever why they should. We have the capital, the experience, the brains, and the workpeople. We have the best facilities for shipping and financing, as well as the great advantage of old connections and prestige in all the markets of the world. Why, then, should it be possible for German bar-iron or German wire-rods to be sold in Lancashire, Belgian girders and joists to almost monopolize our building requirements, German hollow-ware to be cheaper, and, as some say, better than our own, and so on throughout the list, which is far too long to be enumerated with patience by anyone who is a believer in the capabilities of his own countrymen and of his own country? We are aware, of course, of the stock answers which are forthcoming in response to queries such as the above. We are told that the Germans have cheaper and more plastic labor, that their men work longer hours, that they have a protected home market, and so on. In our opinion, none of these reasons is sufficient to account for the greater progress made in several branches of trade by our continental and American competitors. All experience shows that our labor, properly managed, is the most efficient in the world, and simple common sense shows that a protected market must be a comparatively dear producing market. We know, also, that the military burdens of the continental nations are tremendous—that they impose severe taxation upon all grades of society. Other burdens have also been placed upon the shoulders of the German manufacturers, consequently we are compelled to discard the ancient "explanations," and go further afield in order to discover the real reasons of our discomfiture in several departments of trade wherein we ought on every reasonable ground to enjoy a decided and unshakeable pre-eminence. To fully elucidate these real reasons would be impossble in the space now at our command, but we may state our conviction to be that during the past few years of prosperity and active employment, many of our manufacturers have become careless, indifferent, or negligent of the progress which has been going on during that period in many departments of metallurgy and applied science. On the other hand, our rivals on the continent and in the United States have had a clearer perception of the necessities of the near future. They have seen that the good tmes would not last long, and have applied large portions of their profits to new plant and machinery, so as to be able and ready to retain their share of the world's business when the period of really severe competition arrived. Even now the course of events has justified the sagacity of our rivals. The Belgians would have lost the girder trade had they not boldly revolutionized their works by going in almost universally steel. The Germans have got a long lead in basic steel making; the Americans swear by, and are the world's greatest adepts in, the use of machine tools. We sit down and jog along very much in our old style, and too many of us seem to think that the world can move onward and not leave us behind. The sooner we correct that false impression, the better for us. It may be a hard lesson to learn, but it is necessary to fully comprehend that there is no such thing as standing still. Either we make progress or we fall hopelessly behind. We must be either in the van or in the rear. For some centuries past Britishers have been proud of their prowess of all kinds. Surely this is not the time for us to throw up the sponge and acknowledge that we are no longer able to "show the way" to the rest of the world! We do not think there is any such general view amongst us, but we shall be more than pleased if such of our friends as are apt to be too confident of their old-time repute in these go-ahead days will indulge in a little serious introspection and then make up their minds that they must spread their sails—or drift ashore and be wrecked.—Ironmonger, London.

COOLING GLASS ROOMS.

Experiments with wind currents in glass houses show that a room heated to seventy degrees in zero weather, with a still atmosphere, will be cooled twenty degrees in five minutes and forty-five seconds; the same room will be cooled twenty degrees in two minutes and thirty seconds when the wind is blowing at three miles an hour; and it will be cooled twenty degrees in forty-eight seconds when the wind is blowing at the rate of twenty-seven miles per hour,—and these figures, in view of the fact that it is a common occurrence for the wind to blow from twenty to thirty miles per hour, are cited to show the importance of carefully considering the number and size of windows and exposed walls before designing an apparatus for warming a building. It is further found that a granite wall eighteen inches thick, will lose sixty-seven per cent. more heat than a brick wall of the same thickness; a frame building, plastered on the inside and covered with paper, felt, and sheating on the outside, will lose seventy-five per cent. less heat than a brick wall of the same thickness; a frame house built without a paper felt covering on the outside, will lose twenty-five per cent. more heat than the same house if covered with felt. Again, it is demonstrated that one square foot of glass will lose as much heat as six square feet of twelve inch brick wall. If closely fitted double sashes are used 75 per cent. less heat will be lost than with the single sash arrangement.



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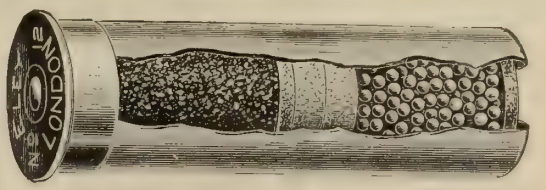
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. . ELEY'S . .

CANADIAN CARTRIDGE



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ENGLISH HOUSE: **SAMUEL, SONS & BENJAMIN**
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RUBBER GARDEN HOSE
GARDEN SHEARS and SYRINGES
LADIES' FLORAL SETS . . .
HOSE REELS . . . .

Lawn Rakes and Sprinklers

THE ANALYSIS OF OCHERS.

The important points to be ascertained about these substances are the amounts of iron, silica, and clay, and the coloring power, says a contemporary. After drying the crude material it is sieved through a No. 50 mesh and dried in a stove at 100°, when any remaining moisture is drawn off completely. The material thus prepared is then employed for the various determinations.

Peroxide of Iron.—One gram of the powdered substance is boiled in a flask for three or four minutes with 20 cbc. of hydrochloric acid, the mouth of the flask being provided with a cork and narrow tube to prevent loss by projection. Water is then added, and the whole again boiled and made up to 200 cbc.

Forty cbc. of the filtered liquid are withdrawn, treated with zinc for four hours in a narrow-mouthed vessel, the zinc removed and the liquid acidified with sulphuric acid and titrated with potassium permanganate solution, containing 0.4 grms. of available oxygen per liter. If A represents the number of cbc. used, then 2A gives the percentage of Fe_2O_3 it the ocher.

Silica.—The silica in the quartzose state can only be determined by mechanical methods. Five grms of the dried and powdered earth are weighed in a porcelain basin, a little water added, and the two well mixed together by the aid of the finger. After allowing to stand for half a minute, the liquid is decanted into a flask capable of holding 200 cbc., and is afterwards used for determining the coloring power. The same operation is repeated five or six times until the flask is full. Since the ferruginous clay adheres very strongly to the sand, it is important to rub the latter well against the sides of the basin. The residue is almost colorless, and is thrown on to a filter, dried, removed, and weighed. When it is not desired to determine the coloring power, the operation is still more simple. Thirty grams of the ocher are boiled with water in order to divide the mass. After cooling, the whole is introduced into a flask and washed by means of a current of water introduced through a tube reaching nearly to the bottom of the vessel, the clay being thus entirely removed.

Clay.—The difference between the weight of silica and that of the original substance gives the clay contained in 5 grams, and this multiplied by 20 gives of course the percentage.

Coloring Power.—M Pagnoul recommends the following method: An ordinary red ocher and a yellow one are taken as standards, 5 centigrams of each being sealed up in two glass tubes, together with 50 cbc of water. In order to make the determination, some volume V of the liquid obtained by washing the sand is removed, after well shaking, and placed in a graduated tube of the same diameter as the other two, and water added until the opacity is the same as in the typical tubes, a point which can be determined with some precision. If V is now the volume to which the liquid has been diluted, then the coloring power is given in percentage of that of the typical specimen by the expression 100 V (25 V=4 V) V. This valuation gives a sufficiently accurate idea of the covering power of the earth mixed with oil, since in both cases the opacity depends upon the intensity of the coloration and the size of the particles. The coloring power thus obtained is that of the earth itself. (Pagnoul.) Knowing the weight of the sand and of the clay present, the coloring power of the latter alone can be calculated.

RUST-PREVENTING RECIPES.

To remove rust from nickel plate: Grease the rust stains with oil, and after a few days rub thoroughly with a cloth moistened with ammonia. If any spots still remain, remove them with dilute hydrochloric acid and polish with tripoli.

To remove rust from finely-polished steel: Rust may be removed from finely-polished steel without injury to the surface by cleaning the article with a mixture of ten parts of tin putty, eight of prepared bucks horn, and twenty-five of alcohol, and then rubbing with blotting paper.

To keep machinery from rusting: In order to keep machinery from rusting, take one ounce of camphor, dissolve in one pound of melted lard; take off the scum, and mix as much fine black lead as will give it iron color. Clean the machinery and smear it with the mixture. After twenty four hours rub clean with soft linen cloth. It will keep clean for months under ordinary circumstances.

To remove rust: To remove rust from iron or steel utensils the following solution is applied by the means of a brush, after having removed any grease by rubbing with a clean, dry cloth: 109 grammes stannic chloride are dissolved in one litre of water; this solution is next added to one containing twenty-five grammes tartaric acid dissolved in the litre of water, and, finally, twenty cubic centimeters indigo solution diluted with two liters of water are added. After allowing the solution to act for a few seconds it is rubbed clean with first a moist cloth, later with a dry cloth; to restore the polish, use is made of silver and jewelers' rouge.

To keep iron pipe from rusting: A simple and economical way of tarring sheet-iron pipes, to keep them from rusting, is as follows; The sections as made should be coated with a coal tar and then filled with light wood shavings, and the latter set on fire. It is declared that the effect of this treatment will be to make the iron practically proof against rust for an indefinite period, rendering future painting unnecessary.—Ohio Valley manufacturer.

RE THE SHAPE OF CHIMNEYS.

The same query applies to hot-air flues as well, and it was put and answered very positively by a man of a wide and successful experience as follows:

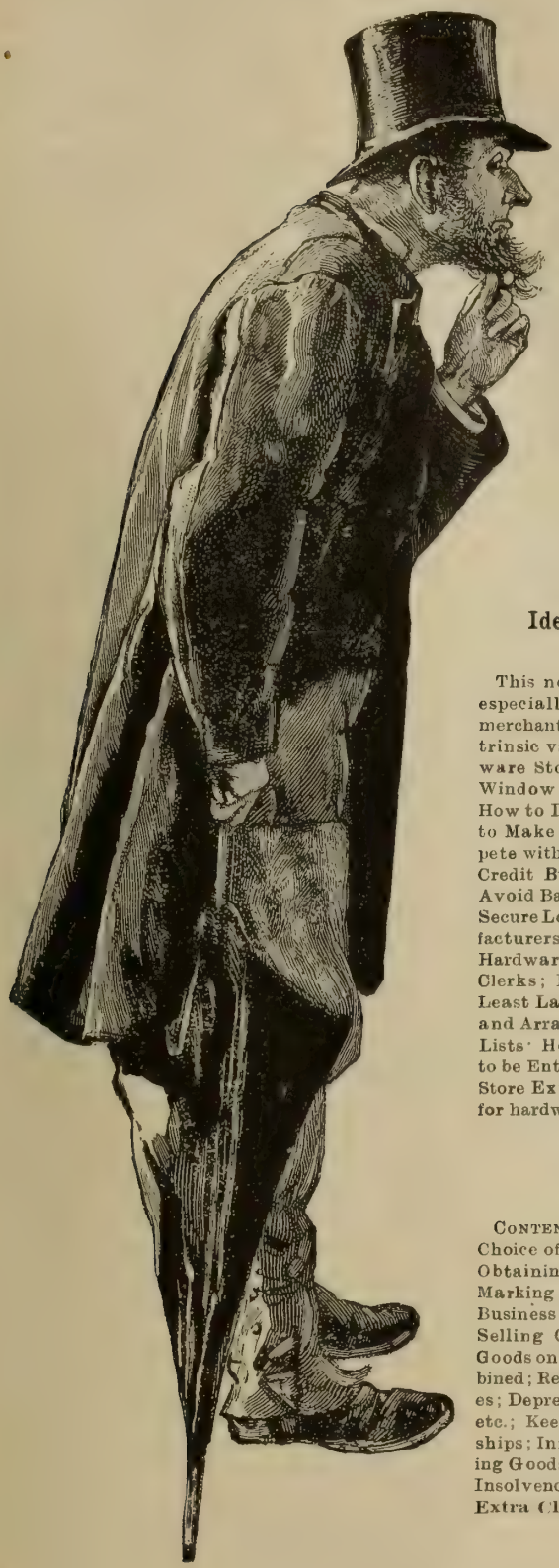
"Having an idea that it was not all uphill work in a chimney, I concluded to investigate the operation of the one in my house to see if there were any down currents in it, as I had heard frequently asserted. I took light tissue paper and made some small light balls of it. I was particular not to crush them tight and make them heavy, and also was careful to keep them round. With these I went to the top, and balls that were dropped into the centre of the chimney were invariably blown out. Those dropped into the corners in a majority of cases went to the bottom, where I found them on taking out the pipe to look for them. Those that did not go down, I think, struck some projection and were thrown into the central up current and blown out. This settled in my mind that rectangular flues were wrong, and while the area of a round flue of the same diameter might be less, it was equal in air-carrying capacity, as it had only one up pressure, with no corners for friction and tendency toward a vacuum. This led me to making the ends of my partition hot-air flues round, and while they are easier to make and cheaper, they are equally as effective as if they had square corners, satisfying me that all flues should be round."

From another equally experienced source this idea has been expressed:

"I believe that in two houses of exactly the same build and exposure, except that one has partition flues for heating and the other round flues of liberal capacity, the house with the round flues can be heated satisfactorily for the six months necessary with at least a ton of coal less, and possibly with a 32-inch portable furnace, where the other house would not be as comfortably warmed with a 36-inch furnace of the same make using the extra ton of coal and possibly more."

These views of practical and experienced men on a subject of so much interest to the trade open up a question that might be discussed with advantage.—Metal Worker.

Many cities are offering bonuses to smelting works, notwithstanding that the law does not permit the application of public moneys in that way, but it has been generally understood that the Ontario Legislature would come to their rescue at the proper time. A bill introduced Tuesday by Mr. Awrey has that object in view. He proposes that cities shall have power to pass by-laws aiding iron smelting works. Last session the bonus clause of the Municipal Act was repealed, but the mining districts were allowed to indulge in bonuses for smelting works. This doubtful privilege is, under Mr. Awrey's bill, to be extended to the cities.



It is more honorable to have built a dog-house than to have dreamed of building a palace. . . . . .

BOOKS FOR BUSINESS MEN.

Ideas for Hardware Merchants.

By D. T. MALLET.

This novel book is the only book ever written especially for hardware men, and every hardware merchant will find it of decided help and of intrinsic value. It tells How to Advertise a Hardware Store; How to Dress a Hardware Store Window; How to Select Seasonable Goods and How to Display Them to Best Advantage: How to Make a Success with Hardware; How to Compete with "Department Stores;" How to Turn a Credit Business into a Cash Business; How to Avoid Bad Debts and Increase Trade; How to Secure Low Quotations from Jobbers and Manufacturers; How to Arrange the Fixtures in a Hardware Store; How to Treat and Manage Clerks; How to Keep Your Accounts with the Least Labor; How to Systematize Your Business and Arrange Its Details; How to Arrange Price Lists; How to Meet Close Competitors and How to be Enterprising; How to Properly Proportion Store Expenses, and thousands of practical hints for hardware merchants. **Paper cover, $1.**

How to Keep a Store.

By SAMUEL H. TERRY.

CONTENTS: The Selection of a Business; The Choice of a Locality; On Buying a Stock of Goods; Obtaining Credit on Purchases; Examination, Marking and Arranging of Goods; Advertising a Business; Employment of Clerks; The Art of Selling Goods; Selling Goods for Cash; Selling Goods on Credit; Selling for Cash and Credit Combined; Replenishing Stock; Settling for Purchases; Depreciation of Goods; Losses by Fire, Theft, etc.; Keeping Accounts; Expenses; Co-partnerships; Influence of Social Life on Business; Buying Goods at Auction; Investment of the Profits; Insolvency; Business Qualifications, etc. **12 mo, Extra Cloth, $1.50.**

300 Ways to Dress Windows.

By HARRY HARMANN.

Fully explained. For grocers, general dealers and all lines of business. 250 pages, 150 illustrations. Price, post paid, $1.75 This includes a nickel hammer and a pamphlet on show windows. **SENT FREE**, a sample of Bon Ami; cleans windows, show cases, brass, etc., with a 44 page catalogue of window supplies.

Building Business.

By N. C. FOWLER.

Nath'l C. Fowler, jr., the eminent advertising doctor and expert at business, has written a book all about advertising in daily papers, weeklies, magazines, religious and agricultural papers, in street cars, signs, lithographs, novelties, calendars; about cuts and how to use them; window dressing; store decoration; points on selling; keeping accounts; everything about publicity and business outside, written from the merchant's standpoint—a book worth its price to the man who spends $25 for printing, and the more to the extensive advertiser and merchant; 177 great advertisers answer the vexed questions of advertising, presenting individual and collective opinion of positive value—most important chapter written. **Cloth $3.75, half leather $4.50, full leather, $5.**

Self Instruction in Practical Business Qualifications.

By CHAS. S. MCNAIR.

Size, 8½ x 11 inches, 256 pages. **$2.50**

How to Sell Goods.

By B. F. CUMMINGS.

A Prize Essay, **10c.**

METHOD IS THE SECRET OF SUCCESS.

The Publishers of this paper have arranged to accept and transmit to the U. S. and Canadian publishers, orders for these books. Money should be sent by P. O. Order or register letter to

THE J. B. McLEAN PUB. CO., LTD.
10 FRONT ST. EAST,
TORONTO.

WHY ONE MERCHANT FAILED.

"One woe doth tread upon another's h el
—So fast they follow."

One of the clearest ways of showing the results of right action, is to describe the effects of an erroneous one, and leave the reader's mind to form the conclusion. For this reason this short sketch of a business career is given to illustrate its error, and thereby prove a cautionary warning to others. In 1887 a young man, who had been left a fair fortune by the death of a relative, decided to engage in a business for himself. For some time previous he had been a clerk in a large retail hardware store and was well acquainted with the details of the business, and was personally popular. Up to this time he had always found difficulty in making his salary last until the end of the month, although it was more than ample for his regular expenses, due largely to his ready liberality towards his friends and acquaintances, and the prospect of a large business for himself was particularly alluring.

Having secured the lease of a large and prominent store he had very elegant fixtures made for his business, and when the stock of new goods was arrayed upon the shelves and in the showcases the effect was pleasing. The place had an air of high-toned respectability and even of luxury in its appointments. As the cost of the fixtures had consumed about one-third of his capital, he was obliged to purchase less stock than he had intended and needed, but as he was a man of taste, the fine appearance of the shining cases and carved woodwork, and the comfortably-arranged office did much to ease his mind of any worry in regard to the limited stock.

The store was on the best street for retail trade, and the rent therefore quite high, but it was roomy and had two large show windows, which when filled with a display of the best articles in stock, contained a large share of the value of the goods. Plenty of people stopped to admire the excellent line of goods arranged in the windows and many stepped in to inspect the new store and its fittings. Business, therefore, for the first few weeks, was brisk, and the outlook seemed favorable, especially to the new proprietor. Being a popular fellow, he naturally thought that as he was now in business for himself, he could afford to keep a horse, and indulge some of his friends with a dash on the avenue now and then.

The business managers of the newspapers in that locality, noticing the new store, sent their assistants around to secure his advertising patronage, and as they were able to prove that it was to his manifest interest to make his business known to the public, he was soon in possession of five yearly contracts for a large space in a choice locality, in as many local papers. His name looked well in print, and everybody admits that great fortunes have been made by extensive advertising, and he felt that although the amount of these signed contracts was larger than his rent, still "if nothing is risked, nothing is gained." In fact, the advertisements did their work well, and people were attracted from all parts of the city by them to the new store. In consequence his business began to grow rapidly, and it was soon necessary to replenish his stock, as he was daily losing sales for want of variety. He had plenty of clerks, and it was a pity for them to be obliged to turn away customers for want of goods.

He had some considerable cash on hand from the sales of the first quarter, but his rent was now due and must be paid, which consumed about half of his bank account, while the remaining portion was used to settle his advertising bills, which were also now due. Still, as he owed nothing, and had some stock on hand, he consoled himself by admiring his handsome store fittings and determined to obtain the stock he needed on short credit, as the demands of his trade made it imperatively necessary that it be replenished, and new and seasonable lines were needed to supply the many customers which his advertising secured. There were also some accounts on his books which he had expected to receive before this, and with the aid of these, and the cash trade, which the new stock would bring in, he felt no hesitation in asking for time on his purchases. The wholesaler to whom he applied for goods knew him as an enterprising young man and the proprietor of a large store, doing an active business, and the commercial reports did him justice, as they reported that he had made his purchases for prompt cash. There was, therefore, no difficulty in obtaining the goods he needed, and as the salesmen from the wholesale house were a fine set of jovial fellows, he felt that as he wished to be popular with the trade, he should not be too close as to prices, and accepted their suggestions as to desirable goods, until he had bought more than three times the amount of stock he had first intended. However, nobody expects to do business without goods, and when the wares were arranged in the store windows, the public appreciated the display, and bought freely, and by the end of the second quarter he found himself again out of goods which the coming season demanded, although his shelves were well stocked with articles which while possessing intrinsic merit and value, moved slowly. In the meantime he had secured a horse, waggon and driver to deliver goods to his customers, and a first-class bookkeeper to attend to the accounts, so that the cash which he had taken in was sadly reduced by the encroaching expenses, and the amount on hand was barely enough to settle his second quarter's advertising account, leaving a small amount for the landlord, which he sent him, with the promise to pay the balance in a few days. The accounts due him, which he had expected to receive long before the end of the quarter, were still mostly due him, and some of them extremely doubtful, as the parties had left town. Still, as business was brisk, he must have more of the staple goods, and went again to market to purchase on credit.

The remembrance of the long and unpaid invoices in his desk at home made him chary about again applying to the same parties for goods and he therefore made his selections from other houses, which were their rivals in trade. He was more careful about quantity this time, and although the purchases were large, still they did not aggregate as much as before. As he was leaving one of the stores one of the salesmen of whom he had purchased on his former trip recognized him and reported to his house that he had seen his former heavy customer purchasing his supplies elsewhere. This fact came to the attention of the head of the concern, he looked over our young friend's account, and, finding it was overdue and for so large an amount that it was a matter of considerable importance to have it collected promptly, instructed his bookkeeper to draw for the amount due at once.

Our young merchant received the draft from his local bank, and, as he hoped to be able to settle the matter soon, from the accounts which were due him, requested the bank to hold the draft for a few days before returning. The bank did so, but as the limit of time had elapsed, returned it to the maker with a note to the effect that they had presented it, but had been unable to collect. The wholesale house became alarmed, and, fearing a loss, placed an attachment on our young friend's promising establishment, which act was soon followed by the other creditors.

The landlord hearing of the situation of affairs, and having a good opportunity to rent the store, notified our young merchant to quit the premises at once or settle the balance due on the rent for the last quarter. By this time the creditors had forced him to assign, and the trustee appointed decided, as the store had to be vacated, to auction off the stock to satisfy the legal claims. As the goods were new and the store well located, the sale was favorable, and the assets, when cashed, sufficed to settle the bills and a few dollars over, which our late merchant pocketed as the balance of his recent fair fortune—poor in money, but with enough experience on hand to suffice for a life-time.

His old employer took him back again to his former position, which he still holds to-day. The brief and brilliant, though sudden eclipse of his business venture lives in his remembrance as a dream, and he now plainly sees where he erred, but it is too late. The difficulty which beset this young business man is a common one, and often under-estimated by the otherwise well-equipped and trained merchant—the relation of expense to capital and profits.

"He knew, yet did ignore his knowledge
And unearthed want where wealth was buried"

—From Ideas for Hardware Merchants.

There are 7,783 drinking places in New York. They are for the most part Democratic campaign bureaus, open 365 days in the year, and averaging nearly 24 hours a day of active business.

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M. MAYER, Propr.

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Imperial Razors

Joseph Allen's NON-XLL Cutlery

T. C. Co.'s Shears and Scissors

G. A. Mix & Co.'s Chisels

The Most Complete Lines of all Kinds of Cutlery in the Market.



S.S. SMOKELESS POWDER is the best. Made by the Smokeless Powder Co., of London, Eng. A stock kept in Montreal. 25 lb. Drums, 2lb. Cannisters, ½lb. Cannisters. Send for Prices. **WILLIAM DARLING & CO., Wholesale Hardware Merchants, 30 St. Sulpice Street, Montreal.**

A FEW REASONS WHY

You should Keep your Stock fully Assorted With

Boeckh's Superior Brushes

They are always reliable and as represented.

They are guaranteed in every particular by the manufacturers.

They are made of the very best material and workmanship

They are sold at closest possible prices.

They are finished and put up in neat and attractive shape.

They are well known throughout the Dominion and are popular with all classes of consumers.

They are handled by all leading Hardware and Paint and Oil trade.

See that the name "BOECKH" Is on every brush.

Boeckh's Flexible Bridled Brushes.

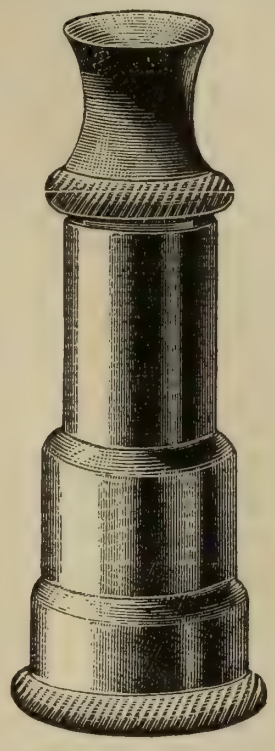
Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

TORONTO, - CANADA.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it.

It is impossible for this pipe to get out of order

Give it a trial and you will use no other.

Hamilton Brass Manufacturing Co.

HAMILTON, ONT.

WHEN IN WANT OF

LAWN MOWERS

Write The James Smart MNFG. CO., Ltd.

Brockville - Ont.



The Largest Assortment.

The Lowest Prices.

The Promptest Delivery.

Brockville Lawn Mowers

The Standard for Easy Running, Durability, and Handsome Appearance. Every machine guaranteed.

BUSINESS CHANGES.

PARTNERSHIPS FORMED AND DISSOLVED.

Brodeur & Lessard, steam fitters, Montreal have dissolved.

A partnership has been formed in Montreal, C. Dagenais and O. Jette to carry on a plumbing business.

Parker & Bray, general store, Preston, have dissolved and have been succeeded by Bray Bros.

Dame Agnes Vayer, wife of P. J. Gearney, has been registered to do business as general trader, Montreal.

A. W. Hugman has been registered proprietor of the firm of B. Hugman & Co., window shades, Montreal.

Winder & Emerson, tents and mattrasses, have dissolved and the business will be carried on by Emerson & Hague.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

Hugh Russell, a Montreal furniture dealer, has assigned.

James Dickson, general store, Austin, Man., has assigned.

C. & A. Inkman, general merchants, Agassiz, B.C., are asking an extension.

The estate of H. Nighingale, office furniture, Montreal, is going into liquidation.

The American Oil Company, 29 Adelaide street west, Toronto, has assigned to E. R. C. Clarkson. Both the liabilities and assets are light. This does not affect the big company proper in the United States, from which the present branch sprung.

CHANGES.

David Townsend, tinsmith, Ottawa, has left town.

E. T. Hamilton, carriage maker, Flesherton, is out of business.

A. W. Otton, hardware merchant, Glencoe, is giving up business.

C. S. Ash, general merchant, Hastings, has sold out to W. C. Hazlewood.

Edward Law, rope works, Kingston, has been succeeded by W. B. Ferguson.

Shier & Marshall, general merchants, Brookdale, have removed to Kinkton.

C. E. Caulton, general store, Lyndoch, is out of business and is now in Tilsonburg.

N. Lee & Co., general merchants, Wroxter, have been succeeded by W. C. Hazlewood.

SALES MADE AND PENDING.

The wholesale sadlery hardware stock of Wm. McIntosh, Montreal, has been sold to Robillard & Genereux.

The stock of Whatmough & Co., the insolvent dealers in house furnishings and stoves, is advertised to be sold by auction.

At Suckling's auction rooms Tuesday the stock of Jennings & Co., Simcoe, amounting to $23,400, was sold to Oscar Henry, of Simcoe, for 60c. on the dollar. The stock of R. & T. Gray & Co., Duntroon, amounting to $2,260, was sold to Henry Marshall for 53c. on the dollar.

DEATHS.

John O'Reilly, general merchant, St. Eugene, Ont., is dead.

W. M. Boyd, druggist, and A. W. Dalton, general merchant, Carberry, Man., were victims of the recent fire that visited that place.

FIRES.

J. F. Delaney, boat maker, Orillia, has been partly burned out.

Geo. H. Brown, carriage maker, Belleville, has been burned out.

Patrick Keefe, sash and blind factory, Iroquois, has been burned out; partially insured.

H. S. Anderson, tinsmith; A. W. Dalton, general store; C. W. Maloan, hardware; W. D. Munro, furniture, were the victims of a fire the other day in Carberry, Man.

OIL CANS.

No engineer should use oil cans with bent and broken nozzles, and without covers and stoppers, for it gives a forlorn appearance to the whole room. As a rule, steam users will furnish these to some reasonable extent, but the writer has made a practice for more than a dozen years of furnishing his own, wherever he has been employed, and the cost has not been excessive, for we have succeeded in keeping an ordinary brass squirt can for two years without accident, although using it every day in oiling valve gears in motion. Sometimes steam users are accused of being niggardly in dealing out supplies, but it may be that there is a reason for this, so that it is well not to be hasty in forming an opinion until you are familiar with all the facts of the case. If an engineer has been in the habit of using belt lacing for various purposes of his own, he should not be surprised if the supply is reduced. If he has not been careful of his waste, he should not object if he is put "on allowance." If he has wasted oil he must expect to be corrected for it.—Scientific Machinist.

COLORING BRASS.

A cold method of coloring brass a deep blue is as follows: 100 grammes of carbonate of copper and 750 grammes of ammonia are introduced into a flask, well corked, and shaken until solution is effected. There are then added 150 cubic centimeters of distilled water. The mixture is shaken once more, shortly after which it is ready for use. The liquid should be kept in a cool place, in tightly closed bottles or in glass vessels, with a large opening, the edges of which have been subjected to emery friction and covered by plates of greased glass. When the liquid has lost its strength it can be recuperated by the addition of a little ammonia. The articles to be colored should be perfectly clean; especial care should be taken to clean them of all traces of grease. They are then suspended by a brass wire in the liquid, in which they are entirely immersed, and a to-and-fro movement is communicated to them. After the expiration of two or three minutes they are taken from the bath, washed in clean water, and dried in sawdust. It is necessary that the operation be conducted with as little exposure to the air as possible. Handsome shades are only obtained in the case of brass and tobiac—that is to say, copper and zinc alloys. The bath cannot be utilized for coloring bronze, copper-tin, argentine, and other metallic alloys.

HOW TO BORE HOLES IN GLASS.

Having had occasion to cement wood to glass, so that the joint would stand changes of temperature, I thought perhaps your readers would like to know how it was done. In making a Wimshurst influence machine the hubs were of wood, and every winter the cold weather made the cement all strip off clean from the glass.

I took some gummed labels such as druggists use on prescription bottles, and gummed them to the glass where I wanted my wood to be fastened, and allowed each label to dry on the glass, and nothing but scraping or soaking in water will be able to loosen it. Then I cemented the hub of wood to the paper instead of the glass, and it holds strongly and permanently. Cement for this purpose may be made of virgin rubber 2 parts, resin 1 part, and gum shellac 2 parts, all melted together and applied hot.

I notice several enquiries how to drill glass. I will tell you my way:

Take a small three-cornered saw file and break off an inch of the end of it. Then take to a grindstone and grind a blunt triangular point on it, being careful not to hurt the temper. Leave the file in the handle and bore just as you would with an awl. The point of the file should not be longer than the file is thick. Use turpentine as a lubricant and keep the cutting edges on point of file sharp with an oil stone. I have bored holes one inch deep in glass in a short time by hand by this method. In boring a plate I have found it best to bore from both sides, using very slight pressure towards the last, always laying the plate on a solid paper bound book.—M. in Scientific American.

The use of cast keys is steadily increasing in the lower qualities of locks made in South Staffordshire. In what are known as "warded" keys, the insertion of the wards in the process of casting has long ago been brought to comparative perfection, and now "sash wards are cast in with equal success. The cast keys are marvels of neaness but, of course, they lack the security which the hand-cut article can alone afford.

No young man can possibly have mistaken his calling who finds in it what the world wants done

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,
Agents.
MONTREAL AND TORONTO.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.
Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.
FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,
CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

FIRE!

McCAUSLAND & SON

Beg to inform their customers and friends that they are in a position to fill all orders with promptness and dispatch, notwithstanding the recent fire in their premises. . . .

72 to 76 King St. E.

This Machine cannot be surpassed for smooth work, light running and durability. The drive wheels are 10½ inches in diameter, and warranted to cut grass 6 to 8 inches high. ALL GOODS WARRANTED.

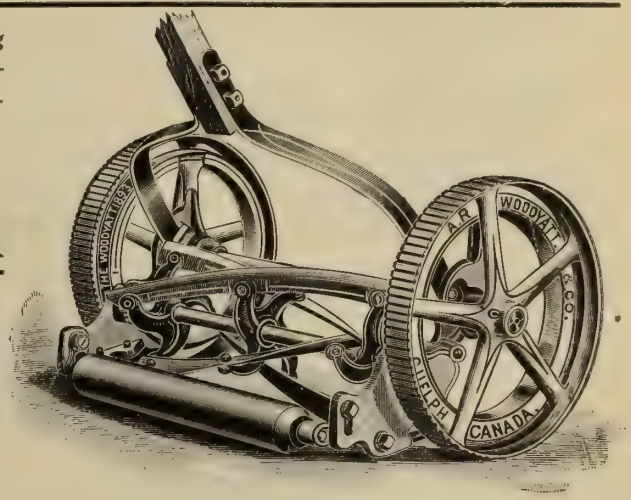
. . **1893** . .

THE "WOODYATT" LAWN MOWER

Light, Durable, and Efficient.

Now On Sale by all Wholesalers.

A. R. WOODYATT & CO. GUELPH, ONT.



Wm. Clendinneng & Son.

Iron Founders and Stove Manufacturers

Makers of the "Etna" Hot Water Boilers, Soil Pipe and Fittings, Stable Fixtures, Machinery, Builders and Special Castings

WRITE FOR ESTIMATES

WORKS: Cor. William and Inspector Sts.,

OFFICE and WAREHOUSE: 145 to 179 William Street

MONTREAL

BUYERS OF CUTLERY

WILL find it to their interest to see our samples before placing Spring orders. A choice assortment in stock of Jas. Rodgers & Co.'s and E. M. Dickinson's goods at special prices.

A. C. LESLIE & CO., MFRS. AGENTS,
MONTREAL and TORONTO

OUR SALES OF
"BURHAM" Portland Cement
For the past 8 months have been
25,499 CASKS.
"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,
McRAE & CO., OTTAWA

MUNN'S LIQUID GLUE
IS THE BEST.
Kennedy Bros., Agents
101 Bay Street, TORONTO.

Clarkson & Cross
ACCOUNTANTS . . .
Established 1864.
26 Wellington St. East, TORONTO

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.
CALVANIZED SHEET IRON. SP



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—
56 and 28 lb ingots, per lb .. 24, 24½
trip " 25, 25½

Tin Plates—*Charcoal Plates, Bright.*

M.L.S. equal to Bradley — Per box
I.C., usual sizes $5 75 $6 00
I.X., " 7 00 7 25
I.X.X., " 8 25 8 50
Raven & P.D. Grades—
I.C., usual sizes 4 25 4 50
I.X., " 5 25 5 50
I.X.X., " 6 25 6 50
I.XXX., " 7 25 7 50
D.C., 12½ x 17 ..... 3 75 4 00
D.X., ... 4 75 5 00
D.X.X. " 5 75 6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—
I.C., usual sizes 4 00 4 25
I.C., special sizes 5 00 5 25
B.V. Grade, I.C., usual sizes 4 85 5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—
I.C. 20 x 28, 112 sheets .. 7 50 7 75
I.X. Terne Tin 9 50 9 75
Old process I.C. 13 00
" " I.X. 16 00

Charcoal Tin Boiler Plates.

Cookley Grade— Per lb.
I.X.X., 14x56, 50 sheet bxs } 6½c, 7c
" 14x60, " }
" 14x65. }

Tinned Plates

72x30 up to 24 gauge..... 6½ 6½
26 " 6¾ 7
28 " 7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb ..	$1 95	....
Refined " " ..	2 35	2 65
Horse Shoe " " ..	2 60	2 75
Band " " ..	2 50	2 60
Hoop " " ..	....	2 60
Swedish " " ..	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets...	4 50	5 00

Boiler Tubes.

2-inch 10½c
-inch 13½

Steel Boiler Plate.

¼inch $2 45
16 " 2 35
¾ " and thicker 2 25

Sheet Iron,

1 to 20 gauge 2¾, 3
22 to 24 " 2¾, 2¾
26 " 2¾, 3
28 " ..... 3 , 3¼

Canada Plates.

Blaina..... ½ bright 2 75 ....
Abercarne ..... 2 75 ....
Lion ....

Iron Pipe.

Wrought 62½ and 5 p. c. to 65 p. c.
Galvanized, 37½ to 40 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head
16 to 24 gauge, per lb 5, 5½
26 gauge, " 5½, 5½
28 " " 5½, 5¾
Gordon Crown—
16 to 24 gauge, per lb 5, 5½
26 gauge, " 5½, 5½
28 " " 5½, 5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per 1b..... 6 6 3-5
" ¼ " " 4⅝ 5
" 5-16 " " 4½ 4⅝
" ⅜ " " 4⅜ 4⅝
" 7-16 " " 4¼ 4½
" ½ " " 3⅝ 4
" ⅝ " " 3½ 3⅝
" ¾ " " 3 1-5
Trace, per doz. pairs $3 60 5 90
German coil, per 100 ft 1 65 2 70
Jack chain, iron, single, per doz yards 0 13 0 50
Jack chain, double, per doz yards..... 0 15 ....
Jack chain, brass. single, per doz yards 0 20 1 10

Copper—*Ingot.*

English B.S " 0 13½ 0 14
Lake Superior 0 13 0 13½

Bolt or Bar.

Cut lengths, round, ½ to ⅞ in .$0 22 $0 25
" round & square
1 to 2 in 0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60 .....$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes 0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60 ..... 0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb.. 0 20 0 22
" 35 to 45 " " .. 0 19 0 20
" 50 lb and above per lb 0 18 0 19

Boiler & T. K. Pitts.

Plain Tinned per lb..... .... 0 21
Spun " " 0 25

Wire.

Pure, in coils—
From 1 to 20 gauge..... 0 25 0 27
From 20 gauge, up 0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge. 0 20 0 21
" " 27 to 30 " .. 0 23 0 25
" " 30 and up..... 0 26 0 28
Sheets, hard-rolled 2x4 ft... 0 21 0 23

Zinc Spelter.

Foreign, per lb..... 0 05 0 05½
Domestic " 0 04½ 0 05

Zinc Sheet.

5 cwt casks..... 0 05½ 0 06
Part casks 0 06 0 06½

Lead.

Imported Pig. per lb..... 0 03½ 0 30½
Domestic " 0 03¼
Bar, 1 pound 0 05
Sheets, 2½ lbs, sq. ft, by roll 0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll 0 04⅝ 0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)...	0 17	0 19
Standard	0 16	0 18
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb $0 13½ 0 14
Other makes " 0 13 0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt 4 75
No. 1 Do..... " 4 50
No. 2 Do..... " 4 25
No. 3 Do..... " 4 00

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon $1 20
2nd qualities " 1 00
Barn (in bbls) 0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb..... 0 05
Chrome Yellow " 0 11
Golden Ochre 0 06
French " 0 05
Marine Black 0 09
" Green 0 09
Chrome " 0 08
French Imperial Green 0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.cwt 1 35 1 40
" " (J.F.L.S.) " " 2 75
" " Royal " " 1 10 1 15
Venetian Red (R.C.2) " " 1 50
Venetian Red. (best) " 1 80 1 90
English Oxides per cwt 3 25
American " " " 2 25
Canadian " " 1 75

Paris Green, per lb 0 13 0 15
Burnt Sienna, per lb..... ..... 0 08½
Burnt Umber " 0 05
do pure 0 08
Drop Black " 0 09
Chrome Yellows " 0 12
" " Lemon pure,
8 lb. tins, per lb..... 0 19
Chrome Greens " 0 12
Golden Ochre 0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal 0 70
Extra " 0 90
Brown Japan " 0 55
Brown Japan, Turpentine p. gal. 0 71
No. 1 Carriage " 1 30
Gold Size Japan ..... " 1 00
Pure Orange Shellac..... " 2 00
Hard Oil Finish ..... " 1 30

Linseed Oil (in bbls)

Raw, per gal 0 60 0 62
Boiled " 0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal 0 50 0 52

Castor Oil.

Best, per lb..... 0 09 0 09½

Cod Oil.

Cod Oil, per gal. 0 48 0 50

Glue (in bbls)

Common, broken 0 10 0 11
French medal 0 11 0 13
Cabinet makers 0 17 0 18
White..... 0 16 0 17
London Town..... 0 7½ 0 08½
Gelatine..... 0 22 0 27
Stripped..... 0 16 0 17
Coopers..... 0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer-
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

per 1b
Best thick white felt wadding, in ½ lb. bags..... 1 00
Best thick brown or grey felt wads, in ½ lb. bags 0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges..... 0 99
Best thick white card wads, in boxes of 500 each, 10 gauge..... 0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge.... 0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50, 50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 3 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 80
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 25

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 45 to 47½ p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary,
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb . 0 25 0 3

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross..... 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05
Screw hook and hinge—
6 to 12 in., per set 0 00 0 04½
14 to 20 in., " 0 00 0 03½
21 up " 0 00 0 03½
Per doz. sets
Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.
Per doz. pairs
Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mortar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

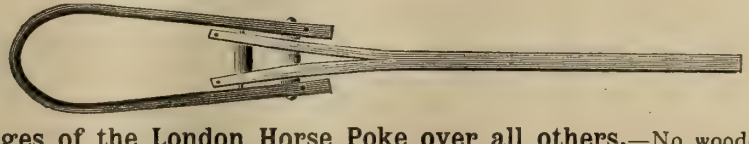
Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

THE LONDON HORSE POKE.

DURABLE  STRONG

Some of the Advantages of the London Horse Poke over all others.—No wooden pins to break or loose. No wire spring to rust or get out of order. The London Poke is the only one made with iron bolts, which cannot get lost or broken in shipping. It is the only adjustable Poke made to fit any size horse from a Pony to Clydesdale.

Send for Sample Order. **BOWMAN, KENNEDY & CO., London,** Western Agents.

Wrought Hooks and Staples, Amer dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

anadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 50 per doz.
ronze, Berlin, per doz .. 2 75 3 25
ronze Gem, " 6 00 9 00
" " 8 75 10 00
hutter, porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy	2 30
40dy	2 35
30 dy	2 40
20, 16 & 12 dy	2 45
10 dy	2 50
8 & 9 dy	2 55
6 & 7 dy	2 70
American Pattern Only	
from 4 to 5 dy	2 90
3 dy. (lath)	3 30
3. Canada Pattern Only	
from 4 to 5 dy	2 80
3 dy. (lath)	3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92. Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Nails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross 1 00 4 25
" Carpenter 2 25 3 60

Picks

Per doz 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis 15 to 17½ per cent

Plane Irons.

English, per doz 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz 1 35 2 00

Pruning Shears.

Per doz 4 00 5 50

Pulleys

Hothouse, per doz 55 1 00
Axle 22 33
Screw 27 1 00
Awning 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot 3 3½
Sliding Door, " 3¼ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger ..	10 10½	11 11½
¼, 5-16, ⅜ in	10½ 10¾	11½ 11¾
Cotton, per lb	18	20
Russia Deep Sea, per lb ..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.

Hack, complete, each 75 2 75
" frame only 75

Saw Sets.

Per doz 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz 3 25 4 00
Bench iron per doz 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P., dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen 1 25

Soldering Irons.

Per lb 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons	per gross	7 50 12 00
Dessert "	"	21 00 .....
Table "	"	30 00 30 00
Dessert Forks	"	24 00 .....
Medium "	"	27 00 .....
Table " ...	"	36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples

Fence, galvanized, per lb 4½ 4¾
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 65 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 51½ per cent.
Channel nails 5c. lb. off list.

Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75 p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz ..... 1 [illegible] 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 60 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 5a
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap 0 11½
" Crown 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " "
" Plain twist, 2&3 wires } 4½ 4¾
" Steel thorn and ribbon 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points 0 04½
Steel staples 0 04½ 0 04¾
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 80 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz 5 80 7 0
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

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REGISTERED TRADE MARK FOR WM. ROGERS, KNIVES, FORKS, SPOONS.

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

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WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

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Phone. 3763 Mention this Advt

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Manufacturer of Telephones, Etc.

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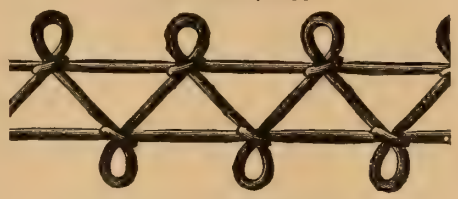
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Nails, Hinges AND Buts

Manufacturers of every description of these goods.

THE HATHEWAY PATENT FENCE WIRE.

Pat. Nov. 19, 1889.



Above Cut Is One-half Actual Size.

The Hatheway Patent Fence Wire, the most popular fence wire throughout the United States, and fast gaining that position in the Dominion of Canada, as it contains all the requisite qualities of a fence wire, being handsome, strong, visible—seen at a long distance; will not sag or get out of shape; allowance for contraction and expansion, heat and cold; being broad, requires less strands to make a complete fence; easily put up, splices itself; will not injure stock. Put up in spools of 120 lbs. each. For sale by all the leading hardware stores in the Dominion.

Manufactured by THE COLLINS MFG. CO., 81 Adelaide st. E., Toronto.

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OF ALL DESCRIPTIONS

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Write for Prices.

Dominion Wire Mfg. Co., (Limited)

WIRE DRAWERS, GALVANIZERS AND MANUFACTURERS

MONTRENL AND TORONTO

Iron, Steel : and Copper **Wire**

Bright, Annealed, Oiled, Galvaized, Coppered, Spring, Nail, Rivet, Telephone, Telegraph and Tinned (for Mattress and Broom makers use.

Also "Lyman" 2 and 4 Point Barb, Ribbon, Thorn and Plain Twist, Fencing. Wire Nails and Wood Screws.

Price Lists Furnished and Discounts Quoted on Application.

Compare

Any Lamp With the

"PITTSBURGH"

And see the Great Difference.



In every point you will see the vast superiority of the . . . .

"PITTSBURGH"

THE central draft in one is perfect, the other you will find fault with. See the wick-screw in The "Pittsburgh," see if the other has anything like it. Which is the simpler? The "Pittsburgh," of course. A child can take it apart without any trouble.

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Sole Agents for Canada

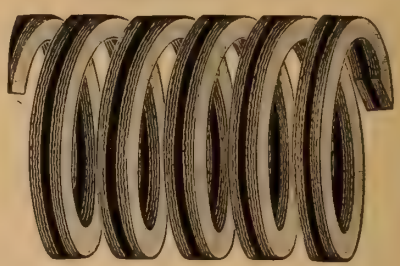
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BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5 8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., **Toronto.**

BARB WIRE = WIRE NAILS

ORDERS SHIPPED ON SIGHT





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CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, MAY 27, 1893. No. 21.

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BEST ANTI-FRICTION METAL FOR

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MANDER BROS.
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Fine Bronzes, Powders, Leafs.

F. W. DEVOE and C. T. RAYNOLD CO., New York
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Fine Colors
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Artists' Materials

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Fine Paints Varnishes, Etc. MONTREAL

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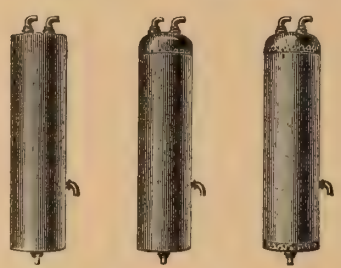
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RICE LEWIS & SON, LTD.

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BOOTH'S COPPER RANGE BOILERS

Best Workmanship.



Test Guaranteed.

26. 27. 27½.

IMPORTANT NOTICE.

Consequent upon the ordinary Range Boiler failing to fill the demands of the Trade, we are making a special Copper Range Boiler, Extra Heavy, of the best Lake Superior Copper, flat bottom, top and bottom Double Riveted, with a guaranteed Hydraulic Test of 200 pounds.

This Boiler is known as

"Booth's 27½ Copper Range Boiler,"

and meets the requirements as called for in the specifications of our leading Architects.

Correspondence solicited and Price Lists on application.

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TORONTO

HARDWARE

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, MAY 27, 1893 No. 21

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

HEAD OFFICE: - - 10 Front St. E.
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NEW YORK OFFICE: Room 41, Times Building, Roy V. Somerville, Manager.
EUROPEAN BRANCH: Canadian Government Offices, 17 Victoria St., London, S.W. R. Hargreaves, Manager.

The Patrons of Industry prove a disturbing element in any and every line of business in which they meddle. Now the manufacturers of paints are beginning to be annoyed by them. Every business man who has had anything to do with the Patrons knows that he cannot live on the percentage of profit they stipulate if he adheres strictly to the letter of the agreement. Some paint dealers throughout the country, in order to keep in touch with the Patrons and still make a living profit by selling them at their own price, have resorted, among other questionable means, to the practice of inducing a manufacturer of prepared paints here and there to make a cheaper brand which they could palm off on this class of customers as the standard article. The result of this is of course injurious to the legitimate trade. So much so in fact that some of the manufacturers have discontinued supplying dealers through the jobbers or middle men and now deal direct with the retailer, being thus in better position to control their trade and keep it out of the hands of the Patron stores.

* * *

Apropos of the above paragraph is another matter that is somewhat irritating the manufacturers of prepared paints at the moment. It has for some time been customary for the members of the association to enter into an agreement with one dealer in each country town or village to handle their goods alone. It is now alleged that some of the privileged ones are not keeping their part of the compact. The representatives of a rival concern comes along here and works in an order, another gets one there, and so on. Against this the manufacturer naturally objects. Deception is not a desirable quantity in business, and does not pay in the long run. A dealer when he enters into an agreement should stand by it. If he discovers that the agreement is inimical to his interests or that it is unjust it is his duty to notify the "party of the first part" that such is the case and that he will in consequence be compelled to withdraw from it. This is the fair and manly way. The better way is for dealers not to trammel themselves with agreements of any kind.

* * *

Overshadowed with clouds as is the trade situation in England, glints of sunshine are seen here and there by those who are not pronouncedly pessimistic. Mr. Mundella, president of the Board of Trade, is numbered among this class; and it was during the deliverance of a recent address before the London Chamber of Commerce that he told what he saw in the situation. The existing depression was only temporary, and while it was hard to endure they could find encouragement in past experience, he consolingly said. And then he proceeded to show what this past experience was. England began the century with a foreign trade of £80,000,000 a year, and he was old enough to remember what pride was felt when it reached £250,000. "And now we are depressed," said he, "because our foreign trade was about £700,000,000." When he said that what trade was suffering from was a lack of confidence, he uttered a truism that is applicable to other countries besides England. We in Canada have at times failed to reap many advantages, because of a laxity in this respect. Confidence is as essential to the success of trade as to the success of war, and the more we have of it the better.

* * *

The wide-awake wholesaler is necessarily a busy man. Like a captain at sea, during critical periods he needs to be on deck during business hours. Of course there are times when he must have relaxation, but when—to again pick up the simile—he is supposed to be on deck, he should not be no one knows where when he is wanted, either by his subordinates or by some one on business matters. In other words, he should have as near as possible a definite time when he can be found in his office. In Great Britain and on the continent of Europe mercantile men are very particular in this respect and in the keeping of appointments. In Montreal they are not so particular, although it is said there is not much cause for complaint. But with Toronto merchants the representatives of European and foreign houses find cause for considerable complaint. Most of these men have been trained to have a time for everything, and when an appointment is made to keep it even if the heavens should fall. Consequently when they set their feet in Toronto and find carelessness in this particular they are likely to form a bad opinion of our business men. The merchants of the Queen City are probably the equal of those in any other city in ability, astuteness and energy, and it is to be deplored that a bad impression should go abroad regarding them because of a lapsus in one particular.

* * *

It's a long lane that has no turn. Canadians have been waiting patiently and long for the establishment of a direct line of steamships between the Dominion and the sister colonies in Australia. Now the want is supplied, and the first boat of the new service is at the moment ploughing her way through the blue waters of the Pacific towards British Columbia. She is the Miowera, and with the Warrimoo compose the line that is to keep up a monthly service between the two countries, touching at New Zealand, Honolulu and the Sandwich Islands. These boats are first-class, elegant in all appointments and 5,000 tons burthen. The Canadian Pacific Railway is at the back of the enterprise. For practically all

our communication with Australia we have heretofore been dependent upon American lines running out of San Francisco, and how the new departure is viewed by our cousins across the line may be gathered from this comment made by a leading commercial paper over there during a reference to the sailing of the Miowera : "This, with the well-organized Japan and China service of the Canadian Pacific, will constitute an unrivaled organization in the world of Occidental and Oriental steamship transportation from America, the company's agents claim. The Canadian Pacific's Japan route has long given the Northern Pacific Railroad much trouble." And thus is being opened up another avenue for extending our trade relations with the outside world. That it will be successful is the wish of every loyal Canadian.

* * *

Things cannot be so bad in the hardware trade when the manufacturers in more than one line were compelled to employ extra help, and even then could not keep up with their orders.

MINING IN ENGLAND.

The returns given in a recent Imperial Government blue book adduce some interesting statistics regarding the mining industry in Great Britain. We learn from it that the total quantity of mineral wrought in the United Kingdom during 1892 was 191,954,908 tons, of which 181,786,871 tons were coal and 5,644,486 tons ironstone, the rest being fire clay, oil, shale and other materials. Compared with 1891 there was a total decrease of 5,738,684 tons, the decline in coal being 3,992,225 tons and in ironstone 1,584,664 tons. During last year 721,808 persons were employed in and about the mines of the United Kingdom, of whom 6,099 were females working above ground. In all there were 862 fatal accidents, occasioning 1,034 deaths, but there was only one death for every 679 persons employed, as compared with one in 668 in the previous year. In and about the coal mines 664,300 persons were employed, of whom 4,546 were females working above ground, the aggregate increase being 15,850 as compared with the previous year. Among this class of workers there was one fatal accident for every 816 persons employed and one death for every 676 persons employed. The consideration of such mortality figures cannot be cheerful, but it is satisfactory in that it shows that as time goes on the percentage decreases.

THE CORDAGE FAILURE.

The Cordage Trade Journal comments as follows upon the Cordage Trust troubles :— "Among other transactions wholly outside of legitimate business which have had a share in bringing about the ruin of the company were the purchases of competing manufacturing concerns at ridiculously high prices. If the company had a treasury overflowing with gold such a course might have been defended. The fact was that the company did not have a full treasury. On the contrary, while the Company was paying large dividends, supposed to be based upon 'earnings.' It had a very small amount of cash on hand and to acquire the new properties it had to resort to various expedients to secure control of the concerns which were coveted. Some of them were purchased by individual members of the National Cordage Company. Others were leased to the latter direct. Still other concerns were deeded to a corporation which was organized to provide the capital necessary to pay for a number of plants which were wanted, but which the National Company did not have the money to pay for. Of what use a concern that was worth, at an outside valuation, not over $300,000 and for which $700,000 was to have been paid by the officers of the National Cordage Company, which amount did not include a sum of $500,000 which was paid to individuals of the concern which was bought, has never clearly been understood. The utility and advantage to the National Company of the other concerns of which control was secured has likewise been a great mystery. This phase of the operations of the National Cordage Company can only be explained upon the ground that the inordinate ambition which permeated the organization had to be satisfied.

"And if to such an ambition is added a lack of respect for one's reputation the combination is sure to end in disaster. Words, agreements and contracts were all broken when they had served the purpose of deluding the victims. Then the trade was turned over almost entirely to subordinates, while every attention was given to Wall street, where the same tragical drama was enacted with the final result of bringing ruin upon the whole institution."

CARGOES OF CRUDE PETROLEUM IN BARRELS.

The secretary of Lloyd's has received a report on the danger of carrying crude petroleum in barrels. A steamer which had discharged at Newport a cargo of crude petroleum in barrels was afterwards found to have a considerable quantity of oil in the engine room well, in the limbers, and in the gutter ways The vessel having been placed in dry dock, and the plugs in the bottom having been removed, a considerable quantity of crude oil flowed out of the vessel. The captain stated that a number of the barrels had leaked out during the voyage, and when it is remembered that crude petroleum oil, owing to its volatile character, is very dangerous in a partly empty space, it can at once be seen that all the elements of a very serious accident had been present. The captain also stated that when he was at Philadelphia there were at least ten other vessels loading similar cargoes. The danger is not over when the cargo is discharged, but continues until the vessels are thoroughly cleansed. An explosion occurred at Cardiff a few weeks ago on board a steamer which had discharged such a cargo, caused by a man going into the deep tank, though it was stated by the mate that the tank had been filled several times with water since it had been emptied of oil. This appears to be a new source of danger, and one of great magnitude. It is the more dangerous when the leakage from the casks can find its way into the engine room bilges. More crude oil is at present been brought from America in barrels than has been the case for some years past, and it has generally been found that considerable leakage takes place from the casks.—Liverpool Journal of Commerce."

VIEWS AND INTERVIEWS.

"Anything doing in wire? Well, I should say there was," said a wholesaler. "The farmers are getting through seeding, and are now buying wire by the mile. And I'll tell you what it it, it would be well for dealers to anticipate their orders some as the manufacturers are even now so busy that they don't know which way to turn."

* * *

"Yes, the bar iron, bolt men and nail makers have been holding meetings in Toronto during the week," said a leading wholesaler. "They were the usual quarterly meetings, and were, of course, as you know, strictly private, but they tell us that there will be no changes, and indications are that there will be none."

* * *

"These things are going out well," remarked a representative of a well-known wholesale hardware house, as he gave the first of a row of ice-cream freezers a vigorous kick, "and I'm afraid we're going to have difficulty in getting enough to supply the trade, particularly in view of the fact that one of the largest ice cream freezer factories in the States was destroyed by fire the other day."

* * *

"There is one thing that the clerks in the wholesale houses along the street should do," said one of them to me the other day, "and that is organize an association, secure rooms near by, put in a billiard table, and keep on file the trade and daily papers. We would be able to go there during lunch hour and have a quiet smoke, read the papers, or have a game of billiards. I think it would be a fine thing, don't you?" I do think it would be a fine thing, and its usefulness might be extended by the addition of a sort of information bureau regarding vacancies or clerks wanting situations. The next thing to be done is for someone to move in the matter.

BYSTANDER.

LIME AND CEMENT.

The powder produced from pure and impure limestone by means of heat is called lime or cement, and, as materials used in the masons' and builders' art, they are classified as common or fat lime, hydraulic lime and hydraulic cement. Good lime is in hard lumps, free from cinders, clinkers, much dust, and should form a very smooth paste when slacked. The limestone from which common lime is obtainable is very seldom pure, and contains magnesia, alumina, silica, and similar impurities to the amount of from 3 to 10 per cent. The paste it makes is greasy, from which fact it is known as "fat." It is sometimes called "air lime," as it will not harden unless it is exposed to the air, and, if mixed with water, it can be kept for an indefinite period without loss of its qualities, provided it is kept from contact with the atmosphere.

Hydraulic lime differs from common lime in that it will harden under water, which is on account of its clayey or flinty nature. When burnt it becomes a caustic lime, and on being brought into contract with water is hardened, its hydraulicity being produced by the crystalizing elements of the clay and flint in the lime. This lime is imported in large quantities from France, but an artificial material of this class can be made by mixing unburnt clay with common lime or a powdered limestone, burning in the shape of bricks by means of a common kiln, slacking the material in the ordinary way, care being taken that there are no lumps of clay still unburnt.

Hydraulic cements are of three kinds, viz., Portland, Rosendale and Pozzuolana, but the last named is seldom used, as the strength of the cement is much less than others of this class. It, however, is an ancient cement, being used prior to the Roman age, and it was the first cement known to possess the property of hydraulicity. Its name is taken from the place where it was first found, viz., Pozzuoli, in Italy.

Rosendale cement, sometimes called "natural" or "American," is found and largely used in the United States. The natural bed of limestones from which the cement is made covers about one-third of the State of New York and other parts of the country and is of a clayey, magnesium nature, light and quick setting.

Portland cement obtains its name from its resemblance when made in a hardened mortar to stone found on the isle of Portland, off the south of England. It was first made in that country in 1843, and in America in 1874, aad is heavy, slow setting and of great ultimate strength. The natural stone from which the original Portland cement is made contains 20 to 22 per cent. of clay and 78 to 80 per cent. of carbonate of lime, and its superiority is increased by the intensity and duration of the heat employed in burning, which is almost to the limit of vitrification. Artificial Portland cement is very largely used, and about nine out of every ten of this class of cement now in the market are not the genuine article. Some of these cements, however, are equal to the best imported Portland, and with proper care a still better cement might be obtained. It is generally made by mixing in proper proportions clay and chalk, marl or compact limestone, and burning them at a high heat.

The testing of cements is an important matter, as their values vary to a large extent, and the natural properties of one portion of a cement are liable to differ from another portion, although of the same brand. Particular attention should be paid to the soundness, fineness and strength of a cement. It should be sound, so as not to expand or contract in setting, which is caused by active lime or magnesia being in the material. The presence of such impurities can be proved by immersing in water some cement mortar with very thin edges, and on examination after say two days,the material will be found contorted and cracked at the edges. The magnesia is more harmful than the cement, for the latter can be slacked by exposure to the air. Many defects in masonry buildings of recent years have been caused by the hydration of magnesia in the cement. It is well to remember in testing the soundness of cements that the trial should extend over considerable time, for some defective material will stand for a period, and than lose its unity and fall to pieces.

Finneness in cement is essential from a polnt of economy, for the finer the cement the greater will be the surface it will cover. It should also be borne in mind that cement will not crystallize by the addition of water unless it is ground, because the coarse particles have no binding power. In order to determine the fineness of the material, sieves are employed with a certain number of meshes to the square inch—one with 50 is considered a good test, and the cement that passes through is of a commendable fineness.

The strength of cement is usually determined by submitting a specimen in solid form to a tensile strain, for should it pass this test the compression will also, as this material is not so strong in tension as in compression. The committee of the American Engineering Society recommend that the tensile strength applied should increase at the rate of 400 lbs. per minute.

There are other properties, such as color and weight, which are often tested when determining the value of cements, but they are not of so much importance as the matters already referred to. Color indicates the difference in the character of the rock and amount of burning. Grey or greenish is considered a good color, while bluish grey indicates a probable excess of lime, and brown the presence of much clay. American cements are peculiar in respect of color, they generally being of a light or dark brown shade.

Weight of cement varies according to the heat given in burning, fineness in grinding and density of packing. The harder a material of this class is burnt the more it weighs. The time a cement takes to set may be also considered a test as to its quality, and one that sets in 30 minutes or fails to commence to do so within three hours, reckoned from the time the water is poured upon the cement, should not be used.

CUT VERSUS WIRE NAILS.

There are over three hundred varieties of nails in existence, deriving their names chiefly from the shape of their heads and points, or according to the purpose for which they are generally used. Two of the classes in most common use are those known as cut nails and wire nails. The former are cut by machinery out of sheets of iron and have their angles sharp but rough ; the latter are known also as French nails (a pointes de Paris) are round, very tough, and are supposed to possess the good quality of not splitting the wood when properly used. In some recent experiments in the United States to ascertain the relative holding powers of these two classes of nails some interesting facts were developed. In the 58 series of tests, comprising ten pairs of cut and wire nails, of one size and weight, driven into spruce wood, 1160 nails were used, varying in length from 1⅛ to 6 inches, and in each case the cut nails showed superior holding power. An analysis of the several tests is as follows :

In spruce wood in nine series of tests, comprising 9 sizes of common nails (longest 6 inches, shortest 1⅛ in.) the cut nails showed an average superiority of 47.51 per cent.

In spruce wood 6 series of tests, comprising six sizes of light common nails (longest 6 inches, shortest 1⅛ in.) the cut nails showed an average superiority of 47.40 per cent.

In spruce wood, in 16 series of tests, comprising 15 sizes of finishing nails (longest 4 inches, shortest 1⅛ in.) the cut nails showed an average superiority of 72.22 per cent.

In spruce wood, in six series of tests, comprising 6 sizes of box nails (longest 4 inches, shortest 1¼ in.) the cut nails showed an average superiority of 50.88 per cent.

In spruce wood, in 4 series of tests, comprising 4 sizes of floor nails (longest 4 inches, shortest 2 in.) the cut nails showed an average superiority of 80.03 per cent.

In spruce wood, in above 40 series of tests, comprising 40 sizes of nails (longest 6 inches, shortest 1⅛ in.) the cut nails showed an average superiority of 60.50 per cent.

TRAVELLERS MAKE MERRY.

The City Travellers' Association of Toronto has become one of the most live and prosperous fraternal organizations in the city.

In most associations an attendance of 25 per cent. of total membership is looked upon as gratifying. But in the C. T. A. the average runs up to 50 per cent. or more. As a result of this healthy condition the headquarters of the association in Richmond hall became too circumscribed and incommodious. In looking around for new quarters the choice fell upon St. George's hall, in Elm street. The suite there engaged consist of as prettily furnished and inviting a lodge room on the first floor as man ever rode a goat in, and as comfortable and spacious a reception room on the same floor as any association could desire to entertain its friends in.

Friday night last the new quarters were formally opened and a number of the friends of the members were there by invitation to share their hospitality. All told there was probably about one hundred and fifty present. And for their delectation ample entertainment was provided. Scattered promiscuously about the floor of the reception room were numbers of small tables at which some of the guests sat and played cards, checkers, etc., while others lounged about enjoying the excellent program of instrumental and vocal music and the choice cigars provided for the occasion, or strolled into one of the anti-rooms, where light refreshments were always to be had.

R. M. Corrie was master of ceremonies, and the program consisted of solos by Chas. Dinnick, W. Walmsley (comic), James Owen, G. S. Crean, George Barron, R. A. Donald, Thomas Macdonald, G. F. Beard, E. B. Piggott (comic), E. Davis, W. T. Harrison, J. B. Morrison; saxophone solo by J. W. King; duet by W. H. Paget and J. Owen; piano solo by A. E. Harding. All the artists acquitted themselves well and every number demanded an enchore. The entertainment was characteristic of the drummer—free and easy and full of life. From start to finish everything was on the swing. When the set program was exhausted an impromptu one of topical and popular songs was launched; and "Jimmy" Owen, as he is popularly known by his confreres of the gripsack, was the moving spirit.

During a brief intermission in the program President Gallow called on some of the guests for impromptu speeches.

President Clark of the Retail Grocers' Association warmly congratulated the C. T. A. upon its prosperity and the success of the entertainment. He reminded them that his association was to have an open meeting second Monday in June when the question: "Are commercial travellers' a benefit to the trade?" was to be debated. "And," he jocularly added, "I suppose you have brought us here to-night to soften our hearts and thereby induce us not to wipe you out of existence altogether." Amid the laughter that greeted this sally Mr. Clark modestly took his seat and had resumed his interrupted game of cards before it had subsided.

J. G. Gibson, vice-president Retail Grocers' Association, spoke briefly in his usual happy vein. He dwelt particularly on the advisibility of associations such as that of the travellers and the grocers devoting more time meeting nights to entertainment and less to business. "I would like to see such meetings as this every month," he added amid a chorus of "hear, hear's."

R. A. Donald followed in much the same strain, during which he held up to criticism the idea obtaining among some merchants of keeping to themselves any methods that they may have found helpful to them in business. "If we have a good thing, let us tell it to our fellows, and by this means enlarge our minds and our usefulness," said he; and the applause which greeted the remark proved that he had struck a responsive chord.

George Little, a Parkdale druggist, then paid his tribute. Next W. Meldrum, representing the Peterboro' millinery firm of that name, spoke well and briefly, during which he said that although his firm had no occasion for doing business with commercial travellers, yet it recognised that they were an important factor in the conduct of the trade and commerce of the country.

And then the thread of the musical programme was picked up again and was not dropped till "Auld Lang Syne" brought the unique and interesting proceedings to a close.

CHICAGO NOTES.

It seems to be a settled fact that the Fair will be opened every Sunday. It will be remembered that the United States Government voted a large sum to the Columbian Exhibition on the express understanding that the Fair would be closed on Sunday. Of course, in a cosmopolitan city like Chicago the preponderance of opinion is that the show should be open every day in the week, to enable the working classes to attend and to take in more money. The World's Fair management have voted almost unanimously to return this sum, over two million dollars, to the Federal authorities. That is to say, they will return it—when they can. "After all the debts are paid," as one tersely puts it.

Be very chary of bogus "clubs," where for a membership fee of all the way from $5 to $50 you are to have the entrée to club circles, and meet, and be met by all the best people in the universe to discuss the social problems of the day. Your own hotel is sufficient club for all ordinary sightseers, where you can mingle with all sorts and conditions of men, and debate topics from baseball to the origin of man and the higher education of women.

The better class of down town hotels have not raised their rates, nor will they, all the season. At the same time, they expect chums and travelling companions to "double up" wherever practicable. No discounts need be given to societies or others, so you will not exhibit a button or a badge. By the way, the Americans dearly love a badge. I see them passing along all be-buttoned and be-badged like a perambulating wax-work show. "We don't propose to cut rates to travellers, press-men, or to an advance agent of a circus," remarked one of the hotel proprietors yesterday.

If desirous of seeing Chicago as well as the Fair, stop at one of the down town hotels and then you can spend the day at Jackson Park and in the evenings promenading the crowded streets or at the theatre. Should you care little for the City and a great deal for the Fair better patronize one of the numerous hotels close to the grounds. Take a room only and obtain all your meals on the grounds. To see everything bring lots of cash. It cost just twelve dollars and seventy-five cents to see all the villages and side shows on the midway plaisance without making a single purchase. Add twenty-five cents for a headache cure and you get off cheaply at thirteen dollars of Uncle Sam's money.

Coming to money. Bring American money. They eye the good honest Canadian money with as much suspicion as if it came from Seringapatam or Chillingawobadoree. The big blonde cashier at the Auditorium Barber Show bewitchingly informed me that she "guessed we don't take Canady money."

The news-boy preferred a "good square nickle" to our symetrical five cent piece.

In and about the beautiful exhibits the temptation to purchase some of the novelties on sale is very great. The handsome display, like the wind-up to an auctioneers advertisement, is too numerous to mention. Next to the big cheese, however, there is one exhibit which claims more than a passing glance, that is the display made by the Canada Paint Company of Montreal, Toronto and Victoria. An exhibit of "concentrated excellence" as a tourist remarked.

As I write the ladies are having a number of conventions in Columbus Hall. Several Canadian ladies have addressed the large assembly, and I notice amongst others that the Miss Johnson's, of Brantford, Ontario, come in for honorable mention for their great success in the literary world.

W. H. Evans.

STEEL-PIPE PRISON CELLS.

Should "the latest improvement in prison construction" eventually be adopted criminals will have fresh cause for alarm. According to the newest innovation in incarceration methods, it is proposed to build cells of iron or steel intercommunicating pipes, in which water or other temperance fluid would be maintained under pressure. An attempt to break out of a dungeon thus constructed would, the patentee of the system, who has presumably practically tested

it, claims, result in damage to the tell-tale tubes, the smallest puncture in which would cause a leak, of which quick notice would be transmitted to the warders by the reduction of pressure actuating a system of electric alarms, and these officials would thus be in a position to easily frustrate the nefarious designs of any of Her Majesty's discontented and ungrateful free boarders. The method, it will be seen, is beautifully simple—on paper ; but as it is evidently very costly we are afraid that Bill Sikes, who, moreover, is nothing if not up to date, will not, at any rate just now, let the matter prey on his mind to any appreciable extent.—Iron.

GET AND KEEP.

In the first place, what is a customer? According to Webster, a customer is "one who frequents a place of sale for the sake of purchasing goods," remarks an exchange. Frequents, that is, resorts to or visits often. By custom, then, we do not mean transitory or chance trade by people who happen to be passing by and drop in, and never come again, but those who have the habit, when they want anything in your line, of coming to your store ; people who have come before to make purchases, and being satisfied with your method of doing business come again, and who, by their example and the good name they give you, bring others to your door.

There is a great difference of opinion among business men as to the best manner of attracting custom and of keeping it after it has come. Some believe in making what they can out of each one and trusting to some means to keep up the trade. This is the "rock" which has been the cause of so many financial wrecks.

Barnum, the great show-man, once said that the "American people like to be humbugged." This may be true of the circus and menagerie, but will not work in the hardware trade.

WEIGHT OF STEEL RAILS.

An interesting and important discussion has for some time been going on in scientific and engineering circles with regard to the climatic influences upon railway plant in general and steel rails in particular. The reports of railway engineers and inspectors of permanent ways have never contained a fuller record of rail fractures than during the last six months, and there is among experts a pretty general opinion that the fractures were due not so much to the want of fibre in the texture of the rails as to their inadequate weight. It does not appear, from past experience, that the use of light rails is by any means an economical policy. More than one-half the value of heavy rails is recouped when they are sold at the worn-out stage ; the cost of maintenance of the permanent way is much reduced, and last, but by no means least, the safety of the traveller by rail is wonderfully increased. It is contended by experienced railway engineers that the weight of rails should not be less than 100 lbs. per yard, although opinions differ as to the shape of the rails as indicated by the dimensions of the flange. Some authorities contend that a large flange or rail-head induces a rapid wear from the interior porousness of the steel, while others who claim to be equally well informed hold an opposite opinion. "There seems to be no doubt, however, as to the superiority of a heavy rail over a light one—whatever shape either may take—and it is satisfactory to learn," says an English contemporary, "that among the highest authorities on the subject, the rails and chairs of the English iron roads are pronounced 'the strongest and safest in the world.'"

NEW METHOD OF BLASTING COAL.

In using the Plom and d'Andrimont excavator, for forming a chamber at the end of shot holes, an ordinary shot hole is first drilled in rock or coal, when in the latter, by an ingenius modification of the Lisbet hand drill, and then the excavator or chambering tool is introduced, and rotated by the ratchet lever or handle, according as the coal presents greater or less resistance. By holding from time to time the nut of the screwed end of the shank the latter is moved forward, so as to cause two blades to open out and excavate a chamber, which may be as much as a foot in diameter. The coal dust produced by the boring is withdrawn by the coarse screw of the shank. When the chamber is formed, the nut is turned in the opposite direction, an action which causes the blades to collapse, so that the tool may be withdrawn from the hole. The charging, which should be by gunpowder for coal, is effected by a brass or copper tube, having longitudinal slots at the end. The tamping consists of a wooden plug, carrying the ignition fuse, and held in place by clay filling. As the action of the gases due to the explosion is exerted in a direction perpendicular to the face, the roof and floor are unaffected, and the coal is detached in large blocks, which are not thrown forward, but only pushed outwards for a few inches. The proportion of large coal is therefore increased, while a considerable saving of labor is effected. This appliance is used at the Hasard colliery, near Liege, and has been favorably reported upon by the managers of several collieries in Germany, including the Frederika Tiefbau, the Carolinen and Gluck, the Eschweiler, Prinz von Preussen, Konig-Ludwig, and Frederick der Grosse.—Colliery Guardian.

HE MADE FEW SALES.

"You meet on the road," said a commercial traveller, "men representing many kinds of business, and it is now always easy to classify them. I once met, for instance, on a train in the South, a calm, polite, agreeable man whom I was sure was selling something, but I could not even guess what. I learned in the course of conversation with him that he was selling railroad cars. At first that may seem like a strange sort of business to be in, but there isn't anything very remarkable about it after all. The car-builders keep track of railroad news of every sort—projected new roads, extensions, branches, new connections, proposed new equipment, everything that indicates a present or prospective demand for cars—and they send out men to look after this business as occasion demands.

"Speaking of a man selling railroad cars reminds me of a story I once read. There were a lot of travelling men sitting around in the smoking room of a sleeping car after dinner, smoking and talking. A quiet man who sat in the corner said that he had only made one sale in six weeks. Someone ventured in a friendly interrogative sort of way to say that he hoped that that was a good bill. The man said : 'Well, pretty fair ; it was a little over $300,000.' And when somebody asked him what he was selling, the man said he was selling railroad bridges, and it appears that the last one he had sold was a double-track steel bridge something less than a mile long. Nobody evinced any surprise at this, but they all agreed that a man couldn't expect to sell a bill like that every day."—New York Sun.

AN UGLY WEAPON.

The gimlet knife is a weapon so dangerous that its manufacture is forbidden by law. This is one of the smallest fighting knives used by any people of the earth and one of the most deadly. In length this knife is hardly longer than a long gimlet, so that it can readily be concealed inside the waistband of the trousers. The handle is not set on parallel with the blade, as in an ordinary knife, but at right angles, like that of a gimlet, hence the name.

The handle is grasped with the blade between the second and third fingers, the upper part of the blade being drawn down to a shank, so as to prevent cutting the fingers when the knife is so held. The blade when in position represents merely an extension of the axis of the arm, and is not held at right angles with the arm, as the villain in the play holds his knife.

The blade is made of the best razor steel, is double-edged for the lower two-thirds of its length and is as keen as a razor. It is not dagger-pointed, but has the strongest formation of a rounding point. The blade is short, but long enough to inflict a fatal wound, and so strong and keen that it will divide a rib under a powerful blow, or cut through any garment like so much paper.

The peculiar position of the handle leaves nothing for an adversary to grasp at except the blade, so that it is almost impossible for the wielder of the knife to be disarmed, the more so as the handle curves in at the end, giving the fingers a better hold upon it.—Chicago Times.

TRADE CHAT

[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Tuesday.]

A woman was recently charged in Camden, N.J., with stealing a red hot stove.

Fifty-one metals are now known to exist. Four hundred years ago only seven were known.

Galvanized iron is not galvanized at all, but is coated with zinc by being plunged into a bath of that metal and muriatic acid.

Merchant (to applicant)—Do you think you know enough to assist me in the office? Boy—Know enough! Why, I left my last place because the boss said I knew more than he did.

Wm. Mitchell, master builder for the Rathbun Company, is hurrying forward the new mill of the Rathbun Company at Campbellford. It will be 100x35 feet and two stories high, with engine and boiler room 26x40 feet. It wil lbe fitted out in first-class style.

The first new steam boiler made in the city has just been completed by Messrs. Laidlaw & Green, at their machine shops on 10th street. Their business has been increasing so rapidly that they find it necessary to put in a moulding shop for the purpose of making all kinds of castings..—Times, Brandon, Man.

The manufacture of indiarubber door mats is simple and interesting. The cell-like structure is produced by making a series of cuts in a solid sheet of rubber, the cuts lying parallel—just as the ladies make screens for the fire-grate out of colored paper. The sheet of rubber stretched laterly opens out in the honey-comb form, and after a border is placed round it, and the whole is fixed,as it were, by exposure to considerable heat.

Some of the largest steel plates ever made in England were turned out recently at the works of the Consett Iron Company, Durham. They measure 60 feet 2 inches in length, 50 inches in width, and 11-20ths of an inch in thickness; and they are to be used in the construction of several large cattle ships which are being built by Furness, Whithy & Co., of West Hartlepool, for a firm in the United States.

On Tuesday the nest of seven boilers recently placed in the Big Mill easily furnished the necessary power not only to run the big mill itself, but also the machine shops, blacksmith shop, sash and door factory, locomotive shops, wood conveyer, etc. In future all the motive power of these different establishments will be furnished by these boilers. Only two men are required at the furnace. This is a great improvement on the old state of things.—Tribune, Deseronto.

The Rathbun Company are putting up a plant at Calabogie Lake for the purpose of drawing up logs and loading on cars, with a saw for cutting up pulpwood. There will be a switch to connect it with the K. &. P. Ry. main line.

Platinum at a white heat, it is said, will consume any quantity of tobacco smoke and keep the atmosphere perfectly clear. Lamps with a little ring of platinum over the flame are used for this purpose, but a piece of platinum wire suspended over a gas jet is much cheaper and really does the work better.

Before the travelling man has left his hotel the newspaper advertisement has had an interview with the purchaser. The buyer may have been out of town that day, but somebody's newspaper advertisement was in his pocket. The country dealer may be located much "out of the way," but the newspaper gets there,and gets attention. The canvasser may ring in vain, but the housekeeper is always at home to her favorite newspaper.

The annual meeting of the shareholders of the Kingston and Pembroke Mining Company was held on Tuesday. The following directors were elected: H. Seibert, J. D. Flower, J. H. Hollister, New York; W. G. Pollock, Cleveland, Ohio; M. H. Folger, B. W. Folger, F. A. Folger, J. Bawden and C. F. Gildersleeve, Kingston. No other business of importance was transacted. This is said to be the richest mining company in Canada.

In 1885 forty-eight iron and steel vessels of a tonnage of 44,028, were built in American ports, of which 37 were built at Atlantic ports and six were built on the great lakes. In 1892 55 iron and steel vessels, of a tonnage of 51,374, were built, of which 27 were built at Atlantic and 23 at lake ports. The Centurion, launched last month at Bay City, Mich., has a capacity for 4,000 tons of freight, and a very few years ago would have been deemed a large steamer on the Atlantic.

It looks as though the Truro Gold Mining Company had discovered King Solomon's far famed mines at Caribou. Last night a brick weighing 750 ozs., 95 per cent. of which was obtained from four tons of quartz. The whole crushing only occupied 50 hours, the last part of the crushing, two shafts each, alone giving 110 ozs. The bar is on exhibition at A. H. Smith's Crown Building, and is valued at $15,000. Besides that there are $1,000 worth of specimens.—The Headlight, Truro, N.S.

The returns issued by the British Iron Trade Association give the production of puddled bars last year as 1,560,697 tons, a decrease of 173,205 tons on the production of 1891. The only centres in which the make increased were Shropshire 8,578 tons, and Lancashire 1,240 tons. The heaviest decrease was in Cleveland, 113,633 tons, followed by a decline of 24,644 tons in South Staffordshire, 12,000 tons in South and West Yorkshire, and 11,599 tons in North Staffordshire.

The threatened attempt to tax bicycles in Massachusetts is justly exciting vigorous remonstrance. "Not only are ordinary assessors disqualified to judge the comparative value of the multitude of different wheels now in use," remarks a United States paper, "but in the majority of cases in that State such a tax would fall upon mechanics, clerks and small tradesmen to whom bicycles have become a necessity in travelling between their homes and places of work. It would be equivalent to a tax on tools. The part that bicycles have played in creating a demand for good roads should alone exempt them from the exactions of the taxgatherer."

Liberal, Portage la Prairie: "The early closing system has been in force in Portage la Prairie since last fall, and gives the very best of satisfaction to both merchants and employees. Prior to the first of January last a petition was circulated by the early closing association of the town, and the signatures secured of two-thirds of the local merchants. Acting upon the request of this petition the town council passed a by-law requiring all stores, except places which must remain open, such as drug stores, etc., to close at 6.30 every evening excepting Saturday and days before holidays, for which the hour was fixed at ten o'clock. The by-law came into force upon the first of January last. Previous to that time for some months the stores had closed at 7.30. There is a fine of $50 for violation of the by-law. The scheme is found to work admirably, and gives general satisfaction, and we hope to see it adopted throughout the province."

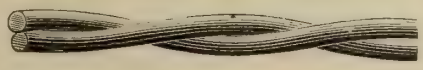
There is room for much improvement in the efficiency of electric door bells as in many instances they are fitted up. It is not an infrequent thing to see posted above the push button beside a residence door, the intimation: "Bell out of order; please knock." It sometimes happens, as in the case of a prominent Toronto merchant recently, that considerable time elapses before the inmates of the house become aware that the door bell is failing to discharge its duty. The merchant's friends in vain had been pushing the button for a week or more. When at last the discovery was made that the bell was not working, the owner went down town and expended $3.50 in repairs. What was his regret at having done so when the first person to demand admittance after the bell had been put in order was a policeman bearing a warrant summoning him to the police court to show cause why he had not removed the snow from the sidewalk in front of his premises.—Canadian Architect.

. . FENCE WIRE . .

A—4 Barbs, 6 inches apart. . . .
B—4 Barbs, 4 inches apart. . . .



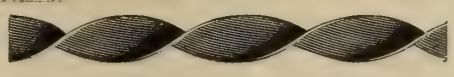
C—Plain Twist, 2 wires. . . . . .



D—Plain Twist, 3 wires. . . . . .



F—Ribbon. . . . . .



G—2 Barbs, 5 inches apart. . . .
H—2 Barbs, 2½ inches apart. . .



I—2 Barbs, Flat Barb . . . . . .



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Carriage Top Dressing
Etc., Etc. . . . . .

DEATH OF GEO. K. SCOTT.

Sad was the news and sudden its bringing that on Saturday last announced to the business men of the country and Toronto and Montreal in particular the death of Geo. K. Scott, until recently a member of the firm of Taylor, Scott & Co. His death occurred the previous day in Montreal, where he had undergone an operation for peritonitis. So far as the operation was concerned it was successful, the direct cause of his death being heart failure. He was only sick a few days.

Deceased was one of the most popular of business men. Those who were brought into casual contact with him recognized in him a shrewd business man, but, above all, those qualities that make friends many and enemies few, while his close and intimate acquaintances and employees looked upon him as their ideal and paid homage to him as such. And when the sad and unexpected news of his death reached them they felt a void had been created in their existence. To his old employees at Taylor, Scott & Co.'s the news came with especial sadness. To the floral pillow they sent to grace the coffin of their former and beloved employer, the youngest and least important to the oldest and most important contributed. And when the remains were borne from his late residence in Tranby avenue to their last resting place they were there to pay their last tribute of respect.

The late Mr. Scott was born in Donegal, Ireland, in 1856. He came to Montreal when quite young, and there entered the employ of the soap manufacturing firm of Alfred Savage & Co., remaining with it for 17 years. A little over five years ago he severed his connection to enter as a partner the firm of Taylor, Scott & Co., which, it will be remembered, was dissolved some weeks ago.

TO OBVIATE OXIDATION.

The oxidation of iron and lead pipes, with the consequent contamination more or less of water or other liquids which may pass through them has lead some Belgian engineers to experiment with glass-lined pipes, according to Age of Steel. The experiments have, it is said, been so far successful, and showing an unexpected capacity for resisting great interior and exterior pressure. The compound pipe bears a heavy internal strain without damage to the glass, while it presents to external strains more resistance than the purely metal pipe. The glass tube is placed in the metal tube, and the space between the two filled with a special kind of cement, perfectly uniting the two tubes. It can be suited to pipes of all forms of shape or conduit, and would seem to be specially suitable for use in running electric cables, the insulation being complete. Further experiments with this combined form of pipe will doubtless be made and public service be benefitted by its adoption where practicable.

TRUSTS AND THEIR LIMITS.

Public interest in trusts has been greatly renewed by recent events in Wall street. There have been violent fluctuations in the securities of every big trust except the Standard Oil, which is the oldest and most solid of them all, and sells at the highest price a share. The fluctuations in the Wall street values of the trust securities recall all the discussion over the methods and expediency of the trusts when they first started, and the limitations of the laws of trade impose as well on trusts as on any other business corporation.

A writer in the Sun says the great difference in principle between the Standard Oil Trust and most of the trusts which have been organized and floated within the last few years is that the Standard Oil Trust tries to cheapen, no matter how little, the selling price of its product, and relies for its profits on economy of management, facilities in handling and control over the sources and production of the raw material. This is increased by the limited area in which petroleum is found, and by the great advantage in refining it which the big corporation, with a large plant, its own steamers, pipe lines and distributing agencies, has. The Standard Oil Trust learned by experience that this was the best policy, in that it prevented competition through the operation of the laws of trade, and secured to itself a monopoly of the consumers.

There are natural advantages in trusts and also disadvantages. If the disadvantages can be eliminated by careful management and adherence to good business principles, the advantages will prevent competition, and make unnecessary the buying out of competitors. Up to the limit of the executive ability of the management of a trust the cost of production can be diminished. This should be the real source of profit to a trust, not the monopoly of business secured by the buying out of competitors nor the raising of prices to the public.

The laws of trade, which are as inexorable as the law of gravity, prevent the permanent raising of prices by a trust beyond the competitive point. If a trust were formed to-day in any of the big industries in the United States, and that trust should embrace every factory at present engaged in that industry, it would still be impossible to advance prices materially, because every advance would encourage free capital to invest, and other factories making the same product would come into existence.

Even were the facilities of the trust so much better and its executive management so much abler than could be secured by the outside people, still the only result would be that outside capital would have to wait for prices to the public to be raised before it would be profitable to go in. If the trust were making 15 per cent., and at the prices obtained by the trust outsiders could make 10 per cent., there would be plenty of outside capital going into the business, with the result that the trust would have either to buy its competitors out and so encourage the development of new competors or lower its prices, not only below the prices at which outsiders could manufacture at a profit, but so low that the outside factories would have to close.

The fact that prices had been unduly raised for once for any length of time would mean the creation of outside competitors whose total production would amount to more than the consumers could absorb at a profitable price, and so there would be a constant pressure to a selling price lower than the profit which could have been secured had prices never been unduly raised.

It is not by overcapitalization that a trust will bring about its downfall, but by poor business management and disregard of the laws of trade. It is well known that almost every trust is capitalized at a sum considerably larger than the cash values of the properties, good wills and franchises which were consolidated to make up the trust. All over this real value, whatever it may be from time to time, is water. If the trust earns dividends on all its capitalization it simply means that the trust has been so well organized and is so well managed that it can pay an unusual profit on the investment.

Wall street and the public discount water. They not only discount it, but they often discount it too much. During a recent break in the values of industrial securities the whole capital at the Wall Street prices was of less Wall Street value than the original properties which went to make up the prices. A stock paying 6 per cent. dividends steadily year in and year out, with books open to the stockholders and to the public, well and conservatively conducted, will sell for more than twice as much a share as a 3 per cent. speculative stock. By making securities speculative the market for them is limited, and the large class of conservative investors is excluded. It is this class which buys the gilt edge steady paying securities, which rarely break in the market, and are not often handled on margins. They are bought and paid for. It is hard to cause any break or panic in them.

Except where a trust can control the source of production and thus prevent competition, or where it owns patents or exclusive franchises, there is nothing which the public has to fear. A trust cannot raise prices beyond a rate of reasonable profit without encountering two great dangers. One is that of competition, if the article is such that the public have to buy it. The other danger is that by raising the price it will restrict its market and drive the public to smaller purchases or to the use of substitutes. It is a well-known fact in commerce and trade that the market for any product depends greatly on its price. A reduction in price of a third may double the sales, while an increase in price of a quarter may diminish the demand by half. This is what every man in charge of a business must decide for himself, and his profit or loss depends on that decision. The trade rule is that the lower the price the greater the demand, and that a constant cheapening of prices means a constantly increasing demand for the product.

Here is where a well organized trust has its advantage over a small corporation or an individual. It has greater capital, better credit, more concentrated and cheaper management, and an opportunity to economize in the buying of raw materials in bulk for cash, in the saving of distributing, and in the constant saving of salaries and incidentals. There is one main office and only one set of executive officers for a whole trust, instead of a separate office and a separate set of officials for every corporation which was absorbed to make up the trust. The market can be better watched and handled, raw materials can be secured at the season at which they are most cheap, credits can be arranged with the banks, the army of drummers, sales agents, branch offices, and distributers can be materially reduced; better terms can be made with the workmen. There will be fewer superintendents and fewer salaries.

There is no reason why the trusts should not live and prosper and be good investments; only for their own even more than for the public interest, they must not regard themselves as exceptions to business rules, and they must not attempt to ride over the laws of trade.—Journal of Commerce.

Perhaps the most recent application of photography which has come to play quite an important part in scientific work is a registering device for recording a continuous reading of station voltmeters. The apparatus is described as follows: An incandescent lamp is arranged so that the rays of light which emanate from the glowing filament are directed in a parallel sense upon a narrow slit, before which is placed the needle of the voltmeter. Obviously, in moving across this illuminated slit, the needle obscures the light, and the shadow is then recorded upon the sensitized paper as a white image upon a dark ground (the image of the illuminated slit). By an ordinary clockwork mechanism the sensitized paper, which is rolled upon a drum, is caused to move at a regular rate, and the intervals of time are recorded upon it photographically at the same time as it receives the shadows of the moving needle.

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Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

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HOW TO AVOID WASTE.

The following is a second article by H. C. Wiseman on "Waste in the store and how to avoid it:

The constant study of a subject, the main import of which is the caption above, will prevent many a man and many a firm from going to the wall. The writer, personally, has in mind a business acquired on a capital of $150,000, carried on for 11 years in a seemingly successful manner, the sales of which were enormous and based on a margin of profit that ordinarily would be more than safe—would be enriching. And yet that business literally leaked itself away. At the end of those years its stock was worth 40 cents. It sold finally under the hammer and did not realize 25 cents on the dollar on the original investment. It was full of leaks from cellar to garret, from office boy to president. They were never stopped, they grew, and those men to-day attribute every dollar of their loss to careless, criminal waste in the business. How to avoid—be always on the lookout for it and know the remedy. Start at watching for small waste, and the habit will come of finding the large.

In the store never set out a box of matches, put out a dozen or so. Set out the box and every man will take a handfull. We've tried it, and we now make one box go as far as a dozen formerly went. Buy a good broom, name a fair life for it, and when the old one is worn out serve the new one yourself. Tell your clerks: "There are a dozen brooms, use them," and with the most of them three will be used where one ought to answer.

Get every man in the house in the habit of turning down gas as soon as he is through with it. Two dollars a month saved for gas is a fair profit on $240 worth of goods sold in twelve months, or 10 per cent. on a $20 sale. Keep a nail box and use it—you throw them on the floor, why not in the box? Besides what we use again, we sell enough at 2 cents a pound to pay the broom account in a good sized retail store.

Keep a twine reel and use that. Do not stop to untie knots—you cannot afford to lose the time—but cut off the knots, make a quick tie, give the reel a whirl, it is wound up and ready. Do not try to ball scrap twine—the reel is better.

Save your iron scraps, it will surprise you to see the results of your bands alone from bundles of iron coming in. And there is your paper account. I think I am safe in saying that with all the goods that come in pasteboard boxes, it is possible to save one-half that account. The pasteboard boxes are the most convenient things in the world for sending out cut and wire and horse nails. Save the large pieces of pasteboard for every day special signs, and make a contract with some factory or foundry for all your good boxes, barrels and nail kegs. You will be surprised to see how much P. and D. you can credit to that account. While you are saving—save time, too. Buy a thousand or two cheap coin envelopes for brass headed tacks, screws, cupboard catches, brads, bed spring staples, etc., they take lots of time to wrap up, and that time is money.

Do not economize on scales; have good ones, and have those that do not require down weight to show a pound. Your customer only expects what he buys, and with bad scales and careless clerks you cannot possibly sell over 90 pounds for what you bought as 100. There is nothing that will rob a man so successfully as his scales.

The habit of not charging for small odds and ends is almost criminal. You cannot afford to give away goods simply because it is a screw, a screw-eye or two, a handful of nails or six inches of wire. They are all worth a penny or two, and it takes but a few of these good-will sales to drown a dollar beyond recall. Friendship is one thing and business is another; if goods are marked right no man respects you any more for cutting the price on them, either asked or unasked. If you do it, your clerks will. If you do not they will not; and your example more than all else will prevent their sacrificing you in their little personal friendships Other leaks are the exposed samples of goods. Sell them off, keep them fresh. Watch the parts of goods. Keys and strikes for locks, roses for knobs, nuts for bolts, hoops for buckets, etc. In short, fill them or fit them up; keep them as near their original value as possible.

Cultivate the habit in the store of every one always having something to do, if only using the dust brush. Have goods ready to go out. Grass seed packages made up, nails out in 5, 10 and 20 lb. lots. Your season's rubber hose fitted up with nozzles, bands and connections, and ready for sale. There are hours in a day saved in such work, and the biggest leak in any house is the time wasted by employees. These are but a few of the wastes and losses, and their remedies, that if closely watched will certainly bring the right side of a merchant's balance sheet to the front at the end of the year.

BUILDERS AND FURNACES.

"Now that the building season is well under way, is not right now a good time for the furnace men to take a stand and insist that they shall have a voice in arranging where the heat conductors shall be placed in the contemplated building, and what the size shall be?" writes a correspondent of N. Y. Metal. "Are they not justly entitled to a right in the matter which is paramount to all other, based on the fact that they receive the condemnation that comes from meagre satisfaction and small comfort? Is it not time that the carpenter, instead of consulting his own convenience, shall be made to contribute aid to the furnace man by providing an ample and free passage from the cellar to the register and by this means do his duty as a builder, by furnishing the owner of the building in full what he has a right to expect, that is, comfort for the six months of the year when the windows and doors are closed, from necessity of economizing the artificial heat that is furnished? The utter indifference and dense ignorance of the average hatchet-and-saw man, yes, and of the T-square-and-estimating man, as to what is necessary to be honest to both the owner and furnace man, can only exist where a lack of interest prevails. Now, why not make the architect listen to his peers, even if their apparel don't compare with his, and the carpenter give us a show which will do him no harm, and in the end benefit all."

THE ERA OF THE KITCHEN.

The kitchen is the vital center of the domestic economy. Out of it come the issues of life and death. The symptoms may be manifested in the dining room, in the parlor, or within the curtained recesses of the caudle lecture room, but the moving cause may be readily traced in any case to the kitchen. Like the torpid liver, its disordered condition casts a green and yellow melancholy over every phase of family life, and no remedy is effectual that does not reach it. In the architecture of the dwelling it is kept in the background, but from the moment the household takes possession it comes to the front, and its bile remains a constant source of solicitude until some sweeping catastrophe removes it and the house together. Recourse to flats "light housekeeping" and boarding have been the familiar expedients to escape its tyranny, but without avail. Its unwelcome presence is felt, if not seen, even then, and, like the poet's raven, is proof against all exorcism. Its sway begins with the independent existence, and ends only with death.

If the tales of our grandmothers may be believed, it once occupied a more subordinate relation to human life. Domestic economy was once a simpler problem. A less conventional existence had no need of latter day refinements. It was at once the scene of culinary triumphs, the place where the "groaning board" was spread, the centre of social attraction, and, if need be, the abode of blissful dreams. In those halcyon days, the wide fire-place with its crane laden with the scanty furniture that satisfied the most ambitious cook of that day, and perchance a brick oven, out of whose capacious depths were drawn viands that make our elders sigh for the grace of a day that is dead, constituted the only paraphernalia necessary to elucidate the mysteries of the cook's craft. No alien hand found employment within those sacred precincts, and morning or afternoon callers found the mistress of the house ready, at a moment's notice, to exchange the gossip of the day, her regu-

lar duties affording the convenient means of punctuating and emphasizing the matter of her discourse.

But all this has passed away, like a tale that is told. The baleful influence of the nineteenth century civilization has waved its magic wand, and the scene has shifted. Vigor and health have, hand in hand, taken their departure, and real comfort, a shivering stranger, stands gazing through the rear windows upon the strange transformation. The name is alone left by which the curious may trace the rapid descent. The air and sunshine are no longer welcome visitors. The cheerful glow of the hearth has given place to the laborious sheen of copper and nickel-plate. The reign of the cook-book has supplanted the experience of the trained housewife, and the ardor of the artist has given way to the service of the hireling. The grocer and the garbage box have become the alpha and omega of kitchen destiny, while somewhere between, the members of the family would fain feed themselves upon the food that swine eventually eat. An imported deity is enthroned in the seat of power, and master and mistress, with suppressed voices, discuss the portents that foretell the day's fate. The housewife is mistress only in name. Byeducation and the limitations of the new regime, she discharges the social functions of the first floor, with due regard to the autocrat of the lower regions. She greets her callers with a studied smile, and straightway bemoans the sad fate of their degenerate times. Like Arthur's death, it is the one thought on every woman's heart, and even the Easter bonnet and the new spring dress lose significance in the shadow of this overwhelming topic. The last word she says to her departing lord is not to bring anyone home to dinner, and the first greeting she gives him on his return is that the dinner is spoiled.

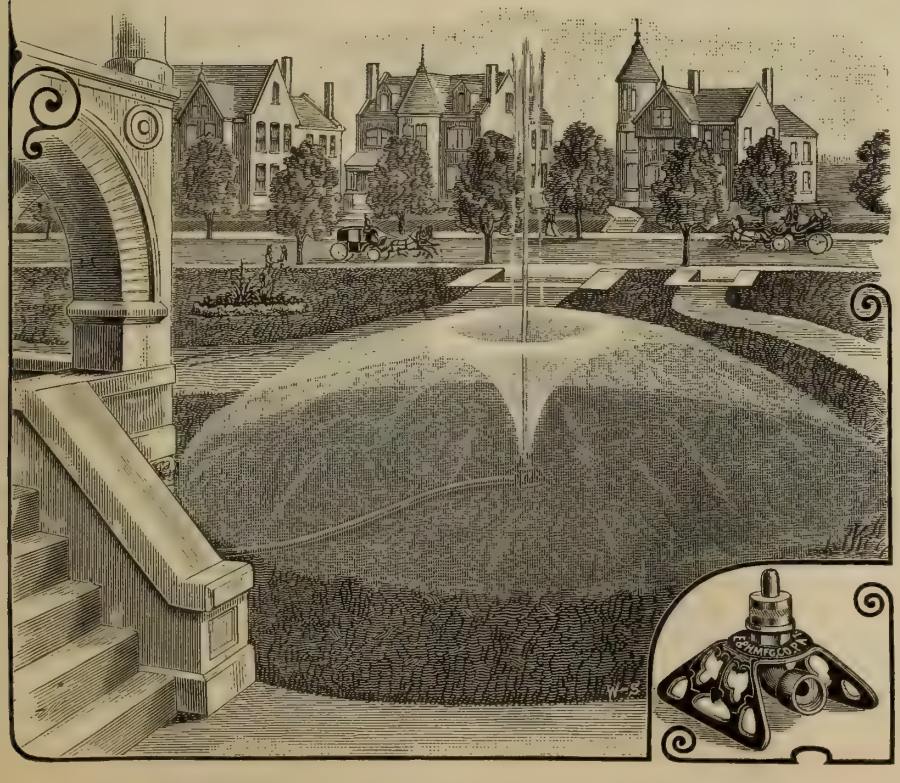
It need scarcely be added that the hanging of the crane is a figment of the pet's brain, and has no counterpart in modern life. It smacks of love in a cottage, and still has a certain attraction for the inexperienced, but the illusion is only too soon dispelled. The first visit to a stove store lays the hard, unyielding facts before the romantic young husband. He suggests a modest cook stove that seems to possess unlimited facilities for catering to the wants of a family of two, but his confident expression fades out of his face like a tropical sunset as his bride with horror-stricken countenance exclaims: "Why, John, Bridget has never been accustomed to anything but a six-hole range! She wouldn't stay a day with such a thing as that!" With such a beginning the rest can be better imagined than described. One article after another is taken up and decided by the standard of the kitchen autocrat. When the equipment is completed and installed, appliances for the production of everything from a plain hash to a plum pudding has been provided and appropriately placed, and one of a mechanical taste would gladly change places with Bridget. But that may not be. Like the Turk, she will have no brother near the throne, and he is forthwith banished never to return unless fortune may favor him with an invitation to a wake. And so the old-fashioned housewarming has fallen into disuse. With the introduction of Bridget the warming process begins, and he is a salamander of no mean pretensions who does not find it hot enough before life's fitful fever ends.—Stoves and Hardware Reporter.

COMPARISON OF WAGES.

The wages paid per day in different trades seem strangely at variance with the amount of information that some workers must have and the responsibility they bear, remarks Metal Worker. This applies to the good workman, and not to the large body below the average or to the higher class at the top. Considering the money invested in tools by the carpenter and the supervision which he is expected to maintain over the other workmen on a building, his wages seem all out of proportion to those of the bricklayer. The tinner has stored away a fund of knowledge, and can consult no higher authority in case of difficulty, yet has to meet difficulties requiring sound judgment, deep thought, and a personal skill that is second to that required in no existing handicraft, but his wages, nevertheless, are not munificent. The plumber, without realizing it, is a veritable encyclopedia compared with his frequent associate, the marble cutter, yet the latter receives much higher pay. It has been said that a man's business is as dignified as he makes it, but we are not prepared to admit that the old trades which are so indispensable have degenerated below the better paid trades, as the difference in recompense would suggest.

Competition is keen and active and the only way to meet it successfully is to buy from the best houses, and at lowest prices.

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STOVES and TINWARE

WHO SHOULD SELL GAS STOVES.

The present condition of the gas stove trade is not altogether a satisfactory one, as there is strong necessity for reform in the methods employed for the sale and installation of these useful cooking appliances. Other trade journals besides The Ironmonger have taken up this matter in the past and advanced reasons showing that the present handling of the stoves almost solely by the gas companies is unsatisfactory and unjust, but so far they do not seem to have brought about very much of a change. The gas corporations apparently consider that they possess the right which comes of a monopoly of the fuel used in the apparatus, and do not seem inclined to relinquish their grasp upon the trade. It appears to us that the subject is one that should be actively agitated, both by the dealers in stoves of other kinds, as well as the journals who represent the stove-making industry and the gas companies themselves. It must be obvious to all that a liberal arrangement between the manufacturers and distributors of coal and water gas and dealers in stoves, whereby the latter would find it worth their while to advocate the claims of gas stoves, even as they now do those of coal, gasoline and oil stoves, would result in a largely expanded sale of the latter, and a corresponding swelling in the dividends now enjoyed by the holders of gas company stock. Stove dealers who are in the business of marketing cooking apparatus are manifestly better equipped by their training and experience, as well as their facilities for exhibiting goods than the gas companies themselves can be; it therefore follows that by their present policy of attempting to do a retail and a manufacturing business, hampered by inexpert and incompetent salesmen, they are by no means contributing to their own prosperity in the highest possible degree. Nearly all the gas stoves now made are marketed directly to the users by the companies who contract for them with the manufacturers. The mere profit upon the stoves themselves is a matter of no moment to the gas companies, who, in many cases, make the necessary connections and put the stoves into the homes of their customers free of charge, recouping themselves for the outlay from the future profits of the gas consumed. The manufacture of these stoves should be a legitimate business, conducted on principles similar to those which underlie every other commercial venture. The sale of every stove should bring a fair profit to both manufacturer and the intermediating agent, through whose hands it passes to the final user. This is not at present the case. The gas people play what we are bound to regard as the part of a would-be monopolist, ignoring the first principles of the "live-and-let-live" policy. Their attitude is not less open to criticism than would be the position of the controllers of the petroleum and oil industry should they lay down a law that, because they produce kerosene and gasoline, they are entitled to a monopoly of the sale of oil and gasoline stoves and even of lamps. Gasoline stoves have come into very general use, and this has been in a great measure through the prominence and activity of the thousands of retail hardware and stove dealers throughout the country who have intelligently explained their merits to customers. Gas stoves are comparatively new things. In many ways they possess advantages over gasoline cooking apparatus, and, properly handled, there is no reason why their sale and use should not be universal. With the assistance of the retail dealers this condition of affairs will be brought about much quicker than it will be under the existing regime.—The Ironmonger.

DISPOSAL OF OLD TIN CANS.

"Wanted, 10,000 goats," is a head line in a recent issue of the Pittsburgh Dispatch, which is calculated to arouse curiosity. On investigation it is found that the ruminants are proposed to be supplied to the city board of health for the astonishing purpose of consuming the mass of old tin cans which is accumulating around the city garbage furnace—at least the Dispatch says this is the only method the superintendent can think of for ridding himself of a daily increasing incubus! His furnace can't burn up the carloads of these articles which are daily thrown away from hotels, restaurants and private houses in the city and dumped into his care, and the digestive organs of goats are the only things, so far as he knows, strong enough to dispose of old tinware. However this may be, it is a solid fact that the question of disposing of the quantities of old tin cans thrown away in cities is one which is greatly exercising the municipal mind, and an effective solution of it is much to be desired. Surely, among the ingenious devices which modern invention has brought out for utilizing the waste matter of every kind, some method of disposing of this class of waste, which really contains valuable material, should be available. The difficulty lies largely in the bulky nature of the cans. Sash-weight makers use them in their manufacture, but as they only offer about $1 a ton for the material, and this on condition that the cans are flattened out, it is not much worth anyone's while to cater to that trade, as the operation of flattening a ton of cans would cost more than the sum offered for them. The tin and solder contained in the cans are of some value, and a number of methods have been announced for separating them. We do not know whether any one of them, however, has proved a commercial success, although it is said that the extraction of tin from old cans is carried on as a regular industry both in London and Paris. Some of the newest garbage cremating systems are claimed as capable of destroying old tinware, though how its annihilation is effected is not quite clear. Still, what is required is not destruction but utilization of this waste material.—Metal Worker.

DUTY ON BARBED WIRE.

Referring to the recent arbitrary action of the Sydney Customs authorities in deciding to increase the duty on barbed wire from £2 per ton to £3, the Australasian Ironmonger has the following pertinent remarks: "This is said to be on account of a shipment having recently been imported in the black state, possibly with a view to galvanizing in the colony, and so evading the duty, which was formerly also at £3, but for at least a year had been £2 per ton. When the objection was raised by the customs authorities to admitting barbed wire duty free in the black state, it appears to have been argued that it could only be looked upon as wire, considering that when galvanized it was not classed as a galvanired manufacture; this is said to have been the cause of the increase in duty. Although it can scarcely be denied that barbed wire is to a certain extent a manufactured article, it is very little, if any more such than corrugated sheets, and importers in Sydney consider that the alteration in duty, without reasonable notice being given, was altogether unbusiness-like on the part of the customs authorities. It is stated that one of the principal importing firms received a shipment early in January, and, having sold a considerable portion of it 'to arrive,' they at once paid duty at the usual rate upon the portion sold and delivered it from the ship, but, to their surprise, the customs authorities the following day demanded an additional £1 per ton duty, and insisted upon its being paid. Although they protested that appeal would be useless in face of the law (notwithstanding that they had already accepted payment of £2 per ton), it is believed that the importers were in the end indemnified against loss. It is manifestly unfair that importers should be put to inconvenience (to say nothing of the risk of loss) through sudden and unexpected alterations in the import tariffs by decisions of the customs officers."—Storekeeper, Sydney, N.S.W.

A feather duster disperses but does not remove the dust from the store.

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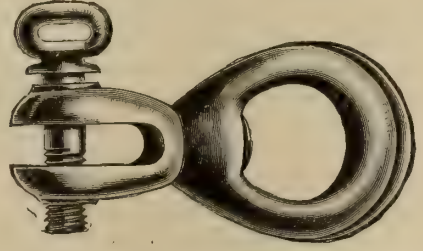
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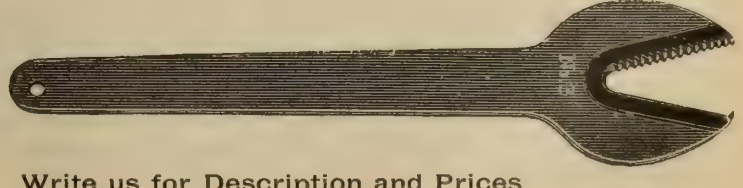
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ENGLISH INDUSTRIAL STATISTICS.

The latest statistics gathered by the Royal Commission on Labor of the United Kingdom contain much interesting information concerning the average rate of wages and the total earnings and savings of the working people of Great Britain and Ireland, and the losses by strikes and lock-outs, together with much of general interest about incomes, investments and savings of the country in general. There are employed in regular industry in the United Kingdom 7,300,000 men, 2,500,000 women, and 1,700,000 males under 15 years of age, and 1,200,000 girls, a total of 13,200,000 persons. Thirty-three separate occupations are enumerated in the returns which aggregate these figures, but in presenting the figures the assistant secretary of the Board of Trade regretted "that the statistics had not been extended to the lower middle classes," which makes rather indeterminate the precise value of the figures. The total amount of wages paid yearly is about £633,000,000, or about £48 per head for men, women and children. All the figures have been specially gathered during the past year and are practically up to date of the beginning of this year. The normal wages of men in the 33 occupations enumerated average 24s. 7d. per week, or £64 a year; of women 12s. 8d. a week, £32 10s. a year; boys 9s. 2d. weekly, £23 8s. yearly; girls 7s. 4d. weekly, £18 a year. Sixty per cent. receive wages of 20s. to 30s. a week, and of the remainder five per cent earn under 20s. a week; the rest over 30s. Building trades average about £70 a year, agricultural laborers in England about £39 a year. On railroads there is not much change apparent in the average of pay between 1886 and 1892, although in some few particular divisions there is an upward change. Out of 314,000 men employed on railroads in 1892 some 8,400 received less than 15s. a week, 124,000 from 15s. to 20s., 139,000 from 20s. to 30s., 21,000 from 30s. to 35s., and the rest over 35s. a week. Most of those classified between 15s. and 20s. receive wages near the latter figure. Domestic servants are in the aggregate better remunerated than women in other employment. In domestic service the wages is £50 a year, while in other employments it is only £32. Returns from savings banks and like institutions show that the savings of the working classes amount to £6,200,000 a year. This is exclusive of the amounts invested in friendly societies and in furniture, which, it is estimated, would represent quite an equal amount, bringing the total to £12,400,000 a year. The total annual income of the United Kingdom is about £1,400,000,000, and out of this the estimated savings amount to £240,000,000. The amount of income received from foreign investments, railways, national debts and the like is estimated at from £80,000,000 to £100,000,000. In 1891 the loss of wages on account of strikes and lockouts was quite £1,500,000. In another year the loss was £1,292,000. This is a fraction of one per cent. of the total of wages earned yearly. The total membership of trades unions is 817,000 in a working population of over 13,000,000.

MEXICO'S ISTHMIAN RAILWAY NEARLY FINISHED.

According to information received by the Bureau of American Republics, it was expected by the Mexican Government that the last spike would be driven in the Government's railway across the Isthmus of Tehuantepec in August next, thus completing the first of the many projects that have been proposed to reach the Pacific by the northern Isthmian route. The line, it is claimed, saves American and European shippers 2,000 miles as compared with the Panama route and 8,000 miles as compared with the route by way of the straits of Magellan. The Tehuantepec Railroad is built on lines nearly identical with those of the ship railway proposed by Captain Eads, and is 191 miles long, from the mouth of the Coatzocoalcos river, 110 miles southeast of Vera Cruz, on the Atlantic, to a point near Salina Cruz on the Pacific side. The completion of the road may, however, be delayed considerably beyond the expected time, as advices from the City of Mexico announce that all work will be suspended about the middle of May, owing to the exhaustion of the aprpopriation of $2,000,000. Less than 38 miles remain to be built.

CHINESE TIN SMELTING.

While the Chinese system of smelting (tin) is similar to that of the Malays, it is more elaborate and carried out on a much larger scale. In place of the bamboo bellows a very ingenious plan is adopted. The trunk of a tree about 18 inches in diameter and 10 feet long is carefully hollowed out and closed at either end. A long pole with a circular piece of wood at one end, fitted exactly into the bore of the tube, acts as a piston. In order to secure the tube being perfectly airtight, the end of the piston is well padded with feathers. Valves are placed at each end to allow the air to enter, and in the centre the nozzle of the bellows communicates with the furnace by means of a small air passage. On the piston being drawn out the air in the higher portion of the tube is forced down the nozzle, and, being drawn back, the air in the further part of the tube is similarly drawn into the furnace. The charcoal is soon brought to a white heat and ready for the molds.

HE LOOKED IN THE BIBLE.

An Irish laborer in a Clyde shipbuilding yard was asked his age by the manager one day last week. "I'm seventy-four, sir," was the reply. "Oh, nonsense," responded the manager; "you are not nearly that age, man. Why, that old man there (pointing to a fellow workmen) won't be seventy for some time, and he must be about twenty years older than you." Paddy, however, still insisted that he was seventy-four, and the manager still declined to accept his statement as correct. Next morning the matter was explained in this way. Paddy slowly approached his superior, and, eyeing him askance, he remarked, "Oh, I made a bit ov a mistake about me age yesterday. I looked up the book whin I wint home, and sure it's me father that's seventy-four." The manager wandered about all day with a smile on his face as broad as a street, and the workers wondered

THE MISUSE OF STATISTICS.

We are told by the census returns, and truly, that wages are higher now than a generation ago, while in the main a dollar buys as much as it did then. But as to how much more the workman wants to-day than he did thirty years ago, we are uninformed. What schedule, however ample in width or minute in interrogation, can seize upon all the facts required to prove or disprove, statistically, the policy of protection or prohibition? Mr. Carroll D. Wright, Commissioner of Labor at Washington, has seen the task attempted many times; he is fond of saying: "Figures won't lie, but liars will figure"; and no less a man than the Rev. Edward Everett Hale is wont to give the noun, lies, a grammatical comparison thus: "Positive, lies; comparative, damnable lies; superlative, statistics." Because calculation is legitimately applied in many ways, let us not imagine its conquered empire to be universal.—New York Sun.

MAKING STEEL DIES.

The proper selection of steel for dies is very important; the die maker must use the best and that which is of great toughness, of good tempering quality, free from veins, pinholes, and of a clear even color when planed, free from all discolorations. The steel wgen cut to shape should then be examined with a lens for ash-streaks, which are almost invisible, and one of the causes of die steel cracking. If the die is a costly one, the steel selected should be washed with diluted aqua fortis, which will show these streaks and the damask veins of the steel. If the steel is all right, the grain of the surface will appear close, fine, perfectly uniform and clear. Steel for stamping dies should be softer than steel for cutting dies. One who makes die steel a special study, soon becomes aware of this difference. The die-worker should use only a slow fire.

ANOTHER NOTABLE ADVANCE IN TIN-PLATE-MAKING.

It would seem that the manufacture of light sheets, the industry which underlies what is commonly known as "tin plate" making, is on the eve of an important revolution. The trade is already measurably acquainted with the Norton process of continuous rolling of sheets from molten metal, upon which large sums have been expended in an experimental way for the past few years. Experimentation in the same line has also been carried on in different parts of Great Britain by prominent engineers. Their developments, working upon plans in some cases analogous to that already referred to and in other cases radically opposed to it, are receiving attention. A patent was recently issued to G. W. Jones, superintendent of the Wm. McIlvaine & Sons Rolling Mill, at Reading, Pa., for a new method of rolling light sheets. The process is described as being such that the quantity manufactured can be increased four-fold over the usual process. The material is said to be rolled under a new plan of continuous rolling, automatically performed, when the tin bar is introduced into the breaking-down train. The speed with which the metal is rolled is said to be 500 feet per minute, and the sheet is so constructed that sheets twelve feet in length are rolled to No. 30 gauge, and that, too, without any inconvenience from stretching. The sheets are finished red hot, thus removing the great strain and friction produced by the old plan of rolling in packs. We understand that a movement is on hand towards organising a company under the patent referred to. For this invention Mr. Jones has been elected a member of the Academy of Inventors, of Paris, France, and awarded a diploma and a gold medal.—Metal.

THE PORT OF MONTREAL.

A more accurate measure of the foreign commerce of Canada cannot be had than the returns of the shipping of the port of Montreal, and these point unmistakably to a successive enlargement from year to year. If the cargoes did not await the ships, the latter would shun the port and seek employment elsewhere. Within twelve years the amount of tonnage of the ocean vessels entering this harbor has about doubled; within the same period the value of the foreign commerce of Canada has increased less than ten per cent. In 1880 the amount of imports and exports was $214,786,000, and in 1892 it was $230,942,000, a gain of less than 8 per cent., while in the same period the ocean tonnage at Montreal rose from 628,721 tons to 1,036,707 tons, or by 60 per cent. Some of the increase has been due undoubtedly to the growing recognition of the advantages of Montreal as the commercial capital of Canada, and of the superior facilities offered at this port, but allowance must also be made for the decline in prices of all staples, by reason of which the quantities are far in excess of the values as formerly returned.

The concentration of particular lines of trade at Montreal has likewise contributed to the increase of the shipping of the port. Take the coal trade as an example. Ten years ago the quantity of coal landed at Montreal by vessel was 457,278 tons, of which 255,784 tons came from the Maritime provinces, and 175,713 tons from the United States. Last season the quantity of coal landed at the port was 790,190 tons, of which 549,971 tons came from the Maritime provinces, and 221,863 tons from the United States. Cattle shipments and grain shipments have increased in a similar degree, all the statistics pointing to the one result, that the port of Montreal is fully holding its own in point of trade with ports elsewhere, and that the foreign commerce of Canada is more and more being centered at this point.—Montreal Gazette.

FREIGHT RATES IN THE SOUTH.

The advance on eastern and southern freight rates, made at the dictation of certain eastern roads, and going into effect June 1st, raises the rates to various points from 50 cents to $1 per ton. "Why such an arbitrary raise is made we cannot imagine," says Daily Metal Market Report, "but as we understand that the rates via water remain unchanged, and cannot, in fact, advance, we think the effect of the advance will be of less importance than most people suppose, since a very little advance on rail and steam freight from either Savannah or Norfolk would bring sailing vessels into competition with them. We, moreover, believe such an advance will be of short duration, as in the end the 'vested interests' of certain concerns in Pennsylvania will be found to be of less importance to the railroads in question than the earnings they are cutting off from their stockholders by such arbitrary proceedings."

RAW HIDES VS. METAL.

From Germany comes the report that an inventive genius there has discovered a process by which he produces, through the combination of raw hide and a composition of his own, a new material adapted to the manufacture of cog and friction wheels which bids fair to do away in many cases with iron and other metals, besides offering additional valuable advantages. This new material, described in the Tradesman, not only insures perfectly noiseless working of machinery, but it is said that cogs made from it will outwear those built of metal; the easy action of these new wheels, moreover, reduces to a minimum the vibration of machinery driven by them. Another important feature claimed in favor of this new raw hide substitute is that it does away with oiling, resulting in considerable saving in lubricants and labor, and insuring absolute cleanliness. According to the inventor, breakage of cogs is an impossibility. It appears that the invention is already in practical use in various parts of Germany, the General Electrical Company of Berlin being named among those having adopted it; in this instance it is used in the propelling of the electric motors of the street railway system of that city. Models of wheels constructed of this new substance have been placed in the Industrial Museum of Stuttgart, Wurttemburg, Germany.

The Ontario Covernment has decided to grant no bonuses to develop the mines of the province.

A proposal to construct an electric railway between London and Springbank is being seriously considered.

The affairs of the Acme Silver Plating Co. are to be wound up, and E. R. C. Clarkson has been appointed liquidator. Mr. Woodhouse, the secretary of the company, had been looking after the interests of the banks for some time lately, and Mr. Parker had been using his utmost power to get the estate back, but the creditors thought that it would be best to wind the estate up, and Mr. Clarkson was appointed to bring about the desired end.

A strike has been declared in Clement & Co.'s cycle works at Paris. It was noticed lately that large thefts of material were being committed at the works, and the police discovered that the culprits were workmen employed at the factory. Several arrests were made, and five men whose offence was a trifling one were dismissed from custody and re-employed by Messrs. Clement, but action was taken against the remainder. The rest of the workmen demanded that the whole of the charges should be withdrawn, and that all the culprits should be taken back. On the proprietors refusing to accede to this request, all the employes, numbering 300 men, went out on strike.

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For sale by private treaty, patent for the manufacture of the Champion Iron Fence, with complete set of patterns and a quantity of stock. The fence has been long and favorably known, and orders are being constantly received for it. Full particulars on application to the undersigned.

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MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, May 26, 1893.

HARDWARE.

Trade has not been active this week and the volume of business has been small. The last few days of warm weather has, however, had some effect on several lines of shelf goods, garden tools, etc., sorting-up orders being to note for them, but in the majority of instances reports state that stocks in dealers hands have not been broken into yet sufficiently to have any influence in the direction of orders to jobbers. City dealers have being doing something in the way of screens, hammocks, etc., but they were fairly well stocked up with these articles and did not require much in the way of additional supplies. If the demand is in any degree protracted, however, it will undoubtedly have effect in a jobbing way, and the expectations are for improvement in business shortly. In heavy hardware there is little or nothing to note.

Makers report some fair orders for forward delivery for nails, but jobbers do not report any particular activity.

Trade in wire has been small, but once the farmers are completely through with their seeding and other operations the demand is expected to pick up.

Gardening tools have furnished some business in a sorting-up way during the week. Other lines are dull and featureless.

Wire screens, rustic goods, etc., have attracted more attention, as the exodus of city people is now going on in earnest, and the fact has led to more demand from retailers. So far, however, jobbers have not benefitted very much from the demand, as dealers were pretty well supplied.

HEAVY MATERIAL.

The week has been a quiet one in this connection, the actual movement on spot being small. Of course goods have been moving forward all the time ex-wharf, but very little of this represented new business. In forward delivery, however, the low prices ruling on some lines at primary markets, notably in galvanized plates, has induced considerable speculative buying for future delivery.

PIG IRON.

The easiness in pig iron already commented on has become more pronounced, and holders of Scotch brands both on spot and across the water show more anxiety about making sales. Summerlee is now offered here at $18.50, Gartsherrie $18, Eglinton $17.25, Carnbroe $17, and No. 3 Middlesboro $16 50, but business is small.

BAR IRON.

Bar iron is unchanged in price and the demand is moderate.

GALVANIZED IRON.

Offers of galvanized iron at very low figures for forward delivery is one of the features at present. Sales have been made at 4½ to 4¾c. for No. 28 guage.

TIN PLATES.

Tin plates have furnished a very moderate business and the tone is easy. Small lots of cokes have sold at $3.20,but no round can be moved even at a concession.

CANADA PLATES.

There is nothing doing in Canada plates. Prices are unchanged at $2.50 to $2.60.

TERNE PLATES.

Terne plates have furnished nothing important $7.25 to $7.50 being the idea.

TIN AND COPPER.

Ingot tin is easier in London and copper is the same way, zinc is also lower, white lead is unchanged. Ingot tin is offered at 21½c., copper at 11½ to 12½c. and lead at 3½c.

LEADS AND PAINTS.

The market for leads has shown rather less life, but a moderate business has been done for all that. We quote choice brands white lead Government standard at $4 75 to $5; do. No. 1, $4.50; do. No. 2, $4 25 ; do. No. 3 $4 ; do. No. 4, $3.75 ; dry white lead, 4¾c. ; red lead, pure, 4¼c. ; do. No. 1, 4c.; zinc white, pure, $7; do. No. 1, $6 ; No. 2, $5.

GLASS.

Glass is steady and unchanged, first break $1.35 and so on. Putty in bulk sells at $1.85.

OILS.

There is no change in linseed oil, but advices from England are firm. Round lots of raw have changed hands at 60c. and boiled at 63c., jobbing quantities meaning a proportionate advance on this. There have been some fair-sized transactions in seal oil to arrive, some 300 barrels being taken at 45c. net cash and no more could be had at the same price, the idea being 46 to 47c. Spot prices are 48 to 50c., and firm at that.

CEMENT.

The demand for cement during the past week has been fair, some round lots being booked for future delivery. Arrivals since the opening of navigation have been 21,000 barrels English and 5,000 Belgian. We quote English brands $1.90 to $2 10 and Belgian $1.85 to $1.95 per cask ex-wharf.

NAVAL STORES.

A fair jobbing trade is to note in naval stores and a good month's business is anticipated. We quote as follows :—Turpentine, 52 to 53c. ; resins, $2.50 to $5.00, as to brand ; coal tar, $3.75 to $4; cotton waste, colored, 5½ ; do. white, 8 to 10c. ; oakum, 5½ to 7½c.; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¼c. for 7-16 and upwards, and 15c. for deep-sea line ; pure Manilla, 12c. for 7-16 and upwards and 13c. for smaller lines.

PETROLEUM.

The petroleum market has been fairly active for the season and the tone is steadier. We quote Canadian 12c. at shed in Montreal for round lots, and 12½c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c in 10-barrel lots, 19¼c. in 5 barrel lots, and 19¼c. for single barrels, 2 per cent. off for cash ; American benzine, 23 to 25c, ; Canadian benzine, 10¾c. Petrola ; 12¾c. Montreal.

MONTREAL TRADE NOTES.

Copper and tin are easier in London and the fact has led to an easier feeling on spot.

Messrs. W. H. Cottingham & Co. say that sorting up orders are fair east of Kingston.

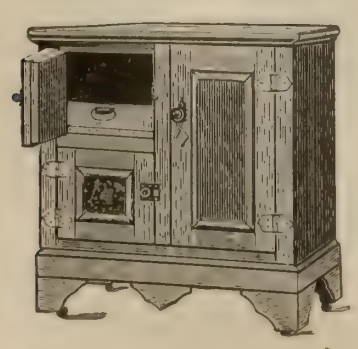
Mr. T. W. Ness has supplied the Montreal Show Case Company with a 5 h.p. Reliance motor.

Messrs. Thos. Davidson & Co. have been filling some large orders for their seamless flanged drip pan.

Mr. T. W. Ness is supplying the Collegiate Institute of London, Ont., with an experimental electrical outfit.

The low prices of galvanized plates on the other side have induced some large speculative purchases. One importer here has, it is

Refrigerators



Hardwood, Lined Galvanized Iron, Patent Locks, Four Sizes

These are **highly finished** and each season has shown an increasing demand. This year we are also **making a cheaper line** in above style, so as to meet all requirements.

Milk, Delivery and Creamery Can Trimmings.
All Sizes Body Stock for Cans and Cheese Vats.
Galvanized Iron Eave Troughs in 8 foot lengths.
Lithographed Tea Caddies and Signs.

We make and Supply everything used in the Stove and Tinware Trade.

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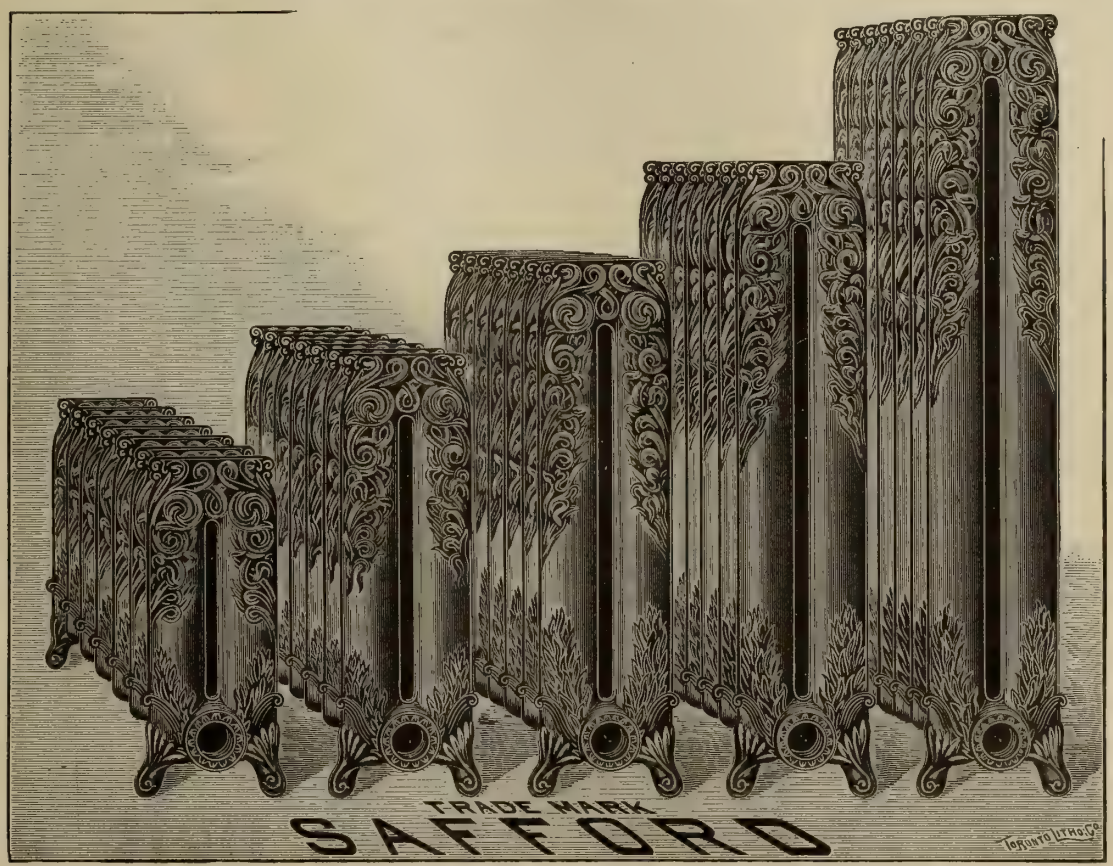
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THE **Toronto Radiator Mfg. Co.** LTD.

TORONTO, ONT.

MONTREAL. QUEBEC. ST. JOHN, N.B. WINNIPEG. VICTORIA, B.C.

MONTREAL Markets Continued.

said, contracted for 5,000 packages and considers them a purchase at the price.

The display of Safford radiators in their Montreal sample rooms on Craig street is a striking one. Messrs. H. McLaren have now one of the best fitted up show rooms in the city.

Wm. Clendenning & Son have been putting through some fair contracts for castings, etc., but report that business is more backward than last year.

Mr. Whimbey, of Simpson, Hall, Miller & Co., has been filling a lot of hotel orders during the last fortnight in anticipation of the summer trade.

The city founderies complain that they have no orders, the city waterworks department not giving out any contracts this spring owing to want of cash.

Arrivals of cement at this port since the opening of navigation have been 21,000 casks English and 5,000 Belgian. Off this fully 30 per cent. was for Western buyers.

Some large transactions in seal oil for future delivery have been put through during the week on the basis of 45c., but this figure could not be repeated, the lowest now being 47c

TORONTO MARKETS.

TORONTO, May 26, 1893.

HARDWARE.

Trade has been broken into this week by the holiday, and the volume of business has not in consequence been so large. The majority of travellers, too, are now in the city. There does not, however, appear to be much cause for complaint, the trade generally being well employed. An increased demand has sprung up in some lines, such for instance as fencing wire, oil stoves and firebrick. Nails are moving much as before, and a good trade is still being maintained for rope. Demand for chain is on the other hand falling off. In harvest and garden tools there is still a fair business being done of a sorting-up character. Preserving kettles and such articles are moving freely. Demand for boilermakers' supplies is increasing, and there seems to be, if anything, a slight improvement in plumbers' supplies. There is still a scarcity of green wire cloth, and the sale of door and window screens continues brisk. Payments conntinue to improve.

NAILS—A steady and fairly good trade continues to be done in this line for 20 to 40 keg lots, and the only complaint is regarding the margin of profit.

WIRE—Demand is good for all kinds of wire, the farmers, having got pretty well through with seeding, now being able to turn their attention to fencing. The manufacturers seem to be at the moment taxed to their utmost to supply the goods ordered.

ROPE—There is no great demand, but business is good in staple summer lines and preparations are going on for the fall trade.

CHAIN—Trade is dropping off in this line and there is no change in prices.

TOOLS—The factories are about up to their orders in harvest and garden tools, although there is still some difficulty with regard to some makes of lawn movers. Carpenters' tools continue slow of sale.

WARE—There is not much doing in tinware, but for preserving kettles, brass, enamelled and peerless, enquiry is still good. American ware, particularly the peerless, is the most favored this spring.

PLUMBERS' SUPPLIES—If anything, there is a slight improvement, trade in this line being now of the usual spring character.

WIRE SCREENS—Screen doors and windows are still going out well. Green wire cloth continues scarce and firm at $1.90, bids at slightly shaded prices having been refused by manufacturers during the week.

METALS.

There is a little more enquiry from the boiler-makers for supplies, but otherwise the situation in metals is much about the same as a week ago.

PIG IRON—There has been little or nothing doing on spot. Sales of odd cars are reported outside of Summerlee at equal to $20.75 Toronto, and of Carron at equal to $20.50.

BAR IRON—A fairly good business of sorting up character is still being done on the basis of $1.95.

TIN PLATES—The movement continues fair at unchanged prices.

SHEET IRON—Boiler-makers are a little freer buyers at prices ranging from 2½c. up.

CANADA PLATES—In fairly active demand and prices are unchanged, all dull being quoted at $2.65, half-half at $2.75, and all bright at $2.80 to $3 per box.

GALVANIZED IRON — Trade continues good. Prices are unchanged at 5 to 5¾c. for Queen's Head and Gordon brands.

ZINC SHEET—Business inactive at 5¾ to 6c. for 5-cwt. casks and 6 to 6¼c. for part casks.

ZINC SPELTER—Dull at 3¾ to 5¾c.

LEAD—Quiet and unchanged. We quote 3½ to 3¾c. for ordinary lots and 3¼c. for ten-ton lots.

ANTIMONY—Business is still quiet in this line ; 12½ to 14c. is the idea for Cookson's and 13 to 14¼c. for other kinds, with prices a shade lower for large lots.

INGOT TIN—Demand fair and prices as before, 24c. being the ruling figure.

INGOT COPPER—A fair sorting-up trade is being done at 12⅞ to 13c. for small lots of the better qualities.

GLASS.

The market remains much as before. Demand continues fair, at $1.25 to $1.30 for first break, and shipments continue to arrive.

PAINTS AND OILS.

Taking into account the break in business occasioned by the holiday, business shows rather more activity. Payments are fair. It is thought that the price of turpentine will be on at its lowest ebb about June 1, and that it will be therefore an opportune time to buy. Anticipating a good demand, therefore, about that time, some jobbers are laying in heavy stocks to compete with it. Demand for turpentine is light in anticipation of lower prices. The price obtaining is still 50c Toronto and 52c. outside, freight allowed. White lead continues in good demand on the 4¾c. basis. Demand is still brisk for prepared paints and quotations are without change. In dry colors, a brisk demand has sprung up for Venetian red at $1 50. Trade in Paris green is about over. Varnishes are in active demand and steady. Linseed oil is selling a little better than a week ago at 60 to 62c. for raw and 63 to 65c. for boiled. Castor oil remains quiet and unchanged at 9 to 9½c.

EASTLAKE
MANUFACTURED BY
METALLIC ROOFING Co
TORONTO
ILLUSTRATED CATALOGUE FREE
STEEL SHINGLES

"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

MARKETS—Continued.

PETROLEUM.

The Petrolea Advertiser, in its weekly review, says :—" The market remains in about much the same condition as a week ago, as far as the volume of business and prices are concerned. About fifteen or twenty sets of tools are laid up for a rest, which must eventually effect the production. At any rate the next two or three months will probably determine whether there will be any surplus of oil for the fall trade or not. The unseasonable and unusually cold and wet weather we have had the past week has made the teaming of oil or machinery a very difficult matter, but the general tone of the business is quiet but steady." It quotes Petrolia crude $1.07 per barrel in tank or $1.10 delivered.

OLD MATERIAL.

Arrivals continue free, while demand does not show any improvement. The only change to note in quotations is a drop of 5c. per cwt. in machinery cast, 65c. now being the price. We quote : Agricultural scrap, 60c. per cwt. ; machinery cast, 65c. per cwt. ; stove cast scrap 40 to 45c.; No. 1 wrought scrap 50 to 60c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c.; new light scrap copper, 8c. ; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1¾ to 2c.; scrap zinc, 2½c.; scrap rubber, 2½c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs. ; borings, and turnings, 15 to 20c.

SEEDS.

The supply of alsike is entirely exhausted, and demand is about satisfied for red clover and timothy. Hungarian seed is in fair demand, and it sells higher at $1.20 to $1.25. The chief enquiry is for ensilage corn, which sells at 65 to 70c. per bushel, according to quality and grade. Millett seed is in fair demand and steady at 85 to 90c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—Supply and demand light, with prices unchanged at 5¼c. for good selections.

SKINS—Calfskins are quiet and prices weak. Jobbers are still paying 7 to 8c., and they quote selling price at 8 to 9c., but there is little or no business being done at these prices. Sheepskins are normal at $1.35 to $1.45.

TALLOW—Market weak and prices unchanged. Dealers are paying 5½c. and selling at 6 to 6¼c.

WOOL—There is a fair demand from the factories. Prices remain unchanged. There is nothing being done in fleece wool. The new clip is expected here shortly, and the price is expected to be something around last year's figures.

MARKET NOTES.

Most of the travellers are home this week.

Wire fencing is beginning to move rapidly.

American ware is the most popular this season.

M. & L. Samuel, Benjamin & Co. report an increasing demand for oil stoves.

Shipments of firebrick are arriving and a good demand has sprung up for this article.

H. S. Howland, Sons & Co. are in receipt of another shipment of Elliot's cutlery and are now in a position to fill back orders "○ X C" razors. The consignment also contains a lot of butcher knives which have been manufactured expressly for the canning trade of British Columbia. Sales of these articles to that province last year were satisfactory but this year they promise to be more so.

H. Goudge, secretary of the Star Manufacturing Co. (Ltd.) of Halifax, N.S., was in Toronto this week on business.

The contract for supplying the Corporation of the City of Toronto with English Portland Cement has been divided between Nichols, Smythe & Co., of Toronto ; Drummond, McCaul & Co., and Wm. McNally & Co., of Montreal.

Russel, Wheeler & Co., of Utica, N.Y, are desirous of securing the services of a first-class hot water heater salesman to represent them west and north of Chicago, with headquarters probably in that city. He must have a thorough knowledge of the hot water system.

A. C. Leslie & Co. are in receipt of an improved ivoride-handled table knife. It is manufactured by E. M. Dickinson, of Sheffield, and is not only of better finish and more closely resembling pure ivory, but the handles will not now shrink, as was formerly the case with ivoride. Another peculiarity about the improved article is that it is partially transparent.

A good meat chopper is one of the most useful and convenient of kitchen utensils. There have been many on the market for a long time, and, as in nearly everything else, improvements have from time to time been made. The latest and best is the white enamelled, manufactured by H. Boker, and for sale by the leading wholesale houses. It is white enamelled on the inside, brown japanned on the outside, and is undoubtedly the best meat cutter on the market to-day.

The Star Manufacturing Co. of Halifax are manufacturing a new skate which they are going to put on the market this season, and which may be had through Messrs. H. S. Howland, Sons & Co., Toronto, whose travellers will shortly be supplied with samples and prices. The trade is advised to wait until they see this skate before placing their orders elsewhere, as it will be sold, it is expected, lower than any other skate yet offered.

AMERICAN MARKETS.

New York, May 26, 1893.

PIG TIN.—There was another sharp decline in the market price of pig tin. On the Metal Exchange sales were made during the forenoon of 15 tons per prompt delivery at 19.35c., 25 tons buyers' option to June 1st at 19.40c., and 125 tons ditto at 19.35c. In the absence of encouragement in London advices or any change in the attitude of local operators, prices ruled quite as low on the second call, there having been sellers at 19.35c. for prompt, current month or June delivery, while best bids on later months were 19.35c. for July, 19.60c. for August, 19.70c. for September, and 19.85 for October. London cables came weak, quoting down to £88 2s. 6d. for prompt, against £90 15s. on Friday last, with three months' futures nominal at £85 and July delivery at £86. These advices affected the market in some degree, but very heavy stocks here and consequent pressure to sell on the part of some large holders figures more conspicuously as a factor governing values. Local short interest, it is believed, has been narrowed down to small proportions, and the further effect of the weight of unprecedented spot supplies is problematical. Tuesday's arrivals here amounted to 325 tons, making a total of 3,480 tons since May 1st. There are about 1,375 tons afloat for this port also, and the indications are that nearly if not quite enough tin to meet a full average consumption during the balance of the year will be on hand before the McKinley duty of 4c. per lb. goes into effect. Hence the outlook is extremely perplexing, without any redeeming feature beyond the fact that existing prices on this side of the Atlantic are abnormally low, and the possibility that the leading manipulators may yet effect a neat piece of speculative work for which they are famous. Cable advices to the Metal Exchange quoted Banca tin at 54 1-2 florins and Billiton at 52 1-2 florins in Holland.

COPPER.—The market remains in a quiet condition, wholly devoid of distinctly new feature. Deliveries on former contracts are of liberal volume, but new purchases continue on a moderate scale and the demand is tame. There is no pressure to sell, however, and prices hold fairly steady at 11c. for Lake Superior ingot, 10 1-2 to 10 3-4c. for electrolytic and 10 1-8 to 10 1-4c. for common casting copper. Latest London quotation on merchant bars were £43 10s. for prompt and £44 5s. for future delivery.

PIG LEAD.—A few hundred tons of common domestic were picked up at 3.80 to 3.85c. The latest sales and the greater portion of the business were at the last named price. Offerings were more reserved than they have been for several days, and the market firmer in tone to the extent that some bids of 3.85c. were refused. Apart from the lighter offering there was nothing to account for the firmer feeling, business having been of merely routine character. The St. Louis quotation was 3.60c. London cables quoted £9 10s. for soft Spanish.

SPELTER.—The market for Western spelter remains in a dull and depressed condition. There were repetitions of previous offers to sell at 4 1-4c. for delivery any month this year, and, in a few instances, as low as 4.20c. was quoted without awakening live interest on the part of Eastern consumers. From St. Louis there were quotations as low as 3 7-8c. there, but some advices stated that it was exceedingly difficult to buy at less than 3.95c. London cables quoted £17 12s. 6d. for good merchant brands.

ANTIMONY.—Demand runs slow, and prices are barely steady, with sellers at 10c. for Hallett's, 10 1-4 to 10 3-8c. for LX, and 10 1-2 to 10 3-4c. for Cookson's.

TIN PLATE.—There is no sign yet of improvement in the demand from any quarter, nor is the offering a great deal heavier or urgent. Prices vary in a slight degree only, and are remarkably steady considering the slowness of the market.

PIG IRON.—Deliveries of American foundry pig iron are of fairly liberal volume, and along with new purchases on

MARKETS—Continued

the part of usual hand-to-mouth buyers keep the popular brands in very fair shape. Some Southern and weaker producers figure with a certain amount of prominence as anxious sellers, however, and the pressure from those quarters keeps the market in rather ragged condition; so much so that the late exceptionally low prices are gradually becoming the rule, although there is no great accumulation of supplies in first hands.

In foreign pig the business is small, and prices remain about the same as for some time past.

OLD MATERIAL.—Occasional trades involving lots of a few hundred tons are put through. Special attraction in the way of low price is the rule, however, and the market throughout presents a soft appearance.

MANUFACTURED STEEL AND IRON. There is not the slightest improvement in railroad patronage in this quarter. The few orders for steel rails that appear involve only small lots, and the buying of fastenings is correspondingly small. Price for heavy section rails stands at $29 f.o.b. mill, but light rails are relatively lower. Fastenings are weak at 1.90 to 1.95c. for spikes, 1.55 to 1.60c. for fish plates, 2.45 to 2.50 for bolts and square nuts, and 2.55 to 2.60c. for hexagon nuts.

In structural steel and iron a fair business is passing, and the lighter productions of the mills move out quite well, but competition is very keen, and prices are weakish all along the line.

BICYCLES AND HARDWARE.

For a hardware dealer to successfully add bicycles to his trade it is absolutely necessary that he should be up to date in that branch himself, or have an assistant who possesses that qualification, who should have charge of the department. He should also himself be a fair rider and take an interest in the sport, and understand the working parts, and merits and demerits of the various machines. But above all he must be up to date. Cyclists are extremely fastidious, and those who can afford to pay for a good machine will not invest in old patterns at any price.

The next thing to decide is which of the numerous makes of machines to represent, and, of course, this will depend upon his securing the appointment as agent for a wheel which is not already represented. Some manufacturers of bicycles allow a very liberal discount, while others, and generally the better makes, hold out smaller margins, and it becomes a matter of decision as to which shall be selected. In some cases it is wise to confine the trade to one manufacture, and others have found it better to carry several grades of wheels in order to more successfully meet outside competition. Of course wheels which have been largely tested and in consequence better known to the general public require less effort to effect a sale.

If a store window will admit of two or more bicycles when standing in their proper positions it will be found of benefit, especially at the opening of the season, to restrict the window for their display. On no account place them in a reared-up position, standing on the back wheel with the front one leaning against the side of the window. No cyclist would be able to form any judgment of the value of a wheel from its appearance in such an absord position. If there is not proper room in the window, it is better to let the machines stand on the floor of the store in a prominent position, so that they can be seen through the door by the passers by. Special attention must be given to have them at all times properly adjusted and requiring no attention when displayed.

There is another feature of this line which enters into consideration, namely, as to whether or not you will take in part exchange second-hand machines. There is always a certain demand, which in some sections cuts quite a figure, for wheels which have been used, and can, therefore, be purchased at a considerably reduced price. They are also a source of profit from one point of view, from the number of repair jobs which will follow upon their sale, and the repair department of the bicycle business is not its least profitable side. If you make a practice of dealing in second-hand wheels it will not be as necessary for you to keep cheap makes of new wheels, as if a customer wants a machine at a less price you can recommend and probably sell him one of your second-hand ones. There is an opportunity for a good deal of Yankee barter in the matter of exchanging old wheels, and it requires an intimate acquaintance with their relative values and present worth.

Another feature in handling bicycles is that of the sundries which naturally are sold with the wheel. The variety of this and there are many articles for which there is little sale. Quite a number of class of goods is practically unlimited, of these sundries are merely fads, and never become popular, and it is, therefore, a matter of considerable discretion to determine which shall be selected. Such articles as lamps, bells, wrenches, saddles, spoke vises, etc., are always called for. One of the store windows might be profitably dressed with these sundries, together with a supply of the manufacturers' catalogues, which should bear the dealer's imprint upon the front cover.

The bicycle repair department is as stated one of the most remunerative branches of the business. It requires a fairly able mechanic to perform skilful repairs, and little can be done in this line without proper arrangements. The dealer who acquires a reputation for having good workmen in his repair shop has no difficulty in securing sufficient work at quite satisfactory prices. In somecases, where the fracture or injury to the wheel is something out of the common run and extremely difficult to repair, it is often feasible to send direct to the manufacturer in order to better serve the customer.

Still another feature is the renting of bicycles, which, however, is somewhat of a doubtful experiment, though it is becoming more popular every season. If this branch is gone into extensively, special room is needed where new learners can be initiated into the mysteries of bicycles and given instructions by a competent rider. Generally the second hand wheels which are taken in exchange are the ones which are used for renting purposes, and if there is sufficient call for them it may result in satisfactory profit.

Still another feature of the business is the matter of selling wheels on instalments. This, while in many ways a doubtful system, is becoming one of the settled features of all classes of trade. It would be surprising to many to know that a large majority of the wheels annually sold are purchased on the instalment plan. Where a customer is well-known to the dealer and he has reasonable expectations of his fulfilling the contract there would seem to be no good reason why he should not sell a wheel in this way; provided that he secures an addition to the price, or interest on the money, which will cover the time of credit.

There is a disposition among manufacturers to place their wheels with the hardware trade generally and with special agencies. The reason for this is probably in the fact that special agents are often men of little capital and the business is not sufficient to support the establishment throughout the year. Most hardware dealers who have added this branch to their business have found it a satisfactory source of profit when judiciously conducted.

There is a tendency of course to change of style, and an uncertainty in the preference of the public for certain makes, and it requires the highest degree of discretion on the part of the dealer to prevent his stock from becoming, from this and other sources, unsaleable.—N. Y. Metal.

SMOKELESS POWDER.

An important trial of smokeless powder was recently made at the great military camp at Aldershot in England, which has afforded additional proof of the utility of this substance. Artillery operations were conducted over an extensive area in order to test the visibility of guns using cordite as compared with black powder. Telegraphic communication was kept up between the batteries in action and the general commanding, who advised the frequent changing of ammunition. It was found that at long ranges it was almost impossible to discern the position of guns using the smokeless powder, whereas those using the old explosives were easily discovered. Meanwhile complaints are being made of the instability of the new powder in many quarters. That which has been manufactured in Russia has, it is stated, been found to be utterly useless after five months' keeping. The cause is some defect in the cotton which forms the basis of the powder, and all attempts have failed to discover a satisfactory way of preparing it. An inventor of a kind of celluloid made from straw is now offering his invention as a substitute for cotton, and first experiments are said to be satisfactory, although, of course, it may fail to stand the test of keeping. "It remains to be seen whether this difficulty has been overcome in the preparation of a Southern inventor, which is now being tested by the ordnance department of this country," remarks Iron Age.

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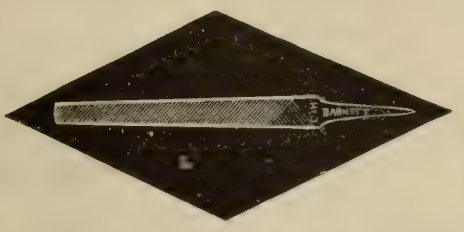
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Hardware - - -
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THE HIGHEST QUALITY. THE LOWEST PRICE.

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A GREAT LOSS?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss. The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

A HINT TO YOUNG CLERKS.

Said an old man of eighty, whose career had been one of marked success: "It is a great thing for a boy to have a nail to hang his hat on." He had possessed such a nail in his mother's old kitchen, and all the family were taught to respect it. If the broom was hung on Henry's nail it was quickly removed and nothing was allowed to interfere with the little orderly habit he had been so early taught, of hanging up his hat instead of throwing it down when he came in. It seemed a small matter, yet he felt it had done much for him in helping to make him an orderly, careful, systematic man.

Once get the seed of a good habit well planted, and then stir the soil properly, and it will grow and multiply. It is surprising to see how one grain of good wheat will, under favorable circumstances, increase. A farmer at the West, who had plenty of rich prairie soil, tried the experiment, and at the end of the third year reported seventeen bushels as the proceeds of the one grain. Akin to this is the growth of good or evil habits in our characters. Each is likely to bring with it a harvest.

Looking through a boy's personal possessions would tell more about his characteristics than any letter of recommendation. As this is a way of determining your character, always open to yourself, it is well sometimes to take a survey with a view to becoming better acquainted with one's self. Throwing things around, and stirring up things in a trunk or drawer to find missing articles do not point toward a successful business career. Thrift and advancement seldom seek such quarters.

When one is really satisfied that here is his weak point, it is good to make a beginning towards a reformation. A nail to hang his hat on is something. A shelf of books set in orderly array is encouraging every time one looks that way, and once get the business fairly started it will be far easier to keep things in order than not. Very disorderly people have turned squarely around and become just reverse. It is a quality more cultivated than is generally supposed. Indeed, reformed people, I have noticed, are apt to carry the matter to an extreme, but it was much more to their advantage than the opposite. Still, the earlier it is commenced the better, and the more thoroughly it is extended to all the affairs of life, the greater will be the chance in one's favor. No one can make the most of himself and his abilities without such habits of order and precision.—Ex.

THE

Oxford Gas Range

The latest production of the great Schneider Frenkamp Co., of Cleveland, the largest and most successful manufacturers in the world of Gas Stoves and Ranges.

See this Range before Spending your money

The only perfect Water Heater, will heat water faster than a coal range.

All burners are operated with Steel Needle Valves which produce sharp blue flames. The body is made of heavy Cold Rolled Sheet Steel Asbestis lined. The front and top are beautifully carved, heavy smooth castings with nickel-plated medallions and Tell panels.

Send for Price List and get our record of Water Heaters

Manufactured by

The Gurney Foundry Co., Ltd., TORONTO



CHARCOAL IRON FROM THREE RIVERS'.

The manufacture of iron in the Province of Quebec forms one of the most interesting subjects in the development of this great industry in America. Its inception, followed in a comparatively short period after the first steps taken in the New England colonies, where iron was first practically made in America. In both cases the ores smelted were what is known as "bog ores." In Quebec the first work was done in and about the town of Three Rivers, and many interesting facts in connection with the development of this industry may be found in the paper read by Mr. James Herbert Bartlett, of Montreal, before the Halifax meeting of this institution in September, 1885. In that paper Mr. Bartlett traces the industry from its first inception, about the year 1730, down to the condition in which it existed in the year 1883, at which time he stated that the St. Maurice forge was the oldest active furnace on the American continent.

A few years after the date last named we became interested in the matter, and have carried it forward on more extended lines than any before attempted, and in fact, so far as the manufacture of this particular class of iron is concerned, it has never been attempted on the scale we are carrying on to-day. This work is not being done on any experimental basis but so far has been carried on for the purpose of supplying a grade of iron hitherto procurable only at heavy cost for Canadian consumption from the United States, and for English consumption from Sweden.

The manufacture of iron in the Province of Quebec was carried on entirely with the use of bog ores during the period referred to, and as the supply of iron made elsewhere from cheaper ores became more abundant, the local manufacture, handicapped by want of shipping facilities, lack of capital, and other such natural causes, was gradually discontinued. It was always admitted that for certain purposes the iron made in the province possessed special value, but the demand for articles requiring such special virtue was limited, and cheaper grades were gradually substituted for general manufactures. That iron of the special character of that produced from the bog ores of the Three Rivers' district has been for many years the most important industry in Sweden will be referred to later on in this paper, as well as the present condition of its manufacture in that country, and the uses to which it is now put.

Some years ago we were induced to test in our car wheel shops at Lachine and St. Thomas a quantity of Canadian charcoal iron, the product of an antiquated

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
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THE CANADIAN RUBBER CO'Y

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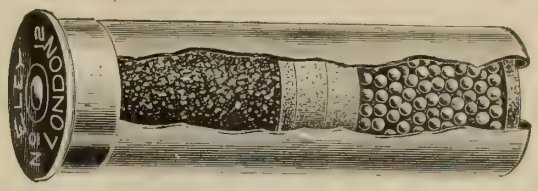
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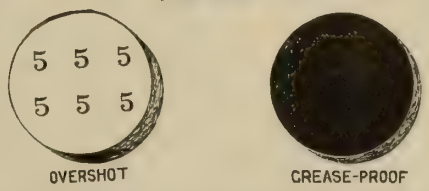
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stone stack situated at the village of Fermont, or Radnor Forges, Champlain Co., Quebec. We were told that this iron was made from the bog and lake ores of the Three Rivers district, celebrated in the history of the Canadian iron industry, and that it had peculiar merits in strengthening mixtures for car wheels and other high class castings. At that time we were using largely "Selected Salisbury" charcoal iron imported at a very heavy cost from the United States. We were loath to make any change in our mixtures, as we had always pursued a most conservative course in the selection of iron entering into our wheels, but we finally decided to enter upon a series of careful tests with Three Rivers Canadian iron. Several trials proved that it was an iron of undoubted merit, which if the ore and wood supplies of the district warranted, could and should be made in large quantities, not alone to the advantage of the parties operating the furnace, but to the advantage of every consumer of iron in Canada who required castings of special quality, and certainly to the great gain of the Province and Dominion. We found the iron soft, tough, clean, close in texture, and with fine chilling qualities—the higher grades admirably adapted for the manufacture of chilled car wheels, the medium grades for castings requiring great strength, and the lower grades soft enough for the finest stove work. To give some idea of the strength shown in these tests we give the following result of the experiments made by us:

The basis of strength on first-class standard car wheel mixture is expressed by a strength of 50,000 pounds per square inch traverse strength, obtained from a bar 1x12, the bar being supported on the extreme ends. By the introduction of 33 per cent. of Three Rivers' iron into our car wheel mixtures we were able to secure a strength of 65,000 pounds without difficulty. It was impossible, however, to procure any regular supply of the iron, the capacity of the old Radnor furnace being very limited and its operation irregular.

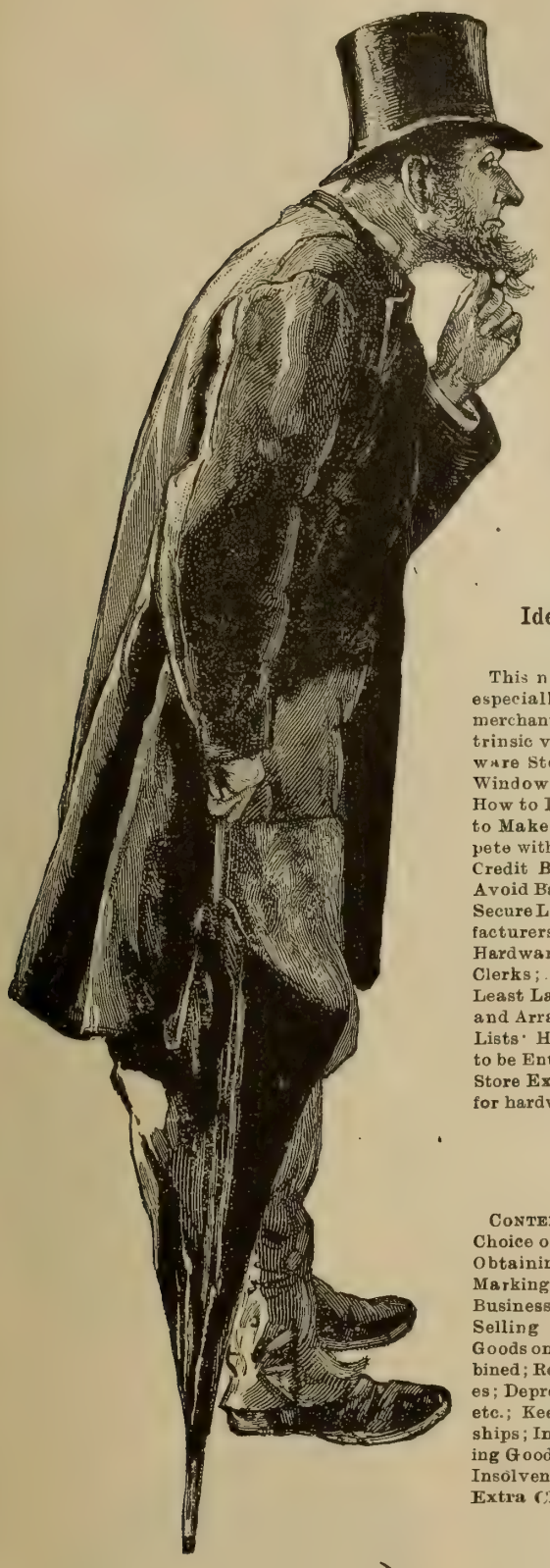
We did not at that time think it possible to develop the manufacture of any great quantity of this special kind of iron, but we did prove to our satisfaction that with proper arrangements a considerable quantity, say 3,000 to 5,000 tons, could be made annually, with every prospect of the maintenance of this product for many years. Later work has developed the fact that this particular iron can be made in very much larger quantities, probably sufficient for any demand that may be made. The reason for this will be stated later on.

The results obtained from the tests referred to led us to make a thorough investigation, with the view of determining the extent of the ore deposits in the Three Rivers' district and vicinity, and to find just what dependance could be placed upon the supply of wood for charcoal making. Our investigations were satisfactory, and in August, 1889, we purchased the entire plant and lands of the company, including the village of Fermont or Radnor Forges, situated on the Piles Branch of the C. P. railway, a village of some sixty houses, with a population of 350 to 400 people. Also a large property at the town of Grand Piles, with lands on both sides of the St. Maurice River, giving us control of the great water power of the Grand Piles Falls. The River St. Maurice is navigable for 70 miles above Grandes Piles, and drains, with its branches, a country some 200,000 square miles in extent. This country is covered with the finest timber for charcoal making, and with invaluable beds of bog and natural ores. The purchase also included the Three Rivers' property, situated on the St. Lawrence River, with railroad and dockage facilities for future use. There was also purchased and leased a large amount of other property for use in obtaining ores and other supplies needed for the manufacture of pig iron. Further investigations were at once commenced in all directions looking to the supply of ore to be depended on, and about one year was spent in prosecuting this work, making leases and purchases to secure the company in its further development. During this period the old furnace was operated with such improvements as could be made upon it, for the purpose of ascertaining further by our own practice the possibilities of the metal. In the meantime arrangements for the supply of ore, wood, etc., had progressed to the point where the erection of a new furnace of large capacity and improved construction could be undertaken. In the early stages of the work it was contemplated to erect a furnace of twenty to twenty-five tons capacity at Radnor Forges for the manufacture of this special iron, but the possible supply of raw materials proved to be so much larger than anticipated that a larger furnace was decided upon, and plans were made for one of fifty tons daily capacity. A furnace giving this product is quite a small affair compared with the great furnaces running on common ores throughout the world, but it must be remembered that the product is of a special class and the development of this particular work was of necessity conducted on moderate lines. As it is, a charcoal furnace, running exclusively on bog ores, turning out fifty tons of metal per day, is a thing not to be found elsewhere in the world, if my information on these matters is correct. As the operation of such a furnace on the particular kind of ores referred to is a novelty in this day, some facts on the bog ore supply, its distribution and characteristics, and of the metal made from them, will be of interest.

The manufacture of iron from bog ores has been carried on for many years in Sweden, and the bar iron and steel made from it needs no comment or praise. Swedish bar iron is known the world over, and Swedish pig is the base of nearly all the famous steels made in England and other countries. Of late years there has been a falling off in the quality of Swedish pig iron, and English makers have in vain offered higher prices for the quality furnished them in the past. Reliable authorities ascribe this deterioration to the gradual increase in the output of Swedish furnaces and to the introduction of common ores to that end. Whether it is possible to found in Canada an industry that will produce an iron equal to the old Swedish or not, is the question, and to this end a consideration of the supply of bog ores is most pertinent.

Bog ores are found in nearly all countries to a greater or less extent, but they do not often exist in quantities sufficient to make their working practical. As stated, Swedish iron has been largely made from them for years, and no doubt the supply of ores is growing limited in that country. The quantity of bog ores that exists in Quebec is difficult to even estimate in definite figures, but the investigations that have been made, and the very thorough ones that we have made, prove its existence in immense quantities. All the bog ore used up to our working was taken from the country immediately surrounding the furnaces, not exceeding a range of three or four miles from the centre. We find it entirely practical to take ore over a range of 75 to 100 miles by establishing depots for the accumulation of stocks from which shipments can be made by rail in large quantities. In treating of the source, growth and quantity of bog ore in Quebec it may be stated that the district to which allusion will be made may roughly be said to extend from north-east of Quebec city to west of Ottawa, a distance of, say, 400 miles long, by 40 to 60 deep. Bog ore is found throughout a much larger range, however The northern limit of this range is the Laurentide Range of mountains, and throughout the whole of this range iron ore seems to exist, generally mixed with the rock. The general formation is such that it favors strongly the natural forces, weather, etc., in the disintegration, and its reduction by attrition. The latter produces principally the fine iron sand found not only along all the river beds, but in fact throughout the entire formation, sand or clay, of this and adjacent counties, and to this attrition, without doubt, the immense iron sand deposits of Moisic and the lower St. Lawrence are due. Owing to the presence of titanium—which exists more or less in all Laurentian ore—this sand seems to possess the peculiar properties of resisting disintegration by natural decay, to which many other ores seem liable.

Beds of hard bog ore are always found on hill sides above which swamps or marshes exist, or in runs which lead to or from these swamps. Wherever this dark swamp water flows sluggishly, and especially where swamp moss, fine grass, or decayed vegetable matter exists, it will gradually form a light film with



It is more honorable to have built a dog-house than to have dreamed of building a palace. . . . . .

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every appearance of that caused by oil, which gradually becomes thicker and sinks to the bottom in some quiet spot, where it takes a yellowish and slightly rusty tinge. This gradually becomes thicker and when the water becomes lower in the dry summer, it becomes denser, and either sinks lower to the firmer beds below the grass, or hardens and becomes bog ore. One very large deposit of soft ore entirely filled a deep ravine leading from an immense swamp. This ravine was being drained with a view of removing the ore for the purpose of making metallic paint. To all appearances it was simply a dark muck, yet contained on analysis over 45 per cent. of oxide of iron. As the top became dry it caked and broke, the top crust showing as clean, black and brilliant a fracture as the best hard bog ore. This proved that the immense beds of soft ore—known as paint ore—known to exist throughout our swamps, will, when drained from natural or artificial causes, become more perfect, dry up, and take the form of hard bog ore beds. Some beds of ore when the top layer was removed exposed a heavy bed of soft ore beneath. This being uncovered and exposed to the action of the sun for a time became so hard that it required heavy work with a pick to remove it. In the particular section alluded to many of the beds are soft on top and harder beneath, while others are the reverse. This would plainly indicate that in midsummer the water in the small swamps become so low that the ore deposited in the runways and during high water when the swamps overflow, had time to harden. In some, apparently, the water when again high, overflowed the old hard ore and deposited more ore on top, while in others it found an exit by oozing out beneath and leaving an additional deposit below.

The ground on which bog ore will, or has been formed, applies to all marches or hill sides between the mountain ranges and the river bottoms into which the water finally finds its way. Much land on which ore is found is to-day comparatively dry, owing to drainage from natural or artificial causes, but a glance at the surrounding country will show that the ground was once the natural drainway from higher lands. On such places as these the ore is, as a rule, massive and hard.

Once the foundation of a bed of ore is formed it seems to grow more rapidly, partly on account of its affinity or power to draw the iron which is suspended in the water, as the following facts will demonstrate: The Riviere au Lard, from which we obtain our water power, as well as water supply for the furnace and boiler, etc., takes its rise in Grand Ple or swamp, in the midst of which lies Lac-a-la-Tortue. This water is at all times dark and rusty in appearance, and a piece of iron suspended or allowed to lie in its bottom rapidly becomes heavily beaded to the depth of an eighth to a quarter of an inch with a pure deposit of iron ore. Besides, ore in this shape will accumulate in our supply pipes in the same manner, no matter how rapid the flow may be. This at one time was a source of considerable anxiety, but latterly, as the pipes remained longer in use these deposits appear to attain a certain size and lose their power of adhesion. A blow from the hammer will liberate the heavier and clean the pipe fairly well.

Bog ore, as a rule, is found twelve to eighteen inches below the surface. This season, however, we are getting ore at a depth of four feet six inches, and the beds are heavy, thick, and good, apparently of old formation. Ore has been raised from a depth of eight feet in the Grand Ple, and although this immense swamp is covered with a soft, floating top, pockets of small-sized ore have been found in paying quantities on the surface. These facts, taken in connection with the deposits of so-called paint ore in this swamp, lead us to anticipate the discovery of large bodies of ore in the bottom, explorations for which we intend to push during the coming season. Excavations to a depth of ten, twelve and fifteen feet, in the immediate vicinity of Radnor, show as strong indications of ore at the bottom as at the top.

LAC-A-LA-TORTUE.

This lies in the midst of an immense swamp, "Grand Ple," and to all appearances it is the last remnant of what, at one time, was a lake which included the entire surrounding swamp, but one that probably was never very deep, hence its gradual filling in from natural causes. Besides threee small creeks flwing into the lake—very sluggishly—the water oozes in around the shores, which are very low. Soft ore is found throughout the surrounding swamp, and in small patches, on the top of which is apparently a floating beaver meadow, hard ore is found. The entire bottom of the lake is more or less covered with ore, but the richest deposits are immediately opposite or around the mouths of the various creeks. In some places the ore is too heavy for our dredge, and an attack on it generally results in broken chains and buckets. The only portion of the lake thoroughly worked in the past is Sturgeon Bay; the principal creeks enter this bay. Its extent at the widest part is not over 2,000 yards and length about the same. For thirty years this bay has been worked by hand and dredge, and time and again declared to be worked out, and yet this season our dredge hardly stirred from it, and made more than double the ore ever taken from it in one season before. This will give some idea of the extreme richness and rapidity with which the ore is formed. It is hardly possible to estimate the quantity of ore in existence in this lake, as without doubt it is growing steadily. An experiment was made one year ago (1891) in Sturgeon Bay. The dredge frame was allowed to work down into the mud for six feet, at which depth it brought up a fine dark ore, not quite so hard as the surface, and instead of flat cakes, like the latter, it was small and round, similar to gravel in size, but softer, yet as fine an ore in every way. In other parts of the lake heavy massive veins exist several feet thick, and this is the portion which our dredge finds it difficult to work. If necessary, dynamite will have to be used on this. Explorations for ore on the lake shore, where nothing but sand showed on the surface, found heavy cakes over twelve inches below, showing that the old deposits may gradually become covered up.

When we commenced operations we found that, according to popular opinion, even among our best ore makers, and those most conversant with the business generally, there was not sufficient bog ore left in the country to give a constant supply to a ten-ton furnace. Investigations developed the fact that although furnaces have been working at Batiscan, St. Maurice, L'Islet, etc., since 1737, they had drawn almost their entire supply of ore from the immediate vicinity. In no case did they exhaust the supply, except perhaps within a radius of three or four miles around the furnaces. Then, again, these furnaces have not been worked steadily, hence steady employment—which alone would produce good explorers—could not be given, and, as a matter of fact, when we commenced operations we did not find a single employee or man who could give us good and reliable information regarding ore fields generally, their knowledge being only of local beds and very superficial.

With regard to the wood supply, there is not a location on the American continent that offers greater inducements for the establishment of a large charcoal iron industry than does the district of Three Rivers. It is not too much to say that the supply of wood suitable for charcoal making, to be had from the banks of the River St. Maurice, and the great territory to the north of that river is sufficient to keep a number of charcoal iron furnaces in fuel for the next century to come. The St. Maurice is one of the largest tributaries of the St. Lawrence. It takes its rise on the borders of the north-west territories, about 250 miles north-west of the city of Three Rivers, and from thence flows through the Province of Quebec to the outlet at Three Rivers. The tributaries of the St. Maurice are: Shawinigan, Matawan, Rat, Vermillion, Flammond, Ribbon, and Manoran from the west, and Mekinak, Petite, and Grand Bostonnais, Croche, Grand Pierriche, Tranche and Wyndigo from the east, these rivers culminating in the St. Maurice, the whole draining a territory of upwards of 200,000 square miles. Throughout its entire course the banks of the St. Maurice river are quite thickly wooded with just the class of wood necessary for the manufacture of the highest class of charcoal, viz., hard maples, beach, birch, iron wood, and oak. This wood has been left practically untouched by the lumbermen, who have been working on the river for years past, taking out pine and spruce. The vast territory stretching to the north of the St. Maurice River offers a wide field for the future supplying of wood, and the same applies to the country which the Lower Laurentian railway traverses. Other new railway lines are projected from Three Rivers north, which will open up a new district rich in timber. Altogether the fuel supply is beyond question.

Apart from the bog and lake ore deposits, vast mines of titanic iron are known to exist in the Laurentian range of mountains, and elsewhere in the Province of Quebec. At the present time these ores cannot be utilized profitably, but science will sooner or later find a means of using these titaniferous ores, not alone with economy, but also I believe with great benefit to the metal into which they enter.—By P. H. Griffin, M.E., of Buffalo, N.Y.



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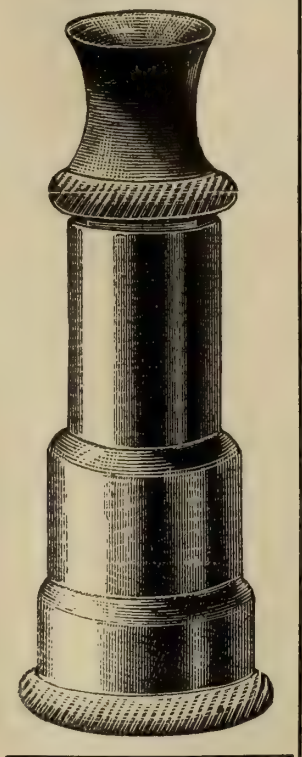
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BUSINESS CHANGES.

SALES MADE OR PENDING.

The assets of Noble & Davidson, woodworkers, Toronto, is advertised for sale.

The general stock of Magoon & Gray, Kingsey Fall, Que., has been sold by auction.

The stock, etc., of H. J. Dreyfus, furniture manufacturer, Montreal, is to be sold by uction, May 29.

The business of Anderson & Burrows, general merchants, Summerside, P.E.I., is advertised for sale by tender.

PARTNERSHIPS FORMED AND DISSOLVED.

E. Blanchard & Co., plumbers, Montreal, have dissolved.

John Findlay & Son, foundrymen, Montreal, have dissolved.

John Davidson, lumber, etc., Halifax, N.S., has admitted his son, Robert S., as partner.

Gibbard & Roberts, lumber dealers, Wapella, have dissolved. Mr. Gibbard continues.

Shaw & Morrison, general merchants, Wapella, Man., have dissolved. Mr. Shaw continues.

T. Sicotte and T. A. Dionne have been registered manufacturers of iron and steel, Montreal.

Michael Keegan has been registered proprietor of the Keegan, Milne Co., manufacturers of electrical supplies, Montreal.

A partnership has been registered in Montreal, by George and Samuel R. Smith, to do business as steam fitters, under the style of G. & S. R. Smith, steam fitters.

C. Grassman and Joseph Robitaille have been registered partners in Montreal to run a general store. Avila Besner and Avila Farand have been registered for a similar purpose.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

Hinton Mills, cabinet manufacturing company, London, has assigned.

L. H. Bouchard, general store, St. Etienne de Boulton, has assigned.

C. & A. Inkman, general merchant, Agassiz, Man., is asking an extension.

Hoskin & Sons, stoves and tinware, Strathroy, have assigned to James Noble.

Harry Skinner, Ontario Bicycle Depot, Hamilton, has assigned to F. H. Lamb.

James Morgan, general merchant, P. Southport, P.E.I., is offering to compromise.

E. Talbot, general merchant, Fraserville, is offering to compromise at 30c. on the dollar.

Deacon & Doyle, hardware dealers, Belleville, are offering to compromise at 30c. on the dollar.

The sheriff is in possession of the estate of Wood & Tunstall, general merchants, Kamloops, B.C., and stock is advertised for sale by tender.

Hugh Russell, furniture dealer, Montreal, has made an assignment with liabilities of about $13,000. The principal creditors are I. Richardson & Co., $3,815, and the London Furniture Co., $2,232, both indirect.

CHANGES.

W. W. Phillip, blacksmith, Kirkwall, is giving up business.

Irving & Co., general merchants, Little Currant, Ont., are out of business.

J. J. Brosman, general merchant, Bracebridge, has sold out to S. Wright.

William McPherson, blacksmith, Petite River, N. S., has removed to California.

Esau Loewen & Co., general merchants, Schauzenfeldt, Man., have removed to Winkler.

E. C. Cargill & Co., general merchants, Lansdowne, Man., has sold out to W. P. Paton.

R. Walton, general merchant, Clarkleigh, Man., is advertised selling out and is going to England.

Gilchrist, Greene & Co., Wingham, are applying for incorporation under the style of the Union Furniture Co.

E. J. Crawford & Co., general merchants, Souris, Man., have sold out their Montreal branch to W. A. Rose.

Asa Caswell, tinware, Teeterville, has removed to Wingham Centre. E. Schonheide, cabinet maker, etc., of the same place has gone to Woodstock.

FIRES.

Curran Bros., lumber, Amherst, N.S., have been burned out.

M. Conley, stoves, etc., Toronto, has been partially burned out.

J. B. Coates, saw and stave mill, Blenheim, has been burned out.

Neil Stewart, general store, Harbor Grace, Nfld., has been burned out.

A. Bigelow & Son, general merchants, Lower Stewiacke, N.S., have been burned out.

The mill in connection with the general store of G. R. Burt, Hartland, N.B., has been burned out.

G. B. Coram & Co., manufacturers wood novelties, Coteau St. Louis, have been burned out, partially insured.

DEATHS.

Wm. Martin, carriage maker, Kentville, N S., is dead.

E. T. Ferguson, carriage maker, Barrington, N.S., is dead.

Samnel Bourgeois, general merchant, St. Hyacinthe, Que., is dead.

John Percy, sr., of the firm of John Percy & Son, blacksmiths, Bowmanville, is dead.

Joseph Ouelette, general merchant, Wahnapital, is dead. So is Joseph Ostigny, in the same line of business at Chambly Basin, Que.

RESEARCHES AS TO ALLOYS.

The second report of the Alloys Research Committee presented to the Institution of Mechanical Engineers, England, recently, by Professor W. C. Roberts'Austen, says an English contemporary, gives evidence of the most careful and thorough research, and even if its conclusions do not command universal acceptance, it will rank as amongst the most interesting reports of the decade. Prof. Roberts-Austen raises a perfectly new point in showing that certain substances will, and do, pass through glass; and another point of moment is that touching the influence of pressure on steel in relation to recalescence at a lower temperature than without the pressure. His general conclusions are that the presence of elements with a large atomic volume accelerates the change of hard iron to soft variety, while elements with a small atomic volume delay the change. As to copper, it is doubtful whether that metal does or does not exist in more than one state, yet it is held to be proven that bismuth, potassium, and tellurium greatly lower the tenacity of copper, whilst arsenic confers strength upon it. In the course of the discussion which ensued upon the presentation of the report some very interesting points were ventilated. Professor Kennedy alluded to the molecular porosity of the glass described in the report, and said that it would seem that in one state copper was really denser than it was in another. Professor Arnold, of the Sheffield Technical school, spoke at considerable length, and in some respects severely criticized the report. He held that the law of atomic volumes had a solid foundation in regard to gold and copper, but utterly broke down in relation to iron and steel. He protested against the theory that chromium, tungsten, and silicon softened steel, as every practical man knew that these elements had a remarkable hardening effect, in the presence of carbon, at all events. Professor Arnold went very minutely into the theory of the allotropic condition of iron and steel as advanced by Osmond, and held that the profoundly different physical conditions capable of being assumed by steel had little connection with any allotropic modification of iron itself, but was due almost entirely to the action of carbon. Mr. R. A. Hadfield, Sheffield, said that the useful elements alloyed with iron, outside carbon, such as manganese, chromium, tungsten, etc., when added in small quantities—say, under 2 per cent.—appeared to influence iron very little, and it was only by largely increasing the amounts of the added elements that the special quality of each alloy showed itself. From the results obtained in his own experiments it certainly seemed difficult to define the precise effects produced on the mechanical properties of iron in the testing machine with alloys of small amounts of added elements. He had recently made some tungsten experiments which probably would be of interest, as the atomic volume of this element is 9.6—that is, but little lower than aluminum and much lighter than iron (7.2). With a very thin sample containing 1 1-2 per cent. of tungsten and about .2 per cent. of carbon, quenched very rapidly, he had been able to scratch glass. But notwithstanding this, he thought that tungsten had similar effects to chromium. This was an important fact, as both chromium and tungsten have atomic weights above that of iron, and should therefore, according to the theory advanced in the report, tend to soften iron. If the use of the atomic volume table be to indicate the prejudicial or beneficial effect of an element added to iron, according to its positin above or below the latter element, he believed practical metallurgists would find Professor Roberts'Austen's research work of considerable service; but when the theory is advanced that those elements below the atomic weight of iron produce a hard condition of iron, and above the atomic weight a soft condition of iron, then he must very strongly dissent from this view. In his opinion all the alloy work yet undertaken clearly proved that there is one element alone, and that was carbon, which, in combination with iron, takes the hard condition, and that we must look to other facts for an explanation of this phenomenon.

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,
Agents.
MONTREAL AND TORONTO.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.
Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.
FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,
CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

FIRE!

McCAUSLAND & SON

Beg to inform their customers and friends that they are in a position to fill all orders with promptness and dispatch, notwithstanding the recent fire in their premises. . . .

72 to 76 King St. W.

This Machine cannot be surpassed for smooth work, light running and durability. The drive wheels are 10½ inches in diameter, and warranted to cut grass 6 to 8 inches high. ALL GOODS WARRANTED.

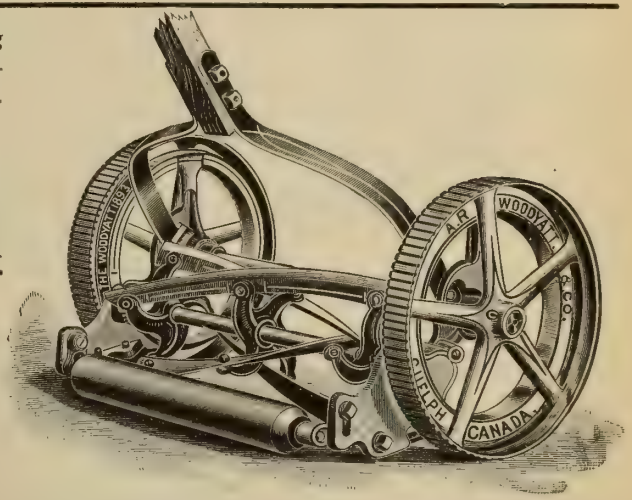
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Now On Sale by all Wholesalers.

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Iron Founders and Stove Manufacturers

Makers of the "Etna" Hot Water Boilers, Soil Pipe and Fittings, Stable Fixtures, Machinery, Builders and Special Castings

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BUYERS OF CUTLERY

WILL find it to their interest to see our samples before placing Spring orders. A choice assortment in stock of Jas. Rodgers & Co.'s and E. M. Dickinson's goods at special prices.

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MONTREAL and TORONTO

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,

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MUNN'S LIQUID GLUE

IS THE BEST.

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101 Bay Street, TORONTO.

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ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO

Excellent Quality! Reasonable Price!



ADAMS-MARS
BEST.

CALVANIZED SHEET IRON. SP



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS.

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	24, 24½
trip "	25, 25½

Tin Plates—*Charcoal Plates, Bright.*

	Per box
M.L.S. equal to Bradley	
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 25 4 50
I.X., "	5 25 5 50
I.X.X., "	6 25 6 50
I.XXX., "	7 25 7 50
D.C., 12½ x 17	3 75 4 00
D.X.,	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
I.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6½ 6½
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
5/16 "	2 35
¾ " and thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2⅞, 2⅞
26 "	2¾, 3
28 "	3 , 3¼

Canada Plates.

Blaina	½ bright	2 75 ....
Abercarne		2 75 ....
Lion		....

Iron Pipe.

Wrought 62½ and 5 p. c. to 65 p. c.
Galvanized, 37½ to 40 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb		6	6 3-5
" ¼ " "		4⅞	5
" 5-16 " "		4½	4⅝
" ⅜ " "		4⅜	4½
" 7-16 " "		4¼	4⅜
" ½ " "		3⅞	4
" ⅝ " "		3⅜	3⅜
" ¾ " "		....	3 1-5
Trace, per doz. pairs		$3 60	5 90
German coil, per 100 ft		1 65	2 70
Jack chain, iron, single, per doz yards		0 13	0 50
Jack chain, double, per doz yards		0 15	....
Jack chain, brass, single, per doz yards		0 20	1 10

Copper—*Ingot.*

English B.S "	0 13½ 0 14
Lake Superior	0 13 0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22 $0 25
" round & square	
1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20 0 22
" 35 to 45 " "	0 19 0 20
" 50 lb and above per lb	0 18 0 19

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 05 0 05½
Domestic "	0 04½ 0 05

Zinc Sheet.

5 cwt casks	0 05½ 0 06
Part casks	0 06 0 06½

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04¼ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04⅝ 0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 17 0 19
Standard	0 16 0 18
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 13½ 0 14
Other makes "	0 13 0 13½

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	4 75
No. 1 Do. "	4 50
No. 2 Do. "	4 25
No. 3 Do. "	4 00

Prepared Paints.
(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.
(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.c.	wt 1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red (R.C.2) " "	1 50
Venetian Red, (best) "	1 80 1 90
English Oxides per	cwt 3 25
American " " "	2 25
Canadian " "	1 75
Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure,	
8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 70
Extra " "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	2 00 2 25
Hard Oil Finish "	1 30

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 50 0 52

Castor Oil.

Best, per lb	0 09 0 09½

Cod Oil.

Cod Oil, per gal.	0 48 0 50

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet makers	0 17 0 18
White	0 16 0 17
London Town	0 7½ 0 08½
Gelatine	0 22 0 27
Stripped	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50, 50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmcur's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 45 to 47½ p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.

1st break		$3 65
2nd "		3 90
3rd "		4 60
4th "		4 95
5th "		5 40
6th "		5 90
7th "		0 50

Picture Glass.

Pilkington's ordinary.

1st break		4 0
2nd "		4 70
3rd "		5 40
4th "		5 90
5th "		6 50
6th "		6 90
7th "		7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb . 0 25 0

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross..... 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05
Screw hook and hinge—
6 to 12 in., per set 0 00 0 04½
14 to 20 in., " 0 00 0 03¾
21 up " 0 00 0 03¼

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1
Wrought Iron.
Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

Philadelphia 1892 Improved

7½ inch Wheel. 4 Blades.

12 in.	14 in.	16 in.	18 in.
$4.40	$4.65	$4.90	$5.40 list

LAWN . . MOWERS

. The Woodyatt 1893 .

10½ in. Wheel. 4 Blades.

12 in.	14 in.	16 in.	18 in.
$6.75	$7.00	$7.50	$8.25 list

Liberal Discounts to Trade, and Prompt Shipments Guaranteed.

BOWMAN, KENNEDY & CO., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

anadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
ronze, Berlin, per doz .. 2 75 3 25
ronze Gem, " 6 00 9 00
ass " 8 75 10 00
hutter, porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy	2 30
40dy	2 35
30 dy	2 40
20, 16 & 12 dy	2 45
10 dy	2 50
8 & 9 dy	2 55
6 & 7 dy	2 70

American Pattern Only

from 4 to 5 dy	2 90
3 dy. (lath)	3 30

3. Canada Pattern Only

from 4 to 5 dy	2 80
3 dy. (lath)	3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Nails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross 1 00 4 25
" Carpenter 2 25 3 60

Picks

Per doz 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz 4 00 5 50

Pulleys

Hothouse, per doz 55 1 00
Axle. 22 33
Screw 27 1 00
Awning 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, 1 lbs 2 50 2 75

Rail.

Barn Door, per foot 3 3½
Sliding Door, " 3½ 3⅔

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10⅔	11⅓ 11⅔
Cotton, per lb.....	18	20
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.

Hack, complete, each 75 2 75
" frame only 75

Saw Sets.

Per doz 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz 3 25 4 00
Bench iron per doz 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen 1 25

Soldering Irons.

Per lb 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Snaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons .....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4⅓ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 65 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 51½ per cent.
Channel nails 5c. lb. off list.

Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p. c

Ties.

Cow, per doz ..... 1 [illegible] 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " ..... 0 30 0 5[illegible]
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " " } 4½ 4⅔
" Plain twist, 2&3 wires
" Steel thorn and ribbon 4⅔ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04⅔
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 80 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 to 70 and 5 p.c,.
Standard, dis. 60, 60 & 10p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz 1 25 2 00

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TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

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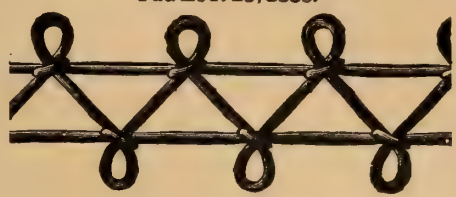
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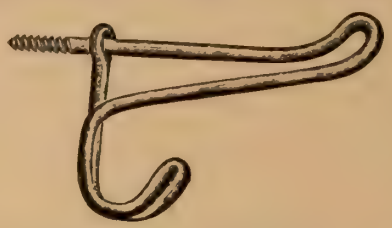
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In every point you will see the vast superiority of the . . . .

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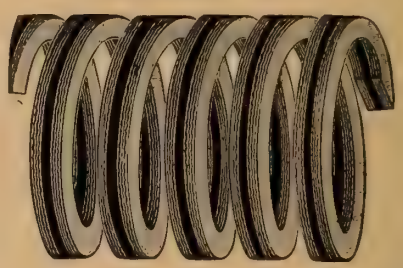
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Price per lb. $1.20. Special Discount to Dealers.

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VOL. V. TORONTO, JUNE 3, 1893. No. 22.

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Vol. V. TORONTO, JUNE 3, 1893 No. 22

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

HEAD OFFICE: - - 10 Front St. E.
MONTREAL OFFICE: - 146 St. James St. E. Desbarats, Manager.
NEW YORK OFFICE: Room 41, Times Building. Roy V. Somerville, Manager.
EUROPEAN BRANCH: Canadian Government Offices, 17 Victoria St., London, S.W. R. Hargreaves, Manager.

The information just furnished by the U. S. Superintendent of Census are garding the growth of the iron and steel industries in the Western States during the last twenty years is of more than usual interest to Canadians, we on this side of the boundary line being at the moment engaged in discussing how the home industries of this kind may be best stimulated. The Western States as dealt with include the iron-making States of California, Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, Oregon, Utah, Washington, Wisconsin and Wyoming. The different branches of the industry with which the statistics deal are blast furnaces, iron and steel rolling mills, Bessemer, open-hearth and crucible steel works, iron ore forges, and pig iron and scrap iron bloomaries. To go extensively into details would be more than space would permit. A cursory review of the facts and figures is all we can attempt. In glancing at the figures adduced one is struck by the fact that while there has been a general increase in capital invested, in wages paid, in value of products and in tons produced, there has been as a rule a marked decrease in the number of establishments, clearly showing the tendency of the age to concentration of capital. The only exception is in rolling mills and steel works, in which the number of establishments in 1890 were 121 against 91 in 1880 and 49 in 1870. In the iron and steel industry the number of establishments were 225 in 1890, 231 in 1880 and 152 in 1870, while the capital invested in 1890 showed an increase of more than 100 per cent. during the decade and or more than 200 per cent. for the twenty years. The cost of material used was $91,707,964 in 1890, $54,580,364 in 1880 and $25,519,539 in 1870; value of products $129,551,521 in 1890, $78,508,424 in 1880, $40,966,909 in 1870; tons produced 5,073,339 in 1890, 1,944,179 in 1880, 766,480 in 1870. Regarding the blast furnaces. In 1890 they numbered 104, compared with 136 in 1880 and 101 in 1890. Capital invested was about 33⅓ per. cent. larger in 1890 than ten years previous, and something like 175 per cent. in excess of 1870. Cost of materials used was about 86 per cent. larger in 1890 than in 1880 and over 170 per cent. larger than in 1870. Value of products increased about 160 per cent. during the decade ending 1890 and 110 per cent. during the twenty years. Tons produced were about 168 per cent. greater in 1890 than in 1880 and for the twenty years the increase was over 400 per cent. We have already shown that there was an increase in the number of rolling mills and steel works. The capital invested in this industry was 192 per cent. larger in 1890 than in 1880, while during the twenty years the gain was over 480 per cent. Cost of materials used were 62 per cent. greater in 1890 than the decade before, and over 330 per cent. greater than twenty years previous. In 1890 the value of the products showed a gain of 67 per cent. over 1880 and more than 300 per cent. over 1870. Tons produced in 1890 were 154 per cent. in excess of 1880 and 888 per cent. in excess of 1870!

* * *

How we sometimes "crow" if in a tilt with another fellow we manage to throw him even though he may have proved his superiority to us in many ways. The railway system obtaining on this side of the Atlantic is acknowledged, particularly in the matter of accommodation, to be superior to that in Europe. Lately a writer in the United States has been contending that while with the large cars in use on this continet "it is possible to move grain, coal, lumber and other coarse freight in large lots more cheaply than in the smaller English wagons," yet their size is a positive disadvantage when the moving of high-class freights in small lots is undertaken. "The time is coming," he adds, "when those of us who are level headed will modify our boasting somewhat." This acknowledgment greatly pleases an English contemporary, and it remarks with glee: "Thus one more cherished American institution has received a knock-down blow, and the reviled British railway manager smirks one more knowing smile of self-gratification." We fail to see where the knock-down blow comes in. Because one man gets up and expresses disapproval of a certain system it does not follow that everyone is of the same opinion. Two swallows do not make a summer. At the same time it must be acknowledged that the large freight cars are often found to be inconvenient, and for shipping small lots and goods of a perishable nature, a few small cars would no doubt be appreciated. The only wonder is that some such cars have not ere this been added to the rolling stock of the most progressive of the railway companies.

* * *

The almost certain feeling of six months ago that cholera would visit the North American continent this year has turned to a belief that it will not. Confidence has been restored as a result. But at the same time confidence should not give place to carelessness or to relaxation of precaution. The plumber should for instance remember that the health of a community depends much upon him. If he is careless somebody is certain to suffer. At the moment he should be more than usually vigilant in guarding against doing anything that would create a nest for the propagation of the cholera or any other disease germ. That there is a good deal of defective plumbing is well known. A letter from a master plumber, published in the London Advertiser the other day, acknowledged it. In Toronto

matter plumbers are compelled to pass an examination and to furnish security, and this system the London man claims should be adopted by other cities. A certificate of efficiency is not a guarantee against carelessness, but it tends to create a better class of masters and workmen, and as these increase the careless decrease.

* * *

Law suits are undesirable things. You may go into them and came out with the satisfaction that you have won. But too often that is about all you get, particularly if it be for the collection of an account that you are suing. You may take off your coat and give the other fellow a good thrashing, but if while you are thus engaged somebody walks off with your coat, the pleasures of victory are diluted with the knowledge that you are the victim of a theft. Yet this is what is occuring every day in tilts between creditor and debtor. The trouble is with the law. At one time the pendulum swung high in the creditor's favor. And in this connection our minds revert to the harrowing scenes in debtors' prisons so graphically described by Dickens. But of late nearly all amendments to the law have favored the debtor to the disadvantage of the creditor. As a result the pendulum now swings high in the opposite direction, or, in other words, the anomaly has been taken from the shoulders of the one and placed in another form on those of the other. The intention was to protect the poor but honest man who could not pay his debts from the hand of the stern creditor, but no v the dishonest as well as the honest debtor often seeks shelter beneath the robes of the law, It is not necessary to specify. Nearly every merchant knows it is so from actual experience.

"Don't give credit, and then you'll have no difficulty about collecting your accounts," is the specie of argument used by some when the defective condition of the law regarding the collection of accounts is pointed out to them. But this line of argument is about as sensible as it would be for some one to say, in urging for a decrease in the police force, that if people properly guarded their premises burglars could not get in. The credit system is part and parcel of our business system; is engrafted in it, and is not likely to be soon, if ever, removed. A any rate, whether it be permanent or not, one thing is patent: As long as it does exist there ought to be laws to enforce the payment of accounts more cheaply and expeditiously than at present. Of course the ratio of a merchant's losses from bad debts will depend largely upon himself. If he is lax in his methods it will necessarily be large. No law will ever prevent it from being otherwise. While after all a careful scrutiny of accounts is the best preventative of loss, there are times when the most watchful of business men are led to give credit to those who are unworthy of it, and it is in order to cover such cases as this that the law needs to be extended.

Protection against fire is a subject that is at the moment commanding more than usual attention. The cause of the increased interest is the number of fires that have of late been occurring. Canada as well as the United States has suffered, and here, as there, they have been attended with loss of life, although probably not to the same extent. Among those who are taking a prominent part in the discussion in the United States is Albert A. Pope, who has heretofore earned a reputation as an advocate of improved country roads. Briefly stated, the climax of his argument is for the placing of fire brigades on a semi-military basis, and with this end in view he would have the subject of how to control a city conflagration treated, under a discipline similar to that adopted at military and naval academies, in a scientific way, in the polytechnic schools of the country as a special branch of study. The more efficient the fire brigade the less danger is there of course of a conflagration taking place. This is frequently demonstrated. But there are also the small towns and villages to be considered. They cannot afford to keep up an expensive and well disciplined organization. Some communities, such for instance as where there may be only a store, blacksmith shop and saloon, can scarcely be expected to maintain even an ordinary hand fire engine, but it is a well-known fact that there are in this country even respectably-sized villages of one thousand inhabitants or more that do not possess even this antiquated instrument. At a fire in one of this class of villages not so very long ago the spectators had to resort to the unique method of throwing snowballs to keep it from spreading to the roof of an adjoining building. Fires, like rivers, are never large at the commencement, and what is wanted is something conveniently and constantly on hand to extinguish a blaze in its incipiency or that will tend to prevent it from rapidly spreading until more efficient means arrive. What this convenient extinguisher shall be is for every business man or manufacturer to determine for himself, and as a help in the premises he might give his clerks and his children too, if he is fortunate enough to have any, a little drilling occasionally in the extinguishing of incipient fires—yes, and a little instruction to the women folk would not be thrown away—for upon a cool head and prompt action much often depends in matters of this kind.

* * *

The outlook for the merchant and husbandman of this country is by no means bad. The fields promise, take it all round, to give a good yield of grain, roots and hay, while the fruits, both cultivated and wild, are expected, in many instances, to yield bountifully.

BIG DROP IN TURPENTINE.

A drop of five cents per gallon in turpentine is announced by the Ontario Association. The step was decided upon at a meeting held a few days ago. The price is now 47c. per gallon for one to four gallon lots and 46c. a gallon for five barrels and over, freight allowed to delivery stations. At Toronto, Hamilton, London and Guelph prices are two cents a gallon below these figures. Jobbers seem to have bought largely of the new crop, and the members of the association claim that they have put prices down to the lowest notch in order to benefit the dealer and to induce consumption. Lower prices are always in order about this time on account of the arrival of the spring stock in the South. The usual brisk demand may now be expected to spring up, trade in this line having for some months been of a hand to mouth character.

The market appears to be steady at the decline. It is thought that prices can scarcely go lower while the conditions favor a firmer market in the future. These conditions are principally an estimated shortage of 11,000 gallons in the crop, while there does not appear to be very much left over from last season.

THE ENGLISH IRON MARKET.

The year 1892 has been one of the worst years ever known in the history of the iron and steel industry in Great Britain. These industries are still greatly depressed, and the outlook at present, according to all accounts, is very gloomy. The production of pig iron according to statistics recently issued has fallen off 600,000 tons, and steel rails are in even a worse condition. The total falling off in the exports of metals and machinery in 1892 as compared with 1891 amounted to £7,000,000. In fact the market over there seems to be swamped, and there does not appear to be half enough work for the country's steel production. One has only

to glance at the reports issued from week to week giving the figures of the stocks in public stores in Great Britain to realize the above. On May 18th the stocks in Connal's Glasgow stores were 338,967 tons against 339,613 for the previous week and 497,665 tons for the same week in 1892, a decrease as compared with last year of 120,698 tons. The stock of Cleveland pig in the Middlesboro stores on the same date was 66,602 tons against 68,974 tons for the previous week and 86.938 tons for the same week last year, a falling off for the year of 20,336 tons. The Hematite pig in the Cumberland stores on the 18th was 64,218 tons against 76,218 tons for the same week in 1892, a decrease of 12,000 tons. This makes a total decrease in the stocks in public stores in Great Britain for the year of 153,034 tons.

TO PUSH PORT STANLEY.

A Board of Trade has been formed at Port Stanley with these officers :—President, M. Payne ; first vice-president, John Price ; second vice-president, John Ellison ; secretary, Arthur Ellison ; treasurer, T. J. L. Orme. The formation of the board arose out of the need of an association through which the commercial world might be made acquainted with the advantagos of the village and harbor of Port Stanley.

A BIT OF PETROLEUM HISTORY.

One thing about petroleum has been demonstrated only too forcibly at our last meeting of Parliament, and every time the subject has been touched upon in public discussion, and that is the prevailing ignorance regarding this particular natural mineral, its arts, and the uses it can be put to in various manufactures. Although the business of producing and manufacturing are confined at the present time principally to the Township of Enniskillen, it is one of the most important industries in the Dominion. The first batch of distillate was refined in New York, and, looking back, it is very amusing to remember the prices paid for the refined article, and the different costly methods of rectifying the illuminant as compared with prices and methods employed to-day. The first oil was sent to New York in February, 1858. The price contracted for was 60c. per gallon, subject to a discount of 2 1-2 per cent. for cash in 30 days—thus making the net cost of the first distillate of petroleum 58 1-2 cents, and with freight and some other charges added, about 65 cents per gallon delivered there. From this price, which equalled the value of a barrel of the oil soon after, in less than two years it advanced to two dollars per gallon, as refined, and again in the short space of two years more was sold on Oil Creek for ten cents per barrel, crude, or was given away to those who would be at the labor of placing it in barrels. The old method of treating or purifying the oil was kept a close secret both by the coal oil refiners and the sole petroleum refiner, and was in the early days disposed of for very considerable sums of money. The quantity and percentage of acid and alkali used would seem fabulous now if stated, and results were problematical, no uniformity in the quality of the refined oil produced being evident. It is very interesting to hear Mr. Henry Brake tell of the early days of refining oil in Bothwell, and the beautiful straw-colored stuff sold those times as first-class refined oil. It has been positively stated that on a cold day in winter the oil contained so large a percentage of parafine wax that if the hoops were knocked off a barrel of finished oil it would actually stand up alone. What wonderful changes have taken place since those good old times. What fortunes have been spent in experimenting and bringing our illuminating oil up to a standard not equalled by any in the world. Excitement still continues at Bothwell, and under the able supervision of Mr. James Beresford the first well drilled by the London Co. is pumping a good eight or ten barrels. This well was troubled with quite a supply of black water, but after several wooden plugs were driven to the bottom of the hole the black water was effectually shut off and the well is now pumping a first-class gravity oil. The drill is not being pushed very vigorously either in Petrolea or the Springs.—Petrolea Advertiser.

IRON WORKERS' WAGE SCALES.

The programme to be submitted to the forthcoming convention of the Amalgamated Association, which will begin its sessions in Pittsburg next Tuesday, contains some propositions for changes in the accustomed procedure for the settlement of the yearly scales that, while radical in themselves, are calculated to render the settlements of easier accomplishment than under the old plan. There is provision for a general conference committee of thirty-one members, which is to be divided into three divisions, each division to confer with and settle the scale for the particular trade it represents with committees of manufacturers without reference to the other divisions. The first division will consist of nine members from the boiling division, which will include boiling, scraping, and bushelling, muck mill and knobbling. This division alone is to confer with the manufacturers in a settlement of the rates for the trade. The second division is to consist of eleven members from the bar, guide, plate, structural and jobbing mills, working on pipe iron, and is to confer and settle for the trades. The third division is to consist of nine members from the sheet, tin and block-plate and jobbing mills, and, like the others, is to settle its own scale. The president and secretary of the national lodges are standing members of each committee. If any or all of the divisions in conference with the manufacturers should disagree on some question in the scale, the point in dispute is to be submitted to the sub-lodges for their vote as to whether the point under disagreement shall be insisted upon or not. To insist upon any such point it will require a two-thirds vote of all the members of the organization voting. In the meantime, however, the trades represented in any division whose committee may have been able to effect a settlement for that division with the employers, may continue at work pending the vote ; but if the vote should be favorable to insisting upon the demands, those who resumed will be required to cease work until a settlement is reached. As the propositions are made by the national officers, and have been presumably endorsed by the advisory board, it may be assumed that they will be adopted by the convention.

IMPRISONMENT FOR DEBT.

It is said that in England the experience of the legal profession is adverse to any proposal for the abolition of imprisonment for non-payment of debt, as at present authorized by the debtor's act; that the remedy is well adapted to meet the case of debtors, who, though owning no goods, are earning wages or salaries, and such must always be met with. It also serves to prevent conduct which is in many cases virtually fraudulent, being crowned with the success desired. Nearly ten millions of dollars are annually collected through the county courts, while less than six thousand of the million debtors go to prison in the course of its recovery. Comparing the number of warrants of commitment issued with the number of judgment summonses heard, as appeared from the latest county court returns, the average is about one in two. One judge issued 6,090 warrants on 8,421 summonses, and the others in about the same proportion. The judges of Birmingham and Liverpool show a less proportion of warrants. In 1870 there were 179,822 warrants issued against the goods of judgment debtors, and in 1891, 228,538. This was an increase of 48,716. The number of debtors imprisoned in 1890 was 6,597 ; in 1891 there were 5,852, or 745 less. This is somewhat remarkable, because during that period there was an increase of 116,275 judgment summonses. It seems, therefore, that the law has been successful as a lever to compel the payment of debts. Not more than one-half of the persons remained in prison for the full term, a large number raising the money to obtain their release. The maximum term of imprisonment is 42 days. We understand that it is against the law in England to attach a working man's wages, the law being abolished on acount of the great inconvenience to employers and the hardship resulting to workingmen having their entire wages attached week after week, and thus leaving them penniless.—The Collector.

VALUE OF THE SILVER DOLLAR.

An interesting table showing the commercial value of the silver in a silver dollar from 1872 until the present year is is follows :

Calendar Year.	Value.	Calendar Year.	Value.
1873.....	$1.004	1883.....	$0 858
1874.....	.988	1884.....	.861
1875.....	.964	1885.....	.823
1876.....	.894	1886.....	.709
1877.....	.929	1887.....	.758
1878.....	.891	1888.....	.727
1879.....	.868	1889.....	.724
1880.....	.886	1890.....	.809
1881.....	.881	1891.....	.764
1882.....	.878	1892.....	.674

At the date of the passage of the present silver law (July 14, 1890), the price of silver in London was 49¼ pence, equivalent to $1.07¼ per fine ounce. The highest point reached since the passage of the act was in New York, August 19, 1890—$1.21 per fine ounce, and in London, September 3, 1890—54⅝ pence, equivalent to $1.19¾ per fine ounce. The lowest price of silver was reached during the last calendar year, viz., $0.83 a fine ounce, showing a decline from the highest price in two years and a half of $0.38 an ounce.

MARINE GLUE.

The true marine glue is a combination of shellac and caoutchouc in proportions which vary according to the purpose for which the cement is to be used. Some is very hard, and some quite soft. The degree of softness is regulated by the proportion of benzole used for dissolving the caoutchouc. Marine glue, according to Work, is more easily purchased than made, but when a small quantity is needed the following receipt will give very good results :—Dissolve 1 part of India rubber in 12 parts of benzole, and to the solution add 20 parts of powdered shellac, heating the mixture cautiously over the fire. Apply with a brush. The following is said to yield a strong cement :—10 parts of caoutchouc or india rubber are dissolved in 120 parts of benzine or naptha with the aid of a gentle heat. When the solution is complete, which sometimes requires ten or fourteen days, 20 parts of asphalt are melted in an iron vessel, and the caoutchouc solution is poured in very slowly, in a fine stream and under continued heating, until the mass has become homogeneous and nearly all of the solvent has been driven off. It is then poured out and cast into greased tin moulds. It forms dark brown or black cakes, which are very hard to break. This cement requires considerable heat to melt it, and to prevent it from being burned it is best to heat a piece of it in a water-bath until the cake softens and begins to be liquid. It is then carefully wiped dry and heated over a naked flame, under constant stirring, up to about 300 deg. Fahr. The edges of the article to be mended should, if possible, also be heated to at least 212 deg. Fahr., so as to permit the cement to be applied at leisure and with care. The thinner the cement is applied the better it binds.—Ex.

STEEL PAVING.

Steel paving appears to be coming more and more into favor, and important experiments have been and continue to be made with different methods, aiming to secure the most satisfactory results. One of the most practicable systems, as thus far demonstrated, provides for the laying of wooden blocks on a steel base—that is above a thick stratum of sand there are laid solid steel plates, which reach from curb to street-car track, and a half-inch or more thick ; rising from this solid plate to the height of two inches are steel tongues an inch thick, securely bolted to an underlying plate, and running from curb to street car tracks. Grooves are sawed in the bottoms of the blocks, these being fitted snugly on over the tongues, and thus every block is securely fastened in place. As they are oblong blocks, having sharp corners and fitting closely together—being held by the tongues firmly at the bottom, and supporting each other by close fitting—it is believed that the requisites of a durable pavement are thus combined in a remarkable degree. The blocks are of wood, eight inches long by four wide and six deep.

A UNIQUE WAY TO SAVE RAILS.

The latest practice in the economy of rolling stock on railways is to turn the cars at the end of each trip, whereby a large percentage of extra wear and tear is saved, says Iron Age. Some years ago a portion of the Wabash railroad was laid with old English iron rails and a small part with steel rails from the Carnegie mills. It became necessary after a time to remove some of the main line rails to another part of the road, and it was observed that after relaying them many gave out immediately, while others manifested no signs of wear. To determine the reason of this apparently unaccountable condition an investigation was ordered which showed that the road from which the rails had been removed was built in a northwest-southeast direction, and that in relaying a large number had been turned end for end. Those that had not been so placed exhibited no additional loss by attrition, while the turned rails succumbed in from thirty to ninety days. The conclusion arrived at was that the metal had become polarized from long use, when first laid, and that the fibre was broken up by the traffic in the opposite direction. It was further proved that cast-iron wheels generally yielded twice the mileage when the cars were turned at each end of the journey than when they were run backward and forward without reversing. Notwithstanding the value of this discovery, it was not universally utilized, and it is only recently that some of the American railroads have begun to recognise its importance.

A GLOOMY ANNUAL MEETING.

The Iron and Steel Institute of Great Britain held its annnal meeting in London last week. President Richards, in addressing the institute, said that the year 1892 had been one of the worst years ever known in the iron and steel industries. Those industries were still greatly depressed and the outlook was gloomy. The production of pig iron had fallen off six hundred thousand tons and steel rails were in a worse condition. The total falling off in the exports of metals and machinery in 1892 as compared with 1891 amounted to 7,000,000 pounds sterling. The markets were now swamped, and there was not enough work for half the country's steel producing power. In regard to seeking new markets, President Richards drew a comparison between the United States with 60,000,000 of people and 175,000 miles of railway and India with 250,000,000 of people and 17,000 miles of railways. Was it any wonder, he asked, that under English rule India had developed wretchedly and slowly? Mr. Abel, who followed President Richards, as speaker, spoke in an encouraging tone, and expressed an opinion that there were signs of betterment. England, he said, was bound to remain the first iron shipbuilding country in the world. The Iron and Steel institute has presented the Bessemer gold medal to John Fritz, of Bethlehem, Pa.

LONG DISTANCE STEAM COOKING.

One of the engineering successes of the World's Fair which is not visible to the public is the steam-pipe line from Machinery Hall to the Casino restaurant, says a contemporary. When the scheme was first broached of doing all the cooking in the Casino by steam from Machinery Hall it was pronounced impracticable almost universally by engineers. Nevertheless the work was given in charge of second assistant mechanical engineer Arthur Venning, and is now in successful operation.

The pipe is six inches in diameter and runs from the boiler-room at Machinery Hall across in front of the Colonnade, under the Agricultural Building, and ends at the kitchen of the Casino adjoining the Peristyle. It is 3,000 feet long.

Steam was first turned on about two weeks ago, and since then the pipe has been in constant use. The pressure at the boiler room is 120 pounds and at the Casino end 100 pounds. When the pipe has been covered with magnesium to retain the heat the pressure will be much better at the Casino.

Great fears were entertained as to the successful operation of the pipe during the last week, as all the cooking at the Casino is done by the steam from it and a failure of the pipe line would have ruined the opening banquet, but Engineer Venning has had it patrolled night and day by two men watching for leaks, and so far it has proved a success in every particular.

TINPLATE IMPORTS.

The latest information regarding the exports of British tinplate to the United States, given in a special cable to the American Manufacturer, states that these exports to the United States during the last month aggregated 31,651 tons. This was an increase of 317 tons over the tinplate exports of the preceding month ; compared with the amount exported to the United States during the corresponding month of last year an increase of 590 tons is seen. The exports of April were the largest recorded for any month in the present year, and make the total so far 106,673 tons. The largest exports shown for the month of April were in 1891, when 45,208 tons of tinplate were sent from Great Britain to this country. The smallest tinplate exports in any April were in 1890, when the total was 23,373 tons. The following shows the exports (in long tons) of British tinplate to the United States for each month in the past four years :

	1893.	1892.	1891.	1890.
January	23,498	17,554	32,018	23,613
February	20,190	22,268	28,253	18,334
March	31 334	22,789	38,638	17,245
April	31,651	31,061	45,208	23,373
May	....	23,799	55,569	25,619
June	....	23,550	63,539	30,793
July	....	24,750	4,323	37,011
August	....	24,221	5,629	25,519
September	....	22,535	11,139	25,557
October	....	19,901	12,461	36,955
November	....	20,634	14,831	28,330
December	....	23.417	13,536	25,700
Total	....	276.479	325,145	318,108

OIL FURNACE FOR BLACKSMITH SHOPS.

For some time past E. B. Wall, superintendent of motive power of the South-west system of Pennsylvania lines west of Pittsburg, has been using oil furnaces in his blacksmith shop at Columbus, remarks an exchange. These furnaces are 5 ft. by 9 ft. and are designed for heavy work, and have proved so successful, and well adapted for the work required of them, that others are being installed in other shops of the same system. One feature of this furnace that may surprise those who have not had much to do with oil furnaces of such size, is the absence of any stack or other means for carrying off the product of combustion. It has been found by actual experiment that when a stack is placed on such furnaces, the temperature cannot be maintained to as high a point as desired. Without a stack it is evident that the flames and products of combustion have a tendency to creep out wherever there is an opening. For this reason the doors in the front of the furnace are carefully fitted, and it is found necessary to protect the buckstaffs in the immediate vicinity of the doors extending out a rib of firebrick from the front wall. These furnaces when first installed gave an economy of about 50 per cent. over that of the coal furnaces, and an increased output of 25 per cent. The economy was not wholly due to the difference in the cost of fuel, a portion of it being accomplished by the reduction of labor, there being no wheeling and shovelling of coal and ashes. While the increased output is maintained, the economy has in a measure fallen off, not due to the performance of the furnace itself, but because of the increase in the market value of oil since the furnaces were first installed.

DON'T GET INTO A RUT.

"How use doth breed a habit in a man
And bind him to a rut unenvied!"

The regular hardware dealer, a few years ago, considered himself restricted by the customs of the trade from handling wares which were not strictly in the line of his trade, and this conservatism was carried to such a degree that the manufacturers of metal novelties were forced to find an outlet for their goods through the channels of the modern "Department stores." These popular business houses, which cater to all, were not slow to avail themselves of this entering wedge to a new and extensive feature of trade, and have gradually absorbed the most profitable and saleable articles in general use. In fact, so widespread become this diversion of trade that, especially in our larger cities, the matter has become serious in the extreme to many retail hardware merchants. The source of this condition of affairs lies simply in the fact that the average hardware merchant was content to follow in the footsteps of his honored predecessor, and neglected to fortify his trade with the new inventions and appliances until they have now turned the tide in favor of his popular competitors. Especially is this true as regards specialties in sporting goods and household utensils, two departments which can with advantage be easily added to the regular hardware business, and prove a source of profit in themselves, as well as a potent attraction to the merits and sale of the regular stock.

Suppose an entirely new and patented article is shown to the hardware dealer. Why, invariably, does he hesitate to try a few, and use the thread-bare argument that because it is new, he will wait for its introduction? Why not let the fact of its novelty and the open field for its sale, if pushed, become its chief commercial element of attraction instead of forcing the discouraged manufacturer to offer it to the "bazaar," or "dry goods emporium," which from their union of expenses can afford to cut the price and still lay a handsome dividend on their capital stock? Is it not true that the hardware trade, as a rule, have been too slow to appreciate the changes of the times, and, in failing to appreciate, have allowed golden chances of progress to slip through their fingers?

The hardware manufacturer is, or has been inclined to confine his sales to the regular hardware trade, but have the trade made it possible for him to entrust his output to their hands?

The hardware store of to-day, which is fully abreast with, or leads the progress of events, will be found eager and alert to avail himself of new articles which demand, and eventually must receive public recognition. The progressive proprietor of such a store will not continue to buy, and keep in stock, goods which have been bettered or cheapened by later inventions, nor will he leave the field open to his "dry goods" competitor, simply because they are somewhat out of his line. The hardware store occupies a useful and unique position in the community, from the fact that under its roof, it may with profit and good judgment, combine with its regular stock many novelties and helps to modern living not to be found elsewhere, and, like the historical bird, arise from its bed of ashes and ruts to a new and vigorous progress.

"I hold it truth,
That men may rise on stepping stones
Of their dead selves to higher things."

—From Ideas for Hardware Merchants.

LINSEED CAKE PROSPECTS.

The new year opened most auspiciously for linseed cake, and prices were phenomenally high, when we take into consideration the proportionate higher values of other cattle feeding products, says a U. S. contemporary. Furthermore, the very scant supply of Calcutta and Egyptian seed greatly strengthened the position of cake in the home market, as the deficiency in the London market was equivalent to forty thousand tons. At the same time the consumption was decreased fifty per cent. as the demand from abroad almost ceased during the past three months, and as the price of American wheat in the foreign markets was unusually low, the foreign feeders were unable to exchange the one for the other. In consequence export trade was extremely dull and about a month ago a heavy decline of three dollars per ton taking place in this cake, brought about by the strong manipulative transactions, by parties then prominent in the trade, caused a temporary depression, but the market has since recovered some of its strength, and during the past two weeks business has been good for this advanced season. The situation is daily becoming stronger, as many of the mills west of New York state have already closed, some of the Chicago mills practically out of the export trade, and many others only running at one-half capacity. The weather abroad has been warm during the day, but cold at night, and with the continued drought and the scantiness of grass, recourse must be had to other feed stuffs, and this condition tends to confirm American manufacturers in the belief that a better demand will soon result.

CHEAP IRON PRODUCTION.

The establishment of prices for Lake Superior iron ore for the season at a low level is a matter of far-reaching importance. It may be stated in a general way that in 1892 there was produced from Lake ore not less than 4,600,000 tons out of a total production of over 6,800,000 tons of coke pig iron. But it is not alone to the purchasers of the raw material itself, or to the buyer of the whole range of manufactured iron and steel, that there is much of interest in the prospect of cheap metal as the result of low cost of raw material. The manufacturers in other sections of the country who draw upon other sources will do well to consider that their formidable competitors will this year command exceptional advantages.

It may be stated in a general way that the profits in the raising and in the transportation of raw materials are down to very close figures. The only exception is coke. But even in this product a very unfair impression is created in the minds of many through the retention of the ridiculously nominal quotation of $1.90 at oven in the Connellsville district when the actual price is $1.60, and that is sometimes shaded.

So far as ore is concerned, it is not likely that costs can be much lowered. There has been some talk of reducing royalties and of lowering the rate of freight from the mines to the shipping ports, which might afford the producers some relief.

Reviewing the situation generally, the statement is warranted that in the dominating districts which use Lake Superior ores, costs are as low as they ever have been, with little prospects of effecting a further saving. On the basis of the present elements of cost, Bessemer pig can be produced in the valleys, in Pittsburg and in the Wheeling district, leaving a fair manufacturers' profit and making an allowance of $1 per ton for supplies and repairs, at $12.50 to $12.75, while foundry and mill irons, using all ore, can be produced at $11.25 to $11.75. Lower figures could be reached only by the abandonment of profit, or by exceptionally well equipped, well managed plants.

It is this level which competing districts must be prepared to come down to with some profit to themselves, unless they are content to continue a precarious existence on the chance that the works of the central West will not find it expedient to market product at cost.

It is not an encouraging sign for the near future that there is a possibility of lower prices than are now prevailing should those producers who use the raw materials under consideration go down to the lowest notch which they are in a position to reach. But it is best that the hard facts be faced squarely and honestly. Those who cannot live at present prices would do far better to close down and await better times. There is little prospect of an early recovery of the market, except possibly in some lines, should there be any prolonged stoppage of work in the Western rolling mills.—Iron Age.

MERCANTILE CREDITS.

It cannot be denied, says the Iron Age, that business men are now passing through a crucial period. While the entire situation may in truth be pronounced tranquil, there is evident disturbance and some degree of apprehension. This appears from the frequency of failures among those who are dependent on credit and bank accommodation. Naturally institutions "banking on wind" are among the first to go, sharing the fate of that class of stocks which have been watered to an extreme, and of those speculators and business men whose operations have been unduly extended, because of their inability to borrow money any longer on doubtful collateral. So long as confidence remained they could go on, but when for any reason distrust is excited more margin is called for and then their collaterals are thrown out altogether. Thus, we notice at the present time that there is no lack of loanable finds at a fair rate of interest where the security is undoubted, but collaterals are scrutinized, and the financial standing of individuals and firms is the subject of enquiry. Those who rely on note brokers for accommodation are especially exposed.

This undesirable condition was brought about primarily, it will be remembered by distrust respecting the ability of the general government to maintain special payments in the face of an extraordinary foreign demand for gold and declining receipts. The Sherman Silver law was recognized as the chief impediment in attempting to uphold the standard of value. Then followed the collapse of industrial stocks and the enforced assignment of prominent individuals or firms who were in some way involved as borrowers. We have later, in quick succession, the failures of "strings of weak banks," mostly in Indiana and Illinois, which have been doing business on corrupt principles, and which Senator Sherman hastens to say, contrary to report, he unhesitatingly condemned.

Among New York bankers the troubles here referred to are viewed with unconcern, as they cannot in any proper sense be taken as an index of general business. Banks in the association are in excellent condition, as shown by the last weekly statement. There was a further contraction in loans, equal to $5,000,000, and the result of all the changes was a gain of about the same amount in reserve, which now stands at nearly $18,000,000 in excess of legal requirements, against less than $16,000,000 in the corresponding week a year ago. The contraction here observed does not, a bank official explains, signify a contraction of credits, but is the result of liquidation mainly connected with stock operations. Money, as before remarked, is in good supply. Another good feature is the improved condition of the Government Treasury, there having been last week a gain in the gold balance of upwards of $2,000,000. The Treasury situation excites no further apprehension.

The latest cause of concern is the sweeping disaster that has overtaken banks in Australia, wiping out large amounts of British capital and increasing the demand for gold.

EFFECTIVENESS OF HEATING APPARATUS.

That there is a wide difference in the effectiveness both of hot water heating and steam-heating apparatus is a fact known to all well-informed men engaged in the heating trade, remarks Metal Worker, but in many instances this difference is accounted for by referring it to anything but the proper cause—namely, defects in the system of piping between the steam boiler or water heater and the radiators. The boiler may be good, the radiators may be the best in the market, yet the result is unsatisfactory. In most such cases it will be found that not enough study and care have been given to arrangement of pipes and radiator connections, to their proper sizes with reference to the surface they are to supply, to their pitch, to the supply in steam-heating pipes of proper relief pipes, to avoidance of traps in pipes, to provision for expansion under the action of heat, and so on to the end of the chapter. These remarks apply to both large and small installments. Some of these defects are not always chargeable to the contractor who puts in the apparatus. Many buildings, large and small, can be found wherein, when first erected, the heating apparatus worked excellently, but in a year or two began to snap and pound vigorously, while its lack of vigor in heating some parts of the building became uncomfortably apparent to complaining occupants. What has happened during the interval between satisfactory testing and the failure to heat successfully is that the building has settled unequally, thus neutralizing, and in many cases often reversing, the inclination given by the fitter to the pipes, and canting radiators so that their outflow connections are higher than their inlets. Examine the boiler; you will find there nothing to prevent efficiency. Radiators and valves, water-feeding and draft-regulating appliances may be all in first-rate working order. The fault is that the piping has been disarranged because the building has settled, and settled unequally. The "skin builder," not the fitter, is to be blamed in such a case.

. . FENCE WIRE . .

A—4 Barbs, 6 inches apart. . . .
B—4 Barbs, 4 inches apart. . . .



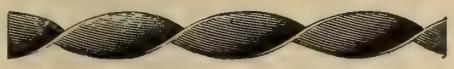
C—Plain Twist, 2 wires. . . . . .



D—Plain Twist, 3 wires. . . . . .



F—Ribbon. . . . . .



G—2 Barbs, 5 inches apart. . . .
H—2 Barbs, 2½ inches apart. . .



I—2 Barbs, Flat Barb . . . . . .



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WORN-OUT MACHINERY.

It is very poor economy, says the Scientific Machinist, to continue a tool or machine in use after it has served its time and is ready for the scrap pile. Yet we see it done every day. Machines that will turn out less than half the work that new ones would are being run in many shops and many manufacturing establishments. The slow operation is not the only loss. Inferior work, stock spoiled and time spent in fixing and rigging up are to be added—and important additions they make. Often labor less skilled can do with a good machine what can be done only with much more costly help on an old tool.

Nor is the machine shop the only place where great loss is entailed by the use of worn-out machines. Some plants are even more in need of attention. The possibilities of waste at the source of power are very great. Badly designed furnaces, boilers venerable with age and in execrable condition, defective chimneys, bad steam conditions or appliances, worn-out shaky engines and incompetent engineers and firemen, are costing manufacturers enough each year to cut down very materially the aggregate net earnings of all concerns using power. Manufacturers who will go out of their way to save a piece of material worth ten cents and scold their workmen for not looking carefully to economy in this direction will listen complacently to the complaints of their foremen condemning used-up tools, and the recommendations of their engineers that repairs, or new purchases of engines, boilers, pumps, injectors, packing, lubricators, etc., be made, and pass them by with the mental comment that "guess if they have served so long, they can a little longer," or something of that kind, seemingly blind to the fact that the seemingly worn-out machinery is eating up earnings enough to buy new ones in a short time.

If they looked more to the performance of machinery there would be less complaints of small margins.

An enterprising Parisian shopkeeper has hit upon a novel device to induce people to stop in front of his show windows in the chill of winter and spring. He secured a length of gas-pipe, and, perforating it with tiny holes, laid it just under the edge of the window outside. Then he rigged a small pump that forced a gentle current of warm air through the pipe, and thus practically heated the space in front of his display. Nor was this all. He fashioned a clever machine that sprayed a delicate perfume into the pump, and so the warm air is kept scented, to the great delight of the feminine shoppers, who can scarcely be induced to "move on." The warm air also keeps the glass clear and bright.

THE CENTRALIZATION OF INDUSTRIES.

There is a remarkable persistence observable in certain industries in adhering to particular localities, says Age of Steel. In Great Britain we find such examples as tin plate manufacture in South Wales, shipbuilding industries on the Clyde, the cotton trade in and around Manchester, and the engineering trade at Leeds. In American iron industries we have the fact of Pittsburg converting Lake Superior ore into marketable forms, and Eastern mills working up the cotton of the South. At first sight these facts would seem to be opposed to the natural order of things. They are, however, the results of a combination of various influences. Facilities for distribution are a potent factor in these apparently anomalous conditions. This is illustrated by the industries concerned in the manufacture of agricultural implements, sometimes remote from the sources of raw material, but located at some central point where distribution radiates and markets are easiest found. We have stove manufactures comparatively remote from their base of supplies, but otherwise in favoring contiguity or access to the centers of demand. To this may be added the fact that in all established centers of any particular trade there is an attractive influence on numerous industries that are auxiliary or dependent on the central and dominant industry. This association of interests, once definitely established, is not easily broken up, and makes migration even under the pressure of economic necessities by no means so easy a task as it seems.

There is, again, a marked tendency in human nature when once settled into a regular routine or rut to remain there, while public faith or confidence in any product associated with a certain old-time center clings to the place as it does to the article. This fact is recognized in business and commerce, and we name new cities, Birmingham, Manchester, Sheffield, etc., for the commercial value of the name when stamped on iron, textiles or cutlery. To this commercial and industrial fact we have the stimulant and encouragement of rapid transportation by which distance is more or less annulled, and what might have been an insuperable obstruction fifty years ago is no longer of paramount importance, raw material being available from considerable distances at so comparatively small an expense that the cost is more than offset by new facilities of commercial distribution. In the earlier stages of the iron industry, forges and bloomeries were located in the neighborhood of the raw material; this is not now, for the reasons given, so urgent a necessity, hence the modern tendency to mobilize iron and steel trades in established centers in some instances where fuel, limestone and ore have to be transported for considerable distances. In so wide a territory as the United States the opportunities of deployment are in correspondence with its area, but in each and all of its numerous and wide-spread districts the centralizing influence will historically repeat itself, and these in turn will focus on the central hubs of the industrial wheels of the country. In all new enterprises this influence has to be taken into consideration, for to lack of foresight or knowledge of these conditions of success too many promising enterprises have been without fruit to follow the blossom.

DID YOU EVER NOTICE IT ?

"Do you know that fractional currency is local in its circulation?" said a well known merchant to a Boston Globe reporter the other day. "I mean that coins of small denominations do not go outside of certain localities; that is, this half dollar here for instance," he said, handing me a coin so peculiarly marked that one seeing it would never forget it, "that half has been taken in and paid out by me over 500 times in five years. I marked it five years ago, and no matter how often I give it out in change it comes back, and that is why I say fractional currency circulates within certain localities, and seldom gets away from the vicinity where it first became a medium of exchange. This half is only one of the few regular pieces of money that come and go all the time."

THE CARE OF LAMPS.

There are few things in the world more exasperating to the patience than a smoking lamp, and with the perfection to which lamps have now attained, that is unnecessary if ordinary care is used in cleaning them. The great mistake which the amateur housekeeper makes is to wash her chimney. Now a lamp chimney should no more be washed than a window pane with soap and water, and whether there is any gain in washing any part of a lamp with soap and water is very doubtful, unless it is a lamp of glass or china.

If a lamp is properly brushed out with a stiff little brush, like a painter's brush, which may be kept for the purpose, there is no need of washing the burner. All that is necessary is to wipe the burner out in every part with soft flannel or cotton cloth, which should also be kept for the purpose. This keeps the burner bright and free from surplus oil and dust. The best way of treating a wick is to brush off the charred part and thus allow it to trim itself. If the scissors are used it is apt to be uneven, until the flame has burned it even. A few drops of alcohol will do more to remove the dust and smoke from the inside of the lamp chimney and leave it crystal bright than a quart of water. Where dust is difficult to remove apply a little alcohol on a cloth. The metal work of a lamp is kept bright by rubbing it firmly and polishing it with a little kerosene on a soft cloth.

Do not use sticky old cloths for cleaning lamps, but wash out your lamp cloths and brush frequently and see that they are clean when used.—China, Glass and Lamps.

GYPSUM IN FLORIDA.

Norman Robinson, State Chemist of Florida, says in his annual report recently issued: "Now the least interesting discovery which the writer during the past year has been able to announce is the presence of gypsum in easily workable and probably very extensive beds in the counties of Sumpter and Hernando. This gypsum, like the so-called 'soft phosphate,' exists in a finely pulverised state. In other words, nature, as in the case of the former product, has relieved us of the trouble and ezpense of grinding, and when these beds are developed, as they undoubtedly will be, will furnish this material in a very cheap form, and will play no unimportant part in the future industries of the State. It is not unlikely that these beds represent the gypsum in the form in which it was originally deposited from the evaporation of the waters of inland seas during the very latest portion of the neocene period. Whether salt, so frequently found as an accompaniment of such deposits, will be found in lower strata underneath these gypsum beds is a matter which only subsequent investigations can determine.

DETERMINING CARBON IN IRON.

The competition lately promoted by the Berlin Verein zur Beforderung des Gewerbefleisses regarding the determination of carbon in iron has been productive of excellent results. Five treatises, all valuable, have been received, three of which were claimed to be absolute solutions of the question in consideration. Under these circumstances the committee appointed to examine the papers and make its award had a difficult task. It was, however, finally resolved to bestow the prize of 3,000 marks and the silver medal which had been offered upon Professor Ledebuhr, of Freiberg; but in recognition of the worth of the productions of Prof. Gottig, of Berlin, and Prof. Walter Hempel, of Dresden, it was also decided to grant special silver medals to these gentlemen.

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'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

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WIRE SHAFTING.

Wire shafting for ships is suggested by S. P. Jerome, an American Engineer, in the Engineering News. He proposes to cut a shaft 100 feet long and 15 inches in diameter into 5 sections. He would use for such a shaft 25,000 No. 7 steel wires, each 20 feet long, and welded together at their ends to make a solid mass of steel upon which to fix couplings for bolting the sections together. Between the couplings the wires would be held in place by metal bands. He claims that each wire would sustain a load of 500 lbs. without rupture or injury; and the aggregate inherent strength would be 37,500,000 lbs., or 25 times the continuous force of a 5,000 horsepower engine. Tests made show that when in rotation a tensile force is exerted upon each wire and its fastenings, and hence the shaft can easily be designed to sustain any given stress, and its elastic nature would better adapt it to the bending of the ship, and eliminate the present danger to crank and engines resulting from powerful waves striking the propeller.

THE CHIGNECTO RAILWAY.

A circular issued by the Chignecto Marine Railway states that in answer to the prospectus asking for subscriptions to £350,000 of 6 per cent. preference mortgage bonds, only about £100,000 has been subscribed, and there appears to be a likelihood that the project may succumb. It is now more than ten years since incorporation was granted to a company for the construction of a line of railway for the transport of ships overland across the Isthmus of Chignecto from Tidnish, on Bay Verte, in the Gulf of St. Lawrence, to the Bay of Fundy. The scheme was not new when presented to Parliament in 1882. It was merely an old idea in a different form, the project of cutting a way between the Gulf of St. Lawrence and the Bay of Fundy, known as the Bay Verte canal, having been discussed even before Confederation. Indeed it was sought to make one of the obligations of the union of the provinces the construction of this very work. Neither then, however, nor at any subsequent period has public faith in the commercial value of the scheme taken the shape of adequate investment in the enterprise, in spite of the very liberal bonus granted by the Canadian Parliament. Considered from a trade standpoint, it is difficult to comprehend that any important traffic would be attracted to the route even though nature had provided a channel across the isthmus between the two waters, and when the natural conditions, as well as the commercial tendencies, are both adverse, it seems a hopeless task to attempt the construction of means of transport. Some sympathy is, no doubt, due those who have invested their money in what we have always regarded as a chimerical undertaking, but, after all, their experience is not more bitter than that of thousands of others, who, upon inadequate knowledge of the local circumstances, or under the allurement of the prospect of a relatively high rate of interest, have put their money into projects which failed of completion. Canada stands pledged to pay the Chignecto Marine Transport Company the very large sum of $170,000 annually for 20 years upon the completion of the work, and this without regard to the proportions of traffic handled. Upon the pledge of this subvention a considerable amount of money was raised, more than three million dollars in all, and duly expended upon the enterprise, but before the work was finished the funds were exhausted and the credit of the company has not since been high enough to enable it to obtain further capital. The Government grant was made conditional upon the completion of the work within a stipulated period; that time having elapsed, an extension was granted again, and yet again, at the instance of the company, the last date within which the subsidy can be earned being July 1st next, and as it is quite impossible to comply with the conditions of the grant by that time, the directors have applied to the Government through Sir Charles Tupper for a pledge of leniency in the shape of a promise to ask Parliament next session to revive the grant. The matter will come before the Governor in council in due course, but we cannot help expressing the hope that no action will be taken towards reviving what now appears to be an almost defunct enterprise. It is unfortunate that so much private capital should have been put into the work, when its success becomes dependent more upon public aid than commercial value, yet the contributors cannot hold Parliament responsible for their prospective loss, since every fair consideration has been shown them from the inception of the scheme.—Gazette, Montreal.

SEEKING PROTECTION.

American manufacturers will be interested in particulars of an imposing deputation which a few days ago waited upon the president of our board of trade asking for further protection to British manufacturers against foreign competitors, by the passing of a more stringent merchandise marks act, writes the English correspondent of American Manufacturer. What the deputation required, indeed, was that every foreign manufactured article imported into this country should be marked with the place of origin. This would mean the extension of our present act, to very many altogether new classes of commodities.

The deputation was promoted in Sheffield, but, though representing primarily trades union bodies, it had also the support of manufacturers in certain of the industries of the country, particularly of the English glass manufacturers and some others. The deputation complained that notwithstanding the existing act, many foreign manufactures imported into this country were still afforded an undue assistance by the ignorance of buyers concerning their place of origin. As evidencing the desire for further stringency it was pointed out that no fewer than 9 bills had already been introduced into the House of Commons by various members, all aiming at effecting further protection to English trade.

The deputation was especially anxious that the glass trade should receive protection in the manner suggested from the Belgian and German makers. In illustration of what is going on in some of the metal trades, it was mentioned that tools and cutlery, all unmarked, continue to sell freely in the leading markets of the kingdom, though made in Germany. The cleverness of the foreigners in attempting to evade the provisions of the merchandise marks act, while still nominally complying, was pointed out. Some goods of the cutlery class were, it was stated, being imported into England, which, though bearing a stamp quite invisible to the naked eye, was revealed under the microscope as "Made in Vienna."

These British artizans and manufacturers have not, however, gained much by their move. While boasting that "there was not a man in England who was more anxious for the supremacy of British manufacturers and British commerce than he was," Mr. Mundella has replied in effect that it is impossible to put the mark of origin on all foreign goods, owing to their nature. Further, that all that can be done is a more stringent administration of the present act with a view of preventing obvious defaulters from escaping its penalties. The existing measure, he asserts, has on the whole been a great success. The president of the board of trade also insists that the pushing of legislation too far in the direction proposed would be likely to seriously interfere with our immense export and import trade.

British manufacturers are reminded that there is another point equally important to that upon which they desire further legislation. That is that we should obtain for our exports abroad the same honest treatment which we give to foreign goods imported into this country. Mr. Mundella remarked that "In foreign countries foreign goods were marked with British names and British descriptions, the effect of which was that enormous quantities of such manufactures were sold in the United States and throughout the world—even in our own colonies—under the wrong impression that they were British manufactures."

An international convention with foreign countries is suggested by the president of the board of trade as a means of bringing about reform upon this question. A start with this object has, Mr. Mundella announces, already been made, but for the present the Germans have taken offence.



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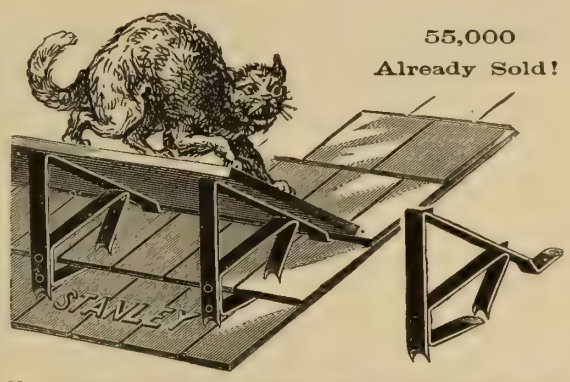
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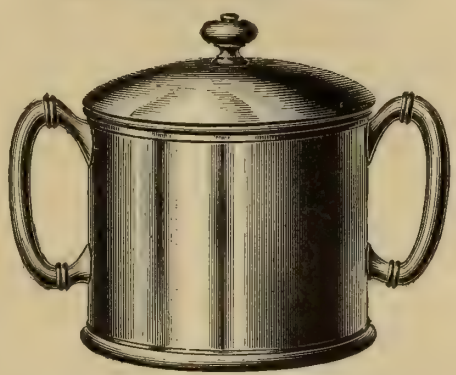
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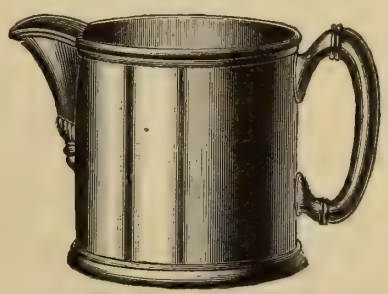
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THE LECEND OF MIMIR.

The late greatly beloved, much lamented, Josh Billings remarked with a sense of humor that was prophetic, that the foreigners pronounced better than they spelled, and he proceeded to read very much French in a highly intelligible English manner. Whenever some foreign duke, or writer, or player upon the banjo, or fiddle, comes from a country where they have more alphabet than is common in the United States, they usually bring with them a great redundancy in the methods of spelling, which is very likely to spread into various parts of English literature. The following beautiful legend was Burdetted by one to whom English literature is much indebted. The reader can probably find a moral by the use of a can opener:

It is a beautiful legend of the Norse land. Amilias was the village blacksmith, and under the spreading chestnut treekjn, his village smithophjken stood. He the hot iron jehammered and sjhoh horses for fifty cents all round please. He made tin hjelmets for the gjodds, and stove pjipe trousers for the hjeroes.

Mimir was a rival blacksmith. He didn't go in very much for defensive armor, but he was lightning on two-edged bjswords, and cut and slash svjcutlassesses. He made chyjeese knives for the gjodds, and he made the great Bjvsstnsenan Arkansaw tooth-pick, that would make a free incision clear into the transverse semi-colon of a cast-iron ichtosaurus and never turn its edge. That was the kind of a Bhjairpin Mimir said he was.

One day, Amilias made an impenetrable suit of armor for a second-class gjodd, and put it on himself to test it, and boastfully inserted a card in the Svenska Norderbjravisk Jkánaheldesplvtdenskgorodovusken, saying that he was wearing a suit of home-made, best chilled Norway Merino underwear, that would nick the unnumbered saw-teeth in the pot metal cutlery of the irodmongery over the way. That Amilias remarked to his friend Bjohm Bjrobinssson, was the kind of a Bjdueckk he was.

When Mimir spelled out the card next morning, he said, "Bjjj!" and went to work with a charcoal furnace, a cold anvil, and the new ismorphic process, and in a little while he came down street with a sjword, that glittered like a dollar store diamond, and met Amilias down by the new opera house. Amilias buttoned on his new Bjarmour and said:

"If you have no hereafter use for your chyjeese knife, strike." Mimir spat on his hands, whirled his skjword above his head and fetched Amilias a swipe that missed everything except the empty air, through which it softly whistled. Amilias smiled and said, "go on," adding that it "seemed to him he felt a general sense of cold iron somewhere in the neighborhood, but he hadn't been hit."

"Shake yourself," said Mimir.

Amilias shook himself, and immediately fell into halves, the most neatly divided man that ever went beside himself.

"That's where the boiler maker was away off in his diagnosis," said Mimir, as he went back to his shop to put up the price of cutlery sixty-five per cent. in all lines, with an unlimited advance on special orders.

Thus we learn that a good action is never thrown away, and that kind words and patient love will overcome harshest natures.—N. Y. Metal.

SHIPBUILDING IN BRITAIN.

The present year is marked by a very considerable falling off in the British shipbuilding industry. The decrease is shown in the following figures, which give the tonnage under construction at the end of the first quarter of a number of recent years:

1881	843,000 tons.
1882	1,264,000 tons.
1884	729,000 tons.
1892	843,000 tons.
1893	621,000 tons.

It is thus evident that the average of vessels under construction at the present time is much less than the usual average for recent years. The tonnage of vessels ordered, but not yet laid down, is also much less than usual, amounting to barely 120,000 tons, as against 300,000, which has been, until recently, about the average amount for this season of the year. "The situation," remarks a contemporary, "is far from promising for British shipbuilders, although it may afford encouragement to the shipowners."

TRADE CHAT

[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Tuesday.]

Invalid chairs propelled by electricity are now made.

More powder was burned in making the Hoosac tunnel than in the war of secession.

The Columbia Roller Mills, Enderby, B.C., have re-started under a new manager, Mr. Appleton.

Ald. Rainville, of Montreal, has returned from Paris. He says storage battery cars are a success in Paris.

Quebec retail clerks are agitating for early closing. They think that ten hours should constitute a day's work.

Artesian wells were known at Thebes as long ago as the time of Timolean, 2,000 years before the beginning of the Christian era.

A Paris inventor believes that he can calm ocean waves around a vessel by spreading over them a thin cotton or silk net, made unsubmergible by being dipped in a certain chemical solution.

The Kootenay Powder Co. are immediately to begin manufacturing explosives at their place on Kootenay Lake, opposite Kaslo. Victorian capital is largely interested in the undertaking.

Mining operations at Fairview in the Okanagan country, B.C., are very hopeful though the land has as yet been but scratched. Seattle capital is behind one leading venture there.

R. Hadden's hardware store in Picton was broken into on Sunday, and a portion of the contents, consisting of four breech-loading guns, taken. The loss will be between $50 and $60.

The Massey-Harris company are making a large addition to their factory at Brantford, and are arranging to commence the erection of a building three storeys high and 300 feet by 60 feet.

An electric towing vessel has recently beeen put into operation on the river Seine, near Paris, with marked success. A magnetized pulley of novel design is used, for which great efficiency is claimed.

Someone has taken out a patent for a pair of scissors, which are supplied with a spring between the blades so that they are kept constantly together when not in use and cut the cleaner when they are.

Maitland, Rixon & Co., mill owners, of Owen Sound, have received a contract to supply H. Ryan & Co., contractors for the Canadian canal at Sault Ste. Marie, Ont., with one million feet of square hemlock timber, to be used in constructing cribwork for the Lake Superior entrance to the canal.

A stream of water from a nozzle with a diameter any place between 6 and 9 inches, with the surface of the source of supply 150 feet high, will furnish power enough to lift a bowlder of 1,000 pounds into the air and hold it there. A stream of this character cannot be cut with an ax, as it is made as impervious as a ball of tempered steel by the enormous pressure resting upon it.

Bronze has been successfully used for telephone and telegraph wires for the last twelve months or so, and in damp districts, such as by the sea coast or where fog prevails, a compound wire, consisting of a steel core with an outside layer of copper is employed. Dr. Elsasser, of Berlin, states that a new kind of telephone wire, having a low electrical existence and of great tensile strength, is being experimented with in Germany. It consists of an aluminum bronze core in a copper-bronze envelope.

A good and permanent bronze can be made by melting together 96 parts copper and 4 parts tin. The following is a good bronzing liquid, which will, perhaps suit your purpose. Sal ammoniac, 1 drachm; oxalic acid, 15 grains; vinegar, one pint; mix. After well cleaning the article to be bronzed, warm it gently and brush it over with the liquid, using only a small quantity at a time; when rubbed dry, repeat the application till the desired tint is obtained.—Ironmonger.

M. Loison de Viviers has invented a foot warmer depending for its action on the slacking of quicklime. The case is divided into two compartments, one containing lime, the other water. The flow of water on the lime is regulated by a valve, adjusted from the inside, so that the degree of heat can be regulated by the quantity of water admitted to the line. The temperature may, it is said be brought up to the boiling point of water and maintained thereat for a considerable period, varying according to the size of foot warmer used.

C. G. Taylor, a stove manufacturer, says that aluminum should not be placed in the hands of an ordinary foundryman, for if used at all it must be used in a scientific manner. Aluminum, if added to cast iron, should be done during the manufacture of pig at the blast furnace. It is generally the opinion that aluminum helps to make sound castings. I found this to be so when small quantities were used. One reason, however, for not using aluminum in the foundry is this: It makes the slag very brittle. This slag is apt to break away and get into the mould. Aluminum iron does not unite well when two surfaces come together in a mould; this is another reason for not using it for certain classes of work. In conclusion I say that aluminum is not a safe thing to use in a foundry.—Tin and Terne.

Gould Bros., of Uxbridge, are reported to be doing a rushing business this spring.

The bloom promises a great fruit season in the United States. And plenty of fruit means a good demand.

Several Victoria, B.C., firms are exerting themselves to engage in the Australian trade, and samples of Australian mutton are coming by the first ship, while samples of various products will be sent back, notably fish, fresh and salted.

A merchant in an Eastern city advertised for a clerk, giving the list of qualifications he desired should be possessed by the employee. Among other requirements, the clerk must be "one who has a taste for reading trade journals with a view to being well informed." That merchant had a lot of good sound brains in his head.

Freight engagements of deals to British ports from Montreal have been made at the low figure of 32s. 6d., which, according to Trade Bulletin, is the lowest rate accepted for a long time, while some state that it is about the lowest on record. Other engagements have been made at 35s., so that the range of freight rates at present is from 32s. 6d. to 35s.

At a meeting of the Toronto City Travellers' Association held Friday night last the committee reported that arrangements had been completed for holding the annual excursion to Niagara Falls and Buffalo on July 19 by the Niagara Navigation Co.'s boats. The meeting was entertained during the evening with songs by Messrs. J. Owen and Ed. Chudley.

The Reid & Currie Iron Works, New Westminster, B.C., have shipped an engine for Hayden & Maxwell's box factory in Vancouver, an engine for the Canadian Pacific Packing Company, of which Mr. Hennessy is the manager, and an engine for Ewen's cannery. The company are also building an engine for Messrs. Munn & Co., an engine for Dutcher's cannery, an engine and boiler for a steamer for Mr. Snodgrass, of Okanagan, and circular saw machinery and match wood drying apparatus and furnace and fittings for the B.C. match factory on Lulu Island.

Save a few tons coming from Devonshire all the tin of Great Britain is from the mines of Cornwall. The ore occurs in veins both in the granite and the overlying slate. No alluvial deposits are worked at the present day. The Cornish mines are probably the oldest worked tin deposits in the world, traces of Phoenician operations there before the Christian era having been clearly established.

The tin obtained from Cornwall is not used in the manufacture of tin-plates, not being as suitable for that purpose as the metal mined in the Straits settlements and Australia.

The trade returns for April continue to evidence the same healthy expansion which has characterized the figures for many months past. The exports for the month amounted to $3,889,662, or an increase of $271,261 over April last year. For the ten months the value of the exports was $93,527,602, an increase of $4,101,809 as compared with the corresponding period of 1892. The imports for April were valued at $9,389,800, or an increase of $1,414,600 over April, 1892. The imports for the ten months were valued at $97,312,740, or an increase of $7,436,594 over the corresponding period last year. The duty collected in ten months was $17,517,102, an increase of $1,457,380 over last year.

According to the census there are 1,588,055 married persons in Canada, of whom 791,902 are females and 796,153 males, so that there are over 4,000 wives missing. The census does not account for them. Nearly every husband in Ontario has a wife in the country, the figures being 353,060 husbands and 352,798 wives. The discrepancy is still smaller in Quebec province, where there are 244,792 husbands and 244,639 wives. In all Canada there are 129,015 widows and 62,777 widowers. In Ontario the number of widows is 60,289, and in Quebec 36,362, or one in about every 40 of Quebec's population, and one in about every 35 of Ontario's. Toronto returned 23,856 married men, and 23,933 married women. In this case there were 77 husbands not accounted for. The number of widows in Toronto is 5,295.

Second clerks and learners are like 20-dollar gold pieces in the States. Ever since the cholera scare last fall, when emigration was suspended, this class of help has been very scarce. Sixty-five dollars was the lowest rate possible for the passage over, and the boys who make the best clerks could not afford it, and those who could and came were a lot of "Berliner Gelernte Kaufman," who modestly demanded 25 dollars monthly "zum anfang," including board, etc. Now that this emigration barrier has been raised, the few that are coming in are headed directly for Chicago. The World's Fair acts like a big sheet of fly paper, or a magnet, and they imagine the gold dollars are flying in the air. Since the winter is over and the roads fair, the walk back won't do them any harm, and they will know better, consolingly remarks an exchange.

BUSINESS CHANCES.

Advertisements inserted under this heading two cent per word each insertion.

SPLENDID HARDWARE BUSINESS FOR Sale, in a good Western Ontario town. Stock about $5,500. An excellent opportunity for anyone. Personal inspection invited. Address O.K. HARDWARE Office. 23

Hamilton and Toronto



—AND—



HEAD OFFICE: HAMILTON, CANADA

¼ the PRICE of Iron. Write for Discounts

READY
MIXED PAINTS

TRADE 

MARK

Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

Manufactured by A. RAMSAY & SON
MONTREAL

THE
Oxford Gas Range

The latest production of the great Schneider Frenkamp Co., of Cleveland, the largest and most successful manufacturers in the world of Gas Stoves and Ranges.

See this Range before Spending your money

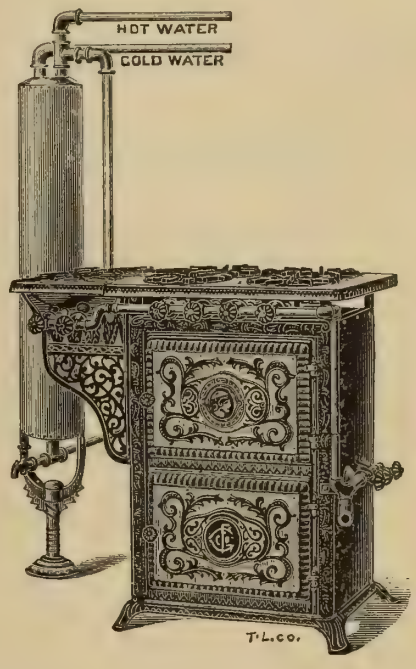
The only perfect Water Heater, will heat water faster than a coal range.

All burners are operated with Steel Needle Valves which produce sharp blue flames. The body is made of heavy Cold Rolled Sheet Steel Asbestis lined. The front and top are beautifully carved, heavy smooth castings with nickel-plated medallions and Tell panels.

Send for Price List and get our record of Water Heaters.

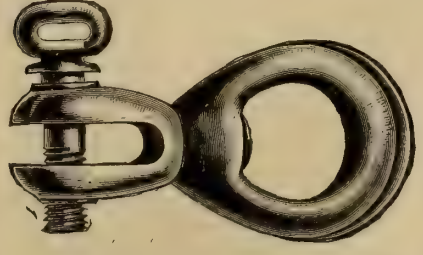
Manufactured by

The Gurney Foundry Co., Ltd., TORONTO



THE WHITMAN & BARNES MFG. CO.

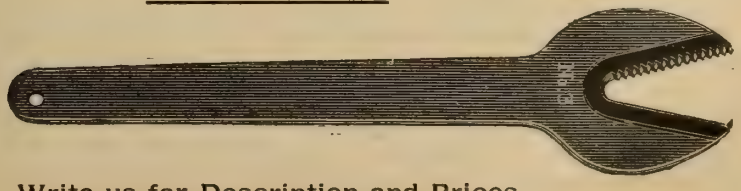
Canadian Branch: St. Catharines, Ont.



This new **Swivel Clevis** can be attached to any Plow Clevis, used in place of Shackle or End Clevis.

MADE OF MALLEABLE IRON.

ALLIGATOR WRENCHES



Write us for Description and Prices

VIEWS AND INTERVIEWS.

"Well, I don't think that anyone can charge the Ontario Turpentine Association with attempting to unduly keep up prices," said a member to me the other day. "The Association is now stronger than at any time since its formation, and all we want is a ten per cent. margin, but I can tell you we are not getting that the way prices are now. The feeling among the members is this: That the Association will be a benefit even if for no other reason than the shortening of the terms of credit, and we all recognise that it would be only working our own downfall were we to try and regulate the market. Yes, the members of our association are keeping to the agreement. I know some say that they are not, but in every instance where a charge has been investigated it has been found to be without foundation. I tell you it is a good deal better to have things the way they are now than like they used to be when they were cutting each other's throats, and demoralizing trade.

* * *

"That was a good article in THE HARDWARE MERCHANT the other day on being courteous to customers," remarked C. B. Kemp, of Brighton. "I have followed the principle there mapped out for some time, and I can tell you it pays. I was so pleased with the article that I read it to my family." In passing I might say that courtesy is one of Mr. Kemp's strongest characteristics, and travellers say he is one of the most affable business men with whom they are brought into contact.

* * *

"There have been three representatives of Sheffield cutlery houses in the city during the last few days," said a jobber to me Wednesday. "They were Mr. Nelson of Lockwood Bros. & Co., Mr. Askham of Askham & Son, and Mr. Mirrel of Thomas Ellin & Co. They report doing fairly well, although they say the orders are not so heavy as last year. You know I think the houses are pretty well stocked with cutlery."

* * *

"There," said a representative of Samuel, Benjamin & Co. as he reached into a glass case and drew out a Columbus skate, "is the cheapest skate on the market. That is, I mean taking the quality into consideration. Look there how simple it works. There are neither parts to lose nor extra parts required and it would adjust to the feet of a Cinderilla. It is its first year on the market and it would startle you were I to tell you the large number we have sold." I understand that there is only one other firm in the Dominion outside Samuel, Benjamin & Co. that handles this particular skate.

* * *

"Yes, I am just down from Collingwood," said a gentleman to me last week. "But there has been nothing extraordinary happening up there that I know of, except it be that George Miller of Gravenhurst, has been visiting his old friends there. Who is he? Well at present he is manager for Homer & Co., of Gravenhurst. I think that's the firm, but at one time he occupied a similar position with a Collingwood firm. That's when he got his popularity with the Collingwood boys, and he has just been down renewing old acquaintanceships. O, he's the boy I can tell you; and he's like the Scotchman who kept the Sabbath and everything else he could lay his hand on, particulary business and his friends, and what is more he still well preserves his avoirdupois—some 300 pounds of solid good nature. Well, ta, ta, call in and see us if you ever come to Collingwood."

* * *

"You said last week that the Paris green trade was about over for the season," said a jobber, "Well, so it is for large lots, but small lots are not much more than beginning to move yet. We are selling a lot in that way, and have still two or three tons in stock."

* * *

"No, I don't think that the Shepard Hardware Co. will be in the market again this year with their lightning freezers," said H. D. Simmons, the Canadian representative, a day or so ago. "Of course I cannot tell for sure, but that is my opinion, but you can depend upon it that they will be on deck again for the season of '94." A jobber who handles the Samson spring hinges, also manufactured by the Shepard Company, says that since the fire it has been utterly impossible to fill orders, while the demand is at the same time large.

BYSTANDER.

A USEFUL FORM OF TELEPHONE

A useful form of telephone, says a contemporary, has been invented whereby one instrument can be used by persons in different parts of a building, so that communications may be received in, and sent from, a room in which no telephone is located. Speaking tubes are placed throughout a building running from a central office. Tradesman adds that a circuit wire is placed in connection with each tube, and in guest room, if a hotel or office, is a telephone receiver, which when not in use hangs from a peg. If this apparatus is used in a hotel and a call comes to the office telephone for a guest, the clerk calls through the speaking tube to the guest's room that his attention is required. The guest has only to take the receiver from the peg in his room and carry on a conversation the same as if he were directly at the telephone, proper connection having been previously made in the office. A guest may also send a telephone call by requesting through the speaking tube to the office, to be connected, and when the connection has been made, carry on a conversation as already described. In large office buildings, as well as in hotels, this invention can be advantageously used, as it entirely obviates the necessity for a separate telephone for every office.

PETROLEUM WELLS IN BURMAH.

In British Burmah it appears that there are now 602 petroleum wells, an increase of 92 since 1888, but there are distinct signs of exhaustion. The fact that the aggregate production of the richer wells has fallen off, while that of the poorer ones has increased, although many new wells have been opened, is regarded as the surest indication of the approaching decline in the industry. The drilled wells worked by the Burmah Oil Company and the Burmah Oil Syndicate have given very satisfactory results. In 1890 the total out-turn amounted to over 3,670,000 viss; but the rate of progress during 1888, 1889 and 1890 has not been maintained during the past two years. The history of the industry shows that the production of the oil field steadily increased from the beginning of the century until about 1873, when it began to decline, rising again in 1885, and coming practically to a standstill in 1891.—N. Y. Bulletin.

FAST ATLANTIC MAIL SERVICE.

The Liverpool Journal of Commerce says that "the superiority of Queenstown as a mail station over that of Southampton is showing itself more clearly every day, and it is now an undisputed fact that nothing can touch the rapid transit of the mail between New York and London via the Irish port. It will be learned with pleasure that the letters entrusted to the Campania, which left New York on Saturday, the 6th, reached London on the morning of the 13th in time to have attention and replies sent by the mail which was embarked at Queenstown on the Etruria on Sunday the 14th It will be thus seen that merchants in New York can post letters in London and receive replies thereto within the extraordinary time of fourteen days, a feat worthy of record, and hitherto unknown. Of course, to accomplish such rapid transit of mail matter the service of the fastest steamships in the world had to be brought into requisition, together with the fast train service to and from Queenstown. With such combination Queenstown stands unrivaled.

THE OAKVILLE BASKET CO.,



Manufacturers of

1, 2, 3 Bushel

Grain

AND

Root

BASKETS

THE OAKVILLE BASKET CO.

OUTWITTING AN EXCISEMAN.

An old woman in Orkney was noted for selling whiskey on the sly. Her house was a few miles from the town, and excise officers had tried in vain to get her convicted, so many attempts had failed that they had given up the task as impossible. A young officer was appointed to the place, who said, on being told about her, that he would soon secure her conviction.

Early one morning he left town and arrived at the old woman's house by seven o'clock. Walking in, he saw no one, but, noticing a bell on the table, he rang it.

The old woman appeared.

He asked for a glass of milk, which was set down before him. After a little he rang again and the old woman appeared. He asked if she had any whiskey.

"Aye, sir," said she, "we aye have some in the bottle," setting it down before him.

He thanked her and laid down a sovereign, which she took and walked out. After helping himself he rang again and asked for his change.

"Change, sir?" said the old woman. "There's nae change. We hae nae license. Fat we gie we gie 'n presents; fat we get we get in presents. So good day, sir!" The exciseman left the house a poorer but a wiser man.

THE PLUMBER AND TINKER.

The country tinker is usually tinsmith, gas-fitter, steam-fitter, and, in a way, plumber, says N. Y. Metal. He usually, from force of circumstances, learns to handle wrought iron pipe, and can, after a fashion, put in a very respectable job of gas fitting. He can run an iron suction pipe from the cistern to kitchen sink without difficulty. Now this same country tinker, by utilizing his knowledge of how to handle wrought iron pipe and by studying into the theory of drainage, may be able to do small plumbing jobs in a thoroughly sanitary and practical manner, although perhaps not up to the city standard in the style of workmanship. Even the most dreaded wiped joint need not trouble him. By a little study and care the number of joints to be wiped may be reduced to a very small number. If care is taken to put in a sufficient amount of solder it is often possible to make a cup joint which will answer the purpose, if properly protected from disturbance and strain. But one thing must receive careful attention, and that is the plan of the work. A by-pass, an improperly located trap, a vent put in the wrong place or brought out near a window, may do infinite harm. On the other hand, very commonplace workmanship, if faithfully executed, in following out a good design, may produce results which are in a practical way safe and serviceable.

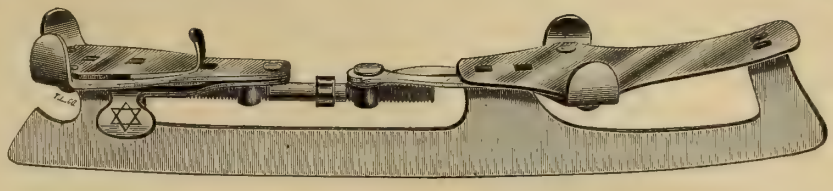
MAGNESIA FIREBRICKS.

Some weeks ago, at a meeting of the French society of civil engineers, a discussion took place on the possibility of obtaining higher temperatures in steel furnaces. At present the temperature is limited by that at which the walls of the furnace begin to fuse, and even Diners firebricks are not proof against this. Magnesia is claimed to be capable of standing far higher temperatures than the Diners brick. It is used, according to a statement made at the meeting referred to by M. Lencauchez, and was first proposed by M. E. Muller in 1869. The principal difficulty in using it is in the excessive shrinkage to which it is liable when heated. Thus, a cube of magnesia of 10 inch edge in the raw state is said to shrink to one of 6-inch edge when sufficiently calcined. For this reason furnace linings made of this material were liable to crack badly. The remedy for this state of things is to cause the magnesia to undergo its maximum possible contraction before being placed in the furnace, but for this an excessively high temperature is required. These difficulties have, it is claimed, now been overcome, and M. Lencauchez showed the Paris Society of Civil Engineers a number of perfectly solid bricks of magnesia, which were as dense as granite, and had been thoroughly shrunk. On analysis the bricks were found to have the following composition:

Silica	1.50 to 2.50
Alumina and iron oxide .	0.75 to 1.25
Lime	1.50 to 3.00
Magnesia	96.25 to 93.25
	100.00 100.00

The high temperature required to ensure that the bricks shall not be liable to further contraction is obtained by suitably designed gas kilns.—Ex.

The Star Skate



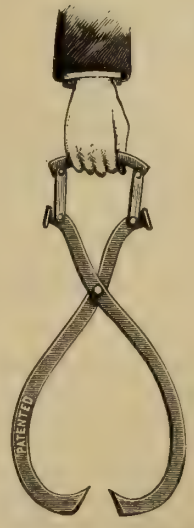
CHEAPEST AND BEST ON THE MARKET.

The Genuine Acme Skate

THE LEADING HIGH CLASS SKATE . .

Before buying others Write your . . Jobber for prices.

The Star Mnfg. Co., Ltd. Sole Makers HALIFAX, N.S.



Neverslip Ice Tongs.

(N. K. Wright's Improved Patent.)

They are the newest, best, handiest Ice Tongs made. Sold in two sizes.

MANUFACTURED BY

DENNIS IRON AND WIRE WORKS

LONDON, ONT.

TRADE SUPPLIED BY

FLETCHER MFG. CO., 440-442 YONGE ST., TORONTO.

BOWMAN, KENNEDY & CO., LONDON.

Write for Circulars and Prices.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, June 2, 1893.

HARDWARE.

Trade in hardware during the week has been fairly satisfactory on the whole, especially in a sorting-up way with city retailers, and in moderate sized orders for near-by points. In this connection quite a nice little volume of business has been passing in nails, wire nails, wire, gardening tools, and farming implements, which is taken as an indication that stocks in some districts have been broken up more and necessitate repeats. Preserving kettles also are showing considerable life, for it is near the season when the housewives commence operations in this respect, and dealers are no doubt preparing for it. Door and wire screens, if anything, furnish more business. In heavy hardware, however, business continues quiet, very few round lots being turned over lately, and it looks as if dullness in this respect was never going to lift. There is not much doing in plumbing supplies. Rope has furnished a fair business, and some travellers who are now in have brought some fair sized orders on fall account. Wire is in good demand, both makers and jobbers reporting a satisfactory trade. Several good sorting orders for cut and wire nails have been filled during the week, one house reporting business involving 300 kegs, which shows that someone is in want of this line. In tinware, ironware, etc., the call has been noticeable also. The position of binder twine is decidedly unsettled owing to the uncertainty regarding the actions of the Trust across the lines. Prices are fully 25 per cent. lower than last year and the call is good, but sellers are disposed to pursue a very conservative course in view of the uncertainty regarding the future course of values.

PIG IRON.

There has been hardly a single transaction in a genuine round lot of Scotch pig during the week, and prices are easy at former quotations, with the strong possibility of concession. The Nova Scotia people are urging business for all they are worth, but the demand they get is the reverse of encouraging. We quote Summerlee and equal brands,$18.25 to $18.50, ex wharf, and this figure might be shaded in the case of a very large lot. Gartsherrie is marked at $18, Eglinton $17.25, and Carnbroe $17.

BAR IRON.

Bar iron is unchanged, and business very small.

TIN PLATES.

Tin plate furnishes no movement of any magnitude on spot, some small lots of cokes selling at $3.20 to $3.30, according to quality.

CANADA PLATES.

Canada plates are the same, with no important business to note, at $2.50 to $2.60.

GALVANIZED IRON.

Galvanized sheets rule quiet on the whole, but some fair-sized lots have sold at 4 3-4c. for No. 28 guage.

TERNE PLATES.

There is absolutely nothing doing in terne plates, which are quoted at $7.25 to $7.50, according tograde.

ZINC SHEET.

Zinc sheet continues easy as noted last week. Further round lots have sold at 5c., and 5 1-4c. is the basis for ordinary business.

COPPER.

Ingot tin rules easy ;copper has sold at 12c., and spelter and lead are quoted at $4.75 and $2.90 respectively.

PAINTS AND OILS.

There has been a little more life in leads and paints during the week, prices ruling steady. We quote government standard, $4.75 to $5 ; No. 1, $4.50 ; No. 2, $4.25 ; No. 3, $4 ; No. 4, $3.75 ; dry white lead, 4 3-4c.; red lead, pure, 4 1-4c; do. No. 1, 4c.; zinc, white, pure, $7 ; No. 1, $6 ; No. 2, $5.

Linseed oil is steady at 60c. for raw and 63c. for boiled in round lots. In seal oil there is nothing special to note this week, holders asking 47c., but buyers are not disposed to operate on this basis.

GLASS.

Glass has furnished rather more business during the week at unchanged prices We quote : First break, $1.35 ; second, $1.45, and putty in bulk $1.85.

CEMENT.

The demand for Portland cement continues good, and some large lots are being placed on local and western account, but sellers claim that the price is too low to be profitable. Good English brands are offered at $1.95 to $2.05, and Belgian, $1.85 to $1.95, ex ship. Some round lots of firebricks have changed hands at figures which also leave hardly any margin to the sellers, and smaller lots are offered at from $13.50 $15 for ordinary Scotch brands, and $17 to $19.50 for good Newcastle brands per 1,000 ex ship.

NAVAL STORES.

There has been a fair movement in naval stores, but business is not by any means brisk. Turpentine is lower in sympathy with the south. The stocks here are not large and the demand fair. We quote : Turpentine, 50 to 51c.; resins, $2.50 to $5, as to brand ; coal tar, $3.75 to $4 ; cotton waste, 5 1-2 for colored and 7c. to 10c. for white ; oakum, 5 1-2 to 7 1-2c., and cotton oakum, 10c. to 12c. Cordage, sisal at 9 3-4c. for 7-16 and upwards, and 15c. for deep sea line. Pure manilla, 12c. for 7-16 and upwards, and 13c. for smaller sizes.

PETROLEUM

A better demand is reported for refined petroleum, and the market is firmer in tone. Canadian crude is quoted at $1.10. We quote Canadian 12c. at shed in Montreal for round lots, 12 1-2c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c. in 10 barrel lots, 19 1-2c. in 5 barrel lots, and 19 1-4c. for single barrels, 2 per cent. off for cash ; American benzine, 23 to 25c. ; Canadian benzine, 10 3-4c. Petrolea ; 12 3-4c. Montreal.

MONTREAL TRADE NOTES.

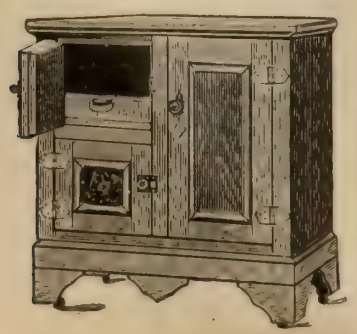
W. S. Kennedy is introducing a lot of new American twines, etc., on this market.

Painchaud, Squire & Co. have been filling a number of orders for cutlery and firearms this week.

Mr. Augers, one of the partners of the firm Forthingham & Workman is taking a holiday.

The Wm. Glendinneng & Son Co. are

Refrigerators



Hardwood, Lined Galvanized Iron, Patent Locks, Four Sizes

These are highly finished and each season has shown an increasing demand. This year we are also making a cheaper line in above style, so as to meet all requirements.

Milk, Delivery and Creamery Can Trimmings.
All Sizes Body Stock for Cans and Cheese Vats.
Galvanized Iron Eave Troughs in 8 foot lengths.
Lithographed Tea Caddies and Signs.

We make and Supply everything used in the Stove and Tinware Trade.

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

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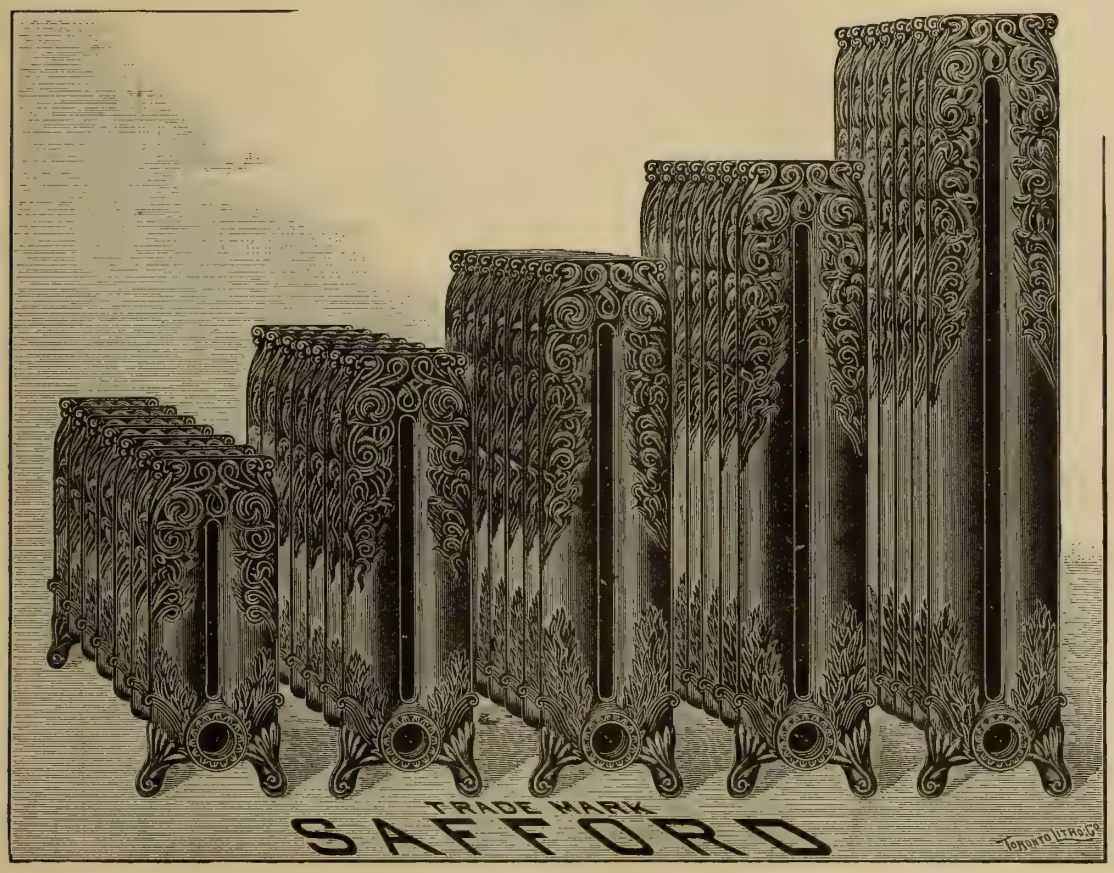
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MADE ONLY BY

THE Toronto Radiator Mfg. Co. LTD.

TORONTO, ONT.

MONTREAL. QUEBEC. ST. JOHN, N.B. WINNIPEG. VICTORIA, B.C.

MONTREAL Markets Continued.

pushing forward their St. Henri works rapidly toward completion,

Pare & Pare, of Granby Que., are extending their telephone lines at that place. The instruments are being supplied by T. W. Ness of this city.

The Wilson & Frost matter, which has been dragging on for over six months, came to a head Tuesday, when the firm made a formal assignment.

Wm. McNally & Co. cleared out a round lot of 4,000 cask government best cement for the canal this week at $2.05, which is considered a low figure.

Several round lots of cement and firebricks have been placed on Western account during the week by Wm. McNally & Co. at extreme inside figures.

Advices from Liverpool this week to importers here state that sumac is equivalent to $10 per ton lower on that market. Shellac also is tending lower.

TORONTO MARKETS.

TORONTO, June 2, 1893.

HARDWARE.

Trade has not developed any particularly new features during the week. The volume of business remains about the same—fairly good. The improved demand for annealed and oiled wire noted last week is becoming still more pronounced. Preserving kettles, horse pokes, rakes, hay-forks, lawn mowers, rubber hose, churns, spades and shovels are all going out freely. Wire door screens and windows and green wire cloth continues scarce. There is a firmer feeling regarding wringers in consequence of the fire at Burlington, and an advance in prices would not cause much surprise. Rope is in fair demand, but there is some uncertainty regarding the tendency of prices. Chain is not in much demand, and tinware is moving fairly well for the season. Payments continue to improve slightly, but they cannot yet be said to be satisfactory.

NAILS—A fair movement in car lots is reported, and some of the makers are behind in filling orders.

WIRE—Demand is becoming brisk for annealed and oiled, and owing to the backward character of the season, business in this line is expected to be unusually heavy this month. It is commencing well at any rate.

ROPE—Demand is good for all sizes, particularly the larger, running from ⅞ to 1¼ inch.

CHAIN—There is not a great deal doing. In cow chain and trace chain there will probably be an advance, and only those jobbers who booked their orders early and bought at old prices will be able to command the trade. Should there be any who have not yet placed their orders they will probably have to pay an advance of 5 to 7½ per cent. more when they do. The cause is that nearly all the small makers in the Old Country have been crowded out.

TOOLS—There is still a fair enquiry for garden and harvest tools, but the demand for carpenters' tools remains light.

WARE—Tinware is going nicely, and demand for brass and peerless enamelled preserving kettles continues brisk.

CUTLERY—All orders are now being placed with the makers for fall trade, but the goods will probably not arrive here for another six week or two months.

PLUMBERS' SUPPLIES—Business in this line continues to pick up.

WIRE SCREENS—American makes of screen doors and windows are still not to be had owing to some of the mills over there having been destroyed. It is not at all improbable that some of the orders will have to go unfilled.

METALS.

There has not been much stir. A fair business has been done during the week. Changes in prices have been few. Antimony is easier and ingot tin and ingot copper show a slight decline.

PIG IRON—The market is quiet and easy. Foundrymen throughout the country are drawing largely upon the United States for their supplies, freights being an inducement for them to do so. The only sales reported are a few carload lots of Ayresome at $20.25. Toronto.

BAR IRON—A good many orders are reported for small lots on the $1.95 basis.

TIN PLATES—Demand is good at unchanged prices.

SHEET IRON—Large lots of this article have been sold at from 2⅝c. up.

CANADA PLATES — Orders are being booked for fall, but for present delivery demand is limited. Prices are unchanged, all dull being quoted at $2.65, half-half at $2.75, and all bright at $2.80 to $3 per box.

GALVANIZED IRON—Trade fair and prices unchanged at 5 to 5¾c. for Queen's Head and Gordon brands.

ZINC SHEET—There is practically no demand. Prices are as before, at 5¾ to 6c. for 5-cwt. casks and 6 to 6¼c. for part casks.

ZINC SPELTER—Inactive and unchanged at 3¾ to 5¾c.

LEAD—Is very dull, with prices unchanged at 3½ to 3¾c for ordinary lots and 3¼c. for ten-ton lots.

FIRE PROOF
ROOFING
ILLUSTRATED CATALOGUE FREE
METALLIC ROOFING Co
MANUFACTURERS, TORONTO

ANTIMONY—Some small lots are going out but the market is weak and lower. We quote Cookson's at 12 to 13c. and ordinary at 11 to 12c., but for large lots these prices would be shaded.

INGOT TIN—Market is weak; 23½ to 24c. is the range quoted, but large lots could be bought at less money.

INGOT COPPER—Market dull. Small lots are quoted at 12½ to 13c. but buyers could do better for large lots.

GLASS.

Stocks are still arriving and demand is good for small lots. Some merchants complain that their import orders have not yet arrived, and are buying in small quantities to keep them going.

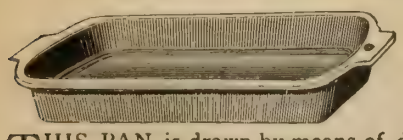
PAINTS AND OILS.

Trade is fairly brisk for small parcels, dealers exercising considerable caution. The feature of the trade is a decline of 5c. a gallon in turpentine, prices now being, freight allowed to delivery stations, 47c. per gallon for 1 to 4 barrels and 46c. for 5 barrels and over. Prices are 2c. less at Toronto, Hamilton, London and Guelph. Turpentine is in fair demand and steady at the decline. Demand keeps fair for linseed oil and prices unchanged at 60 to 62c. for raw and 63 to 65c. for boiled. Canadian manufacturers are still experiencing some difficulty in filling orders. The English market remains much as before. Sorting up orders are coming in freely for prepared paints ; the large orders have been filled. Demand continues good for white lead on the basis of 4¾c. Payments show some improvement and are termed fair.

OLD MATERIAL.

Metals, iron and rags are all offered freely. For iron and rags demand is fair, but metal is not much wanted. Scrap zinc is ¼c. lower, at 2¼c. We quote : Agricultural scrap, 60c. per cwt. ; machinery cast, 65c. per cwt. ; stove cast scrap 40 to 45c.; No. 1 wrought scrap 50 to 60c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 30c.; new light scrap copper, 8c. ; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.: heavy

"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

MARKETS—Continued.

yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1¾ to 2c.; scrap zinc, 2¼c.; scrap rubber, 2½c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings, and turnings, 15 to 20c.

SEEDS.

The seed trade is about over for the season, although there is still a free movement in ensilage corn at from 65 to 70c. per bushel, the same as before. There is also a limited demand for Hungarian grass and millett seed at from $1.20 to $1.25 for the former and 80 to 90c. for the latter.

HIDES, SKINS, TALLOW, WOOL.

HIDES—There has been no quotable change here, but owing to a serious decline in Chicago the local market is weak and lower quotations are expected soon; 5¼c. for good selections is purely nominal, there being no sales to report.

SKINS—Calfskins are also weaker. Jobbers are still paying 9c., but as large quantities are being imported to this country at lower prices, values are on the decline here. Jobbing seems to be at a standstill.

TALLOW—Is a little firmer if anything but without actual change in price. Demand is fair and supplies rendered. Dealers are paying 5½c. for moderate, and they are selling as before at 6 to 6¼c. Rough is quoted at 2c.

WOOL—There has been a little new wool offering, but so far it has been confined to unwashed, for which 10c. has been the market price. It is expected that the market for washed wool will open at about 18c. More or less foreign wools are selling at fair and unchanged prices. The mills are reported to be still busy.

PETROLEUM.

Trade is keeping up fairly well for the season. There is no change in prices, although there seems to have been a slight attempt made to inaugurate an advance in sympathy with the United States market. We quote: Canada refined oil, 13 to 13½c.; carbon safety, 17½ to 18c.; Canada water white, 19c.; American water white, 21 to 22c., photogene, 25c.

MARKET NOTES.

A brisk demand is reported for Mrs. Potts' sad irons.

Daisy churns are reported to be still booming.

The demand for milk can trimmings is about exhausted.

A good business is being done in Paris green in small lots.

Woodyatt & Co., of Guelph, are still behind in filling orders for their lawn mowers.

W. H. Rowley, manager of the E. B. Eddy Co., Hull, Que., paid a flying visit to Toronto this week.

No. 2 gelatine glue, which it is said has not been on this market for some time, is again being introduced by Stewart & Wood.

The white lead, red lead, and orange mineral sold in Montreal the other day from the wrecked steamer Hurona, went at low prices.

The Macfarlane Shade Co. of this city have taken out a permit for an addition to their factory on Liberty street to cost $4,500.

James Robertson & Co. have taken out a permit for repairs to their fire-damaged factory, King street west, Toronto, to cost $14,000.

M. & L. Samuel, Benjamin & Co. have their stock of guns, pistols and ammunition of all kinds complete. The firm has been successful in getting a supply of Eley's job shells, No. 12. It is necessary to order these shells from the manufacturers twelve months beforehand.

A big demand is reported for Samson's spring hinges, but owing to the Shepard fire H. S. Howland, Sons & Co. find it difficult to supply the trade.

Two articles, "Lime and Cement" and "Cut versus Wire Nails," published in last issue, should have been credited to the Canadian Architect and Builder.

The Gurney Foundry Company (Ltd.) have just received an order from the New Westminister School Board for one of their largest double crown water heaters.

H. S. Howland, Sons & Co. report that their stock of Smart & Co.'s new mower of 1893 is now complete in all sizes—12, 14, and 18 inch—and are prepared to fill orders on sight.

An agreement to amalgamate has been entered into between the hardware firms of McKee & Davidson and Fortye & Phelan, of Peterboro, with the intention of carrying on business as wholesale and retail hardware merchants. The premises facing on George and Simcoe streets are to be torn down and suitable buildings erected.

An excellent varnish is being offered the trade by Walter H. Cottingham & Co., of Montreal. It is known as Mander's boat varnish, and is having a large sale. As a varnish for boats and canoes of all descriptions it is highly recommended. As a guarantee of its quality it is only necessary to mention that it is used by the English Admiralty department.

A new gas range is being placed on the market by the Gurney Foundry Co. (Ltd.). It is named the "Oxford." It is made of the best material, and by glancing at the cut in another column it will be seen that it is highly finished. But its strongest point of excellence is the bronze water heater, which will not only not corrode but will heat the water for the bath in much less time than the ordinary boiler, something that will be appreciated by everyone who has had his patience tried waiting for the water to warm for his bath.

A new skate has been placed on the market by the Star Manufacturing Co. of Halifax, makers of the genuine acme skate. It is known as the Star, and is made in sizes from 7½ inch to 13 inch It is made of steel of first-class quality and is adapted to all sizes of boots. There are no clamps or nuts that can loosen and fall out, and as the adjusting screw can be easily worked by hand no wrenches or keys are required. The object of the manufacturers is to produce a skate cheaper than anything of the kind now on the market.

HARDWARE MERCHANT is pleased to know that T. W. Ness, of Montreal, has had representatives in this city since last October installing his Standard telephone and also receiving orders for other lines of electric supplies manufactured and handled by him, His business having grown to such proportions a branch house has been opened up at 106 King street west, Toronto, where the public are cordially invited to call and quote prices before purchasing elsewhere. Nothing succeeds like success. Mr. Ness seems to be "in the swim," and it is hoped since his well directed efforts at Montreal have compelled him to open up here, in order to more satisfactorily supply the demand for his goods, his Toronto branch may share the good fortune of the older house at Montreal.

AMERICAN MARKETS.

NEW YORK, June 2, 1893.

PIG TIN.—From the London market there were advices by cable of a slight turn for the better in prices there during the afternoon. Still the reaction from Tuesday's decline was too feeble and not well enough supported by actual dealings to arouse enthusiasm in the New York market. As a matter of fact, London quotations carried less weight than the heavy arrivals here as a factor governing prices and dealings. The arrivals amunted to no less than 1,255 tons, making a total of 4,948 tons for the entire month. With previous large stocks and about 1,000 tons afloat, due shortly, to say nothing of the irritable disposition on the part of many consumers to whom deliveries are making on old contracts at prices within the range of 20 1-2 to 21 1-2c., this has quite the reverse of favorable influence. The wide margin between prices for June and August deliveries fails as yet to help along sales for June and July delivery, probably for the reason that tin due on old contracts supplies present wants in a great measure. The last London quotations were £85 15s. for prompt delivery, £85 10s. for July and £84 15s. for three months' futures. In the local market there were sales during the forenoon of 25 tons spot at 18 7-8c. and 50 tons June delivery at 18.90.

COPPER.—Slow business, spiritless demand, and stationary prices were the gist of the reports for the day. There was no evidence of more than ordinary anxiety for business on the part of producers' agents or other sellers, but more than enough copper to go around seemed to have been within reach, and buying was easy at the prices that ruled during the early part of the week. For Lake Superior ingot 11c. is still the popular quotations, but small lots could probably have been picked up at a shade less.

PIG LEAD.—No headway was made in the direction of lifting prices higher in this market, although St. Louis furnished a little piece of "bull" material in the shape of an advance in quotations there to $3.65 to to $3.67½c. Stocks are light in this market, and Western advices state that the surplus carried at the primary points is below the average.

SPELTER—Business here was of strictly routine type, and the demand quite as tame as it was at the beginning of the week. From the West there were no advices of any decided change. Latest St. Louis wires quoted 3.92½ to 3.95c., and reported business as moderate. Local market quotations remained at 4.20 to 4¼c., but the lower rate appeared nearest to true market value for round lots. London cables quoted an advance to £17 17s. 6d. for good merchant brands.

ANTIMONY—Demand continues commonplace, and the moderate business passing is at practically former prices. Current quotations are 9.90 to 10c. for Hallett's, 10¼c. for LX and 10½c. for Cookson's, in round lots.

TIN PLATE—Spot sales of moderate quantities of plate were fair, all told, but round lots for either prompt or future delivery are still extremely slow of sale. Prices are a trifle easy, particularly on ordinary cokes for future delivery, but show no radical change thus far.

WARMING AND VENTILATING.

Ventilation is a favorite theme with heating apparatus vendors; their catalogues treat of it profusely. The result is the accumulation of some valuable suggestions and data; likewise of a mass of senseless theorizing and rubbish. The relative merits of the various heating systems, as regards ventilation, are easily summed up.

The stove, by its draft, exhausts some air from the room occupied, and cold air is drawn into the place to replace that taken out.

The fire-place does a similar work on a larger scale. It is a great exhauster of air and, if it has no other source of supply, it becomes a powerful suction pump to draw frigidity in from outdoors.

Steam heat has nothing whatever to do with ventilation; neither has hot water. The vendors say differently, but do not do so truthfully. Hot water pipes have no more to do with changing the air in the parlor than cold water pipes have to do with changing that in the cupboard under the kitchen sink. With a case of diphtheria, scarlet fever, or other malignant or contagious disease in the room, the promised "balmy summer atmosphere" becomes, in a steam or hot water heated house, very foul and very poisonous.

Ventilation is naturally incidental to, but not an indispensable feature of, a a warm-air system of heating.—American Artizan.

THE MISSION OF THE BICYCLE.

The bicycle is a native of France, but it early emigrated to England and America, and it is in these countries that it has developed a mission, says Stoves and Hardware Reporter. Its origin dates back to the closing quarter of the last century. It was taken seriously by the French of that day, but a heavy fall of snow early in its career presented such difficulties that the idea was abandoned and no more was heard of it until nearly forty years later. It then took form in Germany. It was still practically employed, the inventor giving a striking illustration of its utility by its regular use in his duties as master of forests to the Duke of Baden. It immediately found its way to England, where it aroused general interest, and was considerably improved in details. The distinguished chemist, Michael Faraday, is said to have given it his enthusiastic endorsement, and to have been one of the prominent riders of the machine. The sporting gentry took it up, but the fashionable world frowned upon it, and after a few years it degenerated into a toy. From that moment it fell into disuse, and twenty years later William Howitt describes two of these machines among the curiosities laid up in Alnwick Castle, belonging to the English family of Percy.

It was introduced in New York, but the English blight was upon it, and it was popularly known as the "hobby" or "dandy-horse." It at once became the fad of the period. Manufacturers found difficulty in supplying the demand, and machines were kept in the principal cities for hire at twenty-five cents an hour, the young bloods of the period affording a liberal patronage for a few years. Its popularity, like that of all fads, was shortlived, and it was soon to be found only in junk shops or in the collection of curio venders.

In the meantime, the manufacture of invalid and children's carriages propelled by levers and treadles had made considerable progress in France, and in 1865 a patent for a kind of three-wheeled hobby-horse was taken out in Paris. A mechanic in one of these factories conceived the idea of applying treadles to the abandoned velocipede or "dandy-horse," and succeeded in propelling it in the way now become so common. It was exhibited in the Paris exposition of that year by his employer, but it was still considered only a curious toy, and was not thought worth a patent.

In the following year the mechanic came to this country, and while looking for employment, built another of these machines with which he amused himself in riding on the streets of New Haven. It attracted the attention of a shrewd Yankee, and in November, 1866, a patent was issued to Lallemant and Carrol. Two years later another patent was issued for another two-wheeled velocipede, and for a year or two it became the fad of the fashionable. Rinks, halls and riding schools for its use sprang into existence in all the smaller cities, and women, as well as men, in pursuits which entailed confinement during the day, eagerly engaged in the pastime that afforded entertaining exercise. Two years, however, sufficed to wear out this novel fashion, and early in the seventies one of these machines could scarcely be found.

In the meantime, Lallemant had returned to France. He sold his American interest, and evidently thought little of the invention. The idea, however, had taken deeper root in France, where the improved streets and suburban roadways of Paris gave the greatest encouragement to its development. Soon after his return to his native land, Lallemant became a manufacturer of this machine, as well as his former employer and others. The renewed interest in the machine was better sustained, and was almost immediately transferred to England. Here the first recorded description of the two-wheeled, treadle machine was made in 1866, and the less volatile Briton took to it seriously. From that time forward, its manufacture has been an important industry, the English love of outdoor exercise and good roads furnishing the needed incentive to inventive minds and ingenius mechanics in perfecting the crude machine of twenty-five years ago.

American visitors to Europe were surprised to see the practical use to which the queer vehicle was put, and gossipy writers found much of never-failing interest supplied by these machines, which had by this time developed into the form of the "ordinary," now rapidly passing out of use. It was not until 1876, when the brilliant exploits of English champion riders, and the exhibit of a few wheels at the Centennial Exposition attracted public attention, that a new interest was awakened in America. In the following year a few were imported by different individuals who used them as means of restoring health, and in the fall of 1877 a Boston house began the regular importation. Clubs were soon formed, and a publication for the especial advocation of the wheelman's interests was established.

From this point the interest in the bicycle, which was soon adopted as the appropriate name of the developed machine, has grown into the proportions of the present. At first, approving itself as a valuable health help, it has rapidly risen to the dignity of a modern necessity, and bids fair to revolutionize the affairs of nations no less than those of individuals. It is no longer the fad of the fashionable, or the pleasure of the wealthy, but the indispensable compan- of those of limited resources.

Until a few years since, the state of the common roads has restricted its use to the cities, but the practical advantages of the wheel have been so clearly demonstrated that there is a widespread demand that the conditions which exclude it from the country regions shall be removed. For years the farmer and the country merchant have yielded to the inexorable demands of muddy roads with unavailing protests, but a new power has arisen in the land, and the universal demand that the highways shall be made accessible to the bicycle the year round is heard on every hand.

Nor is the mission of the wheel confined to its influence upon material results alone. In England, where its use has found the most general employment, its influence upon the higher planes of social development has been significant. The ease with which an excursion of a score of miles can be made has invited young men and women to get beyond the limits of their immediate environment, and one such excursion is but the precursor of many more, and others more extended. Like the introduction of railroads, the extended use of the wheel has led to a breaking down of provincialism, and to broader conceptions, with all their uplifting tendencies. Its influence in this direction in America has an almost unlimited field for employment, and nowhere else will results be more valuable and far-reaching. The American is essentially sectional in his training and development, a characteristic that has borne dire results. The right employment of the wheel will effect a change, and every lover of his native land may well speed the wheel.

THE BEST IS . . THE CHEAPEST ⊛

Leather Belting, Lace Leather, Etc.

A FULL SUPPLY ALWAYS IN STOCK

H. D. SIMMONS,
85 York St., TORONTO

Agent for J. L. GOODHUE & CO. DANVILLE, QUE.

Wire Ropes

Crucible Cast Steel Ropes, for Hoisting, Inclines, Mining.
Seimans-Martin, for Transmission of Power, Elevators and Hoists, Etc.
Galvanized Ropes, for Derrick Stays, Ship's Rigging, Etc.

Manufactured by Write for Catalogue.

The B. GREENING WIRE CO., Ltd.,
HAMILTON, ONTARIO.



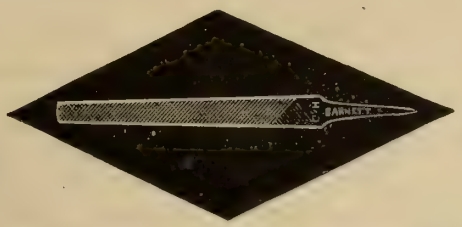
A. B. JARDINE & Co.

HESPLER, ONT.

- Blacksmiths' Tools
- AND
- Tube Expanders

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BLACK DIAMOND FILE WORKS,



21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

—MANUFACTURERS OF—

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES.
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
CLIMAX SAWFILES. LIGHTNING SAWFILES.

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EVERY OTHER DESCRIPTION OF SAW FILES.

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Is what a Hardware Merchant requires in his paper. He gets it when he buys . . .

THE E. B. EDDY CO.'S

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Heavy Manilla -
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PAPER

THE HIGHEST QUALITY. THE LOWEST PRICE.

TORONTO BRANCH : 29 Front St. West.
MONTREAL BRANCH : 318 St. James St.

MAMMOTH WORKS : HULL, CANADA

EVOLUTION OF THE STEAMSHIP.

At a time when exhibitions and anniversaries are in the air on all sides it were perhaps befitting that a little attention should be devoted to a study of the growth and progress of steam navigation, says an American contemporary, that wonderful power the importance of which it is impossible to overestimate, and which, particularly in the matter of ships, has revolutionized the trade of the world and the intercourse of nations and peoples. To whom the honor of introducing marine engineering really belongs is a moot question, perhaps somewhat difficult of settlement, but the curious in such matters may be interested in learning than an attempt to navigate vessels by means of steam engines was made by Earl Stanhope in October, 1792, a little over 100 years since. The American Rumsey was at work on the subject at the same time as the English earl; but so far as America is concerned, the age of steam navigation dates in that country from 1807, when Robert Fulton, assisted by Livingstone, placed the Claremont steamer on the River Hudson to trade between New York and Albany; and, I think, that to the sea-girt England belongs the honor of having ships propelled by means of steam power. As there could hardly be steamships without steam engines, and as the first suggestion of the latter is to be found in the Marquis of Worcester's "Century of Invention," published in 1655, the invention of steamships must have been of a later date. Captain Thomas Savoy, who took up the subject in the following century, refers to one of his steam engines on a ship in 1702, but as he does not say that it was used for propulsion, it was probably only a steam pump. In 1736 one Jonathan Hull obtained a patent for applying steam to ship's propelling, in which a Newcomen engine was put on board and worked a revolving wheel situated in front of the bow, the bars or paddles of which wheel struck the water and caused the vessel to go forward. This vessel was intended for the towing of sailing vessels in and out of harbor. Although no record is left of the success which attended Hull's invention, he is unquestionably the inventor of steamships, and those who came after him speedily adopted and improved upon his ideas. Toward the end of the last century one or two small vessels were tried near Paris; and in America, in 1783, Fitch and Rumsey began to experiment in the same direction, the former five years later floating a paddle-boat, which, however, came to grief by bursting, after a short run at the rate of four miles an hour! In the same year Scotland made a triump in marine engineering, Messrs. Miller and Taylor placing a paddle between two boats, which worked so well that in the following year larger engines were introduced, and a speed attained of nearly seven miles an hour! Earl Stanhope had so far succeeded as to construct a paddle in which the strikers were shaped like ducks' feet, and which were placed under the quarters of a ship, and in 1792 the Navy Board ordered a vessel of 200 tons to be built by Stalkart, under the direction of the earl, but when the vessel was tested in Greenland harbor, his lordship was disappointed. The next development was the construction of the Charlotte Dundas by Lymington in 1803 for the Clyde, but the wash was so great from the paddles that the banks were damaged, and the boat had to be taken off. When on a visit to England Fulton obtained the plans, and taking them back, together with a 20 horse-power Boulton and Watt engine, with him to New York, he constructed the before-mentioned Clermont. In 1811 the Comet was placed on the Clyde, and this marked the beginning of steamship work on the rivers. They speedily increased in number, and in 1815 a steamer ran from Glasgow to London, and a few days later another was travelling between New York and New Orleans. Naturally for long journeys, with few or no ports of call, the question of coal militated against the employment of steamers, the vessels being only of a few hundred tons burthen, and consequently not big enough to carry sufficient coals for a lengthy journey, but in 1819 the Savannah ventured on a voyage from New York to Liverpool, using only a small paddle when the weather was fine; and as it was, she exhausted all her fuel—coal and wood—long before the ocean was crossed. In 1831, however, the Royal William, a Canadian vessel, travelled nearly the full distance under steam. Historians usually tell us that the reign of ocean-going steamers commenced with the Sirius from Cork, and the Great Western from Bristol, in 1838, but this is only so far as the trans-Atlantic is concerned. The East India Company sent the steamer Atalanta from London to Bombay in 1836, and the Berenice three months later to Mauritius and intermediate ports. At the commencement of Queen Victoria's reign—a reign be it marked which stands out as the most wonderful in invention and progress the world has ever known—not much progress had been made with paddles, and the screw was only being slowly evolved, while the Government packet across the Atlantic was a sailing vessel, and an idea of the uncertainties of those days can be formed from the fact that the ship which conveyed the death of King William IV. and the accession of Princess Victoria, which left on June 20, did not reach Nova Scotia till August 10! In the half century since the whole tone and character of steam locomotion, not only at sea but on land also, has been entirely and radically changed; and this can be at once understood by a comparison of the wretched vessels of 50 years since and the graceful greyhounds of the Atlantic of the present day—all of which has grown out of Hull's patent steamship of 1739. The tug of low power took 70 years to develop into a 20 horse-power steamship, and this in its turn took 80 years to grow into vessels of present-day proficiency, by which the trip between America and Liverpool is accomplished in something under a week!

A Board of Trade was organized at Mount Forest Tuesday. Mr. Thomas Martin, miller, was elected president; J. A. Halstead, banker, first vice-president; J. Hampton, merchant, second vice-president; R. O. Kilgour, secretary; A. Jamieson, treasurer. A council and board of arbitration will be elected next meeting.

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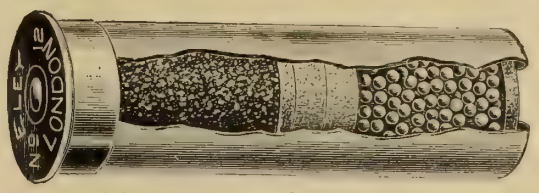
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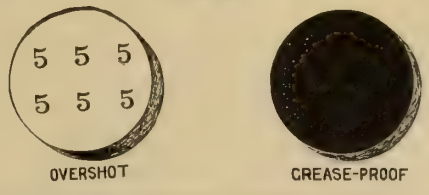
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164 Fenchurch St. London, E.C.

Brass and Enamelled Preserving Kettles,

Granite and Peerless Preserving Kettles,

Brass and Japanned Bird Cages,

Put up in cases assorted.

Coal Oil Stoves, 1, 2, and 3 Burner, Canadian and American Makes.

ON BEGINNING BUSINESS.

In country towns connections have a great deal to do with the success of the storekeeper. For instance, writes a correspondent in Merchants' Review, if a would-be merchant proposed to set up a rivalry against an old established and respectable dealer, the writer would certainly feel inclined to advise him to think well before so doing, but if he replied that his "connection" was sufficient to establish a business, it might overrule the objections. Friends and acquaintances, however, ought not to be to implicitly relied upon. They are, as a rule, more exacting and less easily satisfied than the general public. The writer has known, in his nearly 40 years' experience, many an unfortunate victim to the promises of friends, who has opened with the most glowing prospects and closed with the most disastrous results. Your friends, of course, expect you to give credit, and are surprised that you should be so importune about those "little bills;" they may possibly remind you of certain obligations that you are under to them for past favors. By and by your friends discover that your goods are not a whit better nor cheaper than those of other merchants, and soon find fault with goods purchased of you, comparing them to their disadvantage with articles bought by neighbors at rival stores. It is not long, perhaps, before some of your warmest friends leave you for some other dealer, forgetting, of course to settle their accounts, and when you remonstrate, you lose not only your friend and customer but your maney also. The sold reliance of the beginner in the retail business should be in the integrity of his transactions, the reasonableness of his prices and the civility of his demeanor. He should make it the interest and the pleasure of the consumer to his store. If he pays due attention to these points he will make patrons of his friends and friends of his patrons and establish a connection that will never desert him.

Religious and political connections are easily formed in small towns, where the minds and habits of every man are known to his neighbor, but the merchant should never seek to make the pretense of religion a means of worldly progress. If he does, in all probability the truth will out some day, he will be condemned as a hypocrite, and having built his expectations on so substantial a foundation he and they will come to grief together. In these days of toleration a man may hold any religious opinion if he do so becomingly. The store is the place to practice the principles taught in the place of worship, but it is not the place to traffic under the cloak of religious reputation. The same with politics. A good citizen will discharge his duty to his town and state conscientiously. Let him allow others the freedom of opinion which he claims for himself. There are proper times when we have political duties to perform; but in the place of business let not the storekeeper weigh the opinions of other men, as he would his merchandise, in brass scales. Politics is the business of the state; fair dealing is the business of the storekeeper, and while the writer is the last to say that men should not recognize and discharge political duties, he does assert that they should neither seek nor bestow custom for party purposes.

BINDER TWINE.

It is stated that the Canadian Pacific railway will have nothing to do with the proposed scheme to retail binder twine through the station agents of the company. The Commercial all along refused to believe that the railway company would undertake any such illegitimate enterprise as this binder twine proposal, devised as it was to boom personal interests by aspiring statesmen? If the scheme had really gone into effect, serious injury would have resulted, as the dealers were deciding not to handle twine this season. The consequence would be a blockade of harvesting for lack of twine. Several dealers reported to The Commercial that they would not handle twine if the railway company went into the business.—Commercial, Winnipeg.

IT WAS HER ANNIVERSARY.

Some drummers were diverting themselves in a smoking car by repeating episodes of so-called "cheek." All but one had related an instance; when he was called upon, he drearily said:

"I don't remember anything worth telling; in fact my wife has completely dazed my memory of matters of that kind by a fine sample of her own stock. You see, when I got back from my latest trip I went home at something after 9 o'clock in the evening. Well, there was my house lighted up from top story to basement; carriages were leaving the door, and affairs seemed to be going inside on a grand scale. I let myself into the basement with a latch key and walked into the dining room. Strains of music came from the back part of the hall, and the mingled laughter and conversation indicated a host of guests.

"Presently my wife came into the dining room, dressed like a Princess; she ran up to me saying:

"'Oh, Jack! I'm so glad you've come home early.'

"'So'm I,' said I; 'what's the racket—surprise party?'

"'Surprise party?' said she, with a pout; 'no, indeed, it's the anniversary of my wedding.'

"'Tilda,' said I, 'you're off; you're way off! This is the month of March—it was in summer we were married.'

"She serenely replied; 'I know that very well; this is the anniversary of my first marriage. Go put on your dress suit, dear.—N. Y. Tribune.

HORSE POWER OF BOILERS.

If the boiler is new, or has never been tested, the heating surface is the best guide to a knowledge of what it will be capable of doing. If, says Locomotive, the boiler is designed or properly set, two pounds of water should be evaporated for each square foot of heating surface, so that, on the Centennial committee's basis, fifteen square feet of heating surface should be allowed per horse power of a boiler, the external surface of that portion of the shell which is exposed to the fire should be estimated, and to this, expressed in square feet, should be added the area of the tubes, and of such portions of the heads as are exposed to the direct heat. The sum should then be divided by fifteen, and the result is the nominal horse-power of the boiler. This rule is not absolute, but like all other rules it has exceptions. With the most approved settings, and with well managed fires, the evaporation is greater than that estimated above, and we find that in such cases twelve square feet of heating surface will evaporate the quantity of water required for a horse-power. In some exceptional cases the requisite heating surface is even less than twelve square feet, but we do not use less than twelve square feet unless we have satisfied ourselves, by careful experiment upon similar boilers, similarly set, that we may do so fairly. On the other hand, if the boiler or setting is poorly designed, or the draught more imperfect, or the fires badly handled, more than fifteen square feet may be required. There is no such thing possible as an absolute rule for the horse-power of a boiler, and the rule we have above merely represents what, in our experience, a given boiler, well designed, may be expected to do under ordinary circumstances.

A MAN WHO WILL SUCCEED.

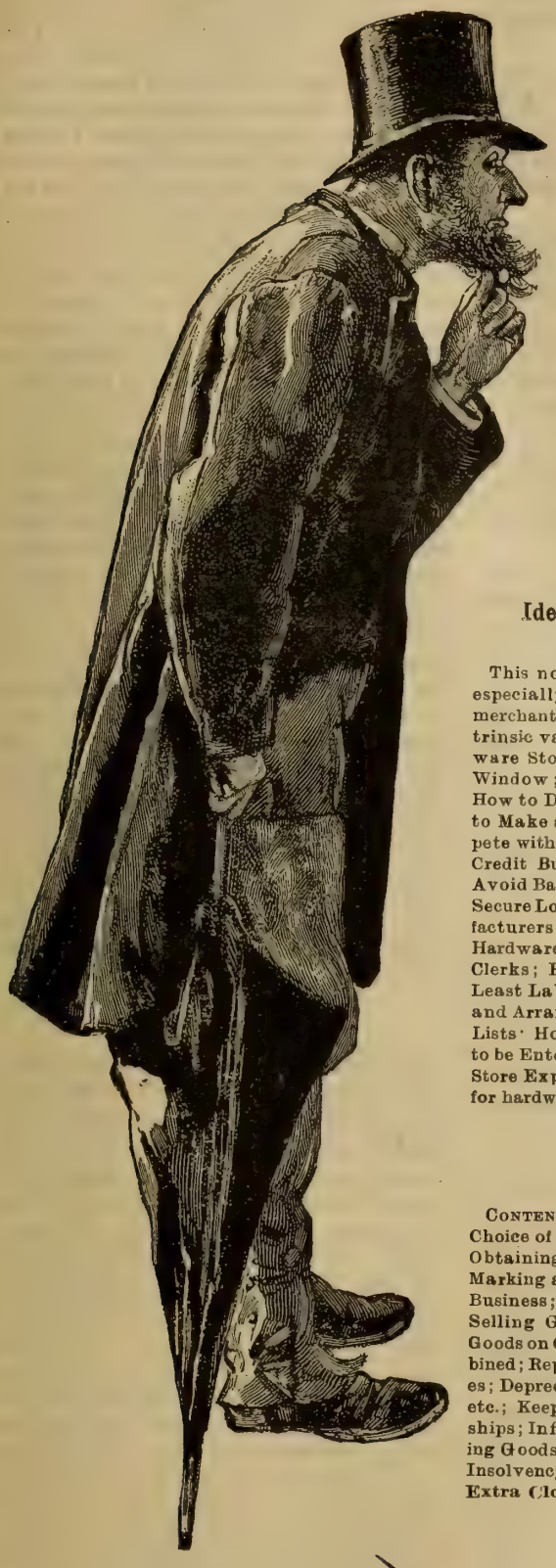
"Now, if you will show me where the burglars got into your store," said the detective, "I will see if I can find some clew."

"In a minute," said the proprietor. "I am working at something a little more important than hunting for a clew just now. Take a seat."

And while the detective waited the merchant wrote as follows at his desk:

The man who broke into Katzenhefter's store on the night of the 15th and carried away a silk hat, a pair of French calfskin boots, a fur-trimmed overcoat, a black broadcloth suit and two suits of silk underwear was a black-hearted villain and scoundrel, but a man whose judgment cannot be called in question. He knew where to go when he wanted the finest clothing the market affords.

"Jacobs," he said to the bookkeeper, "send a copy of this to all the papers in town, and tell 'em I want it printed in big black type to-morrow morning. Now, Mr. Hawkshaw, I am at your service."



It is more honorable to have built a dog-house than to have dreamed of building a palace. . . . . .

BOOKS FOR BUSINESS MEN.

Ideas for Hardware Merchants.

By D. T. MALLET.

This novel book is the only book ever written especially for hardware men, and every hardware merchant will find it of decided help and of intrinsic value. It tells How to Advertise a Hardware Store; How to Dress a Hardware Store Window; How to Select Seasonable Goods and How to Display Them to Best Advantage: How to Make a Success with Hardware; How to Compete with "Department Stores;" How to Turn a Credit Business into a Cash Business; How to Avoid Bad Debts and Increase Trade; How to Secure Low Quotations from Jobbers and Manufacturers; How to Arrange the Fixtures in a Hardware Store; How to Treat and Manage Clerks; How to Keep Your Accounts with the Least Labor; How to Systematize Your Business and Arrange Its Details; How to Arrange Price Lists; How to Meet Close Competitors and How to be Enterprising; How to Properly Proportion Store Expenses, and thousands of practical hints for hardware merchants. **Paper cover, $1.**

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BUSINESS CHANGES.

CHANGES.

N. D. Hover, general merchant, Caistorville, is out of business.

R. M. Purdy, general merchant, Eugenia, Ont., is out of business.

William McCormick, tinware, Port Dalhousie, is out of business.

H. Quenneville, blacksmith and carriage maker, Sudbury, is out of business.

Bond Sherman, general merchant, Odessa, Que., is reported to have left the place.

E. C. Cargill & Co., general merchants, Lansdowne, have sold out to W. B. Patton.

Hardaker & Childs, blacksmiths, Hartney, Man., have sold out to McNiven & Childs.

Archie McGregor, blacksmith, Washington, Ont., has been succeeded by William McDonald.

Henry Robertson, general merchant, Midland, has sold out to J. W. Selby, who takes possession July 1.

J. B. A. Mongenais, general merchant, Rigaud, Que., has sold out to A. Chevier and James Fletcher.

M. Murgatroyd, general merchant, Smithville and Ridgeville, has been succeeded in the latter place by D. J. Stone.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

William Hick, manufacturer of spring mattresses, Montreal, as assigned.

Oswald Chaput, contractor, L'Assomption, Que., has compromised at 50 cents on the dollar.

Louis Crepeau, general merchant, L'Assomption, Que., has compromised at 50 cents on the dollar.

W. F. Klengender, tinsmith, Langton, has been closed out under chattel mortgage, and has left the place.

A. G. Smith & Co., general merchants Collingwood and Byng Inlet, have assigned to E. R. C. Clarkson.

Failures in the coal and wood trade in Toronto have been epidemic of late. First there was the Ontario Coal Co. Following came G. W. Kenny & Co. with liabilities of $7,257 and assets of $5,585. Then A. & R. Fleming, with liabilities of $17,426 and assets of $15,843, succumbed. Now J. R. Bailey & Co. with liabilities of over $70,000 have been compelled to assign. These failures are all more or less connected with that of the Ontario Coal Co. At a meeting of the creditors of the latter company held a few days ago an offer of 50c. on the dollar is said to have been made. There is a rumor going the rounds to the effect that the Lehigh Valley Coal Co. is likely to purchase the assets.

PARTNERSHIPS FORMED AND DISSOLVED.

Trahey & McDonald, shipbuilders, Victoria, B.C., have dissolved.

Allan McKendrice & Son, general merchants, of Campbellton, N.B., have dissolved.

Thornburn, Son (Ltd.), general store and lumber, Broadview, Man., have been incorporated.

Kenneth McKenzie, of the firm of A. T. Graham & Co., founders, New Glasgow, is about to retire.

Wilson & Robertson, general merchant, White Lake, Man., have dissolved. A. M. Robertson continues.

Napoleon Vallee and Joseph Labelle have registered under the firm name of Labelle & Vallee, plumbers, Montreal.

A. & W. Hicks, general merchants, N. B., have dissolved, and F. C. Reid & Co., grocers, Moncton, N. B., have done the same thing.

H. A. Myers, general merchant, Norton, N.B., has admitted O. R. Patriquin as partner. The style of the firm is now Patriquin & Myers.

Robert E. Wood and C. A. Borrowman, Montreal, have been registered under the firm name of Wood & Co., glass stainers, painters, etc.

W. Charles Aggett and Robert J. Cherry have entered into a partnership under the firm name of Aggett & Cherry, to carry on the business of bell hangers, steam fitters, plumbers, etc., at Montreal.

SALES MADE AND PENDING.

Hume & Co., hardware, etc., Galt, are advertising business for sale.

The stock of W. J. Mowat, general merchant, Chatham, has been sold by auction.

The bankrupt stock of Boosey, of Petrolea, has been sold by auction to J. E. Price, of Dutton, at 73 cents on the dollar.

DEATHS.

Joseph F. Wilson, formerly proprietor of Wilson Bros.' foundry, Victoria, B.C., and father of Joseph Wilson, present manager of the Victoria foundry, is dead, aged 77. He was a native of Hull, England. He settled in British Columbia in early days and grew up with it.

FIRES.

C. Goode is advertising his general store at Chatsworth for sale.

Leonide Secatte, general merchant, Baucherville, Que., has been burned out; insured; stock partially saved.

Mathew Fenwick and J. R. Jones, general merchants, and Stephen Jones, hotelkeeper, Apohaqui, N.B., have been burned out.

Anderson & Calvert, agricultural implements, Winnipeg, have been burned out; estimated loss between $3,000 and $4,000, and insurance $4,000.

D. J. Stone's general store, with contents, at Ridgeville, was burned early on Thursday. It is supposed to have been started by an incendiary. Insurance on stock, $2,000; on building, $650. Loss over insurance about $2,000.

The premises of the Burlington Manufacturing Co. were consumed by fire Monday. The fire is supposed to have originated in the engine room. Insured for about $7,000; loss about $25,000. About twenty-five men were thrown out of employment.

HISTORY OF CAST IRON.

Cast iron did not come into commercial use before 1700, when Abraham Darby, an intelligent mechanic who had taken some Dutch workmen to establish a brass foundry in Bristol, England, received the idea that iron might be substituted for brass. This his workmen did not succeed in doing, being probably too much prejudiced in favor of the metal with which they were best acquainted. A Welsh shepherd boy, named John Thomas, had some time previous to that been received by Abraham Darby into his workshop on the recommendation of a distant relative. While looking on during the experiments of the Dutch workmen, he said to Darby that he thought he "saw where they had missed it." He begged to be allowed to try, and he and Darby remained all alone in the workshop all night, struggling with the refractory metal and imperfect molds. The hours passed on and daylight appeared, but neither would leave his task. Just as the morning dawned they succeeded in casting an iron pot complete. The boy entered into an agreement with Darby to serve him and keep the secret. Although enticed by offers of higher wages to leave his master, he continued faithful, and from 1709 to 1828 the family of Thomas were the confidential and valued agents of the descendants of Abraham Darby. For more than 100 years after that night, in which Thomas and his master succeeded in making an iron casting in a mold of fine sand, contained in frames and with air holes, the same process was practiced and kept secret at Coalbrook Dale with plugged keyholes and barred doors.—The Foundry.

VARNISH GUM.

For forty years past kauri gum has been a considerable article of export from New Zealand. The article is valued chiefly for the manufacture of varnish. In 1853, says the Australian Trade Review, the export amounted to 829 tons, valued at £15,971. The value appears to have fluctuated very greatly, as in 1861 the quantity was 856 tons and the value only £9,888, whereas in 1871, 5,054 tons was valued at £167,958, and in 1881, 5,460 tons at £253,778. The largest quantity ever obtained was in 1888, when 8,482 tons were exported, valued at £380,933 In 1891 a lesser quantity was exported, but the price advanced and brought the value to £437,056 for 8,388 tons. For a long while the Maories were the only people engaged in obtaining the gum, but for the past thirty years Europeans have also participated in the industry, there being now about 4,000 Europeans and 1,000 Maories so engaged in the Auckland Provincial District. Kauri gum is found on and near the surface of the ground, in places where, presumably, forests of kauri pine have stood. Diggers probe the ground with "gum spears," instruments made of half-inch iron about four feet long. When they discover gum they dig it out with spades. Kauri gum found on growing kauri pine trees is of inferior quality to that which is found beneath the earth.

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Imperial Razors

Joseph Allen's NON-XLL Cutlery

T. C. Co.'s Shears and Scissors

G. A. Mix & Co.'s Chisels

The Most Complete Lines of all Kinds of Cutlery in the Market.



S.S. SMOKELESS POWDER is the best Made by the Smokeless Powder Co., of London, Eng. A stock kept in Montreal. 25 lb. Drums, 2 lb. Cannisters, ½ lb. Cannisters. Send for Prices. WILLIAM DARLING & CO., Wholesale Hardware Merchants, 30 St. Sulpice Street, Montreal.

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They are finished and put up in neat and attractive shape.
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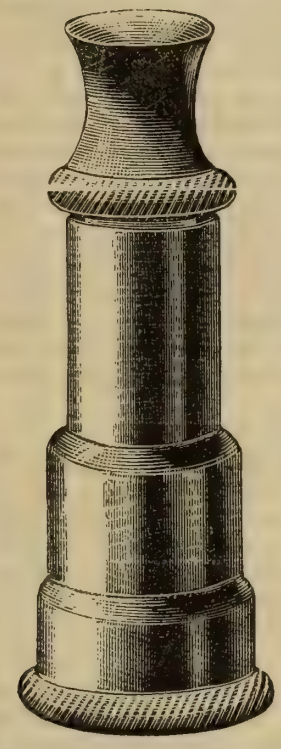
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TORONTO, - CANADA.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it.

It is impossible for this pipe to get out of order

Give it a trial and you will use no other.

Hamilton Brass Manufacturing Co.

HAMILTON, ONT.

BROOKS'



PUMP

Brook's "Reliable" Force Pump

BRASS LINED. The best Spraying Pump in existence. Semi-automatic. Requires no foothold or other fastening. Will work in any position, and in any receptacle that will hold water.

"California" Lawn Sprinklers

For attaching to hose. An inexpensive lawn ornament, throws a splendid spray as per cut.

Lawn Mowers,
Lawn Rollers,
Lawn Rakes,
Garden Hose Reels, Etc.



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Brockville, Ont., Canada

THE WORLD'S GREATEST SMELTER.

The Anaconda copper mines are located at Butte City, but the ore is all brought about thirty-seven miles here to Anaconda to be smelted, and the biggest smelting works in the world are here. I went through them to-day. They wall the sides of the mountain, covering more than eighty acres of space with vast buildings packed full of machinery. Great brick chimneys one-third as high as the Washington monument pierce the sky as they stand on the tops of the mountains above them, and these are connected with the works by flues so that large you could drive a wagon-load of hay through them without touching the walls. This is to give the proper draught. There are vast engines and great boilers, and a wilderness of machinery. The fly-wheels of the engines are as high as a three story house and the power is conducted by cables of steel which run from one elevation to another up the sides of the mountain. I cannot describe the machinery except to say that the ore-producing rock, containing copper, gold and silver, is pounded into a mush with great stamps and then filtered and refiltered, run through process after process, until it comes out in the shape of a metal sand, which is taken to other works and reduced to metal. I remember one room on which this sand ran over hundreds of great tables almost as big around as a small circus tent, and these were washed by a running stream of water in such a way that the refuse went off into pipes, while the copper ore remained on the tables. In other vast rooms covering acres were hundreds of grinding machines which made a noise like a sewing machine, and there were acres of settling vats and of almost every imaginable kind of machinery.

I drove from here to the vast smelting works and walked through vast rooms filled with sulphur, which makes you feel as though a bushel of matches were being burned under your nose, and saw the roasting of this copper in great iron coffee pots five times as big as the largest hogshead you have ever seen and watched the reddish-golden metal pour out in streams and run off in cakes the size of the centre table or in blocks like those in which pig iron is cast. A great many of these processes are secret and electricity is now being used to separate the gold and silver from the copper.

The amount of gold and silver in this Anaconda copper is such that it is believed that it will eventually bear the cost of refining and the copper will be pure profit. It takes about 2,000 men to work this smelter, and the wages paid them are from $2.50 upward per day. Everything is done on the strictest business methods, but Daly's treatment of his men is such that he never has a strike, and they stand up for him through thick and thin.—Frank J. Carpenter, in syndicate letter.

UNIQUE WAY OF UTILIZING POWER.

The waste power of the revolving car axle of the ordinary railway coach has been turned to account by an inventive genius, says Stove and Hardware Reporter. By a series of sprocket wheels and chain belts the axle is made to operate a dynamo employed to give light to the car. The device is arranged so that the requisite light will be produced by a given speed of the axle, and the amount of excess electricity generated at higher rates of speed will be stored so that the lights may be maintained for four hours with the car at rest. A trial trip of cars thus equipped has recently been made on the Central railroad of New Jersey with highly satisfactory results. The machinery is inclosed in an apartment of the size usually devoted to toilet purposes, and after a run of over three thousand miles was pronounced a perfect success.

MAKING A GUN BARREL.

The manufacture of the barrels of the Lee-Metford magazine rifle, with which the British army is supplied, is particularly interesting on acoount of the reliance placed on skilled labor instead of on automatic machinery, as in this country. The material for the barrels is supplied in the form of solid round bars 1⅜ inches in diameter and 15½ inches long. These are tested and then rolled to the required length, after which the proper form is given to the breech by steam hammers. The next step is to drill and turn the bar. The former is done in horizontal machines, the drills operating from each end. The barrel makes nearly 1,000 revolutions a minute against half-round bits, held flat down, and kept cool at the cutting edges by a mixture of soap and oil forced into the hole under the pressure of 80 pounds to the square inch. A drill occasionally wanders from the axial lines through some defect in the steel, in which case the barrel is taken from the machine and reset sufficiently to bring the whole true again. To test its truth a ray of light is made to illuminate the flat bottom of the hole while the barrel revolves slowly. When the drilling is completed rough boring follows, a three-edged bit being used; after which the outside is turned down in an automatic lathe nearly to the final shape. Previous to the rough turning the barrels are fairly straight internally, but the removal of the metal causes slight inequalities, which are tested by the eye of the barrel-setter and corrected by transverse plows. This work is of a particularly skillful character and is performed by young men of good sight, who are trained especially for the purpose. After middle life the eye generally loses its keenness and it is rarely that a man remains a good setter after that age. Many mechanical devices have been contrived to supersede this method, but it is still preferred in Great Britain. The construction of the barrel is completed by the important operation of rifling. In England the system is followed of planing out each groove separately with a hooked cutter, and has been brought almost to perfection. In American factories the grooves are all made at once by means of cutters having several edges; but the English claim that such machines do not make so smooth a cut as theirs.—Tradesman.

ESSENTIALS TO SUCCESS.

In most cases success or failure depends on the man. Sometimes good men fail, not on account of lack of business ability, but from circumstances which they could not foresee nor control. But if failures of this kind were the only ones, the number would be comparatively few. The greater number of failures among merchants is the result of a lack of some one or more of the essential elements on which success depends.

What are some of these essential elements?

(1) To understand one's business; to know When, where and how to buy goods.

(2) To know one's customers; to understand their tastes, peculiarities and characteristics.

(3) Politeness, equability of temper, decision and firmness.

(4) The ability to refuse a request without making an enemy. This is harder to do than most persons think.

A man may be honest, intelligent, have a fair business education, possess sufficient capital, and all that, and yet not be able to win and hold desirable trade simply because he lacks politeness, or has an unpleasant manner; or, if polite enough, he may lack decision and firmness, and so makes too many bad accounts. A brusk and abrupt manner in refusing credit to some customers often loses the merchant the cash trade of these same persons, whereas it might be retained by a polite and diplomatic refusal. One must have tact in business.

There are many persons who, while they have no legal responsibility, are nevertheless honest and worthy of credit to a reasonable amount. Such customers are often better payers than others who own property and from whom an account may be collected by law. It is not a bad plan to give persons of this class a trial, limiting the line of credit to an amount within their respective capacities, and then if they do not pay up according to contract, withhold further credit. In many places the bulk of one's patronage comes from poor people, who have nothing to depend upon but their earnings. Knowing that their credit depends upon maintaining it, they are likely to pay with reasonable promptness. Since a strictly cash system is, in most places, impracticable, one is forced to adopt the credit system, but let it be discriminative and judicious.—J. C. Watkins in Trade.

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,
Agents.
MONTREAL AND TORONTO.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.
Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.
FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,
CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

FIRE!

McCAUSLAND & SON

Beg to inform their customers and friends that they are in a position to fill all orders with promptness and dispatch, notwithstanding the recent fire in their premises. . . .

72 to 76 King St. W.

This Machine cannot be surpassed for smooth work, light running and durability. The drive wheels are 10½ inches in diameter, and warranted to cut grass 6 to 8 inches high. ALL GOODS WARRANTED.

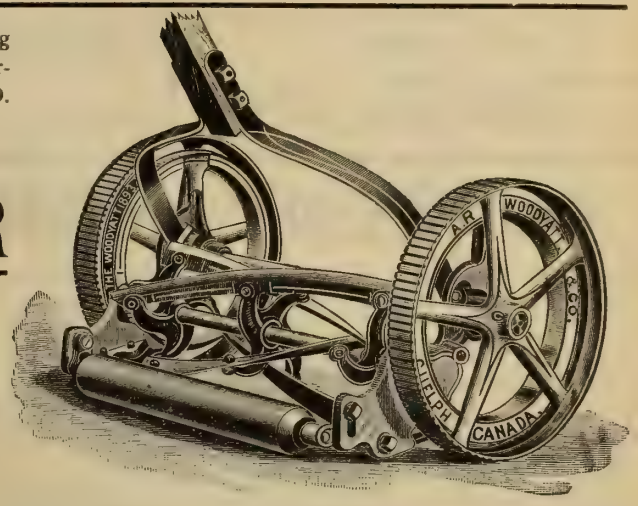
. . **1893** . .

THE "WOODYATT" LAWN MOWER

Light, Durable, and Efficient.

Now On Sale by all Wholesalers.

A. R. WOODYATT & CO. GUELPH, ONT.



Wm. Clendinneng & Son.

Iron Founders and Stove Manufacturers

Makers of the "Etna" Hot Water Boilers, Soil Pipe and Fittings, Stable Fixtures, Machinery, Builders and Special Castings

WRITE FOR ESTIMATES

WORKS: Cor. William and Inspector Sts.,

OFFICE and WAREHOUSE: 145 to 179 William Street

MONTREAL

BUYERS OF CUTLERY

WILL find it to their interest to see our samples before placing Spring orders. A choice assortment in stock of Jas. Rodgers & Co.'s and E. M. Dickinson's goods at special prices.

A. C. LESLIE & CO., MFRS. AGENTS,
MONTREAL and TORONTO

OUR SALES OF
"BURHAM" Portland Cement
For the past 8 months have been
25,499 CASKS.
"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,
McRAE & CO., OTTAWA

MUNN'S LIQUID GLUE
IS THE BEST.
Kennedy Bros., Agents
101 Bay Street, TORONTO.

Clarkson & Cross
ACCOUNTANTS . . .
Established 1864.
26 Wellington St. East, TORONTO

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.
GALVANIZED SHEET IRON. SP



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS.

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	23½ 24
trip "	25, 25½

Tin Plates—*Charcoal Plates, Bright.*

	Per box
M.L.S. equal to Bradley	
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 25 4 50
I.X., "	5 25 5 50
I.X.X., "	6 25 6 50
I.XXX., "	7 25 7 50
D.C., 12½ x 17	3 75 4 00
D.X., "	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

	Per lb.
C okley Grade—	
.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6½ 6¾
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¾ " and thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2⅞, 2¾
26 "	2¾, 3
28 "	3 , 3¼

Canada Plates.

Blaina	½ bright 2 75 ....
Abercarne	2 75 ....
Lion	....

Iron Pipe.

Wrought 62½ and 5 p. c. to 65 p. c.
Galvanized, 37½ to 40 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5¼
26 gauge, "	5¼, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5¼
26 gauge, "	5¼, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4¼ 4⅜
" ⅜ " "	4⅛ 4⅛
" 7-16 " "	4 4¼
" ½ " "	3⅞ 4
" ⅝ " "	3⅝ 3⅞
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 13½ 0 14
Lake Superior	0 13 0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 20 0 22
" 35 to 45 " "	0 19 0 20
" 50 lb and above per lb	0 18 0 19

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 05 0 05½
Domestic "	0 04½ 0 05

Zinc Sheet.

5 cwt casks	0 05½ 0 06
Part casks	0 06 0 06½

Lead.

Imported Pig. per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04½ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¾ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 17 0 19
Standard	0 16 0 18
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 13
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	4 75
No. 1 Do "	4 50
No. 2 Do "	4 25
No. 3 Do "	4 00

Prepared Paints.

(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red " "	1 50
Venetian Red, (best) "	1 80 1 90
English Oxides per cwt	3 25
American " " "	2 25
Canadian " "	1 75
Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure,	
8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 70
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	2 00 2 25
Hard Oil Finish "	1 30

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 45 0 47

Castor Oil.

Best, per lb	0 09 0 09½

Cod Oil.

Cod Oil, per gal.	0 48 0 50

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet makers	0 17 0 18
White	0 16 0 17
London Town	0 7½ 0 08½
Gelatine	0 22 0 27
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, dis. 12½ p.c.; ton lots, on shipment 17½ per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50,50 and 10
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 80
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " ....

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, discount 45 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 to 60 and 10.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 4 40 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers'..... .. 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—Socket, Framing and Firmer

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side..... 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 45 to 47½ p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb . 0 25 0

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross..... 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05
Screw hook and hinge—
6 to 12 in., per set 0 00 0 04½
14 to 20 in., " 0 00 0 03½
21 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

Philadelphia 1892 Improved

7½ inch Wheel. 4 Blades.

12 in.	14 in.	16 in.	18 in.
$4.40	$4.65	$4.90	$5.40 list

LAWN . . MOWERS

. The Woodyatt 1893 .

10½ in. Wheel. 4 Blades.

12 in.	14 in.	16 in.	18 in.
$6.75	$7.00	$7.50	$8.25 list

Liberal Discounts to Trade, and Prompt Shipments Guaranteed.

BOWMAN, KENNEDY & CO., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

anadian, dis. 60 & 10 to 60 & 10 & 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
ronze, Berlin, per doz .. 2 75 3 25
ronze Gem, " 6 00 9 00
ava " 8 75 10 00
hutter, porcelain, F &
L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 30 per cent. to 33⅓ per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy.....	2 30
40dy.....	2 35
30 dy.....	2 40
20, 16 & 12 dy.....	2 45
10 dy.....	2 50
8 & 9 dy.....	2 55
6 & 7 dy.....	2 70

American Pattern Only

from 4 to 5 dy	2 90
3 dy. (lath).....	3 30

3. Canada Pattern Only

from 4 to 5 dy	2 80
3 dy. (lath).....	3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

	per gross
Square, round and octagon	3 38 4 00
Diamond.....	12 00 15 00

Oil.

Canada Refined Oil (Toronto)	14 15
Carbon Safety "	0 17 0 18
Canada W.W. "	0 20 0 22
American W.W. "	.... 0 25
S. R Seal .....per gal	0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Nails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	18	20
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts,	per set	75 80
" N P.	"	1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1¾ 2

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P,, 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen..... 1 25

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Snaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross	7 50	12 00
Dessert " ..... "	21 00	.....
Table " ..... "	30 00	30 00
Dessert Forks.... "	24 00	.....
Medium " .... "	27 00	.....
Table " ... "	36 00	.....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb	0 25	50
Hindostan, per lb.....	0 06	07
" Slips, per lb		9
Labrador, per lb	....	0 13
" Axe, "	....	0 15
Turkey "	....	0 50
Arkansas "	....	1 50
Water-of-Ayr "	....	0 10
Scythe, per gross.....	3 50	5 00
Grind, per ton	15 00	18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet, gimp, blued, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers" dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 65 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 62½ per cent.
Trunk Tacks, dis. 51½ per cent.
Channel nails 5c. lb. off list.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9

Twines.

Bag, per lb	0 12½ 0 20
Wrapp'g, mottl'd, pr. pack.	0 50 0 60
" cotton, per lb ..	0 18 0 20
Mattress, per lb	0 33 0 45
Staging "	0 27 0 35
Broom "	0 30 0 50
Binding, flax, per lb	....
" jute "	....
" Blue ribbon	..... 0 12½
" Red cap.....	..... 0 11½
" Crown.....	..... 0 10½
" Silver Composite	0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz.....	4 00 6 00
Bench, parallel, each	2 00 4 50½
Coach, each.....	6 00 7 00
Peter Wright's, per lb	0 12 0 13
Pipe, each	5 50 9 00
Saw, per doz.....	6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " " } 4½ 4¾
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04¾
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 80 1 90

Wrenches.

Acme, 35 to 37½ per cent.	
Agricultural, 70 to 70 and 5 p.c,.	
Standard, dis. 60, 60 & 10p.c.	
Coe's Gen'ne, dis. 32½ to 35 p. c dis.	
Diamond, dis. 33⅓, 35 p. c.	
Tower's Engineer, each ..	2 00 3 00
" S., per doz.....	5 80 7 00
G. & K.'s Pipe "	.... 6 00
Burrell's " each	.... 3 40
Pocket, per doz.....	1 25 2 00

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TRADE MARK FOR — SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE — HOLLOW WARE.

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INVERT BLOCKS

Canadian, Scotch or American

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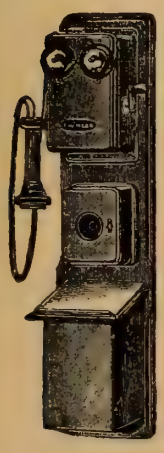
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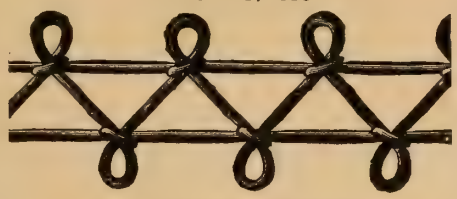
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Manufacturers of every description of these goods.

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Pat. Nov. 19, 1889.



Above Cut Is One-half Actual Size.

The Hatheway Patent Fence Wire, the most popular fence wire throughout the United States, and fast gaining that position in the Dominion of Canada, as it contains all the requisite qualities of a fence wire, being handsome, strong, visible—seen at a long distance; will not sag or get out of shape; allowance for contraction and expansion, heat and cold; being broad, requires less strands to make a complete fence; easily put up, splices itself; will not injure stock. Put up in spools of 120 lbs. each. For sale by all the leading hardware stores in the Dominion.

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NONE GENUINE WITHOUT THIS BRAND



STAMPED IN HEAD OF EVERY PACKAGE



Magee Mfg Co.

LONDON, ONT.

Manufacturers of all kinds of

Lumber and Log Rules
Counter Measures, etc.

IMPROVED

Eclipse Horse Poke
Navey Barrows . .

OF ALL DESCRIPTIONS

Special Lines Made to Order.
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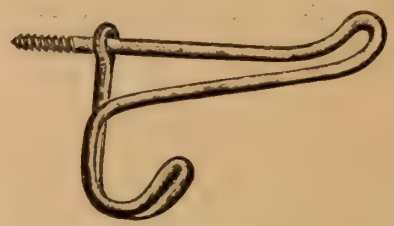
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2 x 4 Barb
Plain Twist and
Strip Fencing

And Staples for same.

Write for Prices and Discounts.



"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

Compare

Any Lamp With the

"PITTSBURGH"

And see the Great Difference.



In every point you will see the vast superiority of the . . . .

"PITTSBURGH"

THE central draft in one is perfect, the other you will find fault with. See the wick-screw in The "Pittsburgh," see if the other has anything like it. Which is the simpler? The "Pittsburgh," of course. A child can take it apart without any trouble.

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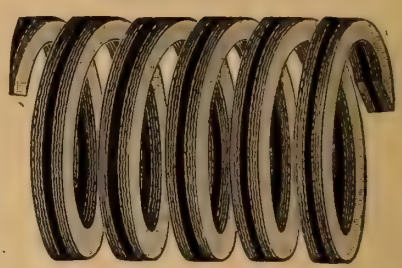
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SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5 8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

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61-63 FRONT STREET W., **Toronto.**

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AND METAL MERCHANT

VOL. V. TORONTO, JUNE 10, 1893. No. 23.

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BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

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ANCHORS = CHAINS

.Rope.

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..OAKUM..

Galvanized Tackle of all Kinds

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TORONTO

HARDWARE

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, JUNE 10, 1893 No. 23

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

HEAD OFFICE: - - 10 Front St. E.
MONTREAL OFFICE: - 146 St. James St. E. Desbarats, Manager.
NEW YORK OFFICE: Room 41, Times Building, Roy V. Somerville, Manager.
EUROPEAN BRANCH: Canadian Government Offices, 17 Victoria St., London, S.W. R. Hargreaves, Manager.

There are failures in the hardware trade as well as in any other mercantile branch. Although comparatively speaking in Canada they are probably not so numerous as in some lines of trade. Last year according to Bradstreet's report the total number in the Dominion was thirty with liabilities aggregating less than $400,000. But while some food for gratification may be gathered from these figures the satisfaction would naturally be all the greater were they smaller. Anything therefore that would tend to minimize the number of failures in the future would be welcomed. In a recent issue of N. Y. Metal there appeared some half dozen letters from practical hardware men on the subject: "Causes of Failure in the Hardware Business and How Avoided," a digest of which might help in the premises, even though it be but small. The first letter is from a hardware man of thirty years' experience and his first premise has a peculiar application to Canada in view of the figures adduced by the return of the failures in this country during 1892. These showed that out of 30 failures 22 were from lack of capital. And the writer referred to remarks: "We are convinced that many failures in business can be rightly attributed to the purchasing of large quantities of hardware on very limited capital." The only remedy he held to be for those who have made this error is "less extravagance in buying." Another cause of failure, he points out, is that of too frequently giving large lines of credit to customers on long time. "When customers find themselves in such sore financial straits as to be obliged to constantly renew their notes besides paying interest and exchange, it is a certainty that disaster will eventually ensue unless they take means to more promptly enforce their collections. Strict attention to collecting accounts due is the only means of settling invoices and notes at maturity." Then he branches off to the subject of the need of good judgment in buying, and points out what is often only too apparent, that a poor buyer will pile up stock on his shelves that is never sold, "and the interest on the goods is constantly eating into the ordinary profits of the business." He might have added in this connection that a close study of the columns of a good trade paper and of the wants of his customers would help him a good deal in acquiring the art of knowing how to buy. "Other remedies," he continues, "to relieve merchants from disasters attending business failures are prompt collection of accounts and the exercise of due caution in opening accounts, rather than having the reputation of selling many lines of goods."

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Another correspondent writing on the same subject designates lack of nerve, which usually developes just before the final collapse, as the cause of failure, but he prescribes no remedy for this particular disease. Nerve, or, as it is more commonly called, courage, is a most desirable possession. There are men well fortified with this who year after year keep up, and often with light hearts, a perpetual warfare against adverse circumstances, while others, with conditions more favorable, retire without scarcely striking a blow. Business ignorance is advanced by another correspondent as a cause of failure, but this is probably not so prolific a cause of failure in the hardware trade as some would imagine. Last year in the United States the percentage of failures in all trades due to inexperience was 5.2, and in Canada 1.6, while taking the hardware trade alone the failures in Canada due to inexperience only numbered two, and a like number was traceable to incompetence.

* * *

Alertness is one of the prices that the hardware merchant has to pay for success in business. Like a yachtsman sailing a race, he needs to trim his canvas to catch every favorable breeze. At one time it is from some whim of the public from which he is to derive benefit, and at another it may be the peculiarities of the seasons that is to bring grist to his mill—or rather a run on a certain line of goods. This spring there has been a large sale of garden tools, lawn mowers, etc., and numbers have failed to reap the full benefit from it owing to the inability of the manufacturers to turn out the goods fast enough. If there is one thing that the retailer is likely to have a demand for shortly it is haying tools. Reports from all parts of the country indicate that the crop will be enormous; and there is now fractionally no possibility of these indications being unrealized. Careful buying has characterized hardware merchants for some time, and it is only proper that it should be continued in the future. But at the same time where freer sail can be given without jeopardizing it should be. One of the ways therefore in which it seems possible that the hardware merchant can with safety put on a little more sail is in the matter of haying tools. To what extent he shall do so depends largely upon circumstances. In the first place he should be careful not to anticipate beyond what his financial resources warrant. It is better any day to make a dollar than to lose five dollars. Then there are the crop conditions in the different districts and the ability of the farmers to purchase to be considered. In anticipating, all these need to be taken into consideration and carefully weighed.

* * *

A blue book of considerable interest, particular to business men, has just been issued by the Dominion Government. "Commer-

cial Relations ; Canada ; No. 1," is its title and it contains reports upon trade and trade openings in Great Britain and other countries to Dec. 31, 1892. The very first subject dealt with is of more than usual interest at the moment. For some time a movement has been on foot with a view to preferential trade relations with Great Britain, and lately a leader has been found for it in the person of Dalton McCarthy. This movement received its impetus some two years ago when Col. Howard Vincent, the leader of the English wing, made a tour of this country and Australia, delivering a series of addresses on the subject, principally before boards of trade. As a result largely of this tour, it will be remembered, the Dominion Parliament again, as in 1882, memorialized the Imperial Government, asking that steps be taken to denounce or terminate the treaties with foreign countries in which there were the most favored nation treatment clauses. This step is necessary before either England or Canada can enter into an agreement giving a preference to the products of the respective countries and from which the favored treaty nations would be excluded.

* * *

The very meaning of the favored nation clause is that articles the produce or manufacture of the country with which the treaty has been made shall not be subject in the British colonies to other or higher duties than those which were or might be imposed upon similar articles of British origin. The blue book just issued shows the number of nations with which such agreements have been entered into by the Imperial Government to be twenty-three. Among them are the German Zollverein, Russia, Persia, Austria-Hungary, Chili, Denmark, Hamburg, Sweden and Norway, Madagascar, Morocco, South Africa Republic, Venezula, Belgium, Uruguay and Columbia. In 1882, when Canada asked to be exempted from the provisions of these treaties, it was pointed out that to carry this into effect would necessitate fresh treaty negotiations, something the Imperial authorities did not seem inclined to undertake. While, whether we view the matter from a preferentialist's standpoint or not, Canada may be placed at a disadvantage by her hands being so tied and without her consent, yet, through these treaties, she is sometimes enabled to reap where she has not sown. An instance of this is pointed out in blue book referred to. In 1892 treaties were made by Germany with Austria-Hungary, Italy and Belgium, and in the reductions in tariff thereby effected Canada shares. It is an ill-wind that does not blow somebody good.

* * *

The less law we have the better. Nearly everybody will probably agree with this. But at the same time there is good reason for believing that the arm of the law is in some respects not far reaching enough. And one of these is in regard to the disposal by a merchant of his stock and good will. As the law now stands there is nothing to prevent a dishonest man from selling his business, say at noon, pocketing the proceeds, boarding a train and being out of the country before many hours have passed, leaving sundry accounts unpaid. How this is taken advantage of by the unscruplous is frequently demonstrated. When a man sells a piece of real estate in the deed transferring the property is a clause which implies that the land is free from encumberances, or if there are any, showing what they are. Now we are not prepared to say that such a procedure would be either advisable or adequate if extended in principle to the disposal of a business, yet at the same time some legal enactments are necessary that will provide the means, as in a real estate deed, for protecting from fraud the interests of all concerned. A simple way, it seems to us, whereby the desideratum might be obtained would be for the law to stipulate that a certain time should elapse between the making of an agreement to sell and the final consummation of the transfer, an advertisement in certain mediums to announce the fact. This period might be fixed at, say, ten days or two weeks from the date of the appearance of the advertisement. This would allow ample time for the creditors to take steps to protect themselves. The question is an important one, and we would like to get the views of our readers upon it. Who will be the first?

* * *

Patron stores, or what is substantially the same, do not seem to meet with success in the State of Kansas any more than in Canada. During a year or more past an organization down there known as the National Union Company has been supplying groceries and dry goods to the farmers of that State. There were six stores in all under the supervision of the company and all six have recently fallen into the hands of receivers. It could not be otherwise. Because a man can turn a straight furrow with a plow it does not follow that he will make a successful merchant or that he is any more qualified to fix the percentage of a storekeeper's profits than he is to determine which to point of the compass a marine should steer in order to escape disaster. A good many have essayed to do these things, but with what result is revealed from time to time by the failure list. As a leavening influence in the politics of the country the Patrons may do good, but when they meddle in business matters they step outside the pale of common sense and the results are evil instead of good.

* * *

Speaking of the patrons of industry reminds us of a little reprimand which the Co-operator, the organ of the organization, recently administered to some of the members. HARDWARE has from time to time charged that the Patrons did not always keep their part of the agreement with the storekeeper, often buying from him only such goods as they could not get as cheap elsewhere. This the Co-operator acknowledges to be true ; and thus plainly does it speak : "As a whole we think there has been a good deal of dissatisfaction with the mode of dealing. If the Trustees, in the name of Patrons of Industry, make bargains with a man to furnish goods at a certain price, on the understanding that the Patrons are to sustain him and patronize him, and he cuts the prices low, then every man who belongs to the order should carry out that arrangement. We believe that the Patrons should carry out their portion of the agreement as well as the merchants. We do not blame any merchant who retires disgusted from the contract he has made with the Patrons, if they will not act honorably with him. We think, as a rule, Patrons try to live up to their contracts, but there are many, alas, who do not. There are some, even in the very Grand Association, who pay little attention to their promises or contracts, we are sorry to say." This is rather a different tune from that which the organ was built to play, and for that reason should have more weight with its subscribers.

* *

The Patrons of Industry one moment shout, "Down with combines," and the next join hands in an effort to grind the profits of the storekeepers down to their idea of fitness. It is evident that consistency is not numbered among their jewels, and as long as such is the case the Patrons will never be a power for good in the land. To organize to improve their own condition is legitimate and praiseworthy, but when they use others as stepping stones their acts come under the category of injustice.

A DISHONEST HARDWARE MAN.

Mack Gray, until a week or ten days ago, was seemingly at least one of Orangeville's prosperous hardware merchants. Last week it came to the knowledge of some of his Toronto creditors that he had quietly sold out his business, and on Tuesday week last W. A. Campbell, assignee, of this city, was despatched to Orangeville in the interest of H. S. Howland, Sons & Co. On reaching Gray's store about 8.30 o'clock that night he found the doors locked and the interior shrouded in darkness, notwithstanding that several persons were inside. Mr. Campbell's next move was to seek legal advice and the assistance of a magistrate, but it was not till after midnight that the legal machinery was got into working order. By that time Gray had flown, having made an exit from the back door of his residence about half an hour before, jumped into a buggy and driven off. A deligent search was made in the surrounding country for him and the telegraph and telephone wires were set to work, but he has so far not been discovered.

Gillespie & Lawson were Gray's successors. The consideration was $8,500, of which $4,700 was payable in land, and for the balance, minus a small cash payment, notes were given. When Gillespie & Lawson learned of the condition of affairs they volunteered, with a friend of Gray's, to make a settlement. "We have never been mixed up in a dishonorable action and don't want to be if we can help it," was the way one of the partners put it. They accordingly paid the Howland claim nearly in full, and they now further offer to settle with the other creditors at 35c. on the dollar.

Gray's liabilities are placed at $10,000. He has been in business some three or four years, and until lately was always prompt in the payment of his accounts. It is not thought that Gray carried away more than $1,000 in cash, Mr. Campbell's advent having hastened his departure before he could accumulate more.

'TIS THE TRADE'S OUTLOOK.

The trade paper is to the merchant what the lookout is to the mariner. While the merchant is actively engaged attending to his business the trade paper is concentrating its energies in the gathering of market data, commercial news, and information to be served up to him at stated periods for his guidance and consideration. This is the office of a trade paper; and the one that is not doing this is not true to its mission.

The merchant who consistently reads a good trade paper is certain to gather at least enough information to reimburse him for the amount of his subscription. Yes, and taking into consideration the low price of subscriptions obtaining to-day, even the poorest of trade papers published are cheap at the price asked for them, for it must be a "rag" indeed that one, two or three dollars' worth of good cannot be gathered during the year. But of course the better the journal the larger the benefit derived from reading it. And the return comes back to the subscriber in a double sense. The first and most important source from which he draws benefit is the market reports. By scrutinizing these carefully he is not only kept well informed as to the trend of the market, but he is in a position to know when an article of merchandise offered him is worth the price asked or not. The second source from which he derives benefit is the articles. These are prepared with the object of suggesting to the merchant ways and means of improving his methods, extending his business and increasing his profits.

FROM LATCH TO LOCK.

Now that the modern methods of making our possessions secure have reached such a state of perfection, it may be interesting to note some of the ancient locks and keys. The oldest substitute for lock and key is the latch and bolt, and the latter have been used from the dawn of the most primitive civilization to the present day. At an early date—perhaps 3,000 years ago—the wooden latch was made more secure by introducing a sort of wooden lever with notches to raise the latch. This lever is regarded as the oldest shape of the key, and is thrust in the lock sideways.

In later times it was made of iron, and still continues to be used in out of the way places all over the world—in Scandinavia, Russia, Germany, in Upper Egypt, in South America, and probably in our own country. The wooden lock held its own through classic and Byzantine times, but the keys were made of iron or bronze. Roman and Byzantine keys were of the simplest shape, but specimens with artistically decorated bows are also found, and the miniature keys Roman ladies used for their jewel caskets were of exquisite workmanship. Locks first made from metal were introduced during the Gothic period, and artistic door mountings in the shape of ornamental door hinges, lock plates, etc., became general. The intricacies of the fan lock were carried to the highest perfection; innumerable notches being put in the bit to guard against wiles of the medieval burglar. The same style of keys continued through Romanic times.

In the renaissance period keys became real jewels of iron. Busts, monograms, coronets, etc., were set in lacework of tracery or enriched with delicate acanthus foliage, which caused the bows of some of those keys to rival the most delicate jewellery. The guillochures of their shafts and the complication of their wards correspond to this elegance. The key of Italian workmanship is a fine specimen of artistic ornamentation in iron inlaid with silver, while others belong to the late renaissance just before it merged into the rococo style. The notches were still as intricate as they used to be in the Gothic period, and actually correspond with the wards or projecting ridges of metal in the interior of the lock, so as to prevent any other key being used in which the notch did not fit the wards.

With the introduction of the box lock toward the middle of the seventeenth century, the no longer visible upper parts of the lock, as well as the notches of the key bit, were more or less neglected, and the latter became merely ornaments, with no wards to correspond. During rococo times the bows became ornamental in style of the period. With the beginning of the present century the locksmith's art gradually declined, and only revived for a short interval about sixty years ago, when ornamental steel keys became a fleeting fashion. After this locks and keys were produced by machinery, with hardly any trace of decoration. Quite recently repeated attempts have been made to introduce ornamental keys for cabinets, caskets, etc., and the designs published for this purpose in various technical journals abroad deserve every attention. They are copied and adapted from the best models of the renaissance and rococo methods.—New York Recorder.

QUEER NAME FOR A TOWN.

A London hardware merchant, visiting South Staffordshire the other day, desired to find a maker of cheap iron cabinet-locks, and was recommended to the village of New Invention, near Willenhall. Somewhat amused with the odd name of the village he enquired and learnt its origin. A century ago, the hamlet had only one house, an old fashioned cottage, which had a very smoky chimney. The occupant, an ingenious mechanic, got a piece of sheet iron and made a very primitive cowl, which cured the chimney of its evil propensity. He was delighted with the result, and the "new invention," as he called it, got widely known in the district. There was no name to the particular spot in which his house stood, and, as other houses were built, the place came to be known by the name—for want of a beter—of New Invention, which is now its official and legal designation.—Ironmonger.

A convention for the reciprocal protection of trade marks and designs has been ratified between Great Britain and the republic of Equador. It is open for any of the British colonies to be included within the convention, if they so choose, and an order in council has been passed asking that Canada may be included as a contracting party.

THE READING RAILROAD CASE.

People are still talking too much about the readjustment plan for the Reading's debt to deposit their securities. But the opposition so far has been nothing more definite than quibbling. Security holders, as a class, without exception, are inclined to consider the plan severe—as it has to be—but they have not suggested any alternative. The general mortgage bondholders are the most outspoken against the plan, but the fact remains that there is a floating debt which must be taken care of, and in case they do not accept the terms offered they must raise the money themselves. That is to say, find ready cash to the amount of about 50 per cent. of their principal; that has got to be done, or the company will lose valuable collateral, and in a very short time their interest would be in deep peril. It is hardly necessary to say that if they should hesitate and the plan prove abortive the market value of their bonds would be a great deal less than it is now. The time offered is too short, however. It will doubtless be extended, because there is certainly a considerable percentage which cannot, on account of absence or other reasons, be deposited in time.

The stockholders' grievance is the surrender of voting rights for the long term of seven years, with $15,000,000 more of debt put ahead of them. They ought to realize, however, that the necessity of tying up the management has been pretty well proven. The road was successfully reorganized, so that in every year since there has been something left over the fixed charges. The stockholders resumed control less than a year ago, and in that short period the company has fallen back into the hands of receivers, burdened with almost $20,000,000 of debt.

The April returns for the Reading railroad and the Coal and Iron Company are the most favorable since the opening of the fiscal year. There was an increase in every item except that of improvements, and though the surplus was only $2,356 greater than last year, it shows that the turn is for the better.—N. Y. Press.

PUDDLING NOT YET OBSOLETE.

It was predicted fully fifteen years ago by men who held leading positions in the iron trade that "the days of puddling were numbered." It was then thought that the further reign of the puddler would be a very brief one, not only masters, but also operatives, believing this, and in consequence extensions of works designed to manufacture finished iron have since been unimportant, while the puddlers themselves refrained from bringing up their sons to the trade, for what would be the good, they argued, of teaching them an occupation which would in a very short time die out, and deprive the younger generation of their means of livelihood? And the more reluctant were the old puddlers to allow their sons to follow in their steps, because at the best of times their trade is most undesirable for any human being. It has been described by one of our local ironmasters as the most barbarous, and certainly it is the most laborious, that any civilized man voluntarily engages in. But formerly the puddler's occupation was one in which regular work and high wages were almost guaranteed, and the "palm of the hand being well oiled the fatigue of the body was taken away. But since the competition of steel set in the trade of the puddler has become every day more precarious, and it cannot be long before the majority of those at present engaged in it have to turn their hands to gaining a livelihood in other industries.

The process of disestablishment has undoubtedly not been so rapid as most people expected it would be when cheap steel began to appear. It certainly was not long after the introduction of the steel rail that it took the place of the iron rail, and the wonder is that any of the latter are made now, for the better material—steel—is supplied to customers at a lower price than this is, or can be, quoted for the iron rail. Thus in the North of England, which in the days of the iron rail was, and in the present days of the steel rail is, the chief district in this country for the production of such material, there are now no iron rail mills, but three large mills are engaged in the making of steel rails. Formerly the district produced 32,000 tons of iron rails per month—that was in 1873, the palmy days of the trade—now the utmost that is reported is 400 or 500 tons, and instead thereof 25,000 tons of steel rails can be manufactured.

On the average a puddling furnace will turn out 30 tons per month, and the almost total abandonment of the iron rail industry would mean the disestablishment of more than 3,000 men, reckoning, of course, four puddlers—two forehands and two underhands for both shifts—to each furnace. So many, however, would not lose their occupation, because the iron plate trade became a more important industry than it ever had been previously, and the steel plate has been much longer in ousting the iron plate than was expected, judging from the rapidity with which the iron rail was superseded. But shipbuilders and shipowners did not so quickly take kindly to the steel plate. They were thoroughly familiar with the iron plate and knew exactly how far they could rely upon it under all circumstances; so they were rather backward about venturing upon the employment of a material of which they had little experience, and in which they hesitated to put their trust. Thus the reluctance of those engaged in shipping to make a move forward gave the trade of the puddler a longer lease of life, and even at one time buoyed him up with the idea that puddled iron might remain the material used for shipbuilding purposes. But, unfortunately for him, this belief is not well founded, for now shipbuilders have acquired confidence in steel, and fully five-sixths of all the vessels built are of that material.

What we most wish to direct attention to, and which tells badly against the use of iron for shipbuilding—and that industry takes the bulk of the plates and angles made—is that the first cost of steel is now nearly as low as that of iron. Formerly a steel plate cost 20s. per ton more than an iron one; then 15s. was the difference, then 10s., and latterly 7s. 6d.; but to-day it is less than 5s., and sellers for a given price have recently offered to supply plates either of steel or iron as the consumer elected to have them. There might with the greatest justification have been some hesitation on the part of the consumer to adopt the steel plate when it was 20s. a ton dearer than the iron plate, but it cannot be left in doubt which will now be the more readily taken.

The steel plate in all respects is the better material, and has now earned the confidence of the consumer, or it would not be so extensively used by shipbuilders; and when, in addition to being the better material, it can be obtained at almost as cheap a rate as the commoner, it augurs badly for the future of the latter, and for the future of the comparatively few puddlers that remain.

The bar trade is what they now will have chiefly to fall back upon. And manufacturers, where they have the appliances, prefer to make the steel rather than the iron plate, for there is a better chance of realizing profits.

It is true that the steel-maker has to use a higher-priced quality of material, hematite pig costing 1s. to 10s. per ton more than the pig which is employed in the iron plate works, but less labor is required in making the steel than the iron plate, and there are other economies that are attainable, so that there is compensation for the extra first cost of pig iron.

The materials, however, for basic steel plates cost little more than those for iron plates, but there is not the saving in the cost of labor that there is when the plates are made from hematite iron.

No doubt many of the puddlers who have been disestablished at the ironworks have found employment at the steelworks which have succeeded them, but all the same the trade which many have followed from their youth up has been snatched from them. Many have emigrated, and others have had to find a living outside the iron and steel trades at occupations where their palms cannot be so well oiled as they were up to the advent of cheap steel.

The fact that steel and iron plates are quoted at almost the same prices is certainly significant. — North-Eastern Daily Gazette.

TIN SMUGGLING.

A scheme for defrauding the U. S Government out of revenue for import tin at Eastport, Me., has been unearthed On the arrival of the schooner N. June 1, Inspector Sunonton boarded the vessel and discovered that there were in the schooner's hold 200 cases of tin plate upon which no duty had been paid and which is valued at over $1,000. The merchandise had been smuggled across the Croix river into Eastport from Beaver Harbor, N. B. The tin is used chiefly by the manufacturers of sardine boxes in Eastport. The duty on tin is exceedingly high. The manufacturers reaped a good harvest in profits by smuggling it. The Treasury officials are of the opinion that this illegal importation of tin has been in operation for some time, and that the Government has been defrauded of thousands of dollars duty.

A DESPERATE TRADES CONTEST.

There is the beginning of a bitter fight in the steam-fitting trade between the large and small concerns. The avowed object of the general combination which was entered into last January is to "squeeze" the public as much as it will stand. The prices fixed, however, by the controlling powers within the combination are so high that they will not afford an adequate amount of business to the minor members of the trade who conforms to them. The trust combination is composed of three elements. The first of these is the American Radiator Company, itself a trust, composed of the Pierce Steam-Heating Company, of Buffalo ; the Standard Radiator Company, of Buffalo ; the Detroit and Michigan Radiator Companies, of Detroit. The second factor is the American Boiler Company, another trust, composed of the Florida Boiler Company, of Geneva, N. Y., formerly owned by Pierce, Butler & Pierce, of Syracuse ; the National Hot Water Heater Company, of Boston ; the Detroit Heating and Lighting Company, the Capitol Boiler Company, of Detroit, and the Richardson-Boynton Company, of New York. The third factor is the National Master Steam and Hot Water Fitters' Association.

Failure to induce the master fitters not in the Association to increase at the bidding of the latter the price of their work was invariably the result of efforts made in that direction until the present year, when the Association began systematically to "squeeze" the small dealers. The combination gave notice that it would do the radiator and boiler business of the country, and do it upon its own terms. Outsiders had their choice of submission and contribution or ruin. The famous Standard Oil Company tactics were adopted, and when a dealer not allied to the combination bid upon a job he learned that the combination had quoted ruinously low figures to prevent his getting work and to starve him into capitulation. This has been going on for months, and it has become so intollerable that the steamfitters outside of the ring, who are still numerically stronger than those inside, but are not so well organized, are preparing for a desperate fight. Meantime the Radiator Trust is economizing to make up for the profits it has as yet failed to squeeze out of the steamfitters and householders.

The constitution of the Master Steam and Hot Water Fitters of the United States provides for a species of boycot against all manufacturers and dealers who do not maintain a difference in prices in favor of its members, and that "each manufacturer or jobbing house shall quote, bill, sell and collect without rebate, from all consumers, at prices to be established by a conference with the Execntive Committee of the Association." A system of espoinage upon the members of the trade is also provided for. There are still several strong firms outside the heating combination.

ENJOINED TO STUDY COST SHEETS.

The lake shipments of iron ore thus far are very light, under the combined influence of the unusually late opening of navigation, the still unsettled controversy over ore prices and the somewhat uneasy condition of the iron trade. The production of pig iron, however, continues to be large with prices low and no prospect of any advance in them at present in sight. The Mesaba mines of Minnesota have not yet become important shippers, and though a few of them can undoubtedly produce cheaply ore of better average quality than it was at first believed they could, yet the estimates of average cost of mining in that district are already being revised and increased. There are mines in each of the Michigan districts that produce a 61 to 63 per cent. ore at a cost of from $1 to $1.25 per ton exclusive of royalty and with shorter distance to lake shipping ports, so that the superiority of the Mesaba is not so great as many supposed.

The cost of mining is now very low everywhere, and further reductions in the prices of ore must be looked for in reductions in royalties, which are far too high (and should not in any case exceed 25 cents a ton) ; and in railroad charges from the mines to shipping ports, which have long been excessive. If these items were brought down to fair rates the selling price of ore could still be reduced at lake ports and leave a better margin for the mines. The present and prospective financial conditions of the country are such that no high prices for anything can be expected for some time to come, and it is the part of wisdom for producers to study closely their cost sheets with the object of finding their profits in reducing them rather than to look to an advance in the market. In iron ore reductions in royalties and freight rates would be just and are necessary. Can they not be secured by organized effort?—Engineering and Mining Journal.

WINNIPEG GROWING.

J. W. Harris, assessment commissioner for Winnipeg, reports his completion of the assessment rolls for 1893. He says :—The real property assessment for this year amounts to $18,603,910, as against $17,845,450 for last year, showing an increase of three-quarters of a million dollars (758,460) upon real estate. This is due principally to the erection of new buildings and general improvements made throughout the different wards, and is a fair and reliable index of the substantial growth of the city. The buildings alone raise the assessment over half a million dollars, while the slight increase in the assessment of land of about a quarter of a million dollars can be attributed mainly to the extension of the street railway lines, and other improvements of a public nature. Last year our personal property assessment was $2,482,650. The assessment has by act of parliament been done away with, and an assessment known as a "business tax," based principally upon the annual rental value of the premises used for business purposes, substituted therefor. The amounts upon which this business tax is to be paid have, as prescribed by legislative enactment, all been capitalized in such a manner that the rate of taxation struck by the council can be applied to these items in the same manner as to the real estate assessments. A comparison can therefore be made between this and the former personal property assessment for which it was substituted. It amounts to $3,019,440, showing an increase of about half a million dollars, or equivalent to an increase in the revenue of the city from this source about $10,000. There is always a possibility of loss in the collection of taxes from personal property assessments ; and as the new system of a business tax is applied to a great many more persons than was the former personal property assessment, it is reasonable to assume that losses in collection of these taxes, owing to parties leaving the city and from other causes will be correspondingly increased. It is therefore perhaps well to consider the excess from this line of assessment more as a margin of safety than as actual increase in the revenue of the city. After making all reasonable allowance for loss that may occur in getting this new system into working order, I think it is quite safe to assume that the revenue of the city will eventually be largely increased as a result of this change. As to the practical working out of the system, it is yet too early a date in its history for the expression of a positive opinion upon its merits. The exemptions amount to $4,310,000. The population of the city totals 32,037, an increase of nearly three thousand (2,855) over the figures of last year. I would respectfully request that for the accommodation of the ratepayers the rolls as usual be left in my care until after the close of the Court of Revision."—Commercial.

THE PIG TIN TARIFF.

Of the numerous trade disturbances that followed the inactment of the McKinley tariff, depression in pig tin has been among the most conspicuous, and it is doubtful if any piece of legislation has so completely failed to produce the results aimed at. The production of pig tin in America, to promote which a duty of 4 cents per pound is to be levied on July 1st, is a clearly defined failure. Foreign producers, who have hurried supplies to this market in order to avoid the duty, are almost the sole beneficiaries of the proposed tax. The extent to which foreign production has been stimulated is illustrated in the fact that the visible supply for Europe and America at the present time is about 6,000 tons above the average, and that the stock in this country has increased to fully that extent during the past four months. This increase is roughly valued at about $2,500,000, making a somewhat burdensome load. In fact, the weight of supplies is such that importers have been unable to maintain prices, and consumers who bought freely at the time the duty question served as a stimulant to the market have very recently been able to duplicate their purchases at fully two cents per pound less. Not over three months ago Straits tin realized 21 to 21½c. per lb. in this market. Within the past week sales have been made at 2 to 2½c. per lb. less. Present prices are below the average for a number of years; but that fact helps the market to no appreciable extent, and affairs are in anything but enviable shape.—N. Y. Bulletin.

VALUE OF TRADE MARKS.

The value of brands and trade-marks as a guarantee of quality is constantly and steadily increasing in the hardware branches with the depression of trade. In fairly good times, when prices rule high, there is little to choose, as a rule, between branded and unbranded qualities; but competition has been so keen of late that large quantities of unmarked goods sent out to foreign and colonial markets are such utter rubbish that it is often a matter of surprise to the makers how they hold together till they reach their destination. This remark applies more particularly to cheap iron bedsteads, tea-kettles, and miscellaneous castings. Some of the larger firms are now taking to the manufacture of cheap unbranded goods in order to meet the requirements of the times, and, as they possess special machinery, dies, and appliances, they are able to turn out a very fair article for a very little money. Most of the makers of branded iron now produce also unbranded descriptions, to compete with the cheap iron made by the smaller firms. Gunmakers of good repute are producing cheap guns which do not bear their brand or name, and certain edge tool houses, who cannot bring down prices any lower for their standard qualities, are now producing, with the aid of machinery, large quantities of cheap but serviceable tools which do not bear their brand. Foreign and colonial buyers, however, who require good brands, must continue to pay for them.—Ironmonger, London.

THE OVERSTONE POPULAR SAFETY.

The accompanying cut is an illustraton of the "Overstone" popular safety, a light roadster. It is manufactured by Loyd, Read & Co., of Coventry, England, and S. H. Howland, Sons & Co., of Toronto, report that they have received a number of import orders for it this season. The machine weighs 40 pounds, and was designed to place before the public a high-class bicycle of the latest and most approved pattern at a low price. It has an extended wheel base, is made of weldless steel, and fitted with brake and guards. The tire is the Dunlop pneumatic. The testimony of riders on this continent and in England is flattering to the manufacturers.



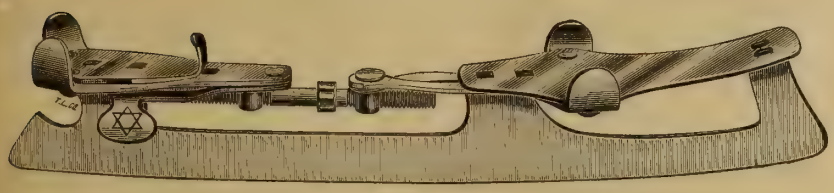
FACTORY DUST AND DISEASES.

The authorities of the commercial hygienic museum of Vienna have recently completed an important series of experiments to determine the action on the human body of the different kinds of dust found in factories and workshops. The investigation, according to a contemporary, shows that the most serious diseases occasioned by the fine particles of matter floating in the atmosphere of industrial establishments have their seat in the respiratory organs. The dust is deposited on the fine mucous membrane of the air passages and forms growths which act as foreign substances and occasion inflammatory conditions of a chronic nature. Dust exerts an injurious influence partly by its fineness and partly by the tenacity with which it attaches itself to the moist mucous membrane. The dust met with in rice and flour mills influences the tissues only by its fineness, while the particles given off in metal and stone working injure by their wounding properties. Most textile fibers cause damage because the dust clings so tenaciously to the organs of respiration. Every foreign body which is inhaled produces irritation, and if the system is unable to get rid of the foreign substance by coughing, a condition of catarrh is soon produced. Some individuals have the power of resisting acute or even chronic catarrh, gradually becoming accustomed to an atmosphere laden with dust, and they work on without injury up to old age. These cases are rare. Dr. Hart shows that of 100 operatives who were ill in consequence of inhaling dust, the greater number suffered from tuberculosis, while chronic bronchial catarrh was a fruitful source of trouble in a large percentage of the cases.

ANOTHER NEW MINERAL.

Australia is proving a fruitful producer of new minerals. Recently the attention of Mr. J. J. East, registrar of the Adelaide School of Mines, was directed to a variety of ore which had been brought from the alluvial tinfields near Greenbushes, Western Australia—stanniferous deposits which have, so far, only proved of a moderately-remunerative character. The mineral sample mentioned was of a kind locally known as "pale tin" and "resin tin," the color varying from "a dirty greenish white to a dark flesh hue." It was as heavy as tinstone, and in some outward respects similar to this mineral, but simple tests showed it to be an ore of antimony, with, however, characteristics differentiating it considerably from commom ores of this metal. Complete analysis, in fact, indicated that the substance was essentially a tantalate of antimony, part of the tantalic

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acid being replaced by niobic acid and part of the oxide of antimony by oxide of bismuth, the exact determination being—Tantalic acid (Ta_2O_5), 51-13 per cent.; niobic acid (Nb_2O_5), 7.56; antimony oxide (Sb_2O_3), 40.23; bismuth oxide (Bi_2O_3), 0.82; nickel oxide (NiO) 0.08; iron oxide, trace; total, 99 82 per cent. The occurrence of tantalates with tin is believed to be common in Finland and Sweden, one of the varieties there found, being cassiterotantalite, which contains iron, manganese, and lime, in addition to tin. Columbite, a niobate of iron and manganese, is, we understand, met with at the Euriowie Tinmines of the Barrier Reef; and it is probable that the new mineral, which, if discovered in quantity, would be valuable as an ore of antimony, may be found in that district. A suitable name for the element has yet to be fixed. Many titles have, it is said, been proposed, but none seem to have given satisfaction. We do not know if "antimontantalite" has been suggested. That is, in our opinion, the most natural appellation.—Iron.

The first lucifer match was made by John Komerer, in a German dungeon in Ludwigsberg.

TO KEEP THE TROLLEY WHEEL IN PLACE.

A device for obviating the danger arising from the liability of the trolley wheel of electric cars to jump the wire at crossings, has just been invented by an employee of the Consolidated Railway of Worcester, Mass., and which is to be used on the crossings of the company in Worcester. At a point a short distance from the railroad tracks, at each end of the crossing, is an iron bracket, supported by guide wires at the side of the street. These brackets support (separated by galvanized rubber insulators) another bracket of composition metal, the ends of which hang down three inches below the ears, which follow the trolley wire and support it. The ears are at the top of the bracket, each end of which supports another wire, three inches apart. Thus over the railroad tracks are three wires containing the electric current—the trolley wires, secondary wires, ears and lower bracket, all being in electrical connection. The trolley wheel runs between two wires and in contact with the main wire. Should it jump the last, it will still receive the current through contact with the others, for the jar is never sufficient to throw the trolley pole down more than three inches. It is an impossibility to stall a car on this account.—Boston Journal of Commerce.

TO SWEEP OUT A STORE.

A correspondent of a contemporary writes: "As a great deal of harm is often done in sweeping out a store by dust soiling, we believe our plan worthy of adoption. Take a shallow pan and partly fill it with kerosene oil. Then dip the broom, which should be nice and soft and light, into the oil, turning the handle to the floor a minute or two, long enough to allow the oil to run into the broom. You may have to dip it three or four times. After sweeping a few times you will have no dust, and your floor will be nice and clean. The smell of oil soon passes off. This is the cleanest way to sweep out a store. In sweeping after business hours, it is a benefit to the stock, as no moths will bother the goods. If you will try it for a week you will always do it."

WIDENING THE PLUMBER'S SCOPE.

Within the past few years a very remarkable change has come over the work the plumber is required to do. It is customary, looking back beyond the era of progress in modern plumbing, to deplore the absence of the good old times when the plumber made all his own lead work except pipe and had to deal only with the most primitive of fixtures and appliances. It is customary to refer to the old time artisan as by far the better craftsman—we have even done this ourselves when comparing his skill in some directions to that of his modern brother—but when we come to contrast the class of work required of the plumber of to-day and his predecessor of a generation ago we must admit that the mechanic of to-day is necessarily by far the most skillful of the two.

Take a well fitted modern bath room, for instance, with its highly polished exposed work and its ofttimes complicated sanitary appliances. The old time plumber would have been simply dazzled by such a show of magnificence, and, however skillful he might have been at the bench, he would never have been able to keep up with his present competitor in fitting up a job. As for the adjustment and connection of the modern fixtures, it would have been Greek to him, and he would have been compelled virtually to learn his trade all over again.

Constant innovations are being made in the plumbing of modern buildings. It is only a few years ago that George Pullman gave the first impetus to the use of screw-jointed wrought iron pipe for soil and waste service, for vent pipes, etc. Now it is used in all the best buildings, and we find many of the leading plumbers adding a complete outfit of pipe cutting and threading machinery to their establishments to obviate the necessity of sending such work out to be done. That the plumbers seem quite strong enough to undertake it themselves is further proved by the recent adoption by the New York master plumbers of a rule by which they are forbidden to undertake any work in a building in which the plumbing has been done by any one not a plumber or by others than union journeymen plumbers.

A visit to to the New York Trade School will further serve to enlighten us as to what is expected of the plumber nowadays. The specimens of work shown demonstrate that not only is the modern craftsman compelled to be as skillful as his predecessors were in the details of his craft, but he has to be so familiar with the applications of these details that his predecessors never dreamed of and would not have understood if they had.

This, in fact, is one of the grounds on which we should seek to modify very greatly the old apprenticeship system. It is no longer possible for the neophyte to "pick up" the requisite knowledge of the appliances used in his trade. He must be taught to understand them on scientific principles in order that he may properly apply them, and for this special instruction is necessary.

We believe in the "survival of the fittest" every time, and in our opinion the young man who prepares himself for the practice of his profession by an intelligent course of study that will enable him readily to grasp and thoroughly understand all the appliances it employs, will distance the competitor who confines his efforts to the mastery of the mechanical technique of the business, leaving the study and comprehension of sanitary devices to the manufacturer and the architect.—The Sanitary Plumber.

CONFIDENCE AMONG BUSINESS MEN.

Mutual and general confidence is the basis of all successful business, and confidence is impossible unless men live up to the principles which they profess, remarks the Chautauquan. Some sneer at the expression, "Commercial Morality," and intimate that it is only a variation of "Honor among Thieves," but that conclusion is obviously wrong. Commercial morality implies that it's exemplar is worthy of trust. The idea business is a sort of legalized theft—a system in which success depends upon slyly getting the best of other people—is far more common than is good for the community; consequently the man who lives up to the principles of commercial morality is gratefully held up for the admiration of his fellows. It would be idle to deny that humanity is almost as absolutely dependent upon the business community as upon the solid earth upon which it lives. No amount of wisdom, forethought or precaution on the part of the average member of the community can avert the general disaster that follows a great betrayal of confidence in business.

All of our financial panics were the results of sufficient causes which were in operation long before the final crash, but when the crisis came it was not through general suspicion, but because some individual or institution, previously supposed to be trustworthy, failed to meet its obligations and was unable to explain honorably its default. The great panic of 1857, which paralyzed the commercial world so long that confidence was barely restored at the outbreak of the civil war, was precipitated by the failure of a single loan and trust company, and not a large one either; no great amount of money had been lost, but a more important factor, confidence, had disappeared. Confidence is worth far more than actual capital in most business transactions. For instance, all the money in the United States, could it be gathered together in a single large city, would not suffice to conduct the business of that city were actual cash the sole medium of purchase and sale.

Credits, notes, drafts and checks constitute the machinery by which exchanges are facilitated, where most business is done, and these are as sensitive to commercial disturbances as the barometer to a change of weather. Not one firm in twenty could do business at a profit on its actual cash capital. It must trust and be trusted, counting on bills receivable to liquidate bills payable, springing as eagerly as a sentry or a spy upon any one who shows the slightest sign of shirking his financial responsibilities.

IMPROVED LUBRICATOR.

A recent English improvement in the construction of sight-feed lubricators prevents the dispersion of the oil by the steam in the event of the sight glass becoming broken, says an exchange. The improvement consists in forming a cone mouth at each end of the sight glass in which an india rubber or other suitable ball is provided, and which forms a valve at each end of the glass. Should the glass become broken and the pressure within released, the balls are forced into the cone, and so automatically close the valves. With a lubricator formed with more than one sight tube, this invention will provide for stopping only a damaged tube while leaving the others entirely unaffected.

HOURS OF LABOR IN JAPAN.

The development of the cotton spinning industry in Japan has progressed with great rapidity during the past three or four years, and the returns of dividends paid by the various companies show that they are all in a highly prosperous condition. There is, however, a sombre side to the picture, and it is found in the condition of the work people employed. The American Board of Missions, as a result of its investigations in the condition of the working population of Japan, says that each day in the week is a working day—there being no Sunday's rest—for men, women and children alike; that it runs from twelve to fifteen hours as a rule, with exceptional instances of seventeen hours, the only breaks being two short intervals for meals. This long daily stretch of work is made still more arduous and injurious to the workers by the badly ventilated and badly lighted factories in which they labor, and cannot fail to act prejudicially upon the quality of their products.

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HARDWARE SHOPPING.

Who ever heard of hardware shopping? And why not? Shopping is the especial function of women, and one in which they take especial delight. Its object is not always to make purchases. Every woman knows the charm of seeing the display of new things, and nearly every man has heard of it from mother, sister or wife. The natural query is, why are not the hardware stores included in this semi-social function? This question was proposed to a lady who has the average passion of her "sex for doing," and shops at more or less regular intervals, and her reply was: "O, that is where the carpenter gets his nails and tools, and the farmer gets his shovels, forks and rakes. I always ask my husband to get me anything that I can't get elsewhere."

Now this is doubtless the idea entertained by the majority of the household buyers of the land. Although so many of them do not do the work of the kitchen themselves, they nevertheless take a keen interest in its equipment. Half the pride of the average housewife is centered in her kitchen, for however accomplished she may be in other departments of life's activity, she knows her prestige, not only with her own family but also with her guests, depends very much upon the attraction of her table. Even among the class who are most removed from household care find it a pleasure as well as an essential condition of success to attend to certain details in the preparation of the table. But the great mass of housewives take a more general interest in what pertains to the kitchen, and are keenly alive to the novelties adapted to this sphere of home life.

Manufacturers of kitchen specialties are very much aware of the interest thus taken in this line of goods, and are constantly improving them in practical as well as artistic qualities, but it may be questioned whether the dealer is equally active in bringing these results to the attention of their customers. One reason assigned to the indifference of women to the attractions of the hardware store is that the articles wear so long that there is no occasion for frequent visits. But that reason is quite as true in respect to furniture and other articles, but they maintain their interest in these lines none the less, and only because their interest is stimulated. It is not because hardware novelties are as durable, but because the real purchasers of such articles do not know of the new ones offered. One may be liable to the charge of particeps criminis in a conspiracy against the family pocketbook to suggest that such articles would not be worn out if the trade took special means to stimulate interest in the new things that are brought out, but it is one that the trade cannot afford to ignore.

A hint may be taken from the practice of the grocery dealers. When they wish to introduce a new brand of coffee, tea or some table delicacy, they secure some novel cooking apparatus, get a lady expert to manage it and serve it free to their callers. It would not be difficult to make up a considerable list of such articles that have been successfully introduced in this way. Why not reverse this operation. Why should not the hardware dealer take up some new article of food, or one in general use, and illustrate the efficiency of some cooking utensil? A rapid ice-cream freezer, coffee maker, refrigerator or stove could be utilized in this way. Make a special opening at the beginning of the season; advertise it, and decorate the store for the occasion. Why let the general stores monopolize such effective measures? Impress the women folk that they are interested in the hardware stock, attract their visits, and build up the shopping custom in respect to the hardware stores as well as others. There are good reasons why it should be done, and none that oppose it.—Stoves and Hardware Reporter.

THE MISSING BOY IN MECHANICAL TRADES.

It is needless to say that the purely American boy is a comparative rarity in many of our mechanical industries, writes Fred. Woodrow in Age of Steel. There are causes for this vacancy, each of which has its place as a factor in what, on the surface, would seem to be mystery. There has been a deal said as to the opposition of trades unions, some of which is true and some of which is not so. Limiting the number of apprentices so as not to overcrowd a trade is really the primal idea of labor action in this matter. This, of course, may be abused, but when separate from arbitrary unreasonableness, is no more an offence than the agreed limitation of production in any specific form of industry. Everybody knows, whether he dares to say so or not, that in these days of acute competition many employers are without conscience in replacing the more costly man labor if they can secure that of an immature and but poorly trained youth at a less cost. This is human nature; it may not be of the best kind, but for all that there is a pretty big crowd of it walking in business pantaloons. In any case, however, it is unjust to say that, as a rule, discriminations are made as to the parentage of the boy, whether native or foreign born. It is, however, perfectly natural that so long as the preponderance of mechanics and artizans in the United States are of direct foreign deviation that a parent should be disposed to teach his boy the trade which maintains the family. It is so in other matters, in railway business, clerkships, etc. Where the relative or friend has influence it is used for family or friendly reasons. A week in Washington or in any other coterie of public service has this fact plainly and broadly written, from the White House down to a post office

There are conditions, however, outside of these that are partly explanatory of the situation. It is not to be denied that in all industries requiring severe labor, discipline and trained skill, the so-called foreign element dominates. The American youth, as a rule, avoids what is seeming drudgery, and is in precisely the same condition that the white Southerner was in previous to the emancipation act. It was not a matter of personal ambition nor indeed of social approval, that the youth of presumably of most brains and better breeding should take a step down the ladder to the severer forms of labor. Consequently the modern youth would rather handle brakes on a passenger train, punch tickets, put travellers to bed, or sell ribbons in a store than lay a brick, plaster a wall, or make a steam boiler. This fact is not to be denied, and there is not a city in the union but in which you will find hundreds of young men who would rather sit on an office stool or accept genteel work at low wages than bruise his fingers in driving bolts or spoil his shirt front in a foundry or machine shop.

It is not the fault of the youth so much as that of his social surroundings. With all our democracy we make a social difference between the boy who moulds castings and his school mate who exchanged his slate pencil for an office quill. We are probably reaching the limits of this widespread folly. The economic broom is sweeping this cobweb out of the house. It is necessary now, if never before, that American youth should find its way into the workshop and the ironworks, the coal mine and the factory. He will do so, and if not previously spoiled, will hold his own with all competitors.

Another important factor in the case is overlooked. This is the loose go-as-you-please training of the modern boy. This is perhaps the most serious phase of the question. Parents are, in too many cases, either foolish in indulgence or positively, though unintentionally, criminal in neglect. It is no use sending a boy to school to learn arithmetic and giving him a free bridle to do as he pleases at home or in the street. It is easy to make a hoodlum, but not reasonable to expect that he will change his skin when he goes to work for his bread. The virtues of self restraint, respect for others, patience, persistence and the necessary qualities to make the kind of a man that will be successful as a skilled mechanic are, it is sad to say, none too common in the average city boy of these child-spoiling times. Hence the complaint of many employers of labor, "We can't get a boy to stick to his business; he wants a change; he will not brook control, and consequently works a time at this or that till he gets tired, and then flies off the handle to something else." Till these things are changed the missing boy in American trades will be a subject of industrial solicitude.

THE AGENT SCORED.

A passible story is told concerning a recent contract of the Karachi Port Trust for the supply of some 3,000 tons of metallurgical products which was placed with a north-country concern. A German firm, hearing probably through the columns of Iron, of the disposal of the commission, despatched to its English agent a letter brimming with what it conceived to be righteous indignation at the neglect of its representative in not having informed it that the contract was on the market. But very soon came back the soft answer which turneth away wrath in the shape of a copy of the Karachi specifications, which stipulated, with what must have been galling monotony to the Teutons, that all the material was to be of British manufacture! The naturally piqued agent thus effectively turned the tables on his employers, who now think that the South German Railway authorities, with whose orders foreign manufacturers are sometimes favored, should insert analogous protective clauses in their specifications.—Iron.

PLASTER OF PARIS FLOORS.

The French, says a contemporary, who have carried the art of hardening plaster to where it is utilized for flooring, either in place of wood or tile, use six parts of good quality of plaster intimately mixed with one part of freshly slacked white lime finely sifted. The mixture is laid down as quickly as possible, care being taken that the trowel is not used on it for too long a time. The floor should then be allowed to become very dry and afterward be thoroughly saturated with sulphate of iron or zinc, the iron giving the strongest surface, the resistance to breaking being twenty times the strength of ordinary plaster. With sulphate of zinc the floor remains white, but when iron is used it becomes the color of rusted iron; but if linseed oil, boiled with litharge, be applied to the surface, it becomes of a beautiful mahogany color Especially is this the case if a coat of copal varnish is applied.



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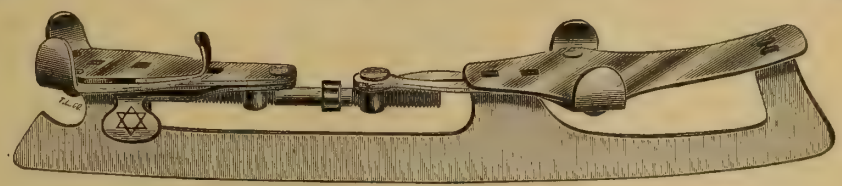
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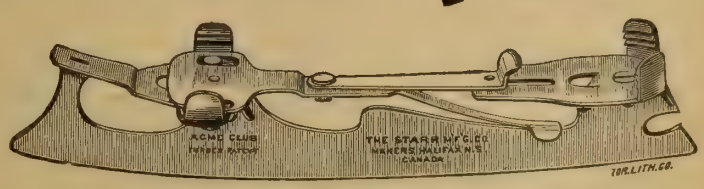


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The Starr Mnfg. Co., Ltd. Sole Makers HALIFAX, N.S.

TRADE CHAT

[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Tuesday.]

Until they can be propelled by a bicycle, lawn mowers will never be popular with the boys.

About 40 pounds of scrap lead and 240 small brass tubes were stolen from Fisher & Co.'s premises in Dundas on Friday afternoon.

The Moncton Iron Foundry Co. has sold out to the Record Foundry and Machine Company, and G. F. Atkinson has taken the management of the Montreal branch.

The electric street car service in Montreal has become demoralized, and it is probable that the company will go back to horse cars until it has a power house of its own.

Several large sized birch logs were shipped from Cumberland a few days ago for Germany. The logs are fine specimens, and required for furniture manufacturing purposes.

The Massey-Harris Company are making a large addition to their factory in Brantford, and are arranging to commence the erection of a building three stories high and 200 by 60 feet.

It is understood that the Royal Electric Company is about to issue $250,000 worth of additional stock. This is said to be necessitated by the increase of the company's business and the need for additional accommodation.

The Hamilton Board of Trade is endeavoring to arrange to have the G.T.R. and C.P.R. to issue stop-over tickets for the World's Fair visitors, and will ask the City Council to grant $175 for expenses incidental thereto.

We had a pleasant call this week from Mr. Cameron, representing the J. B. McLean Co., Toronto, publishers of five excellent trade journals, one at least of which should be taken by every business man.—Kemptville Advance.

Counterfeit half-dollars bearing the date of 1871 and very light in weight, are in circulation. As far as ring and finish are concerned the counterfeit is said to be a very good imitation, and will very easily escape detection.

A Windsor, Ont., despatch says that the first move in regard to the purchase of the right of way for the proposed canal from Lake St. Clair to Lake Erie has just been made, C. C. Wyatt, chief promoter of the scheme, having secured an option from Banker John Curry for the property that is to form the Lake St. Clair canal. The property has a lake frontage of over one-eighth of a mile just west of Stoney Point, and the price paid for the option, which has ninety days to run, was a very handsome one. Mr. Wyatt says the money required for the canal from Lake St. Clair to Lake Erie has already been subscribed by capitalists from Minneapolis and New York, and that the necessary legislation has been promised them by the Dominion Government.

Since the first of the year four hundred and seventy partnerships and dissolutions have been inscribed at the Tutelle Office, Montreal. Twenty-one limited partnerships and sixty-one individuals have registered under firm names.

A St. John, N.B., despatch says that there is a firmer feeling among shipowners regarding deal freights, but the outlook is hardly favorable to a sharp or sustained advance. There is no change as yet, the range to British ports being from 35s. to 37s. 6d.

Messrs. J. G. Kiljsen and W. J. White, of Montreal, had an interview with the Controller of Inland Revenue the other day regarding the points to which consignments of oil may be shipped in tank cars and barrels under the new regulations. It is expected that a decision will be reached at a very early day.

The corner-stone of the addition to Burrow, Stewart & Milne's foundry, Hamilton, was laid on Friday by ex-Ald. William Farmer, in the presence of a large concourse of people, and amid much enthusiasm. Mr. Farmer laid the corner-stone of the main building twenty-two years ago.

An interesting fact concerning the relative hardness of copper and zinc has been brought to light by means of Paul Jannetaz's new sclerometer. Most authors regard zinc as harder than copper. If, however, the metals are examined in a sufficiently pure state, it appears that copper is the harder of the two.

Preliminaries for the construction of the new plant of the Canadian General Electric Company are being pushed and operations will commence at the earliest possible moment. This company has made an out-and-out purchase of Hunt's plant ,and their temporary offices will be on his old property.—Advertiser, London.

Mr. R. Rowlins, milk inspector, who is said to be versed in the progress of the cheese business in Kingston and Napanee district, says that in three years over $15,000 have been spent in the Kingston district on improving the cheese business. There has been a greater improvement in this section than in any other district in the same time.

The Imperial Oil Company, of Petrolea, is about to establish a storing and barrelling station in Hamilton, and is now looking for a site. The City Council will be asked to grant certain privileges to the company in the way of relaxing some of the restrictions in the laxing some of the restrictions upon the storing of oil. The company proposes to bring both American and Canadian oil to Hamilton in bulk, and barrel it there.

At a meeting of the Commercial Travellers' Association held Saturday night in Toronto ex-President John Burns was presented with an address and oil painting of himself. Mr. Burns made an appropriate reply, and presented the portrait to the association. Speeches were made by Mr. Warring Kennedy, Mr. Hugh Blain, Mr. A. Allan, Mr. J. C. Beach and Mr. James Patterson, ex-presidents; and Messrs. Wm. McCabe, R. H. Gray, James Haywood and J. W. Greenfield.

The Columbia Line is the name of the new steamship company which has established a fortnightly service between Antwerp and the St. Lawrence. It is run under the patronage of the Belgian Government, and the Louisiana, 2,000 tons, is the first of the fleet to arrive in port. There are four other vessels: The Pelican, 2,586 tons; the Kent, 2,484 tons; the Glengoil, 2,693, and the Suffolk, 3,303. They are all first-class cargo boats, owned in Glasgow, and will carry general cargo and passengers from Antwerp,and return with freitht and cattle. Next season it is the intention to try to get cabin passengers from Canada for Antwerp.

A new line of the lumber business has been opened up by the arrival in Toronto of a carload of red cedar shingles from British Columbia, for James Tennant & Co. These shingles are of course, more expensive than those ordinarily used, but it is held that they are more durable.

In England 130,000 velocipedes are turned out annually. In Coventry 15,000 workmen are employed in the business. In France, where the machine first appeared, its use was limited through prejudice; people laughed at it. Now there is an army of 300,000 proprietary wheelmen in that country, without counting the immense number of amateurs who hire machines. In 1892 the Paris police authorities issued 12,000 licenses to wheelmen; now the number of velocipedes is estimated at something over 30,000. In 1892-3, 60,000 machines were sold, and it is believed that at least one half of them are used in the city alone.

The following agreement was signed by the coal dealers of Ottawa in March last: That the lowest quoted price by the principal wholesale dealers from month to month shall be taken as the maximum price for the month quoted. The expense of handling and delivering shall be the difference between that of a ton of 2,240 pounds and that of a ton of 2,000 pounds. This agreement to hold good for all quantities sold under 25 tons in single order; orders from 25 to 50 tons may be taken at 15 cents reduction per ton. No dealer who is a party to this agreement shall be at liberty to tender at less than 25 cents off the retail price without the unanimous consent of the coal dealers who are a party to this agreement.

BUSINESS CHANCES.

Advertisements inserted under this heading two cent per word each insertion.

SPLENDID HARDWARE BUSINESS FOR Sale, in a good Western Ontario town. Stock about $5,500. An excellent opportunity for anyone. Personal inspection invited. Address O.K. HARDWARE Office. 23

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA



All kinds of Office and Store Fittings and Furnishings



ASK FOR THE GRAHAM NAILS.



C. C. HARRIS

Manufacturer of Solders and Antimonial Alloys.

Cor. Wickson Ave. and Yonge St., Toronto.

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Hamilton and Toronto



—AND—



HEAD OFFICE: HAMILTON, CANADA

¼ the PRICE of Iron. Write for Discounts

READY MIXED PAINTS

TRADE  MARK

Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

Manufactured by **A. RAMSAY & SON**
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THE

Oxford Gas Range

The latest production of the great Schneider Frenkamp Co., of Cleveland, the largest and most successful manufacturers in the world of Gas Stoves and Ranges.

See this Range before Spending your money

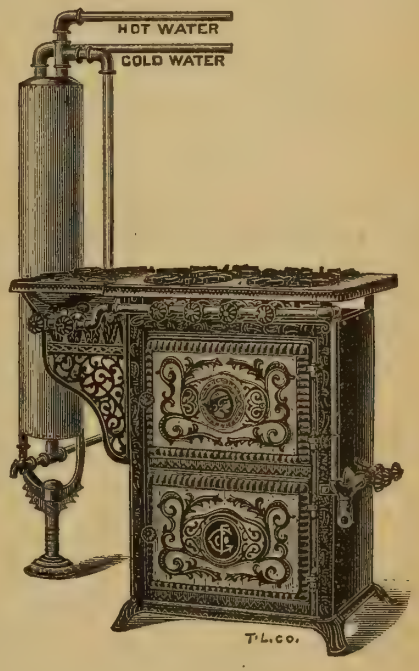
The only perfect Water Heater, will heat water faster than a coal range.

All burners are operated with Steel Needle Valves which produce sharp blue flames. The body is made of heavy Cold Rolled Sheet Steel Asbestis lined. The front and top are beautifully carved, heavy smooth castings with nickel-plated medallions and Tell panels.

Send for Price List and get our record of Water Heaters

Manufactured by

The Gurney Foundry Co., Ltd., TORONTO



THE WHITMAN & BARNES MFG. CO.

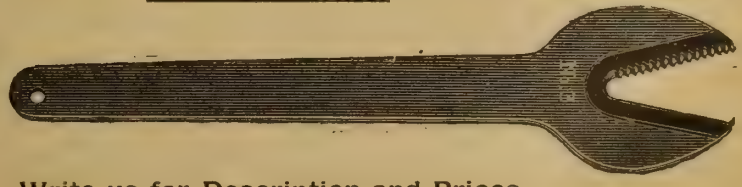
Canadian Branch: St. Catharines, Ont.



This new **Swivel Clevis** can be attached to any Plow Clevis, used in place of Shackle or End Clevis.

MADE OF MALLEABLE IRON.

ALLIGATOR WRENCHES



Write us for Description and Prices

VIEWS AND INTERVIEWS.

I ran against Mr. G. R. Vanzant, one of Markham's hardware merchants, Wednesday, in the sample room of a Toronto wholesale house. Mr. Vanzant is of goodly proportions, and is as genial as he is big. "Well," he said, in reply to a query of mine, "trade is rather quiet in Markham yet. You know, the farmers out that way did not do so well last year as they did the year before. But," he added, as a sort of anticipatory and satisfactory smile overspread his features, "things are promising well this season. The hay, why man, dear, I never saw anything like it before! It is simply enormous. One farmer told me that he had ascertained, by actual measurement, that his hay had grown two inches in one day. And the clover! why it is up like that," said Mr. Vanzant, as he held the palms of his hands about eighteen inches apart to illustrate.

* * *

"Here is a new line of horse-clippers we have just got in stock," said a wholesaler to me the other day. "It is known as Boker's Celebrated Perfection." "Look here," he added, as he picked up a sample and began working it, "isn't it well made? You see the action is covered, and is an improvement over anything on the market. The handles, you see, are ebony. The make is German. They have been making cheaper clippers over there, but this is the first good line they have turned out. It's no use talking, the people don't want cheap goods; they want first-class goods in this line."

* * *

"There, isn't that pretty nice," said T. H. Dexter of S. H. Howland, Sons & Co., as he picked up a handsomely lithographed box. "It is a new line of tacks that has been placed on the market by the Montreal Rolling Mills. You see they have been named the 'Home Tacks.' There is half a dozen packages in each cartoom box and can be retailed at 25c. and at that price will yield the retailer a good profit. Retail merchants will find it a great convenience as their customers frequently do not know what size tack they want. These packages contain an assortment of tacks such as would be required in any ordinary household. As far as I can learn jobbers who are handling them find that they are selling well."

* * *

Jimmy Burns, as he is familiarly known by his confreres of the grip, and who did the west end of Toronto for M. & L. Samuel, Benjamin & Co. has been put on the upper lake route for the same firm. He has just returned from his initial trip. I am told that it was fairly successful and that the only thing that did not find favor with "Jimmy" was the sleeping companions he encountered some places.

BYSTANDER.

JUTE TRADE CONTRACT FORM.

The Indian Jute Manufacturers' Association is dissatisfied with the conditions under which the jute trade is now conducted. Among other reforms they propose that in all contracts for purchase of jute to arrive, members should agree to insist on a guarantee of quality, condition and weight being given, "quality" to be arrived at by the yield of hessian and of warp of the ordinary standard now well known in the trade, and "condition" to include moisture, a maximum being agreed on for different periods of the year, beyond which mills would agree not to go. This question of moisture is a most important one, and may be a difficult one, but can be dealt with if the mills will consent to act together. The committee are of opinion that anything over 10 per cent. (arrived at by drying in the sun for four hours) during July-October, and perhaps 5 per cent for the remainder of the season (or whatever percentages may be thought right), might be considered as excessive; but on this point they are anxious to have the views of members. While admitting that it may not be practicable to bring about a complete reform all at once, the committee hold that the mills have the power to discourage the practice of bringing damp jute to market, by refusing to buy it, and they can, if they like to act together, save themselves a great deal of loss by coming under some such agreement as is proposed.

MUNICIPAL ELECTRIC PLANTS.

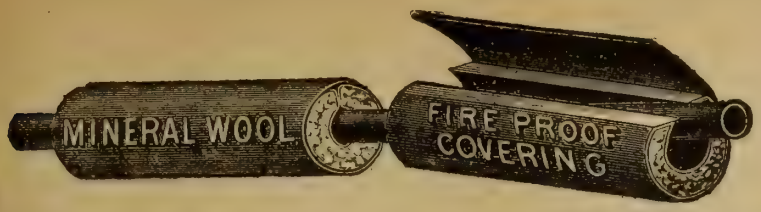
The newspaper press gives evidence that an increasing interest is being taken in the subject of municipal ownership of street electric lighting plants. At the present time a number of cities in New England are considering the matter, and Detroit and a number of smaller cities and towns elsewhere are agitating the same subject. About six per cent. of the street lighting plants are already thus owned, and in several instances commercial lighting is also done from town plants. In communities like typical New England ones there is much to be said in favor of municipal ownership, but it is doubtful if the plan is feasible in the majority of towns, and particularly cities, owing to the abuses that would arise through political mismanagement. The figures generally quoted by municipal authorities as to the cost of lighting from such plants should not be accepted in the absence of detail, as the interest on the investment and depreciation are frequently not included. On the other hand, as a rule, the light is generally better than that often furnished by contract, the lamps being usually run at full candle power. In England the tendency of popular opinion is strongly toward the general supply of electricity by the local authorities, and we learn that of twenty-five towns there in which plants were installed last year, in seventeen they were undertaken by the local authorities. In this connection it will be well to remember, however, that English municipalities are governed far differently from American ones.—Journal of Commerce.

POWERFUL TESTING MACHINE.

Interesting experiments were made at the Washington University, St. Louis, last week with a hydraulic testing machine—the largest in the world—capable of exerting the enormous pressure of 1,000,000 pounds, says Journal of Commerce. Huge timbers such as are used as pillars in large commercial buildings were crushed, not broken, lengthwise. The almost resistless force of the machinery can hardly be appreciated. A piece of timber capable of sustaining 8,000 persons—more than twice as many as could be seated in the music hall of the exposition—was crushed like an egg shell when placed in the machine. The best brick piers 2 feet square, columns of granite a foot square, and sandstone 3 feet square are ground to powder with the greatest ease. A log of selected long yellow-leaf pine 11 inches square and 36 inches long was crushed under a pressure of 514,000 pounds. The machine was designed by Prof. J. B. Johnson, who occupies the chair of consulting engineer of the university, and for the purpose of pursuing investigations being made by the government of the strength of commercial woods grown in the United States.

PETROLEUM IN SUMATRA.

Whilst the American and Russian producers and refiners of petroleum are endeavoring to arrange for the division between them of the mineral-oil trade of the entire world, says Ironmonger, London, a new competitor is making some headway in the far east. It would not be true to state that this new development is formidable at present, but under certain conditions it may become sufficiently so to disturb the "partition of the world" plan of the American and Russian combinations in so far as the oil trade of the Straits, and possibly of China, are concerned. The new field is situated in the northern part of the Island of Sumatra, in the State of Langkat, and is on the seaboard of the Straits of Malacca. A Dutch syndicate is at work already, and English capitalists also are said to have obtained concessons. The various concessions cover an area of 320 square miles, and the whole territory is said to be rich in oil. The quality of the oil is said to be "water white," absolutely without "bloom,"



A GREAT LOSS?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss. The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

flashing by Abel's test at 83 to 86 deg., and burning at 124 to 126 deg. As the field is on the seaboard, the oil can be shipped cheaply, and without costly pipe-lines. An effort will be made to secure a good share of the business done at Singapore, where the imports of oil in 1891 were 397,972 gallons of American and 362,066 gallons of Russian, besides a few hundred cases from Burmah and other places. The consumption per month at Singapore is from 34,000 to 386,000 cases, and as the Dutch syndicate alone expects to be raising 2,000 cases a day before the end of 1893, the Langkat oil stands a fair chance of meeting with a ready market. The Russians are meeting the competition by means of tank steamers, with tanks at Pulau Bukum and the Standard Oil Company is said to have had a couple of agents over the ground with a view, no doubt, to acquiring a share in, or even the control of, the new field. Besides its possible effect upon the oil trade of the East, the opening-out of the Langkat wells is of importance to our tinplate manufacturers, seeing that much of the oil is certain to be cased.



Write for our Illustrated ..... Price List of

Souvenir and Staple

Sterling Silver Spoons and Novelties

THE TORONTO SILVER PLATE CO.

Toronto, Canada.

E. G. GOODERHAM, MANAGER. JNO. C. COPP, SEC.-TREAS.

PERSONAL MENTION.

James Peck, of Peck, Benny & Co., Montreal, was in Toronto this week.

A. C. Leslie of A. C. Leslie & Co., Montreal, is in England on his annual trip.

W. H. Rowley, manager of the E. B. Eddy Co., Hull, Que., paid a flying visit to Toronto last week.

"Sandy" McPherson, secretary of the Montreal Rolling Mills, Montreal, was looking up business in Toronto this week.

C. Mason, of Richmond Hill, who was in Toronto this week doing a little sorting up, reports prospects for trade brightening.

H. Walter Dorken, of Montreal, representing E. Heuser & Co., importers of German, French and English manufactures, was in Toronto this week.

J. Peaker, of the newly organized firm of Peaker & Son, Brampton, was touring the warehouses this week. Peaker & Runians was the former name of the firm.

G. P. and J. W. Weiler of the firm of Weiler Bros. and George W. Wynne of the firm of E. G. Prior & Co. both of Victoria, B. C., spent a few days in Toronto this week. T. G. Dexter of S. H. Howland, Sons & Co., who made their acquaintance when on the road, took them in hand and showed them some of the principal manufacturing industries, public buildings, drives and in fact as many places of interest as time would permit. The visitors thought that the prettiest city they ever saw is their own Victoria, and next Toronto. The visitors left Victoria some weeks ago with the primary object of seeing the World's Fair, but when they reached Chicago they found the exhibits in such an incomplete state that they decided to come east and return to the White City later. They left Toronto Thursday night en route for Montreal. From there they will go to New York and from thence on to Chicago.

R. H. Smith, manufacturer of saws, St. Catharines, was on the street this week. He reports a large business in shingle and circular saws, indicating that the mills in the country are busy.

Among the country merchants who have visited the Toronto warehouses during the week were: Messrs. Clement of Clement & Co., Bolton, Moore of Moore Bros., Georgetown, J. Bundy of Pickering, A. Riddell of St. Catharines, G. R. Vanzant of Markham.

COST OF MINING.

It would seem that the cost of mining is about at its lowest notch, and that any further reduction in the price of ore must be met in other directions. It has been suggested, and with some show of reason, that the escape lies in minimizing royalties and in the reduction of railroad charges from the mines to shipping ports. The study of cost sheets is of more urgency and importance than ever, as present financial conditions and other economic considerations are by no means optimistic of an early return to more remunerative prices. In Great Britain, where the situation is more acute than in the United States, the matter of royalties and railroad rates has forced itself into notice as being possible elements in the equalizing of conditions that are now unusually severe on all mining industries. In fact, both here and elsewhere, we are rapidly converging on a point in which competition insists on the practice of every economy in reach, and in the direction named it goes with the telling that there is room for the correction of abuses hitherto left generally to take their own course.—Age of Steel.

Some of the largest steel plates ever made in England have just been turned out at the works of the Consett Iron Co., Durham. They measure 60 ft. 2 in. in length, 50 in. in width, and 0.55 in. in thickness; and they are to be used in the construction of several large cattle ships which are being built at West Hartlepool.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

HARDWARE.

Montreal, June 9.

Trade in hardware during the week has shown some improvement in a jobbing way, but the increase in the actual volume of business has not been very great. Still all the houses report that the week shows some improvement on the previous one, and that the average seems to be fairly satisfactory. This applies only to the jobbing department, however, for in the matter of actual wholesale business either for importaton or ex wharf all lines of heavy material reflect quietness, and the general tendency of values, although no actual change in this respect can be cited, is toward a lower level. In shelf goods of all kinds fair orders are reported for locks, bolts, etc., in fact the turnover in this respect has been quite satisfactory. Preserving kettles, farming tools, wooden handles, wire and wire fencing have all gone out with a certain amount of freedom during the week. Tinware rules about the same, and there is nothing special to note in the case of chain or rope. Payments are reported fair on the whole. In farming tools several orders for pitchforks, etc., have been filled, also for the handles thereof, while scythes, whetstones, etc., have received more attention. Chain furnishes nothing special, but some small kegs of it have been moved on account of orders from down below during the week. In nails, makers do not report anything special, but the jobbers say that orders for wire nails are good in fifty and sixty keg lots, and that in the aggregate quite a quantity has been moved. Cut nails are not so brisk. Wire has moved with a little more freedom, some good sized orders for woven wire fencing for gardens, etc., being to note. Orders for other descriptions also have been fairly satisfactory. Demand for wire screens has not been so brisk this week, city dealers having supplied themselves for the time being.

HEAVY HARDWARE METALS.

The week has been a flat and featureless one in this respect, with buyers indifferent and nothing in the tenor of advices from primary markets to put them in a different humor. Values show no actual change, but it is more than likely that shading would result if any strong neceessity arose for it.

PIG IRON.

Beyond the sale of an occasional 5 or 10 ton lot there is positively nothing doing in pig iron, and the market occupies the same dull rut that it has kept in throughout the entire spring. Summerlee and Gartsherrie are quoted at $18.50, but this would be shaded without a doubt. Eglinton is marked at $17.50 and Carnbroe $17.

BAR IRON.

In bar iron some lots have been moved, and it is whispered that the figure has been inside the combine price. Makers, however, stoutly deny this, and we quote $1.90 to $1.95.

TIN PLATES.

Jobbers have been turning over some 25 box lots of charcoal at $3.45 to $3.75 for ordinary, and $4.25 for P. D. Crown, but the call is hardly an urgent one. Cokes reflect easiness at $3.15 to $3.20.

CANADA PLATES.

Canada plates are dull and holders free sellers when a buyer is to be found at $2.50.

TERNE PLATES.

There is a moderate jobbing movement to note in these at $7, but for any large business the market is a dead letter.

GALVANIZED IRON.

Galvanized iron has been fairly active at former prices, viz., 4 1-2 to 4 3-4c. for round lots of No. 28 guage.

COPPER.

Copper has been moved for ton 11 1-2c, but we quote 12c. as the price. Ingot tin is easy at 21 1-2 to 22c., and the tone is the same on other lines.

GLASS.

The glass market shows no change, a moderate jobbing demand being to note on the basis of $1.35, and putty in bulk sells at $1.85.

LEADS AND OILS.

A healthy movement is to rule in leads, paints and varnishes. We quote government standard, $4.75 to $5 ; No. 1, $4.50; No. 2, $4.25 ; No. 3, $4 ; No. 4, $3.75 ; dry white lead, 4 3-4c.; red lead, pure, 4 1-4c.; do. No. 1, 4c.; zinc, white, pure, $7 ; No. 1, $6 ; No. 2, $5.

Linseed oil furnishes no quotable change and the demand is fair at 60c. for raw and 63 for boiled, in round lots. In seal oil further sales of round lots have transpired at 45 to 46c. Cod oil is unchanged at 39 to 40c., and cod liver rules at 65 to 75c., as to quality.

NAVAL STORES.

There is a fair trade doing in naval stores, but business is by no means brisk. We quote : Turpentine, 50 to 51c.; resins, $2.50 to $5, as to brand ; coal tar, $3.75 to $4 ; cotton waste, 5 1-2c. for colored and 7 to 10c. for white ; oakum, 5 1-2 to 7 1-2c., and cotton oakum, 10 to 12c. Cordage, sisal at 9 3-4c. for 7-16 and upwards, and 15c. for deep sea line. Pure manilla, 12c. for 7-16 and upwards, and 13c. for smaller sizes.

BINDER TWINE.

The market for binder twine is unsettled, as buyers don't know exactly what to do. The makers, however, repeat previous quotations, which they remark are very much below those of last year. Recent quotations for car lots were Red Cap, 8 3-4c., and Blue Ribbon, 9 3-4c.

CEMENT.

Cement is in good demand, but prices are still too low to leave very much margin for profit. Several round lots have been moved during the week, both on local and western account. We quote : English brands, $1.95 to $2.05, and Belgian brands, $1.85 to $1.95, ex ship. Fire bricks are in good demand at $13.50 to $19.50 per 1,000, ex ship, according to quality.

PETROLEUM.

A good steady business is reported both in American and Canadian, at steady prices. We quote Canadian 12c. at shed in Montreal for round lots, and 12 1-2c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c. in 10 barrel lots 19 1-2c. in 5 barrel lots and 19 1-4c. for single barrels, 2 per cent. off for cash ; American benzine, 23 to 25c.; Canadian benzine, 10 3-4c. Petrolea ; 12 3-4c for Montreal.

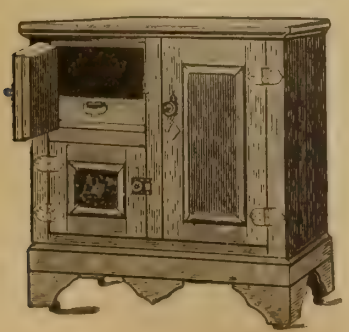
MONTREAL TRADE NOTES.

W. H. Cottingham & Co. have placed a lot of boat varnish during the past week.

Mr. John Thorpe, of Pilkington's, reprots quite a few orders for plate glass.

An offer of 30c. on the dollar has been made in the case of the insolvent estate of Wm. Darling & Sons, and it is said

Refrigerators



Hardwood, Lined Galvanized Iron, Patent Locks, Four Sizes

These are highly finished and each season has shown an increasing demand. This year we are also making a cheaper line in above style, so as to meet all requirements.

Milk, Delivery and Creamery Can Trimmings.
All Sizes Body Stock for Cans and Cheese Vats.
Galvanized Iron Eave Troughs in 8 foot lengths.
Lithographed Tea Caddies and Signs.

We make and Supply everything used in the Stove and Tinware Trade.

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

1893 - OUR LATEST - 1893

Safford Radiators

. . . FOR . . .

Steam and Hot Water

ARE UP TO DATE

Trade Mark Registered

MOST EFFICIENT
NEWEST DESIGNS
BEST CONSTRUCTION

ALL SCREWED CONNECTIONS



RADIATORS PATENTED AND ALL DESIGNS REGISTERED

References: New Parliament Buildings, Board of Trade, Confederation Life Buildings, Freehold Loan Building University Buildings, Toronto; McGill University Building, Montreal; and many thousands of others which will be named in response to enquiries.

MADE ONLY BY

THE Toronto Radiator Mfg. Co. LTD

TORONTO, ONT.

MONTREAL. QUEBEC. ST. JOHN, N.B. WINNIPEG. VICTORIA, B.C.

MONTREAL Markets Continued.

that most of the creditors are favorable to the proposition. The matter will be decided upon at a meeting to be held at the court house during the course of next week.

It is said that Westerners have offered four car lots of refined oil here at a cut of 4 1-2 cents.

A Toronto house has, it is said, secured the Harbor Commissioners' contract for bolts, spikes, etc.

There are reports that the association price on bar iron is being cut, the rebate being in the shape of cash credits.

The Keegans, Milne Co. have recently purchased a new 150 light Reliance dynamo from T. W. Ness of this city.

Several round lots of English cement have been turned over by Wm. McNally & Co. on Western account at extreme inside figures.

Business in the city and in the district between here and Kingston is good, according to A. Ramsay & Son, for all kinds of leads and varnishes.

Advices from the south to dealers here state that turpentine is advancing, which is not surprising, considering that the product has touched the lowest point in the record of the trade down there.

TORONTO MARKETS.

TORONTO, June 9, 1893.

HARDWARE.

There is no great rush of business, but all the houses are well employed, and the general opinion is that trade is fair and if anything better than usual for the season. The only line that can really be said to be anyway dull is builders' hardware. Wire screens, ice cream freezers, water filters and coolers, scythes, snaths, scythe stones, hay rakes, preserving kettles are selling fast, and large quantities of building paper, such as tarred felt, tarred lining are going out A good trade is also being done in iron pipe. Business is of course practically over in milk cans and milk can trimmings. In fact generally speaking buyers are this week purchasing with more freedom than they have for a week or so back, particularly the city retailers, and the trade is now beginning to book orders for the fall trade. Payments, those in the city as well, continue to improve.

NAILS—A fair sorting up trade continues to be done at unchanged prices.

WIRE—Business in this line is brisk and more so than a week ago. Annealed and oiled and galvanized is in most request, while of barbed there is not much selling.

ROPE—There is not much demand for it, and so far there is no intimation that there will be any change in the price of rope, although the jobbers wrote for information a week or more ago. The Consumers' Cordage Co. have just issued a list of prices for binder cord for the season. It shows a decrease of about 20 per cent. compared with last year.

CHAIN—This line is over for the season.

TOOLS—A good trade of a sorting up nature is being done in garden and harvest tools. A good deal is going to the Northwest. Mechanics' tools, other than carpenters', is moving a little better.

WARE—In tinware trade is not so good as a week ago. There does not, however, appear to be any cessation in the demand for peerless, brass and enamalled ware for preserving pnrposes.

PLUMBERS' SUPPLIES—Much about the same as a week ago—business fair for the season.

WIRE SCREENS—Jobbers' are still experiencing a good deal of difficulty in getting screen doors and windows, and to make matters worse another mill in the States has been burned down, and the trade seems reconciled to the belief that the season will be over before they get all their supplies. There is a little stock of green wire cloth on the market, but it is still a scarce commodity.

METALS.

There have been no specially marked developments in metals during the week. Business is fair. Ingot copper is quoted lower at 12½ to 13 for English B. S., and braziers in sheets are from ½ to 2c. lower.

PIG IRON—A few carloads have been going out at $22 to $23.50 for Southern, but business on the whole is quiet.

Rogers, Brown & Co., Buffalo, N.Y., report Toronto's pig iron market as follows: Demand for pig iron continues to be very light. Owing to the fact that the Central Traffic Association have given orders that all rates be cancelled taking effect June 1st,

CORRUGATED IRON
ILLUSTRATED CATALOGUE FREE
METALLIC ROOFING Co.
MANUFACTURERS TORONTO

and have not as yet seen fit to name others, it is impossible to make any accurate quotations of American iron delivered in Toronto. Present advices indicate an advance of about 35 per cent. on former rates.

BAR IRON—There is a good sorting-up trade being done on the basis of $1.95. There is some talk of rebates being made in Montreal, but local jobbers claim that there is no shading being done here.

TIN PLATES—Dull. Enquiries are coming in for ternes and cokes. In charcoal trade is not brisk. Stocks are quite sufficient for the demand.

CANADA PLATES—Orders for import are coming in nicely. Prices are unchanged, all dull being quoted at $2 65, half-half at $2.75, and all bright at $2.80 to $3 per box. Jobbers anticipate that should any change be made it will be in the direction of higher prices.

SHEET IRON—There have been some large lots moving at from 2⅝c. up. Stocks are ample for the demand.

GALVANIZED IRON—There is no feature to note in this line. Trade is light and prices unchanged at 5 to 5¼c. for Queen's Head and Gordon brands.

ZINC SHEET—Nothing doing and prices are unchanged at 5¾ to 6c. for 5 cwt. casks and 6 to 6¼c. for part casks.

ZINC SPELTER—Dull at 3¾ to 5¼c.

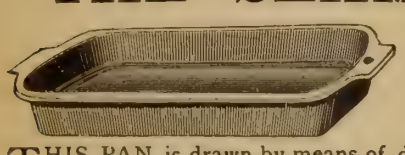
GLASS.

An active trade is being done in all sizes. Some import orders have had to be filled from stock owing to delay in delivering. This of course means actual loss to the jobber. But in order to keep good faith with customers there was no other alternative. Prices remain at the $1.25 to $1.30 basis. Plate glass is a little unsettled.

LEAD—Inactive, with prices as before at 3½ to 3¾c. for ordinary lots and 3¼c. for ten-ton lots.

ANTIMONY—The lower prices seem to have stimulated the demand, more enquiry being heard this week. We quote Cookson's at 12 to 13c. and ordinary at 11 to 12c., but for large lots these prices would be shaded.

"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

MARKETS—Continued

INGOT TIN—There is some improvement in trade in this line and prices are unchanged at 23½ to 24c. for small lots, large lots being obtainable at lower figures.

INGOT COPPER—Some large lots have been sent out during the week, but the general trade is small and of a sorting up character. Small lots are quoted at 12½ to 13c., but buyers can do better for large lots.

PAINTS AND OILS.

Trade continues good. Prepared paints particularly are selling well, the mills being unable to keep up with the demand. Turpentine has advaned 1c. a gallon in South, but the Ontario Association will likely put the reduced rates into force at once instead of waiting till June 15. A meeting was to have been held last night with this object in view. The price as fixed for delivery after June 15, was, freight allowed to delivery stations, 47c. per gallon for 1 to 4 burrels and and 46c. for 5 barrels and over. Prices are 2c. less at Toronto, Hamilton, London and Guelph. Demand for linseed oil is fairly good and manufacturers are still behind with their orders, although they are working day and night. Prices are unchanged at 60 to 62c. for raw and 63 to 65c. for boiled. In white lead trade is a little dull, but prices remain at the 4¾c. basis. Varnishes are in good demand and unchanged. Cod oil is quiet and unchanged at 50 to 51c. a gallon.

OLD MATERIAL.

The rolling mills have lately been getting more scrap iron than they could take care of, and, with a view to causing an easing off, they have put prices down $2 a ton. Metals remain unchanged. We quote: Agricultural scrap, 55c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 50 to 60c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 25c.; new light scrap copper, 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.: heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1¾ to 2c.; scrap zinc, 2¼c.; scrap rubber, 2½c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings, and turnings, 15 to 20c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—No material change. Supplies are not large at the moment and all offered are taken at 5¼c. for good selections.

SKINS—Calfskins are lower, jobbers now paying 8c. and demand is light. Wool skins are scarce at $1.40 to $1.50 and lambskins are quoted at 30c.

TALLOW—Steady and unchanged, jobbers paying 5½c. for rendered and selling at 6 to 6¼c.; rough 2c.

WOOL—There is a little beginning to come in, and dealers are paying 17 to 18c. for good merchantabie fleece combing, and for coarse unwashed 10c. and fine 11 to 11½c. The mills are still fairly well employed.

PETROLEUM.

The Petrolia Advertiser in its weekly report says: "The dullness which was so apparent at the close of last week has, in some instances, become more active and promising. Refined illuminating oil is very depressed. The general position of crude oil is dull and unchanged, but is steady. The movement in consumption of course will quicken as the season advances, and in two or three months from now there is no doubt that a better tone and feeling will prevail. In the meantime the situation is decidedly interesting, and uncertain whether the market will improve or go lower. Should the demand from manufacturers improve, it would send prices upward, as no considerable quantity of the raw material can be secured at present figures; but, on the other hand, a continuance of the present dullness will probably witness a further shrinkage in the prices. On the other hand, holders of oil who can afford to carry their holdings are confident that a change for the better is sure to come, and they do not propose to sacrifice their oil when by holding it they believe they will be able to realize a much better price as a reward for their patience and faith in the future. They are encouraged in the position they take by the fact that the stocks here of both crude and refined are very small, and supplies in the east are supposed to be limited. Indeed it is the general belief that with a normal demand during the remainder of the season an actual scarcity may be experienced, but to counteract this the drill can be set to work, as the territory is prolific enough for years to come to supply any extra demands that may be made on it." The Advertiser quotes Petrolia crude $1.07 per barrel in tank, or $1.10 delivered.

MARKET NOTES.

Boring machines are quoted higher at $5 to $7.50.

The Consumers' Cordage Co. has lowered the price of binder cord about 20 per cent.

A decline of ¼c. is announced in sash weights (sectional), 1½ to 1¾c. a lb. now being the quotable price.

H. S. Howland, Sons & Co. are in receipt of a large stock of Peerless preserving kettles, tea pots and other staple lines of this ware.

In last week's issue it was stated that the estimated shortage in the turpentine crop was 11,000 gallons. It should have read 11,000 barrels.

H. S. Howland, Sons & Co. state that their travellers will be in a position in a few days to quote new prices for binder cord, the Consumers' Cordage Co. having issued its new list on this line.

The Toronto Lead and Color Co. are running every hand they can find room for in their factory, and yet are unable to keep up with the demand for their prepared paints.

M. and L. Samuel, Benjamin & Co. report that orders are coming in nicely for guns, and amunition. They think that orders in these lines are more numerous than a year ago at this time.

The B. Greening Wire Co. (Ltd.) of Hamilton, wholesale selling agents for Ontario, announce that the discount on woven wire fencing is now 12 cents per rod off list No. 1; off list No. 2, 15 cents per rod; off list No. 3, 15 cents per rod; and off list No. 4, 20 cents per rod.

Several changes in discounts are announced this week. As revised they read: Shot, Canadian, 15 per cent.; augurs, Gilmour's, 50 per cent.; belting, No. 1 leather, 40 to 45 per cent.; augur bits, Gilmour's, 60 per cent.; locks, cabinet, Eagle's, 27½ to 30 per cent.; horse nails, 65 to 67½ per cent.; clout nails, 60 per cent.; trunk nails, 60 per cent.

Grundy Bros. & Co., of Kincardine, Ont., have just issued to the trade their catalogue and price list of Otton's patent dome sectional hot water boilers. Judging from the contents of the catalogue Grundy Bros. & Co. are keeping well abreast in the volution in heaters that is constantly going on. The catalogue also devotes some attention to the Safford radiators.

AMERICAN MARKETS.

NEW YORK, June 9, 1893.

PIG TIN.—London sent slightly higher cables, quoting prompt delivery at £85 7s. 6d. July at £85, and three months' futures at £84 10s., but public advices reported only moderate transactions, and private wires were likewise indicative of tame speculative interest there. In the New York market there were a few speculative trades at fairly steady prices, including 25 tons during the forenoon at 18.90c., regular, for June delivery, 10 tons July delivery, sellers' option, one day's notice, at 18.90c., and 10 tons ditto at 18.95c. The interest displayed, particularly in the direction of buying, except to cover old contracts, was extremely tame. The speculative branch of the market, however, was not the only one that gave evidence of being overburdened by unusually heavy supplies. In any event, jobbers and brokers had more or less numerous requests from customers to defer deliveries as far as possible for the time being, more particularly those due on contracts made when prices were a cent or two per pound higher than they are at the present time. This, of itself, is significant, but a singular coincidence was brought out in the fact that some steamers had more tin aboard than reported prior to arrival. For example, the steamship Spain brings 450 tons, whereas it has been almost generally believed that only 250 tons were aboard. In fact, the statistics, as well as sentiment, seem to be adverse to improvement in the market.

COPPER.—Transactions in this market were on a very moderate scale. The demand was very tame as well, and without indication of more urgent needs on the part of consumers of any variety of the metal. Home trade wants, in fact, seem to be met by current deliveries making on old contracts, and export requirements are not of calibre calculated to have any marked influence upon the market. However, the offering is more or less reserved, with some indication that leading producers are partial to a conservative course, and prices, therefore, keep fairly steady. On Lake Superior ingot anything below 11c. is strictly the exception. Electrolytic commands 10 1-2 to 10 3-4c. according to brand, and 10c. stands as the trading basis for round lots of common casting stock. In the London market, prices on merchant bars were, according to cable advices, quite steady at £43 7s. 6d. to £43 10s. for prompt delivery, and £43 15s. to £44 for three months' futures, with the inside figures ruling at the close.

PIG LEAD.—The strong points in the market that have been brought out recently seem to have lost all force. That is to say, the light supplies on spot and

MARKETS—Continued.

reports of moderate stocks at the primary sources of supply are offset in a great measure, if not entirely, by the fact that some influence, probably the monetary situation, has prompted producers to sell a portion at least of their probable June product. To do this, they were obliged to cut the price to 3.80c, at which rate about 500 tons were disposed of for June and July delivery. The official bullion price recedes to 3 3-4c., and there were sellers at 3.60c. regular, at the close. St. Louis wired 3c. London cable to the Metal Exchange quoted £95 for soft Spanish.

SPELTER.—There is hardly enough doing in this quarter to determine Eastern market value for the metal. Single car loads are placed occasionally at 4.20 to 4 1-4c. for early shipment, but it seems impossible to put through larger lots without making some inducement in the way of a specially low price. The Kansas coal strike complications tend to restrain rather than stimulate purchases for the time being. St. Louis quotation to the Metal Exchange was reduced to 3.90 to 3.95c., but the London cable was again £17 17s. 6d. for good merchant brands.

ANTIMONY.—Dealings are still on a very moderate scale, and the market is easy, with 9 3-4 to 9 7-8c. quoted for Hallett's, 10c. for LX, and 10 1-8 to 10 1-2c. for Cookson's, in round lots.

TIN PLATE.—The market remains extremely flat. Concessions on prices made of late fail to stimulate business in futures to the slightest degree, and spot goods move out in small parcels only at steady rates.

FUNK & WAGNALLS CO.'S GREAT TASK.

The great task undertaken by the Funk & Wagnalls Co. is drawing to a close. They are now able to present, for the first time, a complete prospectus of "A Standard Dictionary of the English Language," a work that has been for several years in preparation and is now being pushed rapidly toward completion. The definers are in the letter "T," and over one-third of the entire work is in type. Of the two hundred specialists, all except one have reached the end of the alphabet. The enormous task of perfecting a work of this kind may be judged from an examination of the prospectus. Nearly $300,000 have already been paid to the editors and specialists engaged in the preparation of copy; and before the work is completed over a half million dollars will have been expended.

The following is an actual count of words and phrases recorded under the letter A:

Stormonth Dictionary, total terms in A, 4,692; Worcester Dictionary, total terms in A, 6,983; Webster (International) Dictionary, total terms in A, 8,358; Century Dictionary, total terms in A, 15,621; the Standard Dictionary, total terms in A, 19,736.

The full number of words and terms in these dictionaries for the entire alphabet is as follows: Stormonth, 50,000; Worcester, 105,000; Webster (International), 125,000; Century (six volumes, complete), 225,000; Standard, 280,000.

The whole work has been done by the best scholars procurable, and is endorsed by the leading educationalists of America and Great Britain. Hon. William Clark, LL.D., D.C.L., F.R.S., Professor of Philosophy, Trinity College, Toronto, says: "I think the plan excellent, and the carrying out of it, as far as these specimens enable one to judge, as near perfection as we are likely to attain. I ought to add that I have compared a good many articles with the corresponding ones in the best dictionaries which I possess, and find them, in almost every case, fuller and more satisfactory."

The price when issued will be $12; but those who subscribe now and deposit $1 can secure it for $8, thus effecting a saving of $4. It will be a work every person is desirous of securing, and consequently the dealer who makes arrangements to have copies on hand first will secure most sales. Correspondence with the firm might elicit information as to some plan whereby dealers could take subscriptions now and thus secure the low price for their customers.

SHORT CREDITS. BY ALL MEANS.

As a friend of cash transaction it is natural for me to chose, in this instance, in favor of short credit, or "prompt and frequent settlements"; without better reason, perhaps, for my choice than that it is the nearer approach to my favorite cash system. Yet had I the good luck to be beginning business to-morrow, I would, so far as I could, adapt my business to the general policy of the community in which I lived, as the safest plan by which it might maintain itself profitably, at the same time eliminating as much as possible the feature of long-winded accounts.

When people once become accustomed to "prompt and frequent settlement," they approve of it. As a rule a long-standing account is no easier of collection than a shorter one. Four times in five the season for collecting it is ill-chosen. The custom of delaying collection makes one careless, and it is either permitted to run at the debtor's will, or payment is asked when business is quiet and money naturally scarce. The fact that the account has been permitted to run for months, because the customer is "good," is no consideration on pay day. Collection day should be timed so as to arrive at a convenient time for payment; a difference of thirty or sixty days matters but little to the man with plenty of money.

Short accounts are seldom disputed, while the reverse is frequently the case. People will forget, and it is difficult to recall the incidents of a trade after the lapse of months.

When "prompt settlements" is the advertised policy of the house, no offence can be taken, and objection is seldom offered. Most people are satisfied to be treated as well as their neighbors.

Slow people are the most unsatisfactory customers, as a demand at any time is apt to arouse a suspicion of haste, and if you are firm, then the case is only aggravated.

A sixty day credit is as much an expression of confidence as six months, and the customer who complains of one will find fault with the other.

If spot cash is the better plan, short credit is surely a good second.

Consider the jobber who offers you six per cent in lieu of four months net, just eighteen per cent per annum. It should be not only gilt edge custom but round profits which would satisfy its stead.

There are two classes of men who still cling to "long time." Their representatives are moss covered relics of those "good old days," when advertising was an unknown science, when the trade journal was still undeveloped and our nation yet in embryo; before the railroad, the telegraph and the daily paper—eliminating distance and delay—made the individual idea of to-day the common property of the world to-morrow, and opened up a thoroughfare for the dissemination of popular views.

To one of these classes belongs the country merchant, living in an agricultural community, dependent on the returns from the harvested crops, and finding it necessary to carry his neighbors account from season to season.

We also find, in cities, a store which extends a long-time accommodation, but the condition is the growth of years. The house does an almost exclusively "family trade," and they are acquainted with their patrons from "away back," and did business with the grandparents of the present generation. They are not hustlers, and don't aim to be. Their employees are plodders who have grown old in the service. There is no attempt at bargain days. They have loads of stuff that is "in style every seven years," and which they never expect to sell, unless to an insurance company. Like many other relics which have withstood the shocks of time and change, we admire their stability, perhaps, but as mercantile examples we have no use for them.

There is no doubt that the system of "prompt settlements" has developed as the prominent policy of to-day. This fact should be recommendation enough. Have your policy understood, state terms on billheads, then be consistent. No one will blame consistency. No sane man can take offense at good business methods. Never make an excuse for collecting promptly when bills are due. It is the settled policy of leading merchants of the land, and those who do not practice it, advise it.

The fact that it has supplanted the primitive plan of barter and almost endless credit, together with the fact that progressive men denounce "long time," that progress everywhere displaces it, and that it disappears before the approach of modern merchandising is convincing enough for me. Like many other matters, it must be taken more or less on faith, and although there may be some advantages we cannot fully explain or understand, yet we are not prepared to contradict what is accepted by the majority, especially as we have nothing better to offer instead.—J. J. Brady, in Dry Goods Chronicle.

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ALWAYS IN STOCK

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Galvanized Ropes, for Derrick Stays, Ship's Rigging, Etc.

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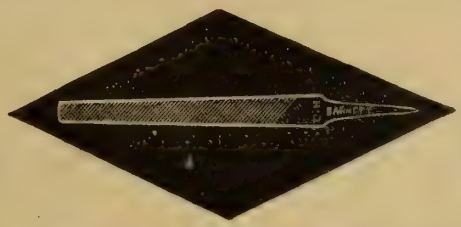
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MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
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MAMMOTH WORKS : HULL, CANADA

THE LARGEST ORE CARRIER.

The Cleveland "Marine Review" notes the launch from the Wheeler yard at West Bay City, Mich., of the new steamer "S. S. Curry," which is expected to carry 3,400 gross tons of iron ore on 14 ft. 6 in. draught, or 5,000 tons on 17 ft. The principal dimensions of the "S. S. Curry" are: Length over all, 378 ft. 6 in.; length of keel, 360 ft.; breadth, extreme, 45 ft. 2⅜ in.; breadth, molded, 45 ft.; depth, molded, 26 ft. For water-ballast she has a cellular double bottom differing from the ordinary floor system employed in lake practice. The bottom extends fore and aft, and is 54 in. deep, with a capacity of 1,600 tons. Steam at 170 lbs. pressure will be furnished by three cylinder boilers 12 ft. 6 in. diameter, and 12 ft. 8 in. long. Each boiler has three 40-in. diameter furnaces, the total grate surface being 100 sq. ft., and the heating surface 6,500 sq. ft. The motive power will consist of triple expansion engines, built in F. W. Wheeler & Co.'s shops, with cylinders 23, 37½ and 63 in. by 44 in. stroke. A departure has been made from the usual practice on the lakes by placing the engines and boilers amidships, instead of near the after end. The ship is owned by the Hawgood & Avery Transit Company.

POINTERS ON NEATNESS.

That hardwaremen in general are noted for their enterprise and intelligence is a fact generally recognized, and for this reason it seems strange that so large a number of them are negligent of the arrangement and cleanliness of their storerooms. A great many of them who have scrupulously neat, clean and tidy houses, and who would quickly find fault at any breach of the laws of order therein, will permit their offices and storerooms, in which they probably spend more of their time, to become so untidy and unclean as to cast reflection on the entire craft.

The fact is, the old proverbs, "Cleanliness is next to Godliness" and "Order is Heaven's first law" are as applicable to the hardwareman as to his fellow merchant in any other line of business. That it is possible to have a hardware store almost if not quite as attractive as that of the clothier, dry goods man, or even the jeweller, may be demonstrated by a visit to a store of the modern class, such as are happily becoming quite common in most localities.

When the actual advantage, attractiveness and economy of such a store is seen, it is a cause for wonder that these facts are not more generally recognized by the hardwaremen, who, of all others, have the reputation of being the most progressive and ready to adopt any advanced business methods. So, laying aside all moral and social considerations, it seems strange that there are so many stores of the "good (?) old kind" in existence at the present time.

Comparing one of these with one of the modern, progressive class, the contrast is startling and the advancement of late years, especially of the last decade, very noticeable. In locating a storeroom of the former class the size is one of the principal considerations, and such matters as light, ventilation and general arrangement are of minor importance. The shelves and counters are inconvenient, rough ,and unattractive features; the show windows entirely too small; the floor of white pine boards, often warped out of shape, while nail kegs, case goods, agricultural implements, &c., are disposed around the room with little regard for anything but convenience. Such a store as this can scarcely be more presentable even at the expense of prodigious labor. In contrasting the modern store the difference is such as ought to make even an old fogy a convert to the new regime.

In place of the plain, open shelves with untidy rows of goods, and the old, unsightly counters with the rows of nail kegs alongside, there are the attractive cleanly rows of drawers with the samples advantageously displayed on the background of green or black, and the broad, oak counters with the convenient bins for nails, etc., beneath.

By these arrangements two of the principal causes of untidiness, viz., the open, dusty shelves and the unsightly nail kegs, are obviated. Another great improvement is the racks or brackets for steel goods, shovels, etc., by means of which these articles may be suspended from the ceiling or wall, leaving the floor entirely accessible to the broom. The stoves kept in stock are placed on trucks, and may readily be moved for sweeping or display. Then the little untidy show-case with its seldom-changed assortment of knives, scissors, revolvers, etc., is superseded by a larger and more attractive one, with effective display arrangements, while still another improvement of much importance is the windows of large, clear glass, admitting plenty of light, and dispelling the gloom usually found in so many stores of the older class.

So much for arrangement, for in that lies half the solution of the problem, but it is not the other and usually neglected half by any means, since no convenience of arrangement or elegance of fixtures can compensate for lack of attention to cleanliness. Of course it will be admitted that it is not as easy to keep a hardware store presentable as some other lines, but it is not an impossibility by any means. A store may be scrupulously clean so far as freedom from dirt is concerned, yet be far from attractive and inviting, because of the untidiness and confusion. To prevent this is fully as important as sweeping and dusting. To this end waste baskets should be placed behind the counter at convenient intervals, in which all discarded wrappings, etc., should be deposited. Another cause of untidiness is the habit of leaving articles on the counter and ledges after a sale is made, and to avoid this salesmen should be instructed to replace everything as soon as possible. However, it is sometimes impossible to do this during the busy time, but it should be attended to at the first opportunity, since it not only improves the appearance of the room, but loss by theft, etc., is avoided.

Where purchases are left to be called for they should be carefully wrapped and plainly marked and put in a certain part of the store. It is important that there should be a certain place for this purpose, and one clerk should be made responsible for these packages as far as possible, as much confusion and annoyance will be saved by such a plan. While replacing the stock the tools in use around the store should be returned to their proper receptacles and the loose nails, etc., gathered up.

At the close of business, the counters, cases, racks, etc., should be covered over with gingham covers to protect them from the dust caused by sweeping and dusting. These covers will be found very convenient, as they not only lessen the labor of dusting, but preserve the goods from damage, and soon pay for themselves for this reason alone.

All stores should be swept daily, and if possible the sweeping should be done in the evening in order that the dust may settle during the night. While sweeping seems simple enough, it is a fact that it is seldom properly done. To tell the average man that he does not know how to sweep will probably arouse his indignation, but it is true, nevertheless. To some it may sound ridiculous to talk about the science of sweeping; nevertheless, there is a knack about it which can only be acquired by experience. It is amusing to hear a man speak about the dust in his store when you know that he does not even dampen the floor before sweeping. This scarcely sounds reasonable, but there are many who do not do this. Dampened sawdust, scattered on the floor, is better than sprinkling, since it absorbs the dust, and the floor may be swept cleaner and more satisfactorily. The old broom in the hands of the average "junior" or porter is responsible for a great deal of the dust on the shelves. The sweeping brush is so much better in every respect that its use will be continued after one trial. While the first cost is greater, they are really more economical than brooms, as one brush will outlast several brooms.

The old method of disposing of the sweeping or rubbish was to sweep it under the stove or in the corner, the

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

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We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

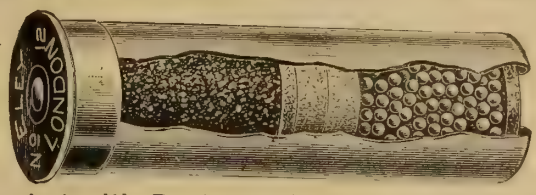
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Corner Front and Yonge Streets, TORONTO.

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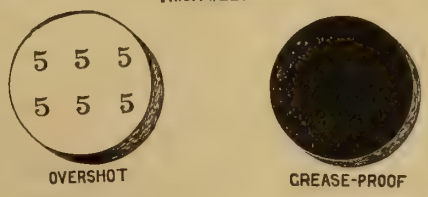
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ELEY'S GUN WADDING





Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. **Wholesale Only.**

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, TORONTO

ENGLISH HOUSE: **SAMUEL, SONS & BENJAMIN**
164 Fenchurch St. London, E.C.

Brass and Enamelled Preserving Kettles,

Granite and Peerless Preserving Kettles,

Brass and Japanned Bird Cages,

Put up in cases assorted.

Coal Oil Stoves, 1, 2, and 3 Burner, Canadian and American Makes.

easiest way to get it out of sight; but the proper way is to burn it wherever possible. If this cannot be conveniently done, it should be deposited in an iron can until it may be otherwise disposed of. It is important that an iron can be used, since there is danger of fire from cigar stumps, etc., where wooden receptacles are used.

Next comes dusting, and it is very essential that this be thoroughly done. Good feather dusters should be used, the windows raised and doors opened, and every particle of dust removed. All shelf goods should be thoroughly dusted at least twice a week, and the upper tiers taken down and thoroughly cleaned. When doing this, the older or shop-worn goods should be placed on the top, where they will be the first sold. Attention to these minor details will do much to improve the appearance of the stock.

After the dusting is completed, the showcases and windows should next receive attention, as a dirty, grimy case is worse than none, because it advertises carelessness and slothfulness instead of the goods as intended. It will usually be found necessary to clean the showcases at least once a week, and the samples should be rearranged frequently. The best method of cleaning glass is to use a cloth dampened with alcohol and dipped in whiting, ending with a polish by means of a dry chamois skin. In this way a brilliancy is imparted which is not attained otherwise. It is a common mistake in cleaning showcases to overlook the metal corners, and the effect is as bad as unfinished work in general. These should be brightened whenever necessary, but all traces of polishing material should be removed from the glass.

In summer much annoyance will be experienced from flies, and at that season windows and cases will require careful attention to keep them clean. An effectual and inexpensive protection against these pests is common colored mosquito netting.

Unless it be possible to have a separate room or a certain part of the storeroom for the purpose of receiving and unpacking goods, much dirt and confusion is unavoidable. Wherever possible this work should be assigned to a responsible and trustworthy person, and all goods received by him should be entered in a book especially for the purpose, and the invoices checked from it. This plan does away with many errors and the unpleasantness of claims for shortages is avoided, and it is not necessary to keep the goods out of stock pending the arrival of the invoices. Under no circumstances should the cases be trucked to the various parts of the store and there opened, as such a plan not only causes a great deal of untidiness, but the goods are frequently lost or stolen.

Attention should be paid to the samples in the showcases and on the drawers, and they should not be allowed to become soiled and rusty. Whenever they show tendencies of this kind they should be replaced by new ones at once.

Another point worthy of mention is the gaudy and senseless placards, etc., often displayed promiscuously around the room. They seldom improve the appearance of the store and in many instances are entirely out of place. Of course there are many which are really attractive and may be displayed to advantage, provided they are not too numerous, but nine-tenths should be thrown in the fire. There are many other points worthy of consideration which cannot be treated here from lack of space, but they will readily suggest themselves to anyone giving the subject the study essential to its successful application, and it is to be hoped that the interest will continue unabated and the advancement in the next few years be as satisfactory as in the past decade.—M. W. Carleton in Metal Worker.

THE VALUE OF PRICE LISTS.

"For what he once had known he ne'er forgot
He kept it, so 'tis said, upon his finger tips."

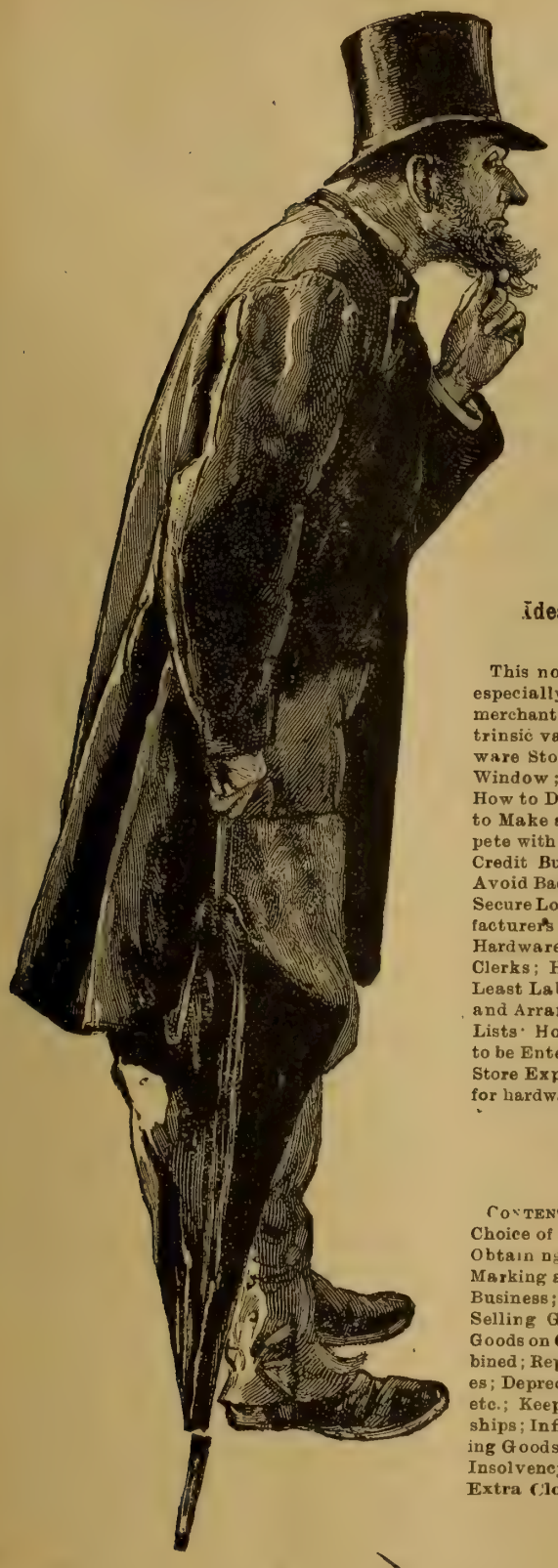
Hardware dealers who have lately taken an inventory of stock hardly need to be reminded of the value of a correct price list for determining the market value of the thousand and one articles which go to make up a modern hardware store. Nearly every dealer, when he has finished his inventory and experienced the annoyance of looking up old invoices and hunting up the price sheets of catalogues for pricing his stock-book, has resolved within himself (if not audibly), to make an effort throughout the coming year to keep his price-book constantly up to date, but, like many other New Year's resolves, the weeks slip by and find him still relying, mainly, upon memory, for current quotations and prices. A well kept price-book is of great value in a hardware store, but unless it has constant attention and correction it soon becomes a snare rather than a help. It means conscientious labor.

A good time to start a new price book is just after inventory, as the items can then be copied from the stock-book,, and sizes added where necessary to complete the lines carried. As new goods are received they are entered, and any changes in prices or list are noted promptly. But the greatest help in the matter of current prices which the dealer of to-day enjoys is found in the carefully prepared "Prices Current" afforded by the trade papers. Take, for example, the excellent record of "current prices" regularly printed. This list includes nearly 2,000 lines of goods, and its variety embraces all the wares from "ammunition" to "wrenches," an immense amount of information when one seriously considers it for a moment. If there is a change in the discount on butts, or wire, or screws, the trade paper is the first to make the matter public—sometimes indicating it even in advance of the change—and dealers who are awake to their opportunities consider this feature alone worth the price of the paper. Many a dollar can be saved or made, by keeping one's eye on the "Prices Current," thereby being in a position to "size the market" and guide your purchases. It is also of great value when a dealer wishes to post himself temporarily on some line of goods for which he has a sudden demand, and with goods he is not familiar. If he has a catalogue of the goods all that is necessary is to refer to the "Prices Current" for the discount, and he is immediately in position to quote prices and secure orders, while his near-sighted competitor who "never saw any good in trade papers" blankly wonders how you knew so much more than he did, although he had written to the factory for prices which had not yet arrived. They may come to-morrow, but the "Prices Current" have gotten in their work to-day—hence the sale. New York stockbrokers are said to read the "stock report" first when they open the morning newspapers, and for good business reasons, and it would seem equal wisdom for hardware men to turn promptly and eagerly to the "Prices Current" as the great feature of their trade journals.

Again, in ordering goods of travelling salesmen, it proves a ready convenience in determining the desirability of quotations. Besides its value in regard to prices alone, it is of benefit as a matter of instruction as regards the various qualities and grades of goods, as well as in the comparative relation of the lists of competing manufacturers. It is also of use as a reminder of the various lines of goods which may from time to time be added to the stock on hand and in a review in miniature of the whole state of the market. Dealers who do not find it convenient to keep their trade papers on file can cut out the "Prices Current" of one issue and separate the articles alphabetically as there arranged and and paste them into an indexed book, with plenty of space left after each article, or letter, to add new goods which appear from issue to issue, and a margin on which to extend the changes in discounts or lists. A very good plan is to have a book of proper width to admit of pasting under "A," on the left-hand side of the page, the printed list of articles found under that letter in "Prices Current," and divide the margin of the book, or the opposite page, into twelve parallel columns, headed with the names of the months. Under each month the changes, if any, may be written, and the dealer is thus able to review the year, and to determine at a glance how the prices have run for any length of time. Such a plan requires hardly an hour's time twice a month, and will widen any dealer's knowledge of the market fluctuations, and develop foresight and business sagacity.

Knowledge is power, yet in the use
Is found the fibre of its strength."

—From Ideas for Hardware Merchants.



It is more honorable to have built a dog-house than to have dreamed of building a palace. . . . . .

BOOKS FOR BUSINESS MEN.

Ideas for Hardware Merchants.

By D. T. MALLET.

This novel book is the only book ever written especially for hardware men, and every hardware merchant will find it of decided help and of intrinsic value. It tells How to Advertise a Hardware Store; How to Dress a Hardware Store Window; How to Select Seasonable Goods and How to Display Them to Best Advantage: How to Make a Success with Hardware; How to Compete with "Department Stores;" How to Turn a Credit Business into a Cash Business; How to Avoid Bad Debts and Increase Trade; How to Secure Low Quotations from Jobbers and Manufacturers; How to Arrange the Fixtures in a Hardware Store; How to Treat and Manage Clerks; How to Keep Your Accounts with the Least Labor; How to Systematize Your Business and Arrange Its Details; How to Arrange Price Lists; How to Meet Close Competitors and How to be Enterprising; How to Properly Proportion Store Expenses, and thousands of practical hints for hardware merchants. **Paper cover, $1.**

How to Keep a Store.

By SAMUEL H. TERRY.

CONTENTS: The Selection of a Business; The Choice of a Locality; On Buying a Stock of Goods; Obtaining Credit on Purchases; Examination, Marking and Arranging of Goods; Advertising a Business; Employment of Clerks; The Art of Selling Goods; Selling Goods for Cash; Selling Goods on Credit; Selling for Cash and Credit Combined; Replenishing Stock; Settling for Purchases; Depreciation of Goods; Losses by Fire, Theft, etc.; Keeping Accounts; Expenses; Co-partnerships; Influence of Social Life on Business; Buying Goods at Auction; Investment of the Profits; Insolvency; Business Qualifications, etc. **12 mo, Extra Cloth, $1.50.**

300 Ways to Dress Windows.

By HARRY HARMANN.

Fully explained. For grocers, general dealers and all lines of business. 250 pages, 150 illustrations. Price, post paid, $1.75 This includes a nickel hammer and a pamphlet on show windows. **SENT FREE**, a sample of Bon Ami cleans windows, show cases, brass, etc., with a 44 page catalogue of window supplies.

Building Business.

By N. C. FOWLER.

Nath'l C. Fowler, jr., the eminent advertising doctor and expert at business, has written a book all about advertising in daily papers, weeklies, magazines, religious and agricultural papers, in street cars, signs, lithographs, novelties, calendars; about cuts and how to use them; window dressing; store decoration; points on selling; keeping accounts; everything about publicity and business outside, written from the merchant's standpoint—a book worth its price to the man who spends $25 for printing, and the more to the extensive advertiser and merchant; 177 great advertisers answer the vexed questions of advertising, presenting individual and collective opinion of positive value—most important chapter written. **Cloth $3.75, half leather $4.50, full leather, $5.**

Self Instruction in Practical Business Qualifications.

By CHAS. S. MCNAIR.

Size, 8½ x 11 inches, 256 pages. **$2.50**

How to Sell Goods.

By B. F. CUMMINGS.

A Prize Essay, **10c.**

METHOD IS THE SECRET OF SUCCESS.

The Publishers of this paper have arranged to accept and transmit to the U. S. and Canadian publishers, orders for these books. Money should be sent by P. O. Order or register letter to

THE J. B. McLEAN PUB. CO., LTD.
10 FRONT ST. EAST,
TORONTO.

BUSINESS CHANGES.

CHANGES.

J. W. Harper, blacksmith, Winona, is out of business

B. McKenzie, blacksmith, Kimberley, has sold out to F. Jameson.

John Milne & Son, plaining mill, Huntsville, are reported to have left.

John Wasman, blacksmith, Cranbrook, has been succeeded by Wm. Steiss.

Wallace & Co., general merchants, Cambray, have been succeeded by J. C. Ray.

N. F. Baker, general merchant, Ingonishe, N.S., has registered consent for his wife to do business in her own name.

H. Stevens & Sons, general store and lumber, Grand Falls, N.B., have been succeeded by the Stevens Lumber Co.

SALES MADE OR PENDING.

The general stock of O. A. Prall, Warkworth, has been sold.

W. Flaherty, general merchant, Northern Bay, has applied for an insolvency declaration.

The stock, etc., of the estate of the Toronto Drop Forge Co., New Toronto, is advertised to be sold.

The creditors of M. P. McCuaig, general merchant, Dalhousia Station, Que., are preparing a statement.

The Pierce Co., furniture, general store and mills, Marmora, is advertising furniture and undertaking business for sale.

The assets of the A. & R. Fleming, coal and wood estate, consisting of $10,130 in book debts and $13,800 in stock are to be sold by tender.

The plant and stock of the Hinton Mills Furniture Manufacturing Company, of Hamilton, have been purchased by Mr. F. G. Rumball for twenty-six cents on the dollar.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

John W. Rockley, harness, Warkworth, has assigned.

F. Mader, merchant, Orillia, has assigned to Chas. R. Gray.

E. Langile & Son, tinware, Spring Hill, N.S., has assigned.

G. F. Macdougall, coal and wood, Toronto, has assigned to T. E. P. Trew.

R. H. Carter, contractor, Windsor, Ont., has assigned to Frank St. Louis.

F. Hatch, hardware, Waterford, has assigned to C. B. Armstrong of London.

Boomer & Co., general merchants, Point Edward, have assigned to M. A. Saunders.

J. F. Weston & Co., stove manufacturers, Tilsonburg, have assigned to G. N. Hodgson.

R. M. Woodward, general merchant, Lower Nicola, B.C., is offering to compromise at 75c. on the dollar.

James Ford & Sons, furniture dealers, carrying on business at 178 Queen street east, Toronto, for a number of years, have been unable to meet their obligations and have been compelled to hand over their estate for the benefit of their creditors to Eckardt & Young. The estate is small, but the liabilities will slightly exceed the assets.

Doole & Co., plumbers, 493 Queen street west, Toronto, have made an assignment to G. L. Kavanagh, 23 Scott street. The estate is small.

Zepherin Perreault, contractor and trader, Montreal, has assigned at the instance of Richard White, with liabilities of about $15,000. Principal creditors: Creditors of the Canadian Roofing Cement Co. (insolvent), $2,327; Roy & Roy, $700; Richard White, $589; J. Greenshields, $814; five notes to P. Z. Chouinard, total amount, $3,200; J. N. Buist (mortgaged), $4,500; P. Z. Chouinard (mortgaged), $3,000. Mr. Richard White is provisional guardian, and a meeting of creditors will be held on the 12th inst.

PARTNERSHIPS FORMED AND DISSOLVED.

Thomas Mason has been registered sole proprietor of the firm of Mason & Co., Montreal.

Fulton & Mills, commission and manufacturer's agents, Truro, N. S., have dissolved.

The Wilkinson Truss Mfg. Co., of Galt, (Ltd.), give notice that they will apply for incorporation.

E. Sigonier and O. Watts have been registered to carry on business as hardware merchants, Montreal.

A co-partnership has been registered by George E. Pinco under the style of the Berwick Iron Foundry Co., of Berwick, N. S.

Thomas Mann has registered that he will carry on business as hardware merchant under the firm name of Mann & Co., Montreal.

Saunders & Co., stoves and tinware, Goderich, have dissolved. Alex. Saunders retires and C. J. Harper is admitted. Style unchanged.

Elie Mayer and Marcelin Paquette, of Montreal, have registered to carry on the business of builders under the firm name of Mayor & Paquette.

Ludovic de la Vallee Poussin, doing business alone as E. L. de la Vallee & Co., engineers, at Three Rivers, has ceased to do business as such.

Partnerships have been registered in Montreal between Ludovic de la Vallee Poussin, civil engineer, as general partner, Gustave de la Vallee Poussin and M. F. B. Mathy's special partners, as contractors under the name of E. L. de la Vallee & Co.

FIRES.

F. W. Wright, general merchant, Lower Ireland, Que., has been burned out; insured.

Pidgeon Fertilizer Co. (Ltd.), manufacturers of phospates, Windsor, N. S., has been burned out.

W. H. Eastman's blacksmith shop and contents at Minden, were destroyed by fire last week. The origin of the fire is unknown. Loss about $700; insurance, $400, in Lancashire.

DEATHS.

Joly Omer, carriage maker, Augers, Que., is dead.

J. B. L. Jones, general merchant, Wellington, B. C., is dead.

C. B. Whalen, general merchant, Boiestown, N. B., is dead.

William Elliot, formerly an active member of the wholesale drug firm of Elliot, & Co. Toronto, died Saturday. He was nearly 81 years of age and his death had been expected for some weeks. Deceased was born at Hammersmith, Middlesex, Eng., in December, 1812, and in 1827 followed his father and family to Dundas, Ont. In 1834 he took up land in Eramosa township and shortly afterwards married Mary Oliphant, who predeceased her husband about three years. Though successful in farming, for the sake of his family he gave it up and accepted a position in the house of E. Leslie & Sons, who carried on an extensive business at Dundas, Toronto, Kingston and London. He was successively connected with the firms of Elliot & Thornton, Dundas; Lyman, Elliot & Co., Toronto, and Elliot & Co., Toronto, and retired from active business in 1886. Among the many honorable positions he has held was that of president of the Toronto Board of Trade, president of the Ontario College of Pharmacy, president of the People's Loan and Deposit Company. Deceased leaves five children; Mr. R. W. Elliot, Mrs. James Watson, Mrs. J. G. Scott, Mrs. Sutherland Stayner and an unmarried daughter.

CORDAGE REORGANIZATION.

There were no new developments in the affairs of the Cordage Company on Saturday. Wall street, however, was more or less favorably impressed with the suggested plan of reorganization, which contemplates an amalgamation of the large companies not now in the Trust with that organization.

These concerns are, it is claimed, sufficiently strong in themselves to defeat the reorganization of the Trust on a paying basis, unless conciliated or incorporated with it. What lends credit to the rumor that the plan will be carried out is the recent compact entered into between John Good and Receiver Young of the Cordage Company, to sustain the price of binder twine. The two competing interests in this arrangement were brought together by Washington E. Connor, who is interested in the mater on behalf of the stockholders.

The large creditors of the Cordage Company are said to favor the idea of its rehabilitation upon the lines stated. If the shareholders succeed in securing a recognition in the committee it is believed that the common stock will cease to be regarded as a speculative football in the market and assume a fair degree of stability.—N. Y. Bulletin.

TORONTO CUTLERY CO.,

M. MAYER, Propr.

65 and 67 Yonge Street, Toronto

Imperial Razors

Joseph Allen's NON-XLL Cutlery

T. C. Co.'s Shears and Scissors

G. A. Mix & Co.'s Chisels

The Most Complete Lines of all Kinds of Cutlery in the Market.



S.S. SMOKELESS POWDER is the best Made by the Smokeless Powder Co., of London, Eng. A stock kept in Montreal. 25 lb. Drums, 2lb. Cannisters, ½lb. Cannisters. Send for Prices. WILLIAM DARLING & CO., Wholesale Hardware Merchants, 30 St. Sulpice Street, Montreal.

A FEW REASONS WHY

You should Keep your Stock fully Assorted With

Boeckh's Superior Brushes

They are always reliable and as represented.

They are guaranteed in every particular by the manufacturers.

They are made of the very best material and workmanship

They are sold at closest possible prices.

They are finished and put up in neat and attractive shape.

They are well known throughout the Dominion and are popular with all classes of consumers.

They are handled by all leading Hardware and Paint and Oil trade.

See that the name "BOECKH" Is on every brush.

Boeckh's Flexible Bridled Brushes.

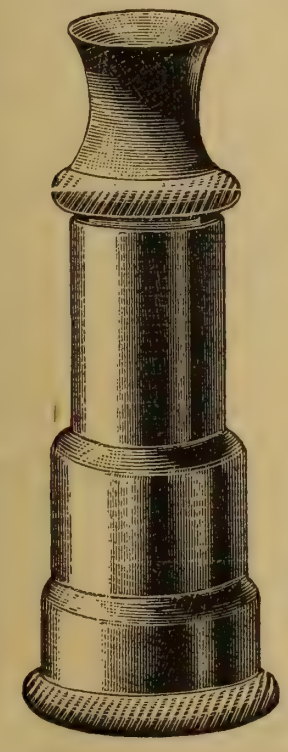
Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

TORONTO, - CANADA.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it.

It is impossible for this pipe to get out of order

Give it a trial and you will use no other.

Hamilton Brass Manufacturing Co.

HAMILTON, ONT.

WHEN IN WANT OF

LAWN MOWERS

Write The James Smart MNFG. CO., Ltd.

Brockville - Ont.



The Largest Assortment.

The Lowest Prices.

The Promptest Delivery.

Brockville Lawn Mowers

The Standard for Easy Running, Durability, and Handsome Appearance. Every machine guaranteed.

VIRTUE WINS ITS REWARD.

I have just finished the perusal of the several essays from your subscribers on the subject of "What are the points which make a clerk useful," and the ideas advanced in such are well conceived and excellently set forth, writes a correspondent of N. Y. Metal. All of these essayists, however, prognosticate a sure degree of success to clerks who cultivate and practice the commercial virtues of industry which do not always materialize.

Now I was a boy of Sunday School vintage, so to speak, of prizes, home conservatory culture, and as I entered a business career at the age of sixteen my good mother enjoined me to always study my employer's interests to the exclusion of my own, placing implicit confidence upon the justice of reciprocation later on. After several years of fly chasing, dusting, carrying parcels, and so forth, I became a junior clerk. In this capacity, in many particulars, I anticipated your correspondents in the voluntary performance of services, which they suggest as contributing to the mutual benefit of the employer and employed. Such unprecedented conduct filled my fellow clerks at first with wonderment, distrust, and which from there passed through the several stages of derision, satisfaction, delight, and finally "salting" and "soldiering," because the boss was prone to periodical fits of restoration, renovation and bustle, which was extremely distasteful to them, and they recognized in me a safe haven from tempests.

I became, therefore, their "pie," "pudding," "meat," and "vegetables." There was a dewy freshness in me to their weary eyes which induced them to recline in my shade and cast all their burdens upon me, because my perennial industry was accepted by my employer as being inspired by these seniors, who duly received the credit for the smart appearance of the store, and thus my voluntary application in moments of leisure became an established duty and very hard to perform during the busy season. I still persisted, having great faith in my mother's prophecies, and as I possessed an active temperament, continuous employment was to my taste.

Aside from his physical system my employer seemed to have none other, and while he assumed to manage the details of the business in general he seemed to bear the same relation that a drum major bears to a regiment. No individual clerk was assigned to report depletions of stock, soiled goods, or other matters of vital importance, and the clerks in general had no objection to these circumstances, as they observed that it was easier to answer the customers' enquiries by "we have none" than selling the goods. Young as I was (twenty) I noted this, and anticipated approaching exhaustions by memorandums for submittal to the "tycoon," brought forth the soiled lots for his inspection and repairing, and this in time was regarded by all as my particular province, and was added to my duties, while an occasional omission in this respect on my part was visited with stern displeasure.

Among the vices which Goodsoul, my employer, indulged in was the frequent purchase of job lots, anything really unsaleable; and these lots, as I recall it, were almost invariably hauled from the station on Fridays, and as I felt an innocent pride in the appearance of the store on Saturday, our busy day, a dementia of orderliness would inspire me to remain alone to an unholy hour of the night for the purpose of storing them away. This involved a somewhat complicated and unassisted jugglery with the hatchway rope, which at times was highly exciting, and even now in my old age I retail a vivid recollection of an experience with a cask of crockery and a "kink" in my shoulder blade at 10 o'clock one night, that I carried home to a sleepless pillow, by reason of a seriously disturbed action of the valves of the heart. That nothing broke was surely an intervention of Providence. No observation was made by anyone after these nocturnal dissipations, because I presume I was unanimously regarded as a fool.

My agreeableness of manner promised to assist me to an early grave, for so anxious was I in my efforts to please and to sell that my services were usually sought by the frequent buyer to the exclusion of my fellow clerks, who stood idly by discussing many nothings. When it became recognized that my percentage of breakage in packing glassware was very low I was yielded the preference and monopoly of that department. Later on it was my misfortune to be very successful in collecting several ancient accounts, and to this unfortunate circumstance I attribute my appointment as the regular collector.

We once erected in the basement a heating furnace which we could not sell, and this apparatus had a most voracious appetite for fuel, an impaired digestion and a deficient circulation, and after futile efforts of the porter to arouse it into energy, my curiosity led me to study the principle of construction and radiation, and with such success that with a minimum of expenditure of fuel it produced a maximum of heat. Goodsoul's warmth of feeling induced him to appoint me its regular attendant thereafter, and in this service I was virtually clothed in "sackcloth and ashes" of despair and penitence.

I had been with the house for seven years and scarcely reveling in all the luxuries of life at eight dollars a week. I once modestly and delicately conveyed to Goodsoul the yearnings of my soul for an increase. He heard my petition silently, sadly, reproachfully, and with an astonished expression of countenance and then said he "would think of it." His was apparently a laborious train of thought, because three months afterwards I was constrained to remind him of it, to his pain. He told me that I would surely be properly advanced "as I progressed in acquiring a knowledge of the business," and as a guarantee of such results, mentioned that both Fever and Ague, who had been with him respectively fourteen and sixteen years, were receiving $12 and $13 weekly, and that I might hope to do as well. He deemed it as a worthy ambition for me to hope to succeed them to such princely income after they should die of old age, or marry, and thus be reduced to starvation. He finally agreed to advance me $50 yearly. I remember that the numeral was uttered with emphasis because it sounded louder than a dollar a week.

With this promotion I perceived that he felt he had a claim on me for further service after hours, and it was not uncommon for him to ask me around to his house to hang a few pictures, file out some duplicate key blanks, or cover some library books for a Sunday school of which he was the superintendent, and very frequently (for he was extensively connected) to contribute some last sad duty in the mortuary services and interments of his relatives, thus depriving me of the half holiday which my fellow clerks enjoyed on such occasions.

It will be understood, of course, that I neither dug the graves nor preached the sermons, and I really believe that Goodsoul only regretted that I did not possess the necessary qualifications for such offices.

Yet with all my efforts I was not considered the very best of salesmen. The rule of the store was, "Sell the goods honestly if you can, if not, why sell them." While no obstacle presented itself to the execution of the first injunction, I was fairly successful, but when ambiguity, resorting to subterfuge, or direct lying was concerned I was completely outclassed by my lazy fellow salesmen, who would lie from choice and love, and were generally discovered, to the discredit of the house which gave countenance to such a policy. Thus while my honesty in one direction was unfavorable to his purpose he availed himself of it by asking me to assume the duties of bookkeeper and cashier, whom he had dismissed on suspicion of petty peculations, and in this act exhibited a complex and elastic line of moral reasoning that filled my mind with tons of thought.

It was his greatest act of kindness ever conferred on me, because I speedily acquainted myself with costs, and office work in general, and when, two years later, I was offered a respectable financial backing by a defeated opponent of Goodsoul for a church deaconship I opened a store across the street, and by new stock and fair system of conduct proved to him in several years that he was not in it.

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,
Agents.
MONTREAL AND TORONTO.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.
Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.
FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,
CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

FIRE!

McCAUSLAND & SON

Beg to inform their customers and friends that they are in a position to fill all orders with promptness and dispatch, notwithstanding the recent fire in their premises. . . .

72 to 76 King St. W.

This Machine cannot be surpassed for smooth work, light running and durability. The drive wheels are 10½ inches in diameter, and warranted to cut grass 6 to 8 inches high. ALL GOODS WARRANTED.

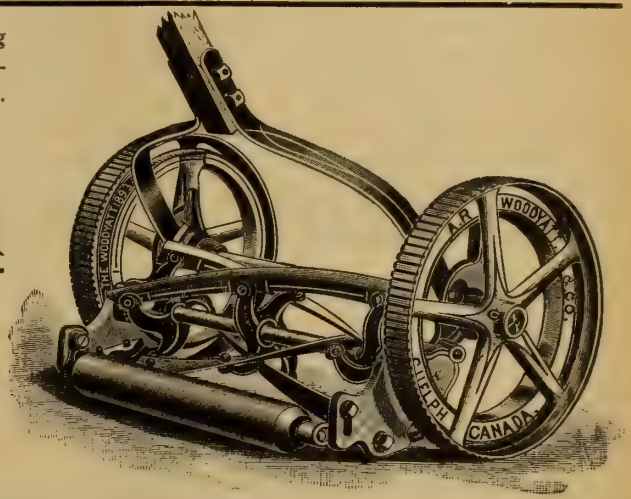
. . **1893** . .

THE "WOODYATT" LAWN MOWER

Light, Durable, and Efficient.

Now On Sale by all Wholesalers.

A. R. WOODYATT & CO. GUELPH, ONT.



. . THE . .

"ETNA"



. . HOT
. . WATER

BOILER

We claim is perfect. It is the original Round Boiler, patented by U. Beaupre, Dec. 1st, 1880 and May 2nd, 1889. Each year improvements have been added; and to-day it stands at the head.

We are willing to give any guarantee necessary to protect Architects or Contractors, that the Boiler will do all we claim for it.

The Boiler costs less than those of our competitors, and we will assume all risks.

We are in the field to stay and are bound to push this Boiler to the top rung of the ladder.

The Boiler previous to our purchasing it, had never been properly advertised or pushed, consequently, is to-day not as well known as some other makes.

Since buying out the former maker the sales have increased over 200 per cent.

If you have not a cut of same, drop us a card and we will be happy to forward one with full particulars.

As we said before, the Boiler is perfect, the price less, and we will guarantee it in every particular.

We have also bought most of the Grand Universal line of Patterns from the Estate of J. M. Williams & Co., of Hamilton.

We can supply all Repairs at the Regular trade price.

We still make the old reliable line of "Leader" Stoves.

Kindly remember us when any thing we manufacture is needed by you.

Wm. Clendinneng & Son, 145 to 171 WILLIAM STREET **Montreal Que.**

BUYERS OF

Cutlery

WILL find it to their interest to see our samples before placing Spring orders. A choice assortment in stock of Jas. Rodgers & Co.'s and E. M. Dickinson's goods at

SPECIAL PRICES.

A. C. LESLIE & Co.

Manufacturers' Agents

MONTREAL and TORONTO.

You can lose more than we do by not subscribing for this paper.

MUNN'S LIQUID GLUE

IS THE BEST.

Kennedy Bros., Agents

101 Bay Street, TORONTO.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.

GALVANIZED SHEET IRON. SP



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS.

METALS.

Tin.

Lamb and Flag—		
56 and 28 lb ingots, per lb	23½	24
trip "	25.	25½

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
M.L.S. equal to Bradley		
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 25	4 50
I.X., "	5 25	5 50
I.X.X., "	6 25	6 50
I.XXX., "	7 25	7 50
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cokley Grade—	
X.X., 14x56, 50 sheet bxs / 14x60, " / 14x65.	6½c, 7c

Tinned Plates

72x30 up to 24 gauge	6½	6½
26 "	6¾	7
28 "	7½	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
⅜ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2⅞, 3
22 to 24 "	2⅝, 2¾
26 "	2¾, 3
28 "	3 , 3¼

Canada Plates.

Blaina	½ bright	2 75 ....
Abercarne		2 75 ....
Lion		....

Iron Pipe.

Wrought 62½ and 5 p. c. to 65 p. c.
Galvanized, 37½ to 40 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4⅞ 4⅞
" ⅜ " "	4⅞ 4⅞
" 7-16 " "	4¼ 4½
" ½ " "	3⅞ 4
" ⅝ " "	3⅞ 3⅞
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 12½	0 13
Lake Superior	0 13	0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22	$0 25
" round & square 1 to 2 in	0 20	0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16	0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17	0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26	0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 19½	0 21
" 35 to 45 " "	0 17½	0 18
" 50 lb and above per lb	0 16½	0 17

Boiler & T. K. Pitts.

Plain Tinned per lb	....	0 21
Spun " "	....	0 25

Wire.

Pure, in coils—		
From 1 to 20 gauge	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20	0 21
" " 27 to 30 "	0 23	0 25
" " 30 and up	0 26	0 28
Sheets, hard-rolled 2x4 ft.	0 21	0 23

Zinc Spelter.

Foreign, per lb	0 05	0 05½
Domestic "	0 04½	0 05

Zinc Sheet.

5 cwt casks	0 05½	0 06
Part casks	0 06	0 06½

Lead.

Imported Pig, per lb	0 03½	0 03¾
Domestic "		0 03¼
Bar, 1 pound		0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04¼	0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04⅜	0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)	0 17	0 19
Standard	0 16	0 18
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12	0 13
Other makes "	0 11	0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt		4 75
No. 1 Do. "		4 50
No. 2 Do. "		4 25
No. 3 Do. "		4 00

Prepared Paints.

(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	....	$1 20
2nd qualities "	....	1 00
Barn (in bbls)		0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.c wt	1 35	1 40
" " (J.F.L.S.) " "		2 75
" " Royal " "	1 10	1 15
Venetian Red " "		1 50
Venetian Red, (best) "	1 80	1 90
English Oxides per cwt		3 25
American " " "		2 25
Canadian " "		1 75
Paris Green, per lb	0 13	0 15
Burnt Sienna, per lb		0 08½
Burnt Umber "		0 05
do pure		0 08
Drop Black "		0 09
Chrome Yellows "		0 12
" " Lemon pure, 8 lb. tins, per lb		0 19
Chrome Greens "		0 12
Golden Ochre		0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 70
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	2 00 2 25
Hard Oil Finish "	1 30

Linseed Oil (in bbls)

Raw, per gal	0 60	0 62
Boiled "	0 63	0 65

Turpentine (in bbls)

Selected Packages, per gal	0 45	0 47

Castor Oil.

Best, per lb	0 09	0 09½

Cod Oil.

Cod Oil, per gal.	0 48	0 50

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet makers	0 17	0 18
White	0 16	0 17
London Town	0 7½	0 08½
Gelatine	0 22	0 27
Strip	0 16	0 17
Coopers	0 17	0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer-
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per 1 lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmcur's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—Socket, Framing and Firmer

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 45 to 47½ p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.25	....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb . 0 25 0

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 12 in., per set 0 00 0 04½
14 to 20 in., " 0 00 0 03½
21 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

Philadelphia 1892 Improved

7½ inch Wheel. 4 Blades.

12 in.	14 in.	16 in.	18 in.
$4.40	$4.65	$4.90	$5.40 list

LAWN . . MOWERS

. The Woodyatt 1893 .

10½ in. Wheel. 4 Blades.

12 in.	14 in.	16 in.	18 in.
$6.75	$7.00	$7.50	$8.25 list

Liberal Discounts to Trade, and Prompt Shipments Guaranteed.

BOWMAN, KENNEDY & CO., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 6 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., per doz. 85 to 3 00
ronze, Berlin, per doz .. 2 75 3 25
ronze Gem, " 6 00 9 00
ava " 8 75 10 00
hutter porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)
1. Either Canada or American Pattern.
Basis—50 to 60 dy 2 30
40 dy 2 35
30 dy 2 40
20, 16 & 12 dy 2 45
10 dy 2 50
8 & 9 dy 2 55
6 & 7 dy 2 70
American Pattern Only
from 4 to 5 dy 2 90
3 dy. (lath) 3 30
3. Canada Pattern Only
from 4 to 5 dy 2 80
3 dy. (lath) 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond 12 00 15 00

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 35 per ct.

Nails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross 1 00 4 25
" Carpenter 2 25 3 60

Picks

Per doz 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz 1 35 2 00

Pruning Shears.

Per doz 4 00 5 50

Pulleys

Hothouse, per doz 55 1 00
Axle. 22 33
Screw 27 1 00
Awning 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " 55 per cent.
Burrs, Iron, 30, 33½ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	18	20
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.

Hack, complete, each 75 2 75
" frame only 75

Saw Sets.

Per doz 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz 3 25 4 00
Bench iron per doz 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen 1 25
3 o dering Irons.
Per lb 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons .....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.
Stove Polish, (Catchpole's).
Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 51½ per cent.
Channel nails 5c. lb. off list.

Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz ..... 1 [illegible] 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4¼ 4¾
" 4 " 4 & 6 " }
" Plain twist, 2&3 wires
" Steel thorn and ribbon 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 80 1 [illegible]

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c.
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 33½ to 35 p. c dis.
Diamond, dis. 33½, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

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REGISTERED TRADE MARK FOR WM. ROGERS, KNIVES, FORKS, SPOONS

MANUFACTURERS OF THE

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Scotch . . English or American

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44 Price Street, TORONTO

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Nails, Hinges AND Buts

Manufacturers of every description of these goods.

THE HATHEWAY PATENT FENCE WIRE.

Pat. Nov. 19, 1889.



Above Cut Is One-half Actual Size.

The Hatheway Patent Fence Wire, the most popular fence wire throughout the United States, and fast gaining that position in the Dominion of Canada, as it contains all the requisite qualities of a fence wire, being handsome, strong, visible—seen at a long distance; will not sag or get out of shape; allowance for contraction and expansion, heat and cold; being broad, requires less strands to make a complete fence; easily put up, splices itself; will not injure stock. Put up in spools of 120 lbs. each. For sale by all the leading hardware stores in the Dominion.

Manufactured by THE COLLINS MFG. CO., 81 Adelaide st. E., Toronto.



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OF ALL DESCRIPTIONS

Special Lines Made to Order.
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Dominion Wire Mnfg. Co., (Limited)

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WORKS AT LACHINE, QUE., Near Montreal.

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2 x 4 Barb
Plain Twist and
Strip Fencing

And Staples for same.

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ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

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"PITTSBURGH"

And see the Great Difference.



In every point you will see the vast superiority of the . . . .

"PITTSBURGH"

THE central draft in one is perfect, the other you will find fault with. See the wick-screw in The "Pittsburgh," see if the other has anything like it. Which is the simpler? The "Pittsburgh," of course. A child can take it apart without any trouble.

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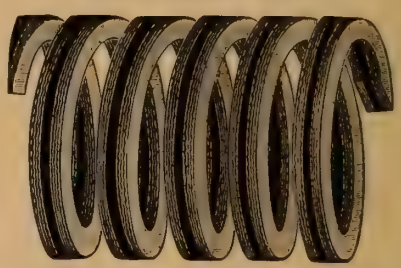
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Price per lb. $1.20. Special Discount to Dealers.

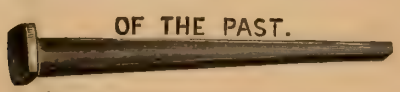
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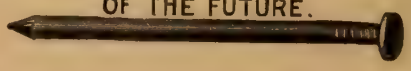
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AND METAL MERCHANT

VOL. V. TORONTO, JUNE 17, 1893. No. 24.

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BEST ANTI-FRICTION METAL FOR

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They do not run into much money and the profit is large. We have constantly on hand all kinds of Artists' Materials from the well known makers . . . .

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Galvanized Tackle of all Kinds

RICE LEWIS & SON, LTD.

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Steel-Clad Baths

Manufactured and Patented in

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UNITED STATES

Also Patented in Australia.

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TORONTO

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Vol. V. TORONTO, JUNE 17, 1893 No. 24

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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The representatives of an American syndicate of capitalists have for some time been offering to locate smelting works in any Canadian city that would comply with their conditions. These conditions were by no means modest. Among the places with which negotiations were opened was Toronto, but they were soon broken off. Next communication was opened with Hamilton. The Ambitious City has many advantages as a manufacturing centre, facilities for shipping by rail and water being excellent; but upon these the syndicate could scarcely have set much value, for large was the bonus and special the privileges they asked. After many conferences upon the matter the City Council approved of a measure agreeing to grant, subject, of course, to the approval of the citizens, a bonus of $75,000 for the promotion of iron smelting works, and the further sum of $60,000 for the promotion of steel smelting works. For the privilege of getting the smelting works, the citizens, judging by the tone of the press, do not seem particularly opposed to paying the price asked, but opposition has arisen over the site for the location of the works. According to the agreement the corporation is to purchase seventy acres of land at Huckleberry Point, all but nine acres of which are outside the city limits. And here it is that the shoe pinches. It is with good reason urged that if Hamilton is to pay the syndicate for starting works there that they should be within the city limits. A man does not, when erecting a costly building, put six-sevenths of the structure on his neighbor's lot. Why then should Hamilton's citizens tax themselves for an industry which will be practically outside the municipality. Judging from the outlook, it is scarcely likely that they will.

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Winnipeg is one of the most progressive and promising cities in the Dominion, and is destined to be a great and important manufacturing and commercial centre, but rapid as has been the growth of the Prairie City it has not, to the minds of some of her citizens, been sufficiently so in a manufacturing sense. For holding this view they are chided by the Commercial, who points out that growth in the direction indicated is handicapped by the cheaper labor that obtains in eastern Canadian cities. "If we take the city of Toronto, for instance," it says, "where the wages paid for skilled labor is probably higher, on the average, than any other eastern city, and compare it with Winnipeg, we find that the wages of the skilled mechanic are in the neighborhood of fifty per cent. higher in the latter than in the former, and what is still worse, it is difficult if not impossible to see where this gap can be to any material extent narrowed as matters now stand. Even with this great difference in remuneration, employers here, who required skilled labor beyond the limit of the local supply, often find it hard to induce eastern artisans to locate in this province." Winnipeggers, it seems to us, need have no fear regarding the future of their city as a manufacturing centre. Its very situation is a guarantee of its possibilities in this particular. In the Province of which it is the capital is springing up an agricultural population which promises to be the best and most prosperous in the world; its railway facilities, which are now good, promise to be even better, especially when the iron horse shall open up communication between it and St. James' Bay; its waterways, like enormous arteries, run for thousands of miles into the interior; and last, but not least, Winnipeggers have faith bordering on enthusiasm in their Province. In the face of all this who is there that shall say that Winnipeg has not a great manufacturing future before it?

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Public carriers like railway and steamboat lines have often much to contend with, but they are not always the grieved. On the contrary they are too often the aggrieved. Shippers know this to to their sorrow. And the result arises—or at any rate appears to—from a misconception of the relation railway bear towards the public. From the lofty and arrogant air they too often assume it is evident they conceive themselves to be the masters instead of the servants of the public. Of course there are exceptions to every rule; but when these public carriers get off their perch it is usually to court a bonus, seek a right of way, or to solicit patronage when compelled by keenness of competition to do so.

* * *

A railway is just as much a business enterprise as is an ordinary mercantile venture, and its patrons are just as much entitled to courtesy and attention as are those of the other. But again and again incidents are brought to the light of public gaze demonstrating that this too often does not obtain. A few days ago a Toronto evening paper published an interview with a commercial traveler in which were adduced samples of the treatment recently accorded himself and other drummers by the Grand Trunk railway. Briefly stated, they told of flagrant baggage overcharges, inconveniences, insolence and incivility from employees responsible for the mistakes. The fruit of these grievances has in some instances already appeared in a transference of patronage where possible to a rival line. This is but a sample of what is occurring with more or less frequency from time to time on the G. T. R. Owing to the treatment they have received from that company in the past there are numbers of mer-

chants and grain men who prefer to ship by any other line when possible. Some in fact do not mind going to a little inconvenience and even extra expense in order to avoid sending by it, such for instance as shipping merchandise to a town into which the G. T. R. only runs, over another road and teaming it from the nearest point on that road to its destination. In the face of such conditions it is not surprising that the annual and semi-annual reports of the Grand Trunk should show such poor results or that many of its shareholders should exhibit so much discontent.

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The man who will thoughtfully look around will come to the conclusion that, compared with other countries, the financial condition of Canada is not bad after all. True the country is not growing as fast as it might or ought, but fortunately we are not experiencing a financial crisis like that of Australia, an unsettled and panicky feeling like our cousins across the border or the heavy depression of Great Britain. Canada is all right The little indispositions that she now and then experiences are only temporary. Chronic diseases she has done. All that is wanted to build up a big, strong and prosperous country is confidence in our resources, the will to push and persevere, and the placing at the head of public affairs—federal, provincial and municipal—men enduced with sound business principles and who place country before party. In the past the trouble has been a laxity in these essentials in all spheres of public life. And although Canada does not stand alone in this particular it is no reason why we should not strive to get more of the desired business element introduced into our halls of legislation. This, however, cannot be accomplished without united effort, and one naturally turns to boards of trade and business men's associations to move in the matter, but at the same time, in movements of this kind as much care as possible should be taken to prevent the idea going abroad that it is being made purely in the interests of one class.

CARE OF WIRE ROPE.

Speaking to a leading Montreal builder the other day a correspondent of HARDWARE was given some interesting facts on the question of wire ropes and the care they should have.

"Now that the building season is on in earnest," said the gentleman, "builders and contractors generally should not be allowed to use poor appliances where public life is at stake. Some accidents that occurred this spring through defective derricks, winches, etc., fully bear me out. In the great number that I have seen where wire rope is used for falls the draws or cones of those derricks do not exceed from six to twelve inches in diameter. This is a great deal below the standard rule, and the tendency in using rope in this way is to strain and break the wires. Besides, the ropes are in many cases left exposed to all weathers, and allowed to rust to such an extent that the wires become crystallized and break. I have known ropes to be used to such an extent that when they have been taken apart the core or bedding has been entirely corroded with rust. This I think most dangerous, and it should have attention by applying some lubricant to protect the rope against the weather, thus giving 75 per cent. more life than ropes otherwise fused. I don't think there would be so much condemnation of the cost upon Canadian ropes if these simple measures weree adopted, for I firmly believe, in fact know, that their quality is equal to any of the imported ones. I believe also that some official should be authorized to inspect all working ropes and not leave such an important item to those who know nothing about such things, for many of the elevators in the city are anything but safe. Besides the peculiar climate of Canada has a great effect on ropes, so that too great care cannot be given."

A GREAT PORT.

A trade report which came under our notice the other day is deserving of mention, as showing the extraordinary progress of the Welsh port of Cardiff and its trade. In fact, only two ports in Great Britain are now ahead of the Marquis of Bute's town in point of position. The relative position of the three ports is as follows :

	Tons.
London	21,759,970
Liverpool	16,986,523
Cardiff	14,495,446

These figures, however, require some detailed explanation, otherwise they might mislead. For instance, to London account should be credited a large addition assumed to be 6,000,000 tons in respect to vessels cleared coastwise in ballast which are not entered at that port, but are reckoned in the others, the customs returns failing to give the figures under that head for London. Then again, as regards Liverpool, the business is far ahead of Cardiff, because the total for the latter is so largely made up of entries in ballast, steamers which fail to secure outward cargoes from other United Kingdom ports being sent thither in ballast to load coal. On the other hand Cardiff tops all ports—leads the world probably—with its clearances foreignwise, for which London totals 6,049,513 tons under this head, Cardiff returns give 6,267,218 tons. It is noteworthy also that the past year is the first in which any United Kingdom port reached the six million limit for foreign clearances.

THE NEW METHOD.

Every merchant should realize that letter orders are playing a great part in the mechanism of the dry goods trade of the present day, and what it is doing for the dry goods trade it seems possible for it to do for other mercantile branches. At least the matter is worth considering. Postage is cheap (although it might be cheaper), and people are utilizing this agent to secure their goods on short notice. This tendency to send in letter orders is simply a part of the tendency which is general among the retailers of the day, to make the wholesaler carry the stock. The retailer won't even order in advance from the traveller but waits until he is actually in need and then orders. He seems to reason, as many men do when lunch hour arrives, he says, "I am not hungry, nor will I eat until I am hungry." But the majority of people eat whether they are hungry or not, and often keep this up until their digestive organs make a failure. So with the merchant who buys too much in expectation ; he loads, and loads until something falls, and then he wonders why the fall ccurred. But the wise merchants will wait as a rule until the demand is almost upon them before they load too heavily ; of course, some little variety must be carried at all times, but what is intended to be emphasized here is the tendency to overload in anticipation.

Letter orders until recently were not given much attention by wholesale dry goods men. The idea, that only travellers could sell goods, seemed to have had absolute possession of their brain, and they forgot or tried to forget the use of printers' ink. But during the past five years a change has been effected in this country. Most of the houses now have a special department for letter orders, and special men to look after them. The cost to the wholesaler of samples and postage is small, because the correspondence can be combined to a great extent, e. g., samples are often sent out in every envelope which contains an invoice. The cost of a traveller is enormous when compared with the cost of letter orders. Last year one house in Toronto sold goods to the value of $225,000 by means of letter orders, which was almost as much as was sold by any three of their travellers. The difference in the expense of selling this amount of goods in each of the two different ways can be readily seen.

The old way of handing a letter order for attention to the department in which the goods were to be found worked out

some ludicrous results. Suppose there were five departments in the house, and a letter order contained the names of goods from each department, and each department was out of the particular line desired, the buyer would receive five letters, one from each department, telling him of this. This is of course an extreme case. Again, the order was filled by a man in each department, sometimes one clerk, sometimes another, and hence the business was never reduced to a system. But now all this is changed. One man controls all the letter orders, and personally chooses the goods. He becomes acquainted with the different classes of customers, learns their peculiarities and idiosyncrasies, their tastes and their indicated but unexpressed desires. This clerk who manages these letter orders is a man who studies people's characters by their writing and thus learns to know them and their wishes. He is never too busy to fill an order carefully and to send that which will best suit the trade. He understands whether it will be satisfactory to fill an order with "the nearest thing" or not, because he learns by long experience the man with whom he is dealing. He knows whether the customer is a cantankerous crank, or a buyer on whom he can impose.

Most of this trade is done by means of samples. Circulars are sent out by some firms, and in other cases extensive catalogues; but the drive trade is done by means of samples. These, if bulky, are sent out in separate covers; but very often sent out with the regular correspondence. If a special line comes in, samples are sent out to the live buyers, and these live men who use letters for ordering are often offered snaps which the dealer who buys only from a traveller never sees.

The class of people who use this way of getting goods are numerous and varied. The man who lives away from a station is liable to be passed by the best travellers, and he is compelled to use letter orders. Dealers in outlying districts, where travellers visit very seldom, find letter orders a necessity of trade. Dealers who do not care to run into the city for the one or two special lines they want on short notice, use the quick travelling mail-car. All dealers use them to a great extent. The wholesalers in Montreal and Toronto receive orders by letter from the remotest districts of the North-west Territories and British Columbia, as well as from the villages in Prince Edward Island, Newfoundland, and Cape Breton. The letter order department is an invention of this electrical age. Its mechanism and despatch is suited to the exigencies of modern trade, with its quickly moving fashions and freaks. It is a modern method for facilitating communication between buyers and seller and thus enlarging the economic market. Only those who have tested it thoroughly can fully estimate the advantages it possesses.

On account of the smallness of the expense to the wholesaler, it must, if generally adopted, gradually lower the margin of profit which the wholesaler would need. As expenses decrease, the competition among the wholesalers will naturally tend to reduce their margins, without injury to themselves, but with great benefit to the retailer.

MARKET QUOTATIONS.

The enemies of trade journals, says The Iron Age, and, unfortunately, many of their friends who entirely mistake their functions, are generally very active in denouncing or reproving them. There are a few men in nearly every line during periods of declining markets. of business, sometimes occupying positions of influence, whose one idea is that every buyer is a natural enemy, and that capacity to deal with him is measured by the success attained in deceiving him. This is the man whose business is booming when half his mill is idle, who represents the market as stiffening when he has offers outright and left to sell at unprecedented prices. He is the one who is always eager to pour into the ears of every journalist his tales of general prosperous trade, and of individual success. He is the one who becomes the violent enemy of the trade journal when he finds at last that while his tales are patiently listened to, they never reach the public. He is comparatively harmless, because his reputation protects those whom he attacks.

There are others who hold that the special function of trade journals is to hide bad news as long as possible, and proclaim favorable developments with the utmost alacrity. When an advance has taken place it must be chronicled at once. A decline must be kept back, and quotations must remain stationary while still a stray buyer exists who has not heard of the lowering in prices. The true office of the trade journal, according to these critics, is to constitute the rear guard in retreat and the picket line in advance.

We hold that it is the function of the commercial reporter to seek the truth persistently and diligently, and to present it fairly and candidly. If developments are unfavorable, the sooner their significance is generally understood the better. It will make the weaker sellers quicker to abandon hope and will make buyers more watchful of their opportunity, thus aiding in steadying the markets. The idea that secrecy was the only safeguard of merchants and manufacturers has been long since abandoned in all the markets of the great staples, such antiquated business methods being now regarded as childish. No one attempts the dangerous and unsatisfactory role of being the special guardian of any commodity, protecting it against untoward declines, or blowing it up during the brief days of expansion.

AMERICAN DEMAND FOR ENGLISH CYCLES.

The enormous growth of late in the American demand for English cycles is one of the chief factors which has led to the present productiveness in the English cycle trade, says the English correspondent of American Manufacturer. This being so a few words as to the condition of the cycle centres on this side may be interesting. Coventry is at present at the head of the cycle trade here in the matter of production. The second place must be given to Birmingham or Wolverhampton. Most people would award the palm without much hesitation to the former city but so enormous has been the growth of the cycle trade in the Black Country town of late that there are good grounds for the manner in which the point is referred to in the annual report of the Wolverhampton Chamber of Commerce issued this week. The years 1890 and 1891 were very prosperous in the English cycle trade, and especially favorable to Wolverhampton. The past year will, however, be memorable in the English cycle trade, chiefly because the supply of cycles during the season fairly exceeded the demand. In other words, competition began to be felt seriously. Coventry suffered far worse than Wolverhampton, however, partly owing to large stocks of old pattern cycles, and chiefly by reason of reckless methods of finance. On the whole, Wolverhampton considerably improved her condition during the past year, and, to quote from the report, "is now third, if not second, in importance as a cycle centre." In view of the fact that Wolverhampton is the original home of the cycle industry it must be gratifying to that community to find that they have to some extent regained a share in a manufacture which, in the opinion of many, ought never to have left them. The chamber adds the following significant remarks, the latter part of which may be commended to all the cycle centres. "Supply has still further exceeded the demand, and the introduction of the pneumatic tire has benefitted the makers of it at the expense of the cycle manufacturer. There is still far too much credit allowed to agents possessed of little or no capital."

The city merchants and householders want to have the Dominion Day celebration here on Monday instead of Saturday. They talk of getting up a petition. The difficulty is that it is a statutory holiday and the banks could not close on Monday.

FUEL OIL ON AN OCEAN STEAMER.

Last week we made a brief mention of the arrival of the James Brand, a tank steamer, from across the Atlantic, having made a successful experiment of using oil as fuel. The captain of the vessel reports that for three days the Brand used oil for fuel,and the manner in which it worked gives conclusive evidence that it will be a complete success. The manner in which the fuel is fed to the boilers is by jets of steam and fuel petroleum which meet under a line of brickwork below the boilers. Sufficient heat can in this manner be generated to force everything to a white heat, while the temperature can be regulated by the engineers according to the speed required. This is the first attempt of a vessel to cross the Atlantic by generating steam with oil as fuel instead of coal, and the result may be very far reaching, especially as the Brand is not an experiment, but a regular cargo carrier, in fact, one of the largest, the carrying capacity being 1,500,000 gallons. The vessel registers 3,780 net tons, and is built of steel throughout. Her length is 345 feet over all, 43 1-2 feet beam, and 29 1-2 feet depth of hold, with triple expansion engines of the latest and most approved type, and Scotch steel corrugated boilers.—American Manufacturer.

A NEW GAS REGULATOR.

The Journal fur Gasbeleuchtung describes a new gas regulator for gas stoves, the invention of Herr Porges, of Vienna, and made by the firm of Robert Kutscher, of Leipzig. It does not depend on the use of mercury in a hermetically sealed tube, but upon the different pressure of saturated vapor (that is vapor in contact with its liquid) at different temperatures. A little closed metallic capsule contains a liquid which boils at a predetermined temperature, say 54 deg. Fahr. If the temperature of the room exceeds this, the liquid begins to boil, the capsule dilates and works certain mechanism which shuts off the gas. The flame burns low until the temperature falls below 54 deg. Fahr., then the liquid in the capsule condenses, the capsule itself returns to its former dimensions, and the gas again flows freely. By the use of a regulating screw the tension upon the capsule can be modified, or pressure put upon it, so that the contained fluid will now boil at some other predetermined temperature. Then the room will have to attain the new temperature before the gas is shut off. In practice, the flame comes to a size at which it is just able to keep the liquid in the capsule at a boil and no more: so the flame remains of constant size (this size being larger in cold weather than in warm), and the temperature of the room is maintained uniform.

STEEL FOR FORGING.

More care has been of late exercised in the selection of steel for forging on account of the rather frequent breaking of forgings under excessive strain, says an exchange. Forgings for piston rods, main shafts, and cranks call for a tensile strength of 30 tons per square inch according to the requirements of some of the best engineers, and even this is regarded under certain conditions as a minimum. Such a tensile strength permits a reduction of area of at least 50 per cent. Some attempt at establishing uniformity of conclusions regarding the various purposes is being made in the government school near Berlin. English scientists and metallurgists are suggesting and recommending that a somewhat similar school of laboratory be established in England.

A PRODUCTIVE CHURN.

In the march of improvement through every field of industry, household as well as manufacturing, the churn has not been overlooked, and the old "dasher" type of that useful article has been improved upon in manifold ways. But the claim which Clermont County, Ohio, makes of possessing the champion churn is nevertheless a sound one, so far as can be judged. It is an old-fashioned churn, made of red cedar, and bound with iron hoops, and has been used by its owner, Mrs. Sarah A. Slade, for fifty-five years. With three churnings per week, its total output is computed to have been 68,640 pounds of butter, worth on an average 15 cents a pound, making its gross earnings $10,296. The poundings and polishings of fifty-five years have made the woodwork of the churn as thin as cardboard, its inside as white as snow, and its iron hoops as bright as silver. It belongs to a model housewife, and is going, we need hardly say, to the World's Fair.

STEAM CEMENT.

Many times little occurrences come up in an engineer's practice where some kind of cement which will stand the heat and pressure of steam can be used to excellent advantage. Perhaps a blow hole in the casting opens up and a stream of steam or water escapes. In such a case it would be most desirable if there was some cement handy which could be put upon the defective spot and would set within a few moments and afterwards remain tight. Many other circumstances often come up where a good cement that would set solid and strong would be found most useful. To be sure, one of the best ways of fixing such things when they occur is to replace the defective by new material, but as this cannot always be done without the expenditure of more time and trouble than is convenient to give it, something that will serve a good purpose instead is desired. A contemporary gives the following recipe for a preparation which, we think, will be found quite useful, as we have often used a cement of similar composition to this: Five pounds Paris white, five pounds red lead, four pounds black oxide of manganese. The whole is to be well mixed, and a little asbestos and boiled oil added. This cement will set hard in from two to five hours, and it is not subject to expansion and contraction to such an extent as to cause leakage afterwards. Leaks that occur in places which are difficult to get at and remedy, may often be stopped by the application of a little cement composed of the above materials in about the proportions specified.—Tradesman.

WHERE ANCHORS ARE MADE.

Visitors to the United States should certainly come to an anchor at Camden, Maine—in fact they should there meet with several of these useful vessel-appendages, for does not the little town "turn out more emblems of hope than all other places in America combined?" A correspondent, upon whom we necessarily pin our faith, and who also occasionally shares our charity,says that "all the stately ships that issue from Maine shipyards look to this village on the Penobscot for their anchors. Scores of sturdy smiths swing their hammers day after day all the year round in the black, smoky, long, low Camden shops, where only anchors are forged. Sometimes the triphammers are going all night about the forges, and the blazing of fires and the ring of the hammers are seen and heard for miles away. Thousands of tons of old iron are purchased by these establishments every year." Judging from these few particulars we can quite understand our correspondent when he somewhat slyly remarks that "Camden is not exactly a place which people 'anker arter' as a residential spot." He then tells in his own sweet way "how the business is done." Perhaps the reader will bear with him. "The material," he attempts to explain, "is cut into small pieces by great shears that clip through the iron as easily as a knife slices a cheese. The pieces are bound into bundles by strong wire, and then fused in the forges. Then they are pounded and welded into the various parts of the anchor, some workmen fashioning the rings, others shaping the flukes, others hammering out the palms, and others forging the shanks. Finally, the 'completers' take the different parts and fuse and weld them into the finished anchor." Our quondam friend does not, however, allow this "description" to pass without some "commentaries" more or less happy. Never, it appears, since he "saw his wedding circlet made" has he been "so pleased with the way the rings are produced." He thinks there is "something fishy about the shaping of the flukes," but "the palm hammering is handily done," although, to be sure, "the shank forging seemed to be performed according to very one-legged methods."—Iron, London.

VIEWS OF ANDREW CARNEGIE.

Shortly before his departure for England Mr. Andrew Carnegie was interviewed by a representative of the Pittsburg Dispatch regarding the iron and steel business.

"Well," he said, in reply to a query, "I do not need to say anything about that; it speaks for itself. One pound of steel for one cent! The robber baron has now ceased to rob and is now being robbed. The eighth wonder of the world is this: Two pounds of ironstone purchased on the shores of Lake Superior and transported to Pittsburg; two pounds of coal mined in Connellsville and manufactured into 1 1-4 pounds of coke and brought to Pittsburg; 1-2 pound of limestone mined east of the Alleghenies and brought to Pittsburg; a little manganese ore mined in Virginia and brought to Pittsburg, and these 4 1-2 pounds of material manufactured into one pound of solid steel and sold for 1 cent. That is all that need be said about the steel business."

"Don't you think the iron and steel business will improve, Mr. Carnegie?"

"Well, in the year 1880 this country made 3,000,000 tons of pig iron and during 1890 she made 9,000 000 tons and used it up in the same way. Three times its product in ten years! It is not reasonable to expect that the country can continue to take so much permanently. The capacity of the country to manufacture is beyond its wants. Some furnaces and some mills must stop, others must restrict production, and until that is done we must expect the continuance of low prices. It is the same all over the world. England is even worse than we are, but she has endured the depression so long that she has now closed many of her works. The longer all parties continue to run the lower prices will become and the more disastrous the stop will be to some of those when the end comes.

"The situation is made more grave by the powers which the courts are now giving to receivers. During previous depressions, when a concern could not pay its debts it stopped, as a rule, and those who were solvent were relieved from ruinous prices. To-day when a concern fails to pay its debts the courts allow receivers to continue running the works, and these insolvent works draw down others which otherwise would have remained solvent. This is a very serious matter, and will prevent recovery longer than usual."

"Is the steel market as dull as it has been reported to be?"

"The country continues to consume a great deal of iron and steel, but it is impossible that such a financial flurry should pass through the country without soon restricting consumption of iron and steel. Many buildings arranged for will be postponed; many new enterprises of various kinds will be postponed, and my belief is that consumption will hereafter be less for some time than it has been."

"What do you think of the condition of the country?"

"Sound, remarkably sound. We have had years of very low prices for all commodities so that a decided fall in prices is not possible. This will prevent, in my opinion, a general panic. If we have good crops we shall recover next year. The demand for agricultural products in Europe promises to be great; if we have poor crops the period of recovery will be prolonged."

"Mr. Carnegie, what about the political situation? Is not that a factor?"

"Yes, and a great factor. The whole manufacturing world is at sea, capital is intimidated, and of course everybody is frightened. We know not what Congress may bring forth. Even if a drastic change in import duties be not made finally, yet the attempt to carry such a measure will bring with it intense excitement, and of course will paralyze business to a great extent. Personally, I do not believe that President Cleveland and the wisest Democrats—and there are many such—together with the Republicans will not be able to prevent revolutionary changes. President Cleveland was not elected on the Chicago platform. He was elected on his letter which stated that he would not be a party to injuring any American industry. I believe that the Republican party, together with a portion of the Democratic party who will follow President Cleveland, will, therefore, finally prevent any revolutionary changes in the tariff. My faith has always been great, others will be less optimistic, and their fears will tend to restrict business; not so much what will be done as what capital fears will be done will cause the greatest amount of trouble."

MAXIMUM SPEED OF ELECTRIC CARS.

The published abstract of calculation by J. Kramer in the Elektrotechnische Zeitscerift on the maximum speed for an electric railway is as follows: "The theoretical maximum speed of a perfect motor on rails is taken at 500 kilometres (310 miles) per hour. This is on the level, with curves not less than 20 kilometres (12 miles) radius, and 12 feet driving wheels. The problam of an electric locomotive and two cars is then investigated at length, and the author appears to have considerable doubts whether the proposed 250 kilometres per hour on the projected Vienna and Buda-Pesth line of Messrs. Canz is feasible. The author would put the maximum at not more than 200 kilometres (120 miles), if as high."

PROFITS FROM FADS.

Several hardware dealers are reaping some profit from the present fad for home made fancy iron work, says N. Y. Metal. This interesting domestic employment has been recently introduced into this country from England, where it has been popular for some time. All that is necessary for the amateur worker to commence operations is to obtain a package of pliable iron strips, a metal saw, plyers, etc., and be possessed of a small stock of natural ingenuity. The iron "ribbons" are bent or twisted according to some design, and the result, if the ingenuity has been properly displayed, is an article of decoration at once graceful and of antique appearance. Such articles as lanterns, grills, lamp shades, five o'clock tea stands, flower bowls suspended from brackets, or mounted on frames, and various other articles of home decoration are easily made. The part the hardware dealers play in this innovation is to furnish the supplies of wrought iron strips which he can retail at considerable profit. Hardware dealers who have publicly announced that they kept these supplies and tools have already reaped in a small way quite a profitable harvest.

THOUGHT THE IRON AGE ENDING.

An interesting outline of the manner in which the Lowmoor iron is manufactured was given by Mr. Windsor Richards in his address as president of the Iron and Steel Institute this week, says Iron and Steel Trades' Journal. Ten years ago many people thought the iron age was ending, and steel was entirely superseding iron, yet last year 1 1-2 million tons of puddled iron were produced in this country, and with improved trade we might produce double this quantity, say in 1895. The president of the institute ten years ago was in charge of the largest steel works in the country, to-day he manages the most famous iron works in the world.

HIS LAST MATCH.

The way was long, the wind was cold,
The traveller's buggy onward rolled;
The traveller on his lonely ride
Thought it high time a pipe was tried.

The pipe was filled, on jogged the mare
Regardless of her driver's care,
For he can to his sorrow find
One only match of unknown kind.

With anxious care he strikes the match,
With joy he sees the sulphur catch;
The glow grows bright, the flame appears,
And soon in smoke he calms his fears.

The way was long, the wind was cold,
The smoke in fragrant clouds outrolled;
The traveller spoke: "Whoa! mare, go steady!
"I'll bet that match was made by Eddy."

ANCIENT LAMPS.

It may be supposed that the first lamps were the skulls of animals, in which fat or oil was burned, says Housefurnishing Review. Shells also used, and this custom survives in some places even to the present day. The shells are those known in Scotland as the "roaring buckie," and might have been made expressly for the purpose. They are spindle-shaped, having one end hollow and pointed, are about six inches in length, and are suspended horizontally by a cord. The oil is placed in the hollow of the shell, the wick passing through the pointed end.

When man began to fashion his household utensils out of clay, lamps were the first thing he made, still, however, for many ages retaining the shape of the shell originally used. The lamps of the Eastern nations were kept burning night and day, and were never allowed to go out—"the putting out of the light" betokening the ruin and extinction of the family. In these countries, where oil was so plentiful and cheap, this was a very small expense, and it has been said that many would rather deny themselves food than the necessary oil for their lamps. It was customary for them when going out of their houses to carry a pot of oil in one hand and a lamp full of oily rags in the other.

These early lamps were the lychna of the Greeks and the lucerna of the Romans. At first they were made of unglazed pottery, and with but one wick; but they gradually assumed more elegant shapes, were made of better material, and the number of wicks increased from two to twelve. Gold, silver, and other metals were after a time used in their construction. From the ruins of Herculaneum and Pompeii have been taken candelabra of wood, marble, bronze and metals of all kinds, and of various sizes, from the little hand-lamp of only one wick to the high and very elaborate floor lamps, not unlike those of the present day, including even those with a sliding shaft.

The base of some of these ancient lamps consisted of a platform or low table resting on three or four feet of a lion, goat, or some imaginary animal. The shaft was sometimes plain, sometimes with a figure at the top of it, which figure supported the lamp on its head; others, again, substituted the figure for the shaft itself, the lamp being placed in its hand. Some of the table lamps were in the form of a tree with the lamps suspended from the branches. Many of the small lamps were shaped like birds, the head and neck curved back, forming the handle, the wick coming from the tail. Numbers of our modern lamps are reproductions of these antique forms.

Candles as we know them were of later date, and were first made by dipping the pith of certain rushes in melted tallow. Strips of cloth, tow, etc., were also used for this purpose, and other animal, vegetable and even mineral oils used in the manufacture of candles. Spermaceti, wax and parafin are employed more than any other materials for making the candles of the present day, their soft light being peculiarly pleasant at table, especially that from the parafin, with their little white shades, or the mystic flow of the little fairy lamps partially concealed by low ferns. In spite also of the facilities given to light our houses both by gas and electricity, there has never been a time when so many lamps have been manufactured or their use so universal.

HOLLOW-WARE.

Hollow-ware consists of the necessary kitchen utensils for use on the stove, explains Housefurnishing Review. It comprises pots, pans and preserving kettles, all of which are made of cast iron. These goods are moulded upon the same principle as are stoves, in so far as being a branch of "floor" moulding, but in stove moulding more skill, and a higher degree of mechanical ability is required than in the moulding of hollow-ware. Another difference between it and stove moulding is a portion of the work in the moulding department is done by machinery. When the castings are done they are wheeled into another department, where they are placed in the mill for the purpose of cleaning or removing the scale from the outside. Now to the annealing department, after which they are taken to the turning-room, where they are fixed in a lathe, and while revolving the inside is made smooth and bright through the application, first, of a stationary chisel that removes the rough portion and then a piece of emery that leaves the surface smooth and bright. When this is done the articles are ready for either of three different treatments they must be subjected to before they are ready for use. These are tinning, enamelling, or varnishing.

If the work is intended to be plain the articles are taken to the varnish room where they are treated to one or more coats of varnish, placed in an oven where they are allowed to bake for a time, and when this is done they are ready for the lids and handles. If they are to be enamelled they are taken from the turning room to the department where this work is done; here they are treated to a preparation, the secret of which is known only to those who prepare it, after which they are placed in an oven where they remain for about 30 minutes, when they are ready for the bails and lids. If the articles are to be tinned the inside is first smoothed up by hand, after which they are taken to the tinning department. Here they are placed on a bright fire kept alive by the working of a foot bellows; the tin that has been melted on an adjoining fire is now poured in until the kettle is one-third full. A pair of pincers in the left hand of the workman assists in turning the kettle so that no portion of it may be allowed to escape the liquid tin, and as it turns it is rubbed hard and swift with a piece of cork especially prepared for this work.

It cannot be said that time has added any improvement to the method of this kind of tinning. It was first done 110 years ago in the same way that it is now. In the meantime some of the other workmen have been engaged in getting ready the lids, bails and handles for the different articles. The lids are generally made of tin, the bails of iron wire and the handles of sheet iron. The lids are stamped out from sheet tin, the bails are cut by machines from coils, and the handles are cut with one machine and rolled with another. From here they are taken to the finishing department, where they are attached to the article for which they are intended and they are now ready for the house wife, who delights in a well-regulated culinary department.

LOST IN WASTE.

A press telegram published in the Pittsburg Dispatch from Pottsville, Pa., says: "The three commissioners, Eckley B. Coxe, William Griffith and Heber S. Thompson, who were appointed in accordance with an act of the legislature of 1889 to investigate the waste of coal, have made a report. The total amount of coal sent to market up to date, as shown by the report, is, from the Wyoming region, about 383,000,000 tons; Lehigh region, 147,500,000 tons; Schuylkill, 289,500,000 tons, or a total of over 820,000,000 tons. This represents about 90 per cent. of the product mined and consumed. The other 10 per cent. was used at the collieries.

For every ton of coal mined the commission estimated that a ton and a half was lost in waste and in the mines. Of the 60 per cent of coal lost in mining at least 25 per cent. was lost in unsaleable or crushed coal. The amount of unmixed anthracite coal is not less than 18,000,000,000 tons.

To work out a solution of saving this 25 or 30 per cent that has gone to the waste bank is properly a great question to solve. A saving of 25 per cent., or 4,500,000,000 tons of coal, will mean for the future of the anthracite coal trade and the carrying companies at the rate of $1.50 per ton to tide over $6,000,000,000.

As a means of utilizing this vast amount of waste coal, the commissioners suggest the use of rotary grates that will carry off the ash as quickly as formed.

BINDER TWINE

Best Makes

Write us for Prices and Special Terms before ordering elsewhere.

H. S. HOWLAND, SONS & CO.,

WHOLESALE HARDWARE

57 FRONT STREET WEST - - - Toronto

American = = Pure Paris Green

IN 100 LB. DRUMS. 1-2 and 1 LB. PACKAGES.

The Toronto Lead & Color Co. (Limited) Toronto.

NOTORIETY VS. KNOWLEDGE.

Many disbelievers in the fact that "knowledge is power" and that "a man of knowledge increaseth strength," entertain the notion that notoriety and noise lead to success. To talk and be talked about is to them the one aim of life. They scheme for place and for public notice, and push themselves anywhere and everywhere so long as they can be seen and heard. Superficiality, buncombe, cant, hypocrisy, self-assertion and unlimited cheek are their chief characteristics. They do not believe with a noted orator that "greatness is of slow growth"; that mushrooms come up in a night, and so do mush-heads."

The old notion is not entertained that "patient continuance in well doing," steady attention to detail, honesty, hard work, reliability, and a thorough knowledge of all that enters into a man's special calling, are requisites if permanency and a competency are to be gained. The applause of the crowd, the flattery of associates are mistaken as evidences of popularity and success.

This class of men are everywhere, even in the newspaper profession and are occasionally found in the grocery trade. They are like comets, which come suddenly, dazzle by evanescent brilliancy, and disappear. As an example of this we have the cutter, with his glaring store front, bombastic advertising and low prices.

He is always offering the "Greatest Bargains on earth," "Immense stock at a sacrifice," "Below the cost of importation," "A bankrupt stock at slaughter prices." Such dealer cannot comprehend how a reputation for perfect service, strict business methods, courtesy, unobtrusiveness, fair dealing, win customers and invite prosperity. Braggadocio bombast, glitter, show, noise, notoriety, constant posing in public, are the factors looked upon as leading to popularity and success.

The world has a fashion of burying the wrecks of trade and commerce as speedily and effectually as old ocean covers with sand the wrecks along the shore, and so the way marks are infrequent, and men not heeding the past, but regarding all men mortal but themselves, push resklessly ahead along a road which invites success but ends in disaster.—Ex.

SHOOTING BY CLOCK WORK.

An aid to shooting, according to a contemporary, has been devised by a Vienna watchmaker, in the shape of a little automatic clockwork apparatus that is applicable to all firearms, and by the aid of which it is said to be possible for troops in the rear of an army to shoot with precision over the heads of those in front without danger to the latter. Reserves will thus be enabled to stand at a greater distance from the place of an engagement than heretofore, and yet take an active part in the fight. It is described as "a piece of clockwork, or small apparatus, by which, if a rifle is held so as to come up to a certain angle of elevation, the whole magazine of cartridges or a single cartridge will be automatically discharged." No details of the instrument have yet reached us, says Invention. It is reported to be simpler and, therefore, more applicable than a similar instrument lately invented in Germany, but, whether it can be brought into practical use depends upon the result of the tests to which it is now being submitted by a committee of the Austrian war office.

PETROLEUM AS FUEL.

From time to time we read of some invention for the burning of petroleum in furnaces which is going to "revolutionize industry" and to "drive coal out of the market," remarks a contemporary. The simple fact is that petroleum has been for years, and still is, used successfully as a steam-producing fuel, and its use in place of coal anywhere is a question, not of the appliance available, but simply of cost. Where oil is cheap and coal is dear the former will be used, as for instance, in some parts of Russia. On the Southwestern Railroad in that country oil is used in many of the locomotives, and the steamers on the Caspian Sea burn astatki, the petroleum refuse from the Baku refineries. In our own country oil is not likely to come into general use as a steam fuel until coal becomes more costly than it is now; not because oil cannot be used, but simply because it costs more.

DECORATING HARDWARE.

There are a great many articles of hardware which for attraction and ornament require more or less painting, enameling or other surface decorations. In a majority of cases the manufacturer is contented with painting the body green and putting a red stripe on it. Red and green as combined colors for decoration are very much in the condition of two cats across a clothes line tied by the tails—one makes the other howl. This is a source of amusement to some classes of people who are interested in animated nature, and the howling of colors is also a source of amusement and pleasure to certain other classes of people. It is not, however, considered very good taste by humanitarians to indulge in this particular form of feline exercise, and to the more highly educated people the combination of red and green in spite of its howling characteristics is not considered the most desirable form of decoration.

It does not usually take any more money to paint or enamel a thing in two harmonious colors than it does in two colors which are widely discordant. Philadelphia machinery for years had a peculiarly quiet and pleasing appearance, because of the almost universal adoption in that city of what was once known as "Philadelphia" grey. It was a quiet color that did not suffer much from coming in contact with dirt, and did not offend the eye. Philadelphia grey is for many purposes a very desirable body tint, because it is well adapted for the harmonious use of colors in striping and decoration. The carmines, the ultra marines, the yellows and the oranges, if sparingly applied, find it a very harmonious background. As mechanical men generally seem to a greater or less degree to be color blind, before doing anything very extravagant or important in this way it would be well for them to consult some of their feminine friends in regard to the matter. Most manufacturers could materially improve the appearance of their work by the judicious following of the advice of ladies. Judging from some recent samples of hardware it would seem that some ladies of most excellent tastes have been doing missionary work of this kind with a surprisingly pleasing result.—N. Y. Metal.

ALLOYS OF ALUMINUM AND ANTIMONY.

Hitherto it has been supposed that alloys of these two metals could not be obtained; in fact, Richards, in his Treatise on Aluminum, says: "Aluminum seems to have but a feeble tendency to unite with antimony and lead." According to M. D. A. Roche, the latest experimenter on the subject, alloys of aluminum and antimony in all proportions can be obtained in several different ways. An alloy can be made by melting aluminum with antimony, chloride or oxide, the latter with or without carbon; still the operation is facilitated by the addition of a flux, such as an alkaline chloride. The simplest process, however, is a direct fusion of the 2 metals in a Perrot furnace at a low temperature. The alloys containing a low percentage of antimony (less than 5 per cent.) are hard and possesses a greater tenacity and elasticity than pure aluminum, yet are quite malleable. According to the author the aluminum-antimony alloys combine with other metals, forming more complex combinations, some of which can be used in the industrial arts. Among these he mentions the nickel and tungsten alloys, which are remarkable for their hardness, tenacity and elasticity, and the silver alloy, which is susceptible of a very high polish.

CELLULOID PENS.

It is stated that in France pens for writing are now being made from celluloid in the following manner: Thin sheets manufactured from celluloid, ebonite, vulcanite, etc., corresponding with the outlines of a pen, are stamped out, punched, and, finally, laid in a softened condition in a press that has been heated, by which means they receive the desired shape.

There is no part of a hardware stock that responds so quickly to good advertising and shrewd management as does the cutlery department. There is profit in being known as having good table and pocket cutlery, shears and scissors in stock, and a wise dealer will work toward this end. But in doing this, he will not forget that a goodly share of his customers will be tempted by the looks and prices of goods, and he will provide for them as carefully as he secures better goods for more sensible folk. —Ironmongery.

CYLINDER LUBRICANTS.

Some interesting practical experiments were recently made to ascertain the expansion of oils under the action of steam, says an exchange. This point, together with its resistance of intense heat and freedom from acid-producing properties, fixes the value of a cylinder lubricant. Since the universal acceptance of hydrostatic lubricants as the only correct method of feeding, the minimum quantity of oil for a given amount of work can be readily determined. The automatic application of drop by drop, just as needed, preventing the waste of injection pumps and securing uniformity instead of the uncertainty of hand feeding has insured the steam user the saving of many dollars. The mistaken economy of selecting an oil on account of its attractive color or to meet the defects of the oil cup, that from some fault in construction or lack of sufficient pressure will not feed heavier oils, was very clearly demonstrated in the experiments referred to.

In filtered and light-bodied cylinder oils the color is obtained at the expense of the wearing properties. Facilitating the feed at the same time accelerates escape from the steam chest before the oil has performed the work intended. Failing to atomize and thus be distributed by the steam, such oils are blown out with the exhaust, leaving the cylinder without lubrication. Consequantly, they must be fed up liberally in order to make up for this failure to disseminate.

There is also a waste owing to their lower fire test and more or less danger from their tendency to burn or bake. The tests also show that an apparent body can be produced by the compounding of foreign substances. To give seeming consistency, gelatinous matter is used. This, as well as fixed oils and fluid results of animal fat, are not volatile. That is, they cannot be distilled without decomposition. When heated under the action of steam in a cylinder with the alkalies of the feed water, the fatty acids combine with the alkali, producing saponification, while glycerine is simultaneously formed. The effect of such a combination on metals is well known. Their heat only tends to make such substances more adhesive, and utterly failing to atomize, they drop into the cylinder to be worked and churned by the follower of the piston.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOT NAILS, ETC.
Hamilton. Ontario.
SP

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friends against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

WE CAN SELL YOU

Solder and Babbitt

Cheaper than You can Make It

TORONTO SMELTING and REFINING WORKS

FRANKEL BROS., Props.

92 and 94 Queen St. East, TORONTO.

Daily Capacity 10,000 Pounds.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT

Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

NEW. CLEAN. GOOD.



Meat - Cutter

WHITE ENAMELLED

Inside, and Brown Japanned outside.

H. BOKER, Manufacturer. | For Sale by Leading Wholesale Houses.

MIXED PAINTS DEARER.

The Canadian Color Grinders' Association have advanced the price of mixed paints ten cents per gallon. The decision was arrived at Thursday afternoon at a meeting held in Montreal. The demand for mixed paints this season has been larger than ever before, manufacturers being absolutely unable to cope with it. This has probably been the cause of the advance.

LARGE RECEIPTS OF PORTLAND CEMENT.

During the past week the arrivals of Portland cement at the port of Montreal have been the largest of the season, the quantity being in the neighborhood of 25,000 brls., 19,000 of this being from English ports and the balance from Belgium. This brings the total quantity received so far this season up in the vicinity of 60,000 barrels, the largest proportion being of the best English brands, some 45,000 brls. having arrived from British ports. This goes to show the superiority of the latter article, as, notwithstanding the difference in price, it remains the favorite make with the consumers. A portion of the above has been forwarded to the States "in bond."

VIEWS AND INTERVIEWS.

I ran against F. J. Hamilton, of Port Credit, a couple of days ago. "Fruits are not looking so well in our district this year," he said in reply to a query of mine. "But the grain and hay crops are looking fine."

"If you had seen the big lot of scythes he has ordered you wouldn't need to have asked him that question," interposed T. B. Williamson, of Samuel, Benjamin & Co.'s with a laugh. "And he says that the hay is that long," he added, elevating his left arm to indicate the length.

• • •

"How would you like to handle $60,000 worth of binder twine and not make absolutely one cent?" was the question put to me by a jobber the other day. "Of course you wouldn't like to," he continued as he perched himself on the ledge of a shelf. "But that is just what we will have to do this season and every house in the trade is in a similar position."

"Why? What is the reason?" I ventured.

"Well, there are two reasons. Owing to the change in the duty the Cordage Co. says it cannot make a profit out of its goods. And then, you know, the Ontario Government are selling direct to the farmers from the works in the Central Prison. From what I can gather the manufacturers will put all their efforts into making rope and such goods upon which they can make a profit, and will only make binder twine when they have little or nothing else to do. You know what the Government can turn out at the Central Prison will not be a drop in the bucket; why, it won't be more than enough, at the outside, to supply the County of York. Of course it will tend to unsettle the market. But wait a while, and see what the result wil be. The manufacturers will make no attempt to push business and will hold all they can. Then by-and-bye when the supply at the Central Prison runs out they will have the market at their own price. I tell you, if I was a retailer and had, say a $1,000 to spare, I would put it into binder twine and not a pound would I sell except at my own price. Then when the shortage came I would say, 'Gentlemen, you can have my twine at 15c. a pound.' And you can bet they would be glad to take it. Yes, sir, there is money for the man who can hold binder twine."

"There is a good deal of grumbling of late regarding the bad shape in which turpentine is coming in," said an extensive handler to me the other day. "You see it is like this. The barrels are classed as ordinary, selected, and extra selected. By the oil being brought in the ordinary barrels an apparent saving of ½c. to 1c. a gallon can be effected. Now these ordinary barrels are not fit to ship oil in. They are seldom sound, and consequently the leakage is often considerable. I have known us to get barrels of this class which did not contain five gallons when they arrived here. This of course meant a serious loss to us. Of late the grievance has become so aggravated that something must be done in the matter. My advice to dealers is: Specify selected barrels in every order you place. That would overcome the difficulty."

"There is an enormous demand springing up for corrugated galvanized sheets," said the representative of a wholesale house to me. "The price—$5.50 per square—is so low that it comes cheaper than shingles and, would you believe it, they are using the corrugated in some parts of the country in preference to shingles. In view of this our sales in this line are larger than ever."

"I don't know whether you are aware of it or not," said a jobber to me Thursday, "but the white lead grinders are meeting in Montreal to-day. What is the object of the meeting? Can't say. Seeing that they are selling down at cost I shouldn't be surprised if the object is to advance prices. In fact I don't see what else they could be meeting for."

• • •

"I understand," said a hardware man to me Thursday, "that all the tinware manufacturers have decided to allow only three per cent. for cash to the jobbing trade. It naturally follows that the jobbers will also change their discounts."

• • •

"What's new? Nothing, nothing, only that we're going to have a big time at our annual excursion to Niagara Falls, July 19," said a member of the City Travelers' Association. "The Hamilton Retail Grocers' Association is, I understand, going the same day, and I guess that will induce a good many of our merchants here to go over. You can bet the welkin will ring. What'll you have? Nothing? Well, then, good-bye."

• • •

"How's Midland? Booming," said J. H. Devaney, Saturday. "A lot of vessels are coming in there now. There were five Chicago vessels in there last week, all loaded with corn for the east. When the new steamer City of Collingwood called there on her maiden trip she had one thousand people on board."

BYSTANDER.

THE WAGES SITUATION.

There never has been a wage conference in the iron trade at Pittsburg of so much importance, one that involved the consideration of so many difficult and apparently conflicting questions, or one that called for so much calmness and fairness in its deliberation as that now upon us.

The average price of iron and steel has never been so low for a full year as during the one just closing. The earnings of skilled labor, with the exception of puddlers, have never been much if any higher. Forge pig is selling at $12.25, Bessemer at $13.50 or less, bar iron at $34 a gross ton, steel billets recently at $21.50. While there were reductions in finishers' wages a year ago the improvements in machinery have so increased the output that even with lower wages the earnings are as great as before they were introduced. Puddlers, as a body, have not earned as much because through their unwisdom in not accepting the situation puddling is being abandoned at many of the mills. Where he has had work the puddler has unless all experience of recent years, as ever before for the same length of time. To-day he gets about 1-6 of what bar iron sells for.

In addition to this, there is the financial condition of the country to enter as a factor into the discussion. What this is need not be rehearsed at length, gold leaving the country by millions, banks breaking all round, confidence so badly shattered among workmen as to lead them in Chicago and other places to institute runs on the savings banks, and the difficulty is not local to Chicago or this country. No doubt the situation is very much exaggerated, but it is serious at the best, and must be seriously considered. The fact that President Cleveland has called a special session of Congress to deal with the financial situation is evidence of its seriousness.

Another feature that in some ways adds somewhat to the difficulties of the labor situation, and in other ways lessens them, is the fact that there are two organizations that will deal with certain scales, the Amalgamated and the new Finishers' Association. This may somewhat complicate the question, but made as much in the scale year, 1892-93, when there have been two associations dealing with wages in the same industry is reversed some agreement will have to be reached with both associations before work will go on. We do not believe, for example, if the manufacturers should sign a scale with the Finishers' Union and not one with the Amalgamated for puddling that the finishers



Our process of weighing Spoons, Forks, Knives, Etc., before and after plating, insures absolute accuracy as to the amount of silver on each article which we guarantee.

When buying such goods from your jobber, see that they are stamped, "**Toronto Silver Plate Co.**" You will not only have a guaranteed article but will effect a saving of from 10 to 25%.

FACTORIES AND SALESROOMS:

570 KING STREET WEST, TORONTO, CANADA.

E. G. GOODERHAM, MANAGER. JNO. C. COPP, SEC'Y-TREAS.

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA



ASK FOR THE GRAHAM NAILS.

would resume work at a mill where there was no scale signed. The K. of L. signed scales at Homestead last year, but that did not prevent its members going on strike when the Amalgamated struck. All workmen, Amalgamated, K. of L. and non-union, went out when the Amalgamated gave the word. According to union ethics the finisher who worked in a mill where the Amalgamated Association puddlers were on a strike would be a blacksheep. The Finishers' Union could not endure the odium.

Altogether the situation is difficult and involved, and the end does not appear.—American Manufacturer.

London Industries says: "The state railway adjudication and the orders secured from abroad have given a little animation to the market. There are several good enquiries in the market from England, while there is also some enquiry on South American and Australian account. Prices still remain low, and the competition is exceedingly keen. Engineering establishments are fairly well employed, and have sufficient orders on hand to ensure work during the summer season."

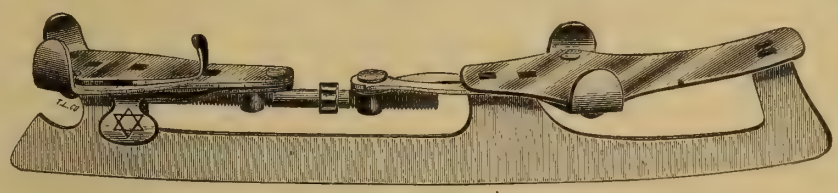
The James Robertson Co.,

LIMITED.

LAWN SPRINKLERS,
GARDEN HOSE,
HOSE REELS,
GARDEN RAKES.

Toronto

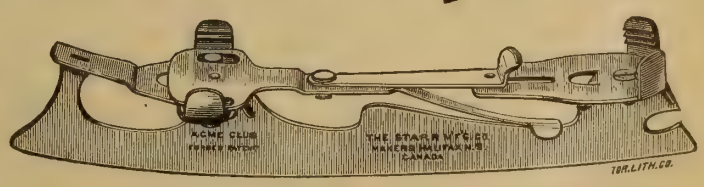
The Star Skate



CHEAPEST AND BEST ON THE MARKET.

The Genuine Acme

The Leading High-Class Skate.
: : :
Before Buying Others write your jobber for prices.



The Starr Mnfg. Co., Ltd. Sole Makers **HALIFAX, N.S.**

TRADE CHAT

[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Tuesday.]

Hot water cannot be raised to any considerable height by suction.

A fourth dynamo and engine have been placed in the Hamilton Street Railway power-house.

The open season for fishing for bass and maskinonge begins to-day, the close season having ended yesterday.

St. John parties have recently sold three cargoes of bricks, one of lime and several of lumber on Newfoundland account.

The first bridge builder is the spider, and the ropes and stays of a spider's web are always attached with geometrical accuracy.

It is estimated that 119,000,000 copper pennies have been lost to circulation in the century since the United States began to coin money.

The theory of Jones, the English scientist, is that the earth is a huge balloon, and that it will finally collapse as the result of drilling for natural gas.

The Canadian General Electric Co., of London, is now making contracts with the public for shop and domestic incandescent wiring.

A Belleville despatch says that the appeal of the commercial travellers against the imposition of income tax has been sustained by the Court of Revision.

Aluminum is found combined with 195 other metals. It is found in every known country on the globe and constitutes the larger part of the earth's crust.

According to the new post-office time-table a mail has been added at Hamilton for Toronto, closing at 10.30 a. m., which the Herald says will be much appreciated by business men.

All law firms in the city of Brandon will close their offices at 1 p.m. on Saturday afternoon during the months of June, July, August, September, and will observe said afternoons as half holidays.

Hugh Wilson, general merchant, of Cannington, lost a 11-year-old daughter last week. Diphtheria was the cause of death. Mr. Wilson feels his loss keenly, and a good deal of sympathy is being extended to him.

The annual statement of the Merchants' Bank of Canada has been issued. The net profits of the year, after payment of interest and charges and deducting appropriations for doubtful debts, amounted to $604,395, as against $530,247 last year. There were carried forward to profit and loss account $13,961, as against $3,733 last year. The profits this year amounted to about 10 1-16 per cent. on the capital.

A spiral coil of pipe, 530 feet long, has just been finished by the Brooklyn Tube-bending Co. The pipe is of 1-inch galvanized iron, and is bent in the form of a flat spiral 2 feet in diameter at the centre, with an extreme diameter of 17 feet.

H. R. Merton & Co., London, estimate the production of spelter in Europe during the years 1892 and 1891 at 287,607 and 284,745 respectively. The American output for the same time is put at 77,650 and 71,756 gross tons respectively.

C. E. Doolittle, of the Ontario Rolling Mill Company, Hamilton, has complained to the Board of Works there that the building of the street railway line on Queen street near the mill would interfere with the traffic on account of the street at that point being so narrow.

The Dominion Coal Company made the largest shipment of coal ever made in Cape Breton in one day on Saturday, shipping 8,000 tons ; 5,000 tons were shipped at Sydney and 3,000 at Grace Bay. Altogether 10,000 tons were shipped that day from mines in Cape Breton.

The most disastrous European panics were those of 1793, on account of the great French war ; of 1797, because of the Irish rebellion, when the 3 per cents went down to 44 ; of 1825, when 770 banks failed in Great Britain alone ; of 1847, through the American failures; of 1859, from fear of a general war in Europe; of 1866, through over-speculation in limited liability companies and of 1870, at the beginning of the Franco-Prussian war.

The drummer from Chicago was rattling off the merits of his goods in a way which at last caused the good old merchant to look at him doubtfully. "Oh, I'm telling you the straight truth," said the drummer, catching on to the mild insinuation in the old gentleman's face. "It would hurt me to tell a lie." "Yes," responded the old gentleman quietly, "I knew it would. There was a Chicago man to see me yesterday, and he said the same thing, but I noticed that he went right on suffering as long as he stayed here.—Ex.

At a meeting of the Council of the Toronto Board of Trade Wednesday, a resolution was passed in favor of reciprocal trade with the Australian Colonies, and the Council decided to act in conjunction with the British Columbia Board of Trade in this matter. The Council declared emphatically in favor of a first-class mail service between Vancouver, B.C., and Australasia, and the laying of a telegraphic cable between Canada and the Australias. A resolution was passed urging the Dominion Government to at once undertake the work of deepening Port William harbor. M. McKay, of Demerara, and J. G. Spurr, of Halifax, N.S., addressed the Council in favor of increasing the trade facilities between Canada and the West Indies. The Council will support the scheme.

It is expected that the Corinth Canal will be opened in a month. The works were begun in May, 1882. The new waterway will be 6,500 metres long, 22 metres wide, and 8 metres deep. The width and depth are thus the same as in the Suez Canal. The canal will make a perceptible difference in the distance between the ports of Western Europe and those of Greece, Turkey, and the Black Sea.

Charley Taylor, of Cambray, is home from his coal and other mines in Virginia a happy man. We have great pleasure in congratulating our good friend on his bright prospects, it being all but certain that he has a large fortune within his grasp. His property there turns out to be rich in coal and other minerals.—Warder, Lindsay.

The Minister of Trade and Commerce was engaged for a couple of hours recently in discussing with Mr. A. Findlay Smith, of McEwan, Frickle & Co., Hong Kong, the question of trade with China. Hon. Mr. Bowell found his visitor quite convinced that there was a grand prospect of developing a large trade between Canada and Hong Kong, especially in the carbon-producing classes of food products. Mr. Smith has been 25 years in business in the Orient.

Says the St James Gazette, a London firm has invented lately a knife for cutting and serving what the French call gateaux—what we call tarts—which is a real boon to those who have to do the honors of a table. Nothing is more trying than to deal with pastry which has fruit or jam in it with a knife and a spoon. One would rather carve a sirloin for a dozen people any day than help them to a tart of this description without the proper implements. The new "server" is wide and flat, and you can both cut and lift the portion of pastry with it.

Be careful of dampers in stacks ; use them with care ; be sure they are open before starting the fires, says Canada Lumberman. The greatest care should be exercised when light fuel is used, for to close a damper with large body of fuel on grate bars will cause flame to impinge on bottom over same, thus concentrating heat on one point of boiler. Many good boilers have been bagged and burned from the same cause. Always try and regulate draft by damper in bottom of front.

The value of mica as an insulating material is creating for it a large demand on the part of manufacturers and users of electrical apparatus. Canada fortunately happens to be one of the few localities where deposits of this material are found. In the Province of Ontario and Quebec exists in abundance. Now that its value has become apparent, there is an eagerness displayed by

local and foreign capitalists to secure control of these Canadian deposits, which will doubtless yield handsome profits in the near future to the owners.—Canadian Electrical.

The men of the Hamilton Glass Works are on strike. The cause of the trouble is that the company wanted a small brick arch built on a part of their premises, and the glass workers not being busy at present, the company decided to turn their glass workers into bricklayers. But the men objected, and declared that rather than become bricklayers they would go out. So the management told them they could go, and they went. The company declare they will not take the men back until they consent to do the bricklaying, and so the matter stands.

The competition between the Intercolonial railway and Canadian Pacific railway for freight traffic from Montreal to St. John, N.B., has given the latter a much better service. The Canadian Pacific railway talked of a 72 hour service for cars of fruit. The Intercolonial railway took a car and landed it there in 48 hours. The Canadian Pacific railway took its innings and brought one down in 38 hours; then, to cap the climax, it fastened a car to an express train, brought it to West Field, passed it over there to a freight train and laid it in St. John in 22 hours from Montreal. There was considerable amusement when it turned out to be a car of mixed goods instead of fruit. Both lines are on their mettle, and a fast service for the future is promised.

A very serious item of expense in hotels, says an exchange, is the consumption of gas or electric light caused by the negligence of guests. It is estimated that 90 per cent. of all hotel guests invariably leave their lights burning upon leaving their rooms. A switch has been invented which compels the guest to turn off his light upon leaving his room whether it occurs to him to do so or not. In the modern hotel it is the practice to fit the doors of all guest chambers with "secret" or double bolt locks, and one bolt being operated from the inside and the other from the outside, and it is by taking advantage of this arrangement that the new switch is made to carry out its work so successfully. To provide means whereby the occupant of the room may turn the light off from the inside when desired an auxiliary switch is placed on the inside of the room.

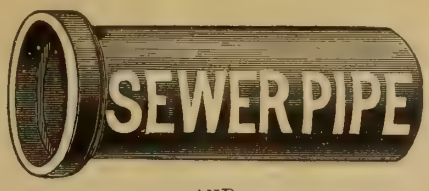
The best Chinese razors are made of old horseshoes.

Brown—Going to housekeeping, eh?
Jones—Yep.
Brown—Awful expensive.
Jones—Won't be for us. Going to use my wife's temper for a furnace, and her feet for a refrigerator.—Truth.

SITUATION VACANT.

TINSMITH—WITH ABOUT $1,000 TO $1,500 capital, to take an interest in a hardware store and tinware business, in a rising Ontario village on the C. P R. Apply Box 26, Shelburne. 28

Hamilton and Toronto



—AND—



HEAD OFFICE: HAMILTON, CANADA

¼ the PRICE of Iron. Write for Discounts

READY
MIXED PAINTS

TRADE  MARK

Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

Manufactured by A. RAMSAY & SON
MONTREAL

THE
Oxford Gas Range

The latest production of the great Schneider Frenkamp Co., of Cleveland, the largest and most successful manufacturers in the world of Gas Stoves and Ranges.

See this Range before Spending your money

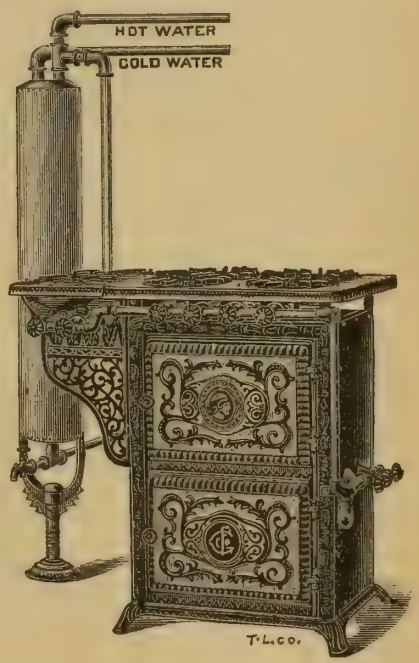
The only perfect Water Heater, will heat water faster than a coal range.

All burners are operated with Steel Needle Valves which produce sharp blue flames. The body is made of heavy Cold Rolled Sheet Steel Asbestos lined. The front and top are beautifully carved, heavy smooth castings with nickel-plated medallions and Tile panels.

Send for Price List and get our record of Water Heaters

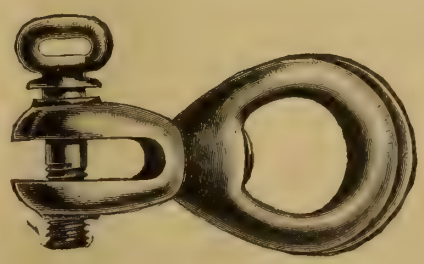
Manufactured by

The Gurney Foundry Co., Ltd., TORONTO



THE WHITMAN & BARNES MFG. CO.

Canadian Branch: St. Catharines, Ont.



This new **Swivel Clevis** can be attached to any Plow Clevis, used in place of Shackle or End Clevis.

MADE OF MALLEABLE IRON.

ALLIGATOR WRENCHES



Write us for Description and Prices



RE MERCHANTS SELLING OUT.

DEAR HARDWARE.—Your article in to-day's issue anent the law being lax in allowing a merchant to sell his stock, pocket the proceeds, and hurry to shake the dust of his late abode from off his feet is among your best. It is just what I have been advocating for some time, and if I was not certain you never heard it from me I would be inclined to think you had fobbled my powder. We have been mourners at several of these financial funerals, but in some cases have succeeded in tracing the crooks and getting our money. One man in this city sold his business, got the money in his pocket, and then went around among his creditors, and, I think, offered 25 cents on the dollar. Some accepted the offer, but many refused, to their sorrow, for he left shortly afterwards for the land of the screeching eagle, where I presume he is in business, laughing at the easy manner in which he was able to get together enough of the needful to allow him to conform to the custom prevailing in the United States of doing business on a cash basis. To use one of your mottos, "Keeping everlastingly at it brings success," I hope you will not lose sight of it or that you will have cause to think otherwise of your motto.

Yours, etc., H.C.F.

Toronto, June 9, 1893.

MAKING A RAISE.

There's a certain business man in Chicago who is as cranky as he can well be, and is at the same time very careless in his business affairs. But he is very rich, and has a big establishment, and not an employee likes him. About a year ago one of his clerks, getting $1,000 a year, approached him on the subject of an increase of salary. The old man got hot in a minute.

"How much are you getting now?" he asked.

The clerk was about to tell when a happy thought struck him.

"Two thousand a year," he replied firmly.

"Um um," he said, "you are a good clerk, and I'll see what can be done for you."

Then he dismissed the clerk and called in the manager.

"Make Jones' salary $1,800 a year," he said.

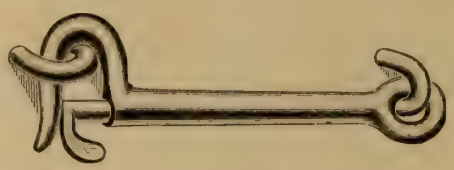
The manager was about to offer an explanation.

"Do as I tell you," said the old man. "I'll teach the young upstart to come in here dictating to me how much money to pay my people."

By this time the manager had comprehended the situation, and he forthwith put Jones on the $1,800 list, and six months later, when the old man found how he had been worked, he called Jones in, and told him he would restore him to the $2,000 list, and Jones was shrewd enough to take the twinkle in the old man's eye in good faith and say nothing.

A SELF-LOCKING HOOK.

The accompanying cut will give the trade a good idea of what Covert's self-locking gate and door hook is like. Its strong features are safety and convenience. It cannot be unhooked from the opposite side through a crack or narrow opening, much less loosened or unhooked by accident, as is too often the case with ordinary hooks. It is readily attached to gate or door, and the difference in the cost between it and the ordinary hook is trifling. They are made in two sizes, 4 and 6 inch, and are manufactured by Covert's Saddlery Works, Farmer, N. Y.



STEAM HEATING.

The following, written by W. J. Baldwin, of New York, appeared in "Home Warming and Ventilation":

Within twenty years the warming of buildings with steam carried through pipes has become a science; previously it was a chaotic mass of pipes and principles.

A low pressure gravity apparatus is the most healthful, economical and perfect heating appliance known, and may be constructed to heat a single room, or the largest building, with a uniformity which cannot be attained by any other means.

By a gravity apparatus is meant, one without an outlet, whose circulation is perfect, wasting no water, and requiring no mechanical means to return the water to the boiler. It may be likened to the circulation of the blood—the boiler being the heart, the steampipes the veins, and the return pipes the arteries; thus carrying heat and life into every part of a building.

The low pressure gravity circulation is at present very much used in the steam-heating of private houses, churches and schools. Its principal merits, when well done, are: It is safe; noiseless; the temperature of the heating surface is low and uniform; all the water of condensation is returned into the boiler (except a very small loss from the air valves); it is easy to keep the stuffing-boxes of the heater-valves tight; and it is no more trouble to manage than a hot-water apparatus.

Boilers for house-heating should have very few parts, and be as simple as it is possible to make them; every part of them should be constructed with a view to permanency; and parts that wear out more rapidly, such as grates, should be arranged that they can be renewed by the most inexperienced person.

Requirements for house-heating boilers are:

1st. They should contain a quantity of water, sufficient to fill the pipes and radiators with steam, to any required pressure, without lowering the water enough in the boiler to require an addition when steam is up; for, should the steam go down suddenly, there will be too much water in the boiler.

2nd. The fire-box must be of iron, with a water space around it, as in upright, or locomotive boilers; to prevent clinkering on the sides, and the necessity of repairs to brickwork, which are unavoidable in brick furnaces.

3rd. The fire-box should be deep, below the fire door, to admit of a thick fire, to last all night, and thus keep up steam.

4th. The fire-box should be spacious, for the sake of good combustion.

5th. The flues and tubes should be large, and in a vertical position, so they will not foul easily, and so that any deposit would fall to the bottom.

6th. The heating surface should be great in diameter, instead of in the direction of the chimney, and the last turn be a drop.

7th. They should, if possible, be constructed of such shape and design, that they will require no sweeping, or cleaning, other than removing the ashes; but when it is unavoidable, every facility should be made for easy access to such parts; because they are often operated by inexperienced persons (house servants) who will condemn anything which gives them trouble.

8th. The fire grate must be easy to clean (anti-clinker), and so designed that it will not crack or break when heated.

9th. The grate and ash-door must be so constructed that a new grate can be put in quickly by anyone.

10th. There should be no tight dampers in the chimney flue, and when the flue goes out near the bottom (drop flue), it may be dispensed with altogether; but the fire and draft doors should be made to close air tight (planed), so as to be capable of entirely deadening the fire. This will prevent the possibility of coal gas escaping into the house, the deadening of a fire by shutting off its supply of air, is the proper way, for the draft of the chimney being unimpaired, draws all the harder on any crack or crevice in the brickwork, causing an inward current, which entirely precludes the escape of gas.

11th. The perpendicular height of the boiler should not be too great for the cellar, so the water line will not be too near the level of the main pipes.

THE ONLY RELIABLE

. . . LOW PRICED . . .

BINDER TWINE

IS THE



Common Sense . . Brand .

REGISTERED.

MADE BY DICK'S PROCESS

(Full Patents Applied for.)

CHEAP AND EASY TO WORK.

Follows Manilla on all Machines in good order without Change of Adjustment. . . . . .

Completely Weather and Rot Proof.

FEW TONS REMAINING.

Immediate attention given to any enquiries or orders. . . . .

WHOLESALE AGENTS:

M. & L. Samuel, Benjamin & Co. = = Toronto.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, June 16, 1893.

HARDWARE.

There has been no striking change in the hardware trade during the week, but the jobbing houses continue to note a fair volume of business, which is quite on par with that reported last week. In heavy material, however, business is quiet, and we have little or nothing to report. In shelf goods a fair trade is being done in locks, bolts, nuts, etc., while there is a fair demand to note for wire screens and other goods of a similar nature. The excessively hot weather we have been having has led to some movement in water filters, refrigirators, etc., but the aggregate volume in this particular is not large. Cut nails are quiet, but quite a few 25 and 50 keg lots of wire nails have been moved during the week. Farming tools have furnished some movement, but there has been nothing special to mention in their case. Wire has been moving freely with no change of importance to note in its case. Tinware remains much the same as it was, with a moderate business doing. Payments are not quite as satisfactory as everyone would wish, but they are fair on the whole. Cutlery is moderately active.

HEAVY HARDWARE, ETC

The week just past has been quite as flat and unprofitable as the previous one in so far as lines of goods which go under this head are concerned. Values all have an easy tendency, and this, coupled with the fact that some importers here are discounting the market and offering extreme inside figures on some lines, such as Canada plate, for instance, is making it very difficult to do business.

PIG IRON.

There is still a complete absence of promise to this market. Warrants, strange to say, have been showing an upward tendency, but they reacted again early in the week, and besides no buyer takes any stock in them, while offers on makers' brands show a tendency to concession. Holders of pig iron here are free sellers, and prices would be shaded in every instance to effect a sale. In fact we understand that Summerlee has been offered in round lots at $17.90, and other lines would no doubt be shaded in proportion but buyers don't seem to want anything at all, for nothing appears to tempt them. We quote Summerlee $18 to $18.50, Eglinton $17.25 to $17.50, Carnbroe $17.50, Langloan $19, Siemens No. 1 $18.

BAR IRON.

Bar iron is utterly without feature, very little business being in progress, while the range of value is unchanged.

SCRAP IRON.

There is nothing special to note about scrap, but sales of No. 1 wrought have transpired at $15.50.

TIN PLATES.

There is nothing doing in tin plate either on spot or for forward delivery. Round lots of cokes could be had at $3 15 and offers of this have been made this. Charcoal is offered at $3 35 to $3.40 for low grades, with superior grades in proportion, $4.25 being the idea for P. C. Crown.

CANADA PLATES.

Canada plate are being offered very low by importers here and round lots of 200 and 500 boxes are offered at $2.45. These offers are said to be on behalf of parties who are discounting the market, but the fact remains that they are being made. For ordinary business, however, nothing under $2 50 is possible, but the fact of the low offers above mentioned is checking regular business.

TERNE PLATES.

There is no change in terne which rule quiet and nominal at $7.

GALVANIZED IRON.

Galvanized iron is on the quiet side, some moderate sized sales of No. 28 at 4½ to 4¾c. being the only business.

COPPER.

There is no change in copper which sales quote. About 11¾c. is the idea, and no doubt even this figure would be shaded. Tin, etc., is unchanged.

GLASS.

There is no important change in the glass market, which remains much the same on the basis of $1.35.

LEADS AND OILS.

The lead market continues to furnish a fairly good enquiry for supplies. We quote: Government standard, $4 75 to $5; No. 1, $4.50; No. 2, $4.25; No. 3 $4; No. 4, $3.75; dry white lead, 4¾c.; red lead, pure, 4¼c.; No. 1, 4c.; zinc white, pure, $7; No. 1, $6; No. 2, $5.

There is no change in the oil market, Linseed selling at about last week's prices, viz.: 60c. for raw and 63c. for boiled in round lots, and seal oil is much the same, 47½ to 52½c. being the idea for it. Fish oils are unchanged.

NAVAL STORES.

A fair trade is reported in naval stores, but prices are generally unchanged except for turpentine which is lower in sympathy with the Southern markets. We quote Turpentine, 49 to 59c.; resins, $2.50 to $5.00, as to brand; coal tar, $3.75 to $4; cotton waste, colored, 5½; do. white, 7 to 10c.; oakum, 5½ to 7½c.; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep-sea line; pure Manilla, 12c. for 7-16 and upwards and 13c. for smaller sizes.

CHEMICALS.

There have been some changes in heavy chemicals during the week in consequence of heavy receipts. Caustic 65 per cent. now stands at $2.25 to $2.50 and 70 per cent. $2.50 to $2.75 which is a slight decline. Sumac is firm and higher in sympathy with prospect of a short crop and the wont of rain in Italy, at 70 to 75c.

PETROLEUM.

The movement in refined petroleum has not been large throughout the week, but business is up to the usual standard and prices are steady and unchanged. We quote Canadian at 12c. at shed in Montreal for round lots, and 12½c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c in 10-barrel lots, 19½c. in 5 barrel lots, and 19¼c. for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c.; Canadian benzine, 10¾c. Petrola; 12¾c. for Montreal.

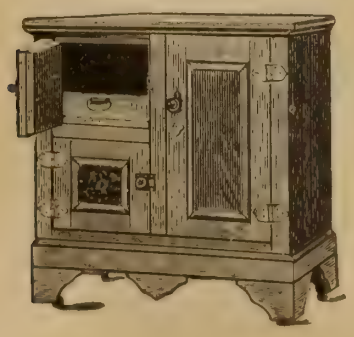
BINDER TWINE.

The uncertainty as to the future policy of the American Trust still affects the market in so far as wholesale business goes. Buyers are unsettled in their minds exactly what to do. We quote for car lots Red Cap 8¾c. and Blue Ribbon 9¾c., a discount being allowed off this to wholesalers by the manufacturers.

CEMENT.

There is a continued good demand for cement and large quantities are going forward to the West, but owing to the heavy arrivals stocks here are accumulating in spite of this. Quotations for English brands are

Refrigerators



Hardwood, Lined Galvanized Iron, Patent Locks, Four Sizes

These are highly finished and each season has shown an increasing demand. This year we are also making a cheaper line in above style, so as to meet all requirements.

Milk, Delivery and Creamery Can Trimmings.
All Sizes Body Stock for Cans and Cheese Vats.
Galvanized Iron Eave Troughs in 8 foot lengths.
Lithographed Tea Caddies and Signs.

We make and Supply everything used in the Stove and Tinware Trade.

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

1893 - OUR LATEST - 1893

Safford Radiators

. . . FOR . . .

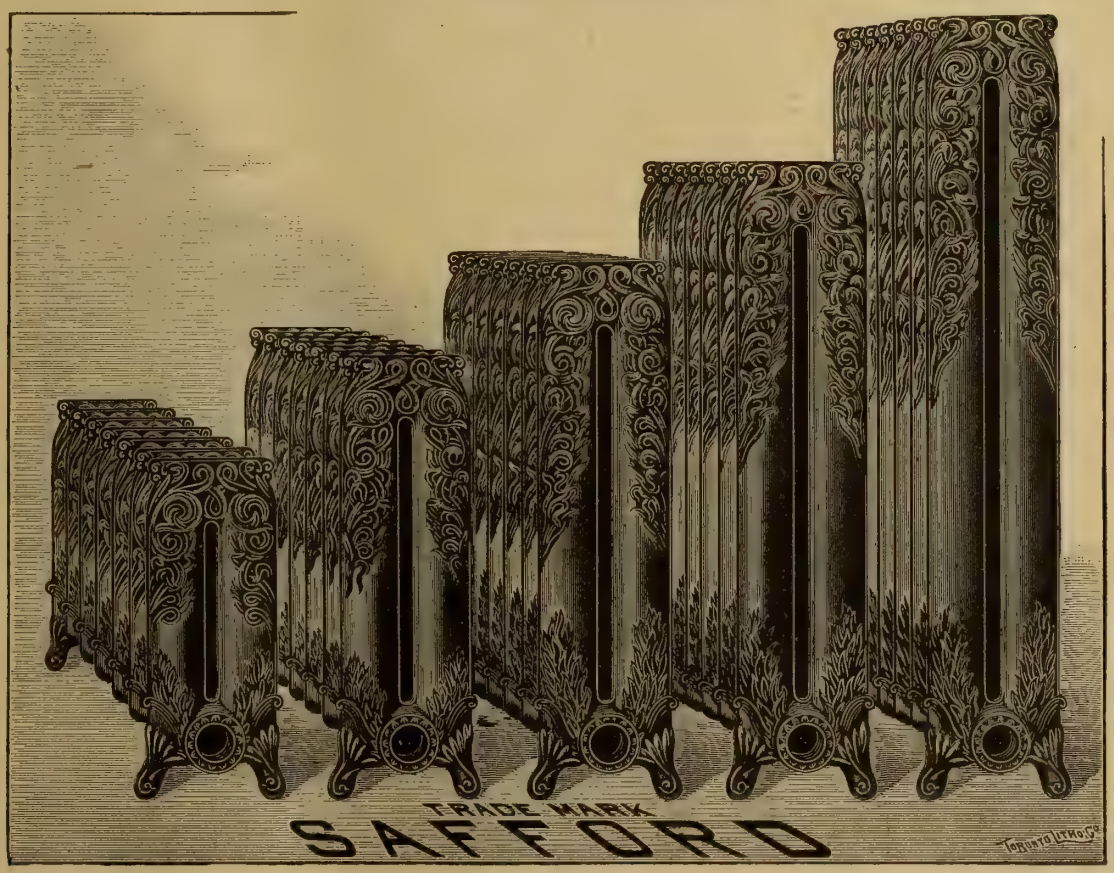
Steam and Hot Water

ARE UP TO DATE

Trade Mark Registered

MOST EFFICIENT
NEWEST DESIGNS
BEST CONSTRUCTION

ALL SCREWED CONNECTIONS



RADIATORS PATENTED AND ALL DESIGNS REGISTERED

References: New Parliament Buildings, Board of Trade, Confederation Life Buildings, Freehold Loan Building University Buildings, Toronto; McGill University Building, Montreal; and many thousands of others which will be named in response to enquiries.

MADE ONLY BY

THE Toronto Radiator Mfg. Co. LTD.

TORONTO, ONT.

MONTREAL. QUEBEC. ST. JOHN, N.B. WINNIPEG. VICTORIA, B.C.

MONTREAL Markets Continued.

$1.95 to $2, and for Belgian $1.95 ex ship. Firebricks are in good demand at $13.50 to $19 50 per 1,000 ex wharf, as to quality.

MONTREAL TRADE NOTES.

A C. Leslie & Co. note a fair demand for cutlery in a sorting way.

Wm McNally & Co. have been filling some good orders for enamelled sinks, etc., this week.

Francis Hyde & Co. are offering round lots of some of the best London brands of cement at inside figures.

Mr. Haydn, of McArthur, Corneille & Co., who has been indisposed for a few days, is back at his old post.

T. W. Ness has filled an order for electric bells for the various public school buildings in Morrisburg, Ont.

The Safford Radiator Co. has completed the order it had for the big National Monument building on Main street.

Painchaud, Squire & Co. report a fair demand for their lines of cutlery and specialties during the last fortnight.

Some very low offers are being made and accepted on Canada plates for forward delivery by a firm here who are discounting the market.

Mr. McLaren, the agent of the Safford Radiator Co. here, says that the sales have just doubled since he moved into his new premises on Craig street.

W. H. Cottingham & Co. have been filling some special orders for boat varnishes, etc,. during the week. The outing season is increasing the demand.

There was a conference between Manager Thorpe of Pilkington's and the insurance men Wednesday in regard to some cases of plate glass which had been smashed into small lots in transit across the Atlantic. The loss will be heavy.

The master and owner of the S.S. Glengott will have occasion to remember the glass importers of Montreal before she leaves port . The vessel brought a heavy line of glass out, the principal consignees being the Pilkington Co., of this city, and The Toronto Plate Glass Importing Company. When Messrs. Pinkirgton's made an examination of their lot they found it much broken, and a subsequent investigation revealed the same circumstances in the case of the Toronto firm. Accordingly the two firms have taken out a seizure against the ship, the Pilkington's for $3,660 and the Toronto firm for $3,830, and the vessel will not be allowed to leave port until the two claims are settled.

SHEET STEEL BRICK
ABSOLUTELY FIRE PROOF.
METALLIC ROOFING Co
CATALOGUE FREE M'F'RS TORONTO

TORONTO MARKETS.

TORONTO, June 16, 1893.

HARDWARE.

Trade has developed considerable activity during the week and business is brisker than it has been for some weeks past. The orders are however largely of a sorting up character, there being little or no disposition to anticipate wants. Demand is still good for agricultural and garden tools, particularly such lines as spades and shovels, rakes, forks, etc. There is the same difficulty about getting lawn mowers, although manufacturers are working day and night, and a good deal of dissatisfaction is being expressed by country customers as a result. There is at the moment a big demand for pumps. Stocks of ice cream freezers are broken up and they cannot be replenished. Stocks of garden shears are also insufficient to put the trade through. Demand for nails has slackened off somewhat. Horse nails are however selling fast. A slight lull is also reported in the demand for wire. Tinware is doing fairly well while there is still a brisk business doing in preserving kettles. Builders' supplies are moving fairly well on country account, but there is not much doing in the city. Payments continue to show slight improvement.

NAILS—Are not going out as quickly as last week, but for the season there is a fair trade doing. For horse nails demand is good.

WIRE—There is a little lull in the demand for oiled and oiled and annealed wire, but a good deal is still going out.

ROPE—Not much doing. Stock is sufficient for the demand and prices are unchanged.

CHAIN—There is no demand for coil chain, and none is expected to spring up for another couple of months. A number of orders are being booked for cow ties and trace chains for delivery later. The market is strong in these lines, and country customers are evidently appreciating the situation.

TOOLS—Hay rakes, forks, snaths, scythes, solid neck, socket and turnip hoes have all been in brisk demand. Repeat orders in these lines have been received, and the trade is now filling orders as rapidly as possible.

WARE—Tinware is going out well, better in fact than usual. Quite a number of milk cans already made up are going out rapidly, handlers evidently being of the opinion that it is more convenient for them to get them in this way than by getting them made themselves. Peerless, brass and enamelled ware are in even better demand than a week ago.

PLUMBERS' SUPPLIES—Much about the same as a week ago, trade seasonably fair.

BUILDERS' SUPPLIES—Are still hanging fire as far as the city trade is concerned, but from the country there is the usual spring demand. Much about the same remarks apply to mechanics' tools.

IRON PIPE—The low price at which iron pipe is being held, together with the superior quality being turned out, has caused quite a demand for this article.

METALS.

A fair business is being done in metals. Pig iron is moving a little better, but the tendency of the market seems to be downward. Good round lots of bar iron are moving and immediate business in Canada plates is small. Sheet iron is quiet, while galvanized is moving fairly well, and for black sheets demand is good.

PIG IRON—There has been a little more business doing this week, but there is no speculation, people buying largely just merely what they want for immediate consumption. American and Scotch prices are now about on an equality. The tendency of the market if anything is downwards. There have been some small lots moving at $21 for Southern and $23 for Summerlee. There has been a fair demand for carlots of Carron at $20.50 and sales of Ayresome are reported at $20.25 Toronto.

Rogers, Brown & Co., Buffalo, report the Toronto pig iron market as follows: No change has occurred in the market since last

"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

MARKETS—Continued.

report. Buying is very light and prices still much depressed. In view of the uncertainties of freight rates, little real work can at present be accomplished in the way of forcing sales and just now that is the only method which could be pursued.

BAR IRON—Demand is good and some large lots have been moving on the basis of $1.95.

TIN PLATES—There is not much doing and stocks are ample. A number of enquiries are heard for ternes and cokes.

CANADA PLATES—Import orders for fall trade are being freely booked by the jobbers and in quantities about the same as last season. Large orders are being booked for elbows; in fact much the same applies to all fall lines, there being seemingly at least some fear that there may be an advance. Prices are unchanged, all dull being quoted at $2.65, half-half at $2.75, and all bright at $2.80 to $3 per box.

GALVANIZED IRON—Is moving steadily although not in large quantities. Prices are unchanged at 5 to 5¾c. for Queen's Head and Gordon brands.

SHEET IRON—There is not a great deal moving and prices are unchanged at from 2¾c. up.

ZINC SHEET—Inactive and prices are unchanged at 5¾ to 6c. for 5 cwt. casks and 6 to 6¼c. for part casks.

ZINC SPELTER—Dull at 3¾ to 5¾c.

LEAD—Some small lots are being placed, but trade in this line is on the whole dull; 3½ to 3¾c. for ordinary lots and 3¼c. for ten-ton lots is still the idea.

ANTIMONY—Is in much the same position as a week ago. The demand, stimulated by the low prices, is still fair, and while 12 to 13c. continues to be quoted for Cookson's and 11 to 12c. for ordinary, large lots can be got at lower prices.

INGOT TIN—There is the usual demand at 23½ to 24c. for small lots, but these prices are being shaded for large lots.

INGOT COPPER—Some big lots have been moving during the week, but trade cannot be said to have improved any; 12½ to 13c. is still the quotation for small lots.

GLASS.

Trade fair. Stocks are broken and jobbers are re-ordering. Business is still being done on the basis of $1.25 to $1 35 first break.

PAINTS AND OILS.

Trade fair, although probably not as good as it was for the same time last year. Payments are reported to be better all round. Business continues good in white lead on the basis of 4¾c. per pound, although the movement is confined to small lots for immediate requirements. Demand is still good for prepared paints. There is a good call for English varnishes and the better class of varnishes generally. Movement in linseed oil is fair and prices are unchanged at 60 to 62c. for raw and 63 to 65c. for boiled. Demand for turpentine is active. The new schedule of prices went into force Thursday. As already stated, prices are, freight allowed to delivery stations, 47c. per gallon for 1 to 4 barrels and 46c. for 5 barrels and over, with prices 2c. less at Toronto, Hamilton, London and Guelph. It is not thought that these prices will obtain long, there having been an advance of 1c. in the South, and dealers look for a higher market here. Southern agents of some Toronto houses have already had to pay the advance in the South to fill orders placed during the decline, thus losing money. Dealers here who bought during the decline are looked upon as being fortunate.

OLD MATERIAL.

Deliveries are still liberal, but there is not much going out. Scrap lead and scrap zinc are both ¼c. per lb. lower. We quote: Agricultural scrap, 55c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 50 to 60c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 25c.; new light scrap copper, 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2½c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings, and turnings, 15 to 20c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—No change, carlots selling as before at 5¼c. for good selects.

SKINS—Calfskins dull; jobbers are paying 8c. as before, but there are no sales. Season is about over for wool skins, only an occasional one coming in. A good many lamb skins are offering and price is unchanged at 30c.

TALLOW—Supply and demand light and prices steady; dealers are paying 5½c. for rendered and selling at 6c.

WOOL—There is a good deal coming in on the street, for which 17 to 18c is being paid for good selections of washed merchantable wool; 10 to 11c. is paid for unwashed and 13 to 14c. for rejections.

PETROLEUM.

The Petrolia Advertiser, in its weekly report, says: "The backwardness of the season, the tariff agitation and the unsettled influences upon commercial affairs pertaining to petroleum are given as reasons for the continued dullness. On the whole, however, the tone of the market is maintained on a steady basis." Petrolia crude is quoted at $1.07 per barrel in tanks or $1.10 delivered.

On the Toronto market business continues quiet and unchanged in burning oils and fairly good in lubricating oils. We quote: Canada refined oil, 13 to 13½c.; carbon safety, 17½ to 18c.; Canada water white, 19c.; American water white, 21 to 22c.; photogene, 25c.

MARKET NOTES.

Jones' spades and shovels are said to have had an unprecedented large sale this spring.

M. & L. Samuel, Benjamin & Co. have a new stock of steel sheets for which the demand at the moment is good.

H. S. Howland, Sons & Co. have received another consignment of Wostenholm's IXL pocket knives and cutlery.

H. S. Howland, Sons & Co. are in receipt of a large stock of Eley Bros. "E.B." gun caps and "C.F." caps for shells.

The second shipment this season of Parks' sand shovels and sodding spades has been received by M. & L. Samuel, Benjamin & Co.

The steamer British Crown arrived in Montreal from London last week on her first trip to that port. She carried a large general cargo, consisting principally of cement, whiting, etc. The bulk of her cement cargo was for W. McNally & Co., of Montreal, some 8,500 barrels being for this firm alone, for delivery at Western ports.

H. S. Howland, Sons & Co. offer binding twine at rock bottom prices. Special terms on application. See their advertisement.

Demand continues good for Paris green in small lots, and some jobbers say they would not be surprised if they were compelled to replenish their stocks.

The sales of Magnolia Metal have been so enormous and the business so prosperous in the last year that the Magnolia Metal Co.'s stock has been recently made $1,000,000.

Mr. Leslie, of A. C. Leslie & Co., is on the road taking orders for case carvers, etc., for fall trade. The firm anticipates that the demand for cutlery will this year be away ahead of that of last year.

M. & L. Samuel, Benjamin & Co. have invoices to hand of a fresh supply of screen doors and window blinds, and will fill back orders as far as possible.

The usual quantity of "Commonsense" binder twine is being handled by M. & L. Samuel, Benjamin & Co.

The Truss and Cable Fencing, manufactured under royalty by the Ontario Lead and Barb Wire Company, Ltd., is undoubtedly one of the best things of the kind on the market. It has great tensile strength, width and visibility, is safe, ornamental, easy to handle, and will not sag. Another peculiarity about it is that its construction is such that it will expand under heat or contract under cold without stretching. An idea of what the wire is like can be gathered from a glance at the advertisement on the back page of this issue.

AMERICAN MARKETS.

NEW YORK June 16, 1893.

PIG TIN.—The feature of the day was a somewhat higher elevation of prices in this and the London market, and that, too, without business of any magnitude. The general impression was that nicely-timed manipulation was the basis of the whole movement, and that the leading operators on the bull side, while keeping a watchful eye upon their opponents, were more deeply interested in giving tone to the market that would not only make deliveries on old contracts more comfortable to interior customers, but facilitate new sales in that direction. Some authorities figure out that consumption is above the popular estimate, and that the accumulation of surplus stock is less than generally estimated; but more facts than one came to the surface indicating that out-of-town distributors and large consumers have been accommodated with all the tin they were inclined to purchase at prices remarkably close to the official quotations.

COPPER.—Rumors had circulation of quite large sales of Lake Superior ingot for delivery several months ahead. Some of those rumors indicated that a price as low as 10 1-2c. had been accepted, and that Lake Superior producers were

forced to make the cut by the steadily increasing consumption of electrolytic copper. That the latter has become at least annoying is no secret, but that the Lake Superior producers have actually resorted to the heroic remedy is not exactly clear. It is the plain fact, however, that sales to consumers have been made at 10 3-4c. this week, and that more could have been secured at the same price at the close. Electrolytic copper has weakened somewhat, as a matter of course, and over 10 3-8 to 10 1-2c. for best brands is now an exceptional price. Casting stock is still quoted at 10c. and finds merely ordinary sale. In the English market there was hardly any movement. Last cables quoted merchant bars at £44 5s. for prompt delivery and £44 15s. for three months' futures.

PIG LEAD.—The buying interest was somewhat livelier, and about 400 tons were taken for prompt and near future delivery at 3 3-4c. Individual transactions involved no really large lots, nor did the demand afford evidence of tendency on the part of consumers or dealers to operate except as clearly defined wants dictate. It was plain, however, that a merely fair volume of business suffices to stiffen values, and that fact, in turn, strengthens the impression that the stock of lead in first hands is not seriously burdensome at the present time. St. Louis quotations to the Metal Exchange was 3.47 1-2 to 3.50c. London cable quoted £9 5s. for soft Spanish.

ANTIMONY.—Outside of ordinary jobbing distribution there is little if any movement at present, but the business passing suffices to hold prices quite steady at about 9 7-8 to 10c. for Hallett's and 10 3-8 to 10 1-2c. for Cookson's.

TIN PLATE.—Spot business was without visible improvement, and the general report indicated that enquiries run quite as light as they have at any previous time during the past two weeks. Future business is almost wholly confined to special sizes or unimportant lots. On values no positive changes were quoted, but the undertone all along the line was soft.

PIG IRON.—The past few days have witnessed no changes in the market for American foundry or mill grade iron. Business is running very much the same as it has for some time past, with prices showing hardly any variation, and the attitude of buyers and sellers appears to be practically the same as it was at the beginning of the month.

Foreign spiegeleisen and ferro-manganese move slowly, in the absence of improvement in the steel trade, and prices are generally nominal. Quotations remain as follows: $22 to $22.50 for 10 per cent., and $25 to $25.50 for 20 per cent. spiegeleisen, and $57 to $57.50 for foreign 80 per cent. ferro-manganese.

STEEL RAILS, ETC.—Orders come this way very slowly, and the call is chiefly for comparatively small lots. Some manufacturers are well abreast with their orders, but, to all accounts, the price for heavy sections is maintained at $29 f.o.b. mill, although other kinds are relatively a great deal lower. Track materials is also without improvement, the demand being almost wholly for rather small quantities and the leaning of prices in buyers' favor. Spikes are quoted at 1.85 to 1.95c.; fish plates at 1.50 to 1.60c.; track bolts, square nuts, at 2.4 1.60c.; track bolts, square nuts, at 2.40 to 2.50c., and hexagon nuts at 2.5 to 2.60c. delivered.

HE FAILED TO MATEREALIZE.

American Artizan—The English journalists who are making a tour of America, with the World's Fair as their Mecca, called on President Cleveland and had a pleasant interview with him. It was suggested facetiously that the member of the party from Cardiff had come over particularly to see some of the tin-plate factories that had been established through the McKinley bill. "If you find any of them, gentlemen," said Mr. Cleveland, smiling, "I wish you would let me know." The gentleman alluded to is Mr. Lascelles Carr, M.P., who recently honored the American Artizan office with his presence. Mr. Carr stated to us that when he was in Pittsburg, Pa., he met some gentlemen who promised to show him all the tin-plate of American manufacture that he desired. An appointment was made, at which, however, the pilots to the tin-plate manufacturing plants failed to put in an appearance.

VENTILATION OF BASEMENTS.

In our large cities many basements and cellars are occupied as shops or stores, or as saloons of some sort, and the ventilation in them is proverbially bad. When a basement is entirely above ground, and has an ample cellar below it, it presents no greater difficulty in the matter of ventilation than rooms situated higher up in the building; but when, as is very often the case, it is about half way under ground, or is substantially or actually a cellar, perhaps extending out under a sidewalk from 14 to 16 feet, and has no means of admitting daylight except through thick glass set in iron frames in the sidewalk itself, ventilation becomes extremely difficult in many cases, especially if there be not an ample sub-cellar below. A plan by which a cellar may be thoroughly ventilated has recently been worked out by a heating engineer in a neighboring city. The design was made for a billiard saloon in a large cellar situated beneath a restaurant. In this scheme air is taken in through areas in the rear of the cellar, and is to be forced through galvanized iron ducts extending entirely around the bottom of the basement room under the rows of chairs provided for spectators, which are ranged around the apartment. The lower part of this duct—that is to say, that part which lies on the floor of the basement—is provided with openings that deliver the air forced in through corresponding openings through the floor into the cellar below, where, in winter, it is moderately warmed by passing it through box coils, whence it passes through distributing ducts arranged under the floor to numerous registers, also arranged around the room, and opening just above the platform for chairs that entirely conceals the main duct. The plenum is obtained by the use of a blower driven by a gas engine placed in the cellar below; but this may possibly be supplanted by an electric engine, when the installment is erected.—Metal Worker.

CUTLERY AT THE FAIR.

The exhibit of cutlery at the Columbian Exposition is now, says a despatch to N. Y. Bulletin, what was anticipated, and not what the public seemingly had the right to expect. It was thought that there would be a great display of American table cutlery—a line of manufacturing in which we have made great progress during the past few years, and in which we have gained great credit both at home and abroad. But no American manufacturer has placed a table knife on exhibition. It is reported that this is owing to the fact that there was a misunderstanding between the manufacturers and the managers of the exposition in respect to the space assigned them, and that they declined to show their goods. There is no display of cutlery in the French or Italian sections, none in that of any of the smaller countries of Europe, and nothing in the Austrian section except fancy fruit and paper knives, which are exhibited by a firm in Vienna.

ASBESTOS IN NEWFOUNDLAND.

"There can no longer be any doubt," writes the Newfoundland correspondent of the Montreal Gazette, "that asbestos in paying quantities and of good quality, is to be found over a very large area of Newfoundland. So far, the serpentine rocks of the west coast have afforded the most promising results; but this valuable mineral has also been found on the east and north-east coasts. This summer active operations will be carried on at several points on the west coast. Mr. Jones, an English expert, who has written the best book on asbestos, visited this part of the colony last year, and spent several months in exploring for asbestos. The result was that he returned this year, engaged a party of miners, and started with a large stock of tools and general outfit for Port-au-Port, St. George's bay, where he has obtained a mining grant. He represents a company named "The Newfoundland Mining Syndicate," of Southampton, England, and he is a fellow of "The Imperial Institute," lately opened by Her Majesty in person. Mr. Jones, who is an experienced mineralogist, has formed a very favorable estimate of the mineral resources of the country. Should he succeed in developing an asbestos industry on the west coast he will have done more for us than if he had discovered gold mines. The demand for asbestos is now so extensive, and the price so high, and likely to continue so, that the discovery here is of the first importance."

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THE CHEAPEST ⊛

Leather Belting,
Lace Leather, Etc.

A FULL SUPPLY
ALWAYS IN STOCK

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85 York St., TORONTO
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Chains

Coil, 7 sizes, Trace, Halter, Tie out, Post Heel, and Cow ties, TieWeights and Evener Chains, etc.

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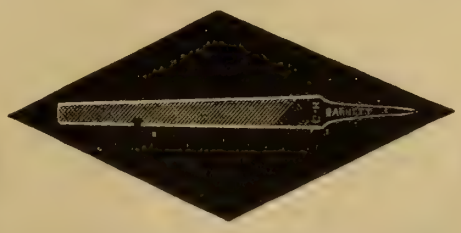
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MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
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MAMMOTH WORKS : HULL, CANADA

DRY STEAM.

It is probably only a question of another 10 or 15 years before engineers generally will again be using slightly superheated or dry steam, not only in land engines, but at sea and with locomotives. Modern ideas favor the change, and the economy which will be obtained by preventing the large amount of condensation now going on in steam cylinders. The presence of water is acknowledged to be uneconomical and injurious. A steam jacket is only a simple means of raising the temperature of the cylinder metal touched by the steam. For the maximum economy it is important to increase the temperature of our cylinders, and this is precisely the effect of superheated steam, the result being that there is much less condensation.—Ex.

DISCOVERY IN ELECTRICAL HEATING.

An account of what appears to be an extraordinary discovery is given in the report from Frankfort to the State Department of Consul-General Frank H. Mason. From advance sheets of the consular reports for June Metal Worker extracts the following description:

A discovery so original and so wide in its practical application that it is believed to open a new and important chapter in the use of electricity for heating purposes has recently been announced from Brussels and tested at Berlin. The invention is the joint achievement of two Belgian scientists—Messrs. Lagrange and Hoho—who a few days ago applied to the Imperial German Patent office for patents on a new method of heating, melting and refining metals by means of electrical heat. The means, as designated in their claim, were so simple and the results as therein described so incredible that the patent examiners demanded that before issuing the patent a practical demonstration of the process should be made in their presence. The matter was referred to an eminent and disinterested electrical expert at Berlin, who made the first essays in his private laboratory, and was so delighted with the result that he asked by telegraph permission of the inventors to repeat the demonstrations before the Electro-Technical Society at the German capital. This permission was readily granted, and the experiments were performed before a group of expert electricians with brilliant success. From the account given by one of the experts who was present at these demonstrations and from various other sources the following report of the new process has been derived:

The apparatus consists of a glass or porcelain vase, which may be of any size conveniently adapted to the purpose, provided with a lining of lead connected with a strong conductor of positive electricity. The vase is filled to three-fourths its capacity with acidified water. A pair of iron tongs with insulated handles is attached by a flexible conductor to the negative pole of an electrical current generated by an ordinary dynamo. With this simple and inexpensive equipment the following phenomenon is produced:

The electrical current having been switched on, a bar of wrought iron or other metal is taken up with the tongs and plunged into the water within the vase. Immediately the water begins to boil at the point of contact; the immersed portion of the iron rises quickly to a red, then to a white, heat, and emits a stream of brilliant white light. In a few moments the heat becomes so intense that the iron melts and falls off in bubbles and sparks, leaving a clear, glowing surface in perfect condition for welding. The heating process has been so rapid that neither the water nor the end of the bar held within the tongs have been more than slightly warmed, and, the current being switched off, the bar, with its submerged end glowing, may be readily held in the naked hand. If, instead of a bar of metal, a stick of carbon is used, the heat in a few minutes produces detached fragments of amorphous carbon, which proves scientifically that a temperature of 4,000 deg. Celsius has been developed. The rapidity of the heating and the limit of temperature to be reached are easily and accurately governed by the strength of the current employed, so that the whole process is under the absolute control of the operator. During the recent experiments at Berlin the measuring instruments registered a tension of 120 volts and an energy of 220 amperes. It was estimated that fully 50 per cent. of the current was directly utilized as heat, whereas the practical limit of such utility has not hitherto exceeded 20 per cent. It is stated by the inventors that by employing a still stronger current a temperature of 8,000 deg. Celsius has been developed. The mechanical importance of this fact will be apparent when it is remembered that this is a degree of heat nearly three times greater than that required to extract iron from the ores, the most refractory of which fuse at about 2,700 deg.

Divested of all merely technical phraseology and reduced to its simplest terms, the process under consideration may be explained as follows: One of the well known effects of electricity is to separate compound fluid bodies through which it passes into their primitive elements. The current, passing through the tongs and metallic bar into the water, decomposes the latter into its two gaseous elements—oxygen and hydrogen. The oxygen is attracted and gathered on the relatively large surface of the lead lining and produces no noticeable effect. The hydrogen, on the other hand, gathers around the immersed portion of the bar; and as this has a comparatively limited surface area, it is immediately surrounded with a close envelope or jacket of hydrogen, which, being a bad conductor of electricity, creates a powerful resistance to the passage of the current and thus develops the heat which causes the bar to glow and melt. It is merely an application of the well-known law that friction or resistance to the passage of an electrical current causes heat, and the apparent paradox of a piece of cold metal plunged into cold water rising rapidly to a melting glow is as simply and clearly explained as the incandescence of a platinum coil in a vacuum bulb.

IRON AND STEEL.

The state of a substance in regard to its fluidity depends upon the conditions of temperature and pressure under which it is placed. The most subtle gas under certain circumstances becomes solid. If a sufficient frigidity is created, frozen hydrogen drops to the floor like shot. When we say of any fluid that it flows as freely as water we scarcely take into account the fact that at ordinary winter temperatures water is a solid. Yet, according to the glacial theory, water has a certain degree of fluidity even when congealed into the hardest ice.

A fluid in some sense a substance, the particles of which can be made to move upon each other without separation, or cohesion, by forming new attachments before breaking off the old.

Under this definition of ductility, malleability, even flexibility, are indications and measures of a fluidity, or capacity of flowing, which may be exhibited under pressure. Now, pressure is everywhere; there is nothing in existence which is not under pressure, and nowhere is there a constant, uniform pressure. It is eternally varying in amount on all things.

A substance in a condition of perfect fluidity resumes its previous form after the removal of an extraordinary coercive pressure. This tendency, more or less apparent, as will be noticed hereafter, may be observed in substances at all degrees of fluidity.

The success of many mechanical operations is involved in the respect which substances which are ordinarily solid yield to the laws governing fluids. The forming of work in stamping dies, as coins and metals, the making of drop forgings, the pressing of car wheels into shape from a mass of heated iron by powerful hydraulic presses are among the applications to the manipulation of the precious and useful metals, of the law that pressure from any direction upon the particles of a confined fluid is exerted with equal force upon all the particles and in every direction.

It would not appear to a casual observer that any law especially governing fluids had much of anything to do with forcing iron and steel to take peculiar forms. If anybody could keep its character clear from the suspicion of fluidity, it would seem that steel, the synonym of hardness, ought to be able to do it. But steel under pressure will flow even when it is cold; good hard steel, too, at that, hard enough for sewing machine needles. It was on the development of the fact that cold steel will flow under pressure that the success of the cold wire swaging machines depended. Their value was soon demonstrated. One morning in 1873 six men walked out of a wire mill on Twenty-ninth

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WE MAKE ALL OUR HOSE BY THIS PROCESS.

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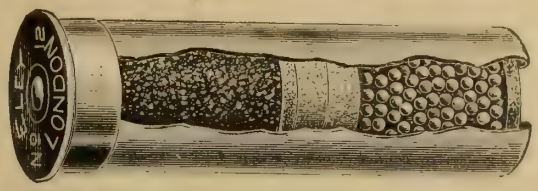
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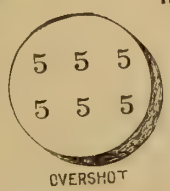
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Manufacturers of EB and other Percussion Caps.

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254 Gray's Inn Road, LONDON, ENG.

PERSONAL MENTION.

E. B. Nixon, Winnipeg, buyer for the Hudson Bay Co., was in Toronto and Montreal last week on a special trip.

James Playfair, lumber dealer and general merchant, Sturgeon Bay, intends going to the World's Fair in a unique way. He will board his private yacht at Sturgeon Bay and sail right through to Chicago. He expects it will take about four weeks to reach the White City.

F. J. Gillespie, merchant and deputy-reeve of Uptergrove, was in Whitby last week attending the County Council.

E. M. Birch, vice-president of the Canadian Screw Company, of Hamilton, was in Toronto this week.

Abe. Lyons, manager of the lamp goods department of M. & L. Samuel, Benjamin & Co., is on a business trip to Chicago and New York purchasing lamp goods and fixtures for the fall trade.

Mr. Meharry, of Lang & Meharry, Port Perry; John McNab, Claremont, and F. J. Hamilton, Port Credit, were among the country merchants who were in Toronto this week on business.

John W. Williamson, who represents Rice Lewis & Son, Ltd., east of Toronto, has forsaken bachelordom, having taken unto himself a wife in the person of Miss Louise Holmes, of St Catharines. Mr. Williamson is popular both on the road and in the warehouse. On Saturday afternoon last, the employees of the firm prepared a pleasant surprise for their friend by presenting him with a handsome cabinet as an expression of their good wishes for his future happiness.

A. M. Colquhoun, manager of Chown & Cunningham's, says: "We believe HARDWARE to be the best paper of its kind in Canada, and equal to anything published in the United States."

Mr. Martin, buyer for McLellan & McFeely, of Vancouver, B.C., was in Toronto this week. He was formerly with Aikenhead & Crombie, of this city, and his many old friends here were glad to see him again.

You will Insure Success IN THE STOVE Business, by selling





"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.





The Gurney-Tilden Co. Ltd.

Successors to The F. & C. Gurney Co.

HAMILTON - = ONTARIO.

street, New York. Their labor was no longer needed to heat and point wire to enter the draw plates. One of these little cold wire swaging machines was doing the work much better, and they were free for other employment.

In drop forging the material submitted to the blow follows the path of least resistance and flows to any parts of the die which are not filled. If steel will flow under pressure when at the natural temperature, or what is called "cold," it is reasonable to suppose that the nearer the temperature approaches that point where it will be fluid at the natural pressure of the atmosphere, the less will be the artificial pressure required to cause it to flow. This supposition is found to be practically correct. The practice in drop forging is to subject the stock—steel or iron, whichever is used—to as great a degree of heat as may be best adapted to the purpose proposed, and to the amount of pressure it is desirable to use.

In making steel forgings of any kind the degree of heat to which they may be brought without injury to their quality must be limited by the nature of the material as to its chemical constitution.

It is not proved that highly carbonized steel will admit of a greater degree of heat when it is to be condensed in dies, as it is in drop forging, than when it is worked on the anvil. When it is struck in close dies, which imprison it on all sides, and it is compressed with great force into smaller space, it does not appear that any heat-generated form or quantity of elastic gas which may be occluded by and with its own particles can be forced out and expelled by this confined compression.

At the instant of impact the object fills the dies in every direction, but when the driving force recedes the elastic recovery of the substance is manifested by expansion in the line of the receding force, and retraction in every other direction from which the blow came. That is the effect of elasticity, and of the tendency of fluids, after pressure, to recover their previous state, and the facts when carefully observed prove it to be a very active principle, although its existence is often ignored.

A due consideration of the conditions imposed upon it will suggest that iron, when it is compressed in close dies, has but slight chance to discharge any impurities which it may contain. This mode of working iron, therefore, cannot be said to refine it, in the sense of ridding it of foreign matter; nor will it determine the proportion of space occupied by such matter, if its incompressibility at the working temperature does not decrease in a greater relative proportion, than that of iron. If the silica at the temperature to which the material is heated becomes proportionately softer than the iron, which it probably will, the pressure brought to bear upon the mass may cause it to occupy less relative space, and the strength of the material will be that much increased.

Iron which shows sand seams and quartz veins before it is dropped may be so thoroughly heated that these will be separated and diffused, so that after it is dropped the cutting tools used to finish it will not need to do the work of stone chisels, and an acid exposure will reveal a fairly homogeneous surface. Some of these impurities may be thrown off as slag before the bar is laid on the die, but there is only a small chance for it, when the blow is struck, to work its way to the little door of exit left open to it from a closed die.

If it is quite essential that the finished work shall have a large proportion of the qualities of good iron, it is advisable that attention to this matter be bestowed upon procuring the stock from which the forgings are to be made.

Red short iron may be used for work made with the drop in many cases where it would be impracticable to use it if the same work was to be made by hand; but this remark will not apply if the iron is to be subjected to bending at a red heat in the process of manufacture; it is only applicable to instances where pieces can be splashed out into a die which may be of as intricate form as is needed.

As the stock flows into every part of the die, the perfect figure is formed, without the peculiar strain which breaks red short iron. This plan may involve the making of a broad "fin," but with little waste of stock from the trimming off of this fin, in comparison with the saving of time resulting from this expeditious method, and the saving of expense in the use of a cheaper stock. The article thus forged will be as serviceable when cold as if it had been made of more expensive material.

If a bar of iron, or a piece of a bar, is heated red hot, and afterwards cooled in water, and this operation is repeated a number of times, the foreign matter in it will gradually become detached from the iron; some of it may melt and run out into the fire, some may scale off in the air with some oxide of iron and some may dissolve in the water, but however it goes, it will leave the bar in the condition of a bundle of irregular strings of iron which seems to be a skeleton of the original bar, from which the flesh has dropped off. This appears to be a pretty fair representation of the constitution of common bar iron.

If a bar of rolled iron—it may be refined iron—be carefully, slowly and very evenly heated to a red heat, and tension applied to stretch it, it will not yield uniformly, but in some places it will diminish in size more rapidly than in others; after awhile it will have a knotty appearance, and as the strain continues, some place will rapidly decrease in size, and the more it is weakened the less the strain will affect other parts. The tension has disclosed its weakest part. If, when it was first removed from the fire at a uniform red heat, it had been submitted to a bending strain it would probably have manifested its weak points by bending more easily at them. The bar was not homogeneous; its particles were not alike; they did not set at an equal distance from each other, and they did not cohere uniformly.

If a man was condemned to "move on" until he found a substance that was absolutely homogeneous he would have a longer pilgrimage before him than the Wandering Jew.

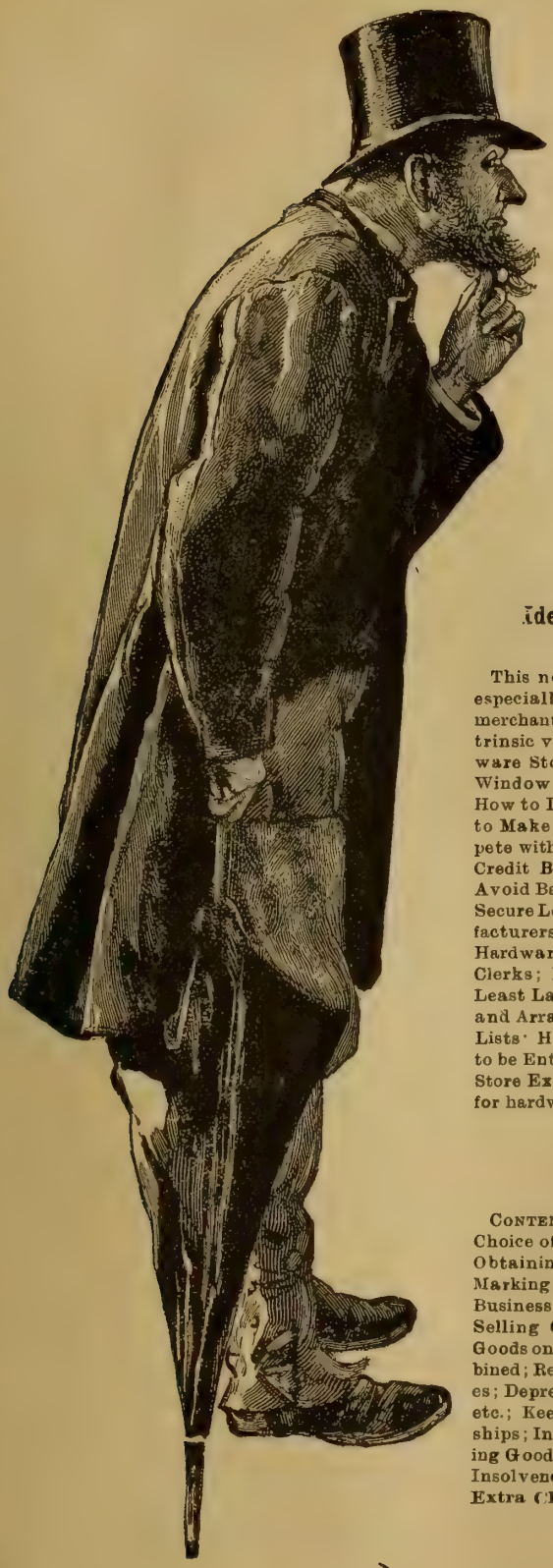
When iron is extended in length by rolling or hammering, the uncombined foreign matter which is mixed with it and not expelled is curiously enough disposed along and between the filaments of iron which are formed by the process without destroying their continuity. The strength of the real iron in the bar is in no wise weakened by their presence; it is even probably stronger on account of it, partly because of an indefinite amount of support which they yield and partly because their effect is to convert the bars into a bundle of wires which they cement together, after performing the same office for them that charcoal dust, sprinkled between the sheets, performs in the making of Russia sheet iron. The bar as a whole may not be as strong to resist a tensile stress as a bar of the same size of pure iron, but it may be be stronger than the same amount of pure iron would if put alone into a bar of the same length, which, without the impurities, would necessarily be smaller in its cross section.

When the proposition is made to construct a steamboat shaft of parallel wires, bundled together and welded at the ends, the idea occurs at once that although such a shaft would have great tensile strength yet its resistance to twisting could not be very great, and in a shaft for the purpose proposed, resistance to torsion is the most essential quality. It is suggested that the friction of the wires upon each other would aid this resistance, but in the first motion from a straight line to the slight incline which would follow, say a quarter twist, there would be a friction so slight as to interpose no serious resistance.

How, then, can the bundle of wires be strengthened to prevent it from twisting? There appears to be no better way than to fasten each to each, along its entire extent. But how can this be done? is the important question. To this there appears to be no better answer than that they can be cemented. They might be galvanized or tinned, and the whole shaft laid in a tank of melted tin or zinc until all the interstices between the wires were filled and the whole mass soldered together. When this has been done and the wires bound fast for the whole length, there will have been obtained a shaft which resembles less a modern shaft, made of ingot iron, than it does a good, well made, wrought iron shaft.

The forging of heavy shafts and of other large masses of wrought iron has in the past been at the disadvantage of not having force to apply to the welding which would not be absorbed by that portion of the metal which received the first impact, and hence there has been an inability to apply the force to the region where it was required to unite the material by welding. To obviate this difficulty the weights of hammers have been so increased that the force is carried through the largest masses that have been brought to them.

The hydraulic presses which are substituted for the heavy hammers in some establishments claim still greater advantages in this respect. They certainly can graduate the speed while retaining the required power, which is a desideratum difficult to obtain with falling bodies. It is now possible to make wrought iron shafts much nearer perfection than ever before.—R. F. Spalding in Age of Steel.



It is more honorable to have built a dog-house than to have dreamed of building a palace. . . . . .

BOOKS FOR BUSINESS MEN.

Ideas for Hardware Merchants.

By D. T. MALLET.

This novel book is the only book ever written especially for hardware men, and every hardware merchant will find it of decided help and of intrinsic value. It tells How to Advertise a Hardware Store; How to Dress a Hardware Store Window; How to Select Seasonable Goods and How to Display Them to Best Advantage: How to Make a Success with Hardware; How to Compete with "Department Stores;" How to Turn a Credit Business into a Cash Business; How to Avoid Bad Debts and Increase Trade; How to Secure Low Quotations from Jobbers and Manufacturers; How to Arrange the Fixtures in a Hardware Store; How to Treat and Manage Clerks; How to Keep Your Accounts with the Least Labor; How to Systematize Your Business and Arrange Its Details; How to Arrange Price Lists; How to Meet Close Competitors and How to be Enterprising; How to Properly Proportion Store Expenses, and thousands of practical hints for hardware merchants. **Paper cover, $1.**

How to Keep a Store.

By SAMUEL H. TERRY.

CONTENTS: The Selection of a Business; The Choice of a Locality; On Buying a Stock of Goods; Obtaining Credit on Purchases; Examination, Marking and Arranging of Goods; Advertising a Business; Employment of Clerks; The Art of Selling Goods; Selling Goods for Cash; Selling Goods on Credit; Selling for Cash and Credit Combined; Replenishing Stock; Settling for Purchases; Depreciation of Goods; Losses by Fire, Theft, etc.; Keeping Accounts; Expenses; Co-partnerships; Influence of Social Life on Business; Buying Goods at Auction; Investment of the Profits; Insolvency; Business Qualifications, etc. **12 mo, Extra Cloth, $1.50.**

300 Ways to Dress Windows.

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Fully explained. For grocers, general dealers and all lines of business. 250 pages, 150 illustrations. Price, post paid, $1.75 This includes a nickel hammer and a pamphlet on show windows. **SENT FREE**, a sample of Bon Ami cleans windows, show cases, brass, etc., with a 44 page catalogue of window supplies.

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By N. C. FOWLER.

Nath'l C. Fowler, jr., the eminent advertising doctor and expert at business, has written a book all about advertising in daily papers, weeklies, magazines, religious and agricultural papers, in street cars, signs, lithographs, novelties, calendars; about cuts and how to use them; window dressing; store decoration; points on selling; keeping accounts; everything about publicity and business outside, written from the merchant's standpoint—a book worth its price to the man who spends $25 for printing, and the more to the extensive advertiser and merchant; 177 great advertisers answer the vexed questions of advertising, presenting individual and collective opinion of positive value—most important chapter written. **Cloth $3.75, half leather $4.50, full leather, $5.**

Self Instruction in Practical Business Qualifications.

By CHAS. S. MCNAIR.

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How to Sell Goods.

By B. F. CUMMINGS.

A Prize Essay, **10c.**

METHOD IS THE SECRET OF SUCCESS.

The Publishers of this paper have arranged to accept and transmit to the U. S. and Canadian publishers, orders for these books. Money should be sent by P. O. Order or register letter to

THE J. B. McLEAN PUB. CO., LTD.
10 FRONT ST. EAST,
TORONTO.

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

P. E. Beaudoin, general merchant, Black Lake, has assigned.

T. A. Cooper, crockery, Toronto, has assigned to John Ferguson.

Neil Black, coal and wood, Toronto, has assigned to Richard Tew.

W A. Thornton, general merchant, Shebo Lake, has assigned.

G. B. Jones, general merchant, Apohaqui, N.B., is offering to compromise.

Michael Gillis, general merchant, Broad Cove Chapel, N. S., has assigned.

G. F. Thompson & Son, paint manufacturers, St. John, N.B., have assigned.

The stock of W. H. Bell, plumber, Truro, N.S., has been seized under bill of sale.

Patrick J. Grace, general merchant, Huntley, has assigned to J. F. Kirkland.

Harmon Gilmore, shingle and planing mill, Vittoria, Ont., has assigned to J. H. Johnson.

White & McCreary, sash and door manufacturers, Arnprior, have assigned to Ephraim Mohr.

W. H. & J. Rourke, lumber dealers, St. Martins, N.B., have compromised at 50 cents on the dollar.

McKay Bros., general merchants, Papineauville, is offering to compromise at 25c. on the dollar, cash.

W. S. Given, general storekeeper, Paisley, is offering to compromise with his creditors at 85c. on the dollar.

The Ontario Coal Company will place before its creditors at the next meeting a composition offer of 50 cents on the dollar.

The Baackes Wire Nail Company, of Cleveland, Ohio, one of the largest concerns of the kind in the United States, has assigned.

Mrs. E. Hardy, general storekeeper, of Bridgewater, near Madoc, Hastings county, has assigned to W. A. Campbell. The liabilities are about $6,000.

PARTNERSHIPS FORMED AND DISSOLVED.

Venne & Bourgeau, painters, Montreal, have dissolved.

The Katrine Lumber Co. (Ltd.), of Hamilton, is applying for charter of incorporation.

Wellington Manufacturing Co. (Ltd.), of Fergus, is applying for charter of incorporation.

Paris Tool Manufacturing Co. (Ltd.), of Paris, is applying for charter of incorporation.

H. F. Poirier and Dame Azilda Perrault have been registered proprietors of the Dominion Safety Lamp and Brass Work Co., Montreal.

Jean Marie and Louis T. Aubin have been registered partners to carry on business as builders at Montreal under the style of Aubin & Frere.

A partnership has been registered in Halifax by John Davidson and Robie S. Davidson to carry on business as dealers in lumber, etc., under the firm name of John Davidson & Son.

FIRES.

C. P. Holton, lumber and sash factory, Belleville, has been burned out.

James N. Moran, saddler, was among the sufferers of the Truro, N.S., fire.

A. Longue, blacksmith, Longue Point, has been burned out; partially insured.

P. J. Grace, general merchant, Pawmure, Ont., has been burned out; partially insured.

Kelso & Co., general merchants, and H. N. Ryan, grocer, Thurso, N.S., have been burned out.

A fire broke out in the foundry of W. & J. G. Greey, 2 Church street, Toronto, at 9.20 Wednesday evening; damage $1co.

A fire on the premises of Bourgouin, Duchesneau & Co., hardware merchants, on St. Paul street, Montreal, caused damage to the extent of $11,000.

SALES MADE AND PENDING.

The stock of J. W. Collins, lumber, Montreal, is advertised for sale by auction.

The general stock of Freres McKay, Papineauville, Que., is advertised for sale by auction June 23.

The furniture stock of Smith & Taylor, of Brandon, was sold by Assignee Campbell to Wilson & Smyth of the same place for 31c. on the dollar.

CHANGES.

Henry Peters, hardware, Woodbridge, has sold out to John W. Franks

Henry Wood, paints, Winnipeg, Man., has sold out to T. S. Hamilton.

James Stewart, general merchant, has been succeeded by W. J. Young.

Andrew Ross, general merchant, Harwood, Ont., has been succeeded by John A. Watson.

O'Meara & Whiticomb, tinsmiths, Port Arthur, are closing up there and going to Superior.

DEATHS.

Chas. Sargeant, general store, etc., Nelson, N.B., is dead.

THE FIRST SLOT MACHINE.

The penny-in-the-slot machine has, during the last few years, been adapted to so many different purposes, and has become so popular, that its origin, which has been heretofore enveloped in obscurity, is a question of considerable interest, says Mechanical News. While the name of the originator of this great money-making device will probably never be known, it is universally admitted to be of English origin. The first slot machine the writer ever saw was in the store of a London tobacconist in the year 1867. I am reasonably sure that this was the first one manufactured, for the contrivance was not only then looked upon as a decided novelty, but the mechanism was so crude and primitive, that in view of the state of perfection to which it has now attained, there could be little doubt of its recent origin. The device consisted of a little brass box, resembling in appearance the old-fashioned tea caddies our grandmothers used to use. The box was partitioned off in the middle, and had two half covers which were fastened at each end of the box, and were operated by means of springs. The cover of one compartment was provided with a raised slot and a thumb knob. When you put a coin in the slot and pressed the knob, the cover of the other compartment would fly open. The idea of the machine was to put a penny in the slot and get a pipeful of tobacco. At first thought it would look as if the tobacconist had all the best of the bargain, but the machine was so crude that he had only his own watchfulness to save him from imposition. Not only would any coin open the box, but any object shaped like one, and as the tobacco in the other compartment was in a loose state, an unprincipled person could as easily take a handful as fill his pipe. This machine did not meet with any lasting success, and it was many years after that the slot machine, as we of the present day know it, put in an appearance. But there can be little doubt that this device, which has made so many fortunes, can trace its origin back a quarter of a century to the crude contrivances then seen in the shops of the London tobacconists. To England not only belongs the credit of originating but of developing the slot machine, and it occasions no surprise to hear that it has recently been adapted to the use of quadrupeds as well as bipeds. In the Manchester Zoo, if the visitor now gives one of the elephants a penny, he immediately drops it in the slot of one of these machines and gets a biscuit. It is said that these intelligent animals have grown so wise that they will indignantly refuse a coin that will not work in the machines.

BUSINESS SUCCESS.

There is a fair run of business in structural material, but competition is keen and prices are still rather weak all along the line.

1. The first principle in the hardware business is to have a good double-entry bookkeeper. Rather save in the salary of clerks than do without a good bookkeeper.

2. Have your clerks work for your interest.

3. Have a uniform price as near as possible.

4. Do not overstock your store with certain lines of goods because they are cheap It is better to pay 5 per cent. more than to carry an overstock.

5. If you have an article that don't sell, do not take cost into consideration, but dispose of it for any price you can get.

6. Be careful in selecting new goods. When you do, advertise them extensively. In that way you are able to dispose of goods before your competitors.

7. Keep the store and especially the windows always attractive.

The above rules fully observed are bound to bring success to any firm.—M.C.E. in N. Y. Metal.

TORONTO CUTLERY CO.,

M. MAYER, Propr.

65 and 67 Yonge Street, Toronto

Imperial Razors

Joseph Allen's NON-XLL Cutlery

T. C. Co.'s Shears and Scissors

G. A. Mix & Co.'s Chisels

The Most Complete Lines of all Kinds of Cutlery in the Market.



S.S. SMOKELESS POWDER is the best Made by the Smokeless Powder Co., of London, Eng. A stock kept in Montreal. 25 lb. Drums, 2 lb. Cannisters, ½ lb. Cannisters. Send for Prices. **WILLIAM DARLING & CO., Wholesale Hardware Merchants, 30 St. Sulpice Street, Montreal.**

A FEW REASONS WHY

You should Keep your Stock fully Assorted With

Boeckh's Superior Brushes

They are always reliable and as represented.

They are guaranteed in every particular by the manufacturers.

They are made of the very best material and workmanship

They are sold at closest possible prices.

They are finished and put up in neat and attractive shape.

They are well known throughout the Dominion and are popular with all classes of consumers.

They are handled by all leading Hardware and Paint and Oil trade.

See that the name "BOECKH" Is on every brush.

Boeckh's Flexible Bridled Brushes.

Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

TORONTO, - CANADA.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it.

It is impossible for this pipe to get out of order

Give it a trial and you will use no other.

Hamilton Brass Manufacturing Co.

HAMILTON, ONT.

BROOKS'



Brook's "Reliable" Force Pump

BRASS LINED. The best Spraying Pump in existence. Semi-automatic. Requires no foothold or other fastening. Will work in any position, and in any receptacle that will hold water.

"California" Lawn Sprinklers

For attaching to hose. An inexpensive lawn ornament, throw a splendid spray as per cut.

Lawn Mowers,
Lawn Rollers,
Lawn Rakes,
Garden Hose Reels, Etc.



THE JAMES SMART MFG. CO.

LIMITED

Brockville, Ont., Canada

TIN FROM TIN SCRAP.

T. Twynam, in the Scientific American, gives the following method for obtaining tin from scrap. "The tin is coated with a film of chloride of calcium, or similar fusible salt, and heated to redness. It is then cooled by plunging in water, when a scale falls, which contains all the tin, and leaves the iron practically clean and suitable for many metallurgical purposes. The insoluble scale may be smelted direct for tin, after mixing with carbon and siliceous matter, or it may be heated with sufficient acid, preferably hydrochloric, to dissolve out the iron, leaving the oxide of tin in a nearly pure state, or the tin may be recovered as a soluble stannate after fusion of the scale with alkali."

CASH OR CREDIT?

"Keep thy shop and thy shop will keep thee
Light gains make heavy purses."

It goes without saying that every retail merchant believes that a store run on strictly cash principles is the ideal of business. Yet it is in some lines very difficult, or so considered, to place one's sales on a cash basis, and entirely refuse to extend credit to some of the customers without endangering the established trade. Take for example a hardware store, where the sales are about half cash and half credit, with the "book accounts" gradually getting the upper hand, it would seem that to refuse credit would almost if not quite diminish the sales to half their volume.

On the other hand, if the capital of the proprietor is limited, and he wishes to buy at the bottom of the market, he will view with alarm the increase of the amount which he is extending to his credit customers. There is no other one matter which has proved more disastrous to retail merchants, than that of extending credit without proper discretion, and in amount, beyond the means of the dealer.

The cost of keeping the books, collecting the bills, and loss of bad debts, equal in many stores the amount of profit made on their credit sales, and it is a common occurrence to learn of failures, which were primarily caused by indiscretion in extending credit.

I knew a merchant in New York State who, after five years of brisk business, was obliged to suspend, because he had been too free with his customers, and allowed them to run up bills beyond their power to pay. This same merchant, after he had settled with his creditors, took what he had left, and, remembering his experience, decided to start again in the same line and in the same place, and sell for cash only. As his capital was small, his stock of course was correspondingly scanty, but he pegged away on the "Cash Only" route, and in three years had regained his former amount of sales.

When he started, his old customers asked for credit, but he plainly told them that he proposed to sell only for cash, that his prices would always be as low or lower than credit stores, and that if they wished to favor him with their patronage it must be on his terms—Cash at time of purchase.

Well, a good many, in fact a large majority, of the old "book customers" went to another store to trade where they could pay for the goods when they got ready and found it convenient, but people who paid as they went, and wished to get full value for their money, supported him, and after a while he found that these same old customers when they had any cash to spend preferred to trade where their money went the furthest. He could afford to sell cheaper, since he had either the goods of their equivalent always on hand, and was able to discount his own purchases, which item alone about paid his rent. He carried the system of cash sales to the extreme, and it would have been just as impossible for the richest man in town to have bought one dollar's worth of goods on time as it would have been for the poorest to have secured one hundred. If anybody said they would step in "next week and settle" the goods remained on the shelves, and nothing was allowed to leave the store unless previously paid for, or sent C.O.D.

Years ago it was the custom to give long time as a rule, and without giving credit very little business could be transacted, but the time is now ripe for strictly cash stores, or cash with very limited credit. Let a cash store start in the midst of long established credit establishments, and how long a time will it take for the public to find out that the cash store can undersell its old time competitors?

If credit stores could have two sets of prices, so that the credit accounts would include a percentage for insurance, the matter would perhaps adjust itself, but this being impracticable, no store can afford to sell as low and give credit, as a competitor who sells for cash only, and never loses a cent on bad bills.

One of the easiest ways to gradually turn a part credit one into an entirely cash one is, at the commencement of the year, to place a short limit of time on to book accounts, say thirty days, and thus make your customers toe the mark. It is all right to urge that the public will pay no attention to time limits printed on bills, but if you wish to run your store yourself, why should you not insist that your customers shall respect the conditions on which you extend their credit? Suppose you have a number of customers who are in the habit of settling their bills at their sweet convenience in from four to eight months, although our bills may read "Terms 30 days," subjecting you to loss of interest and the anxiety of wondering whether they will ever pay? Now if I wanted to change matters, and they would radically need changing, I should explain to these customers separately, and personally, that after the first of the coming month, or year, as the case might be, that I should extend credit for thirty days only, and that I expected if they continued to trade with me that they would make their settlements promptly at the end of each month. If they were persons who were honest in principle, they could not feel offended at my proposition, and if they were not, the loss of their trade would ultimately be a gain. Then when the thirty days were up, under the new management, I should send them a concise statement of their account, with a printed slip enclosed, stating in polite but firm language, that the time in which the goods were sold had expired, and request a prompt settlement. If, after receiving this notice they came for more goods without paying what was due, I should then and there decline to extend further credit until the old score was settled. Right at this point is where most merchants' "backbones" begin to bend; they don't fear to print the limit of credit on bills, etc., but they hesitate to decline further credit, for fear of losing the customers.

If these same dealers will look back over their books, I will venture to state that they will find that nine-tenths of the "bad bills" they have encountered were the result of hesitating to refuse more credit promptly, and thereby allowing the bills to grow so large, that their customers were unable or unwilling to settle, or had himself been caught "in a hole" and forced to fail or skip the town.

If "Procrastination is the thief of time," what a rank and bold robber he is when allowed to linger among book accounts!

Now, having made it a rule to give no longer time than thirty days, and thereby having weeded out the slow customers, whose trade was a detriment to the business, I should commence to reduce my prices a little to encourage cash trade from a distance; I would make it an object for a workingman who had a few dollars to spend to walk past the old time credit concerns to my "Cash Store." As my cash trade increased, I would embrace the first opportunity to notify all "book customers" that after a future date all sales would be for "Spot Cash" at time of purchase, and at the same time take occasion to explain that I had reduced my prices to a cash basis, and the difference was to be divided among my customers. Those customers who had been willing to submit to the thirty day time, would now for the same reason, be satisfied to buy for spot cash, and effect the saving on price which it implied.

The entire sales now being for cash, with no expense for book-keeping or loss for debts, I would be able and willing to make a material reduction on all goods, and thereby demonstrate the value of trading for cash. If I had intelligent and polite clerks, the variety of goods which suited the locality and my prices lower than the credit stores, what would prevent my sales from increasing daily until the credit houses would either be obliged to meet my prices or continue giving long time credit?

If they decided to give longer credit, I would then secure most of their cash trade, and if they decided to meet my prices and also give long time, it would only be a question of how large a bank account they had as to how much longer they could continue to remain in business on their credit system.

When the store closed at night I would not be obliged to remain behind to figure out how I could meet my bills, and to run out daytimes to dun my delinquent customers. On the contrary, I would lock my business within, knowing that my capital was under my own control and not subject to the caprice or incapability of outsiders.

My whole time could be devoted during business hours to present sales, and not to those of last month or former years.

"Jock when ye hae nae thing else to do, ye may be aye sticking in a tree; it will be growing, Jock, when ye'er sleeping."

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,
Agents.
MONTREAL AND TORONTO.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.
Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.
FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,
CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

FIRE!

McCAUSLAND & SON

Beg to inform their customers and friends that they are in a position to fill all orders with promptness and dispatch, notwithstanding the recent fire in their premises. . . .

72 to 76 King St. W.

This Machine cannot be surpassed for smooth work, light running and durability. The drive wheels are 10½ inches in diameter, and warranted to cut grass 6 to 8 inches high. ALL GOODS WARRANTED.

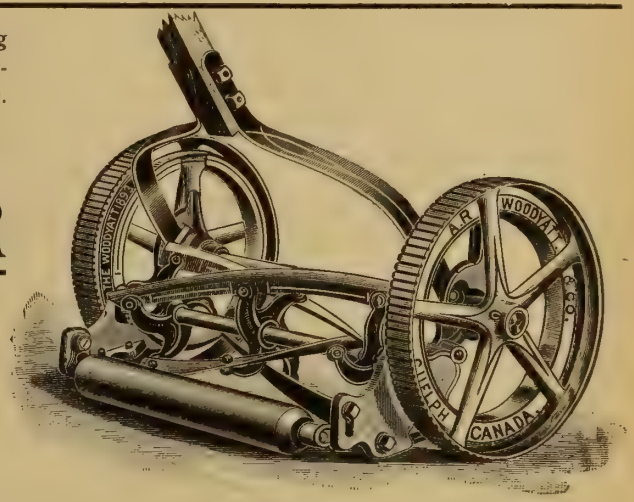
. . **1893** . .

THE "WOODYATT" LAWN MOWER

Light, Durable, and Efficient.

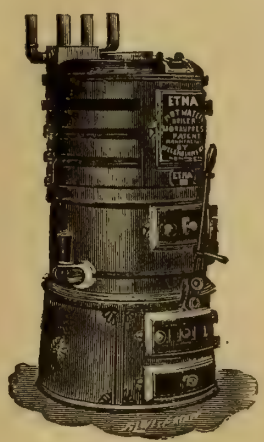
Now On Sale by all Wholesalers.

A. R. WOODYATT & CO. GUELPH, ONT.



. . THE . .

"ETNA"



. . HOT
. . WATER

BOILER

We claim is perfect. It is the original Round Boiler, patented by U. Beaupre, Dec. 1st, 1880 and May 2nd, 1889. Each year improvements have been added; and to-day it stands at the head.

We are willing to give any guarantee necessary to protect Architects or Contractors, that the Boiler will do all we claim for it.

The Boiler costs less than those of our competitors, and we will assume all risks.

We are in the field to stay and are bound to push this Boiler to the top rung of the ladder.

The Boiler previous to our purchasing it, had never been properly advertised or pushed, consequently, is to-day not as well known as some other makes.

Since buying out the former maker the sales have increased over 200 per cent.

If you have not a cut of same, drop us a card and we will be happy to forward one with full particulars.

As we said before, the Boiler is perfect, the price less, and we will guarantee it in every particular.

We have also bought most of the Grand Universal line of Patterns from the Estate of J. M. Williams & Co., of Hamilton.

We can supply all Repairs at the Regular trade price.

We still make the old reliable line of "Leader" Stoves.

Kindly remember us when any thing we manufacture is needed by you.

Wm. Clendinneng & Son, 145 to 171 WILLIAM STREET MONTREAL QUE.

BUYERS OF

Cutlery

WILL find it to their interest to see our samples before placing Spring orders. A choice assortment in stock of Jas. Rodgers & Co.'s and E. M. Dickinson's goods at

SPECIAL PRICES.

A. C. LESLIE & Co.

Manufacturers' Agents

MONTREAL and TORONTO.

You can lose more than we do by not subscribing for this paper.

MUNN'S LIQUID GLUE

IS THE BEST.

Kennedy Bros., Agents

101 Bay Street, TORONTO.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.

GALVANIZED SHEET IRON. SP



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucpan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS.

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	23½ 24
trip "	25, 25½
Tin Plates—*Charcoal Plates, Bright.*	
M.L.S. equal to Bradley	Per box
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 25 4 50
I.X., "	5 25 5 50
I.X.X., "	6 25 6 50
I.XXX., "	7 25 7 50
D.C., 12½ x 17	3 75 4 00
D.X., "	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

Cokley Grade—	Per lb.
X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6½ 6½
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¼ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2⅞, 2¾
26 "	2¾, 3
28 "	3 , 3¼

Canada Plates.

Blaina	½ bright 2 75 ....
Abercarne	2 75 ....
Lion	....

Iron Pipe.

Wrought 62½ and 5 p. c. to 65 p. c.
Galvanized, 37½ to 40 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6	6 3-5
" ¼ " "	4⅞	5
" 5-16 " "	4⅛	4¾
" ⅜ " "	4⅝	4⅝
" 7-16 " "	4⅛	4½
" ½ " "	3¾	4
" ⅝ " "	3⅝	3⅝
" ¾ " "	3	3 1-5
Trace, per doz. pairs	$3 60	5 90
German coil, per 100 ft	1 65	2 70
Jack chain, iron, single, per doz yards	0 13	0 50
Jack chain, double, per doz yards	0 15	....
Jack chain, brass, single, per doz yards	0 20	1 10

Copper—*Ingot.*

English B.S "	0 12½ 0 13
Lake Superior	0 13 0 13½

Bolt or Bar.

Cut lengths, round, ½ to ⅞ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 19½ 0 21
" 35 to 45 " "	0 17½ 0 18
" 50 lb and above per lb	0 16½ 0 17

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 05 0 05½
Domestic "	0 04¾ 0 05

Zinc Sheet.

5 cwt casks	0 05¾ 0 06
Part casks	0 06 0 06¼

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¾ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 17 0 19
Standard	0 16 0 18
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 13
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	4 75
No. 1 Do "	4 50
No. 2 Do "	4 25
No. 3 Do "	4 00

Prepared Paints.

(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red " "	1 50
Venetian Red, (best) "	1 80 1 90
English Oxides per cwt	3 25
American " " "	2 25
Canadian " "	1 75
Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure,	
8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 70
Extra " "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	2 00 2 25
Hard Oil Finish	1 30
Oil Shellac	1 40

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 45 0 47

Castor Oil.

Best, per lb	0 08½ 0 09

Cod Oil.

Cod Oil, per gal	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet makers	0 17 0 18
White	0 16 0 17
London Town	0 7½ 0 08½
Gelatine	0 22 0 27
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads. in ½ lb. bags	0 70
Best thick white card wads. in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge..... 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, eacn 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmcur's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 to 70 and 10 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... ..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 45 to 47½ p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 50 & 10 to 57½ per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.

st break	$3 65
2nd "	3 90
3rd "	4 60
4th "	4 95
5th "	5 40
6th "	5 90
7th "	0 50

Picture Glass.

Pilkington's ordinary.

1st break	4 0
2nd "	4 70
3rd "	5 40
4th "	5 90
5th "	6 50
6th "	6 90
7th "	7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb . 0 25 0

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 12 in., per set 0 00 0 04½
14 to 20 in., " 0 00 0 03½
21 up " 0 00 0 03½
Per doz. sets
Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.
Per doz. pairs
Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

Philadelphia 1892 Improved

7½ inch Wheel. 4 Blades.

12 in.	14 in.	16 in.	18 in.
$4.40	$4.65	$4.90	$5.40 list

LAWN . . MOWERS

. The Woodyatt 1893 .

10½ in. Wheel. 4 Blades.

12 in.	14 in.	16 in.	18 in.
$6.75	$7.00	$7.50	$8.25 list

Liberal Discounts to Trade, and Prompt Shipments Guaranteed.

BOWMAN, KENNEDY & CO., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 67½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Canadian, 37½ to 40 per cent.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   Basis—50 to 60 dy 2 30
   40dy 2 35
   30 dy 2 40
   20, 16 & 12 dy 2 45
   10 dy 2 50
   8 & 9 dy 2 55
   6 & 7 dy 2 70
2. American Pattern Only
   from 4 to 5 dy 2 90
   3 dy. (lath) 3 30
3. Canada Pattern Only
   from 4 to 5 dy 2 80
   3 dy. (lath) 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross 1 00 4 25
" Carpenter 2 25 3 60

Picks

Per doz 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz 4 00 5 50

Pulleys

Hothouse, per doz 55 1 00
Axle. 22 33
Screw 27 1 00
Awning 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, 1 lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3½

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33½ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10⅔	11½ 11⅔
Cotton, per lb.....	18	20
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz 1 65 9 00

Scales.

Canadian List, dis. 40 p.c
Scale Beams.
Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P., dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, " 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen 1 25

Soldering Irons.

Per lb 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Snaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 2 00
" 2 " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 51½ per cent.
Channel nails 5c. lb. off list.

Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33½ p c

Ties

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9 00

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4½ 4¾
" 4 " 4 & 6 " "
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... .... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c.
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM ROGERS KNIVES, FORKS, SPOONS

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

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SEWER PIPE
WATER PIPE
INVERT BLOCKS

Canadian, Scotch or American

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Also for Fire Brick, Fire Clay, Gas Retorts, Gas Works Supplies, Portland Cement, Keen's Cement, Roman Cement, Mortar Colors.

Phone. 3763 Mention this Advt

W. J. REID & CO.

IMPORTERS AND DECORATORS OF

Crockery China and Glass.

LAMPS A SPECIALTY.

All glass, Vase, and Library Lamps, in every hue and design.

Our travellers will call upon you shortly with samples.

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Sold Outright. No Rentals

Sample Testimonial Letter

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TORONTO, Jan. 5th, 1893

T. W. NESS, ESQ.,
749 Craig St., Montreal.

Dear Sir:—I am pleased to state that the Telephone system in our establishment is working satisfactorily.

Yours faithfully,
C. W. TAYLOR,
Bus. Mgr.

Send for Special Catalogue No. 6.

T. W. NESS

749 Craig St., Montreal.
166 King West, Toronto.

COWAN & BRITTON

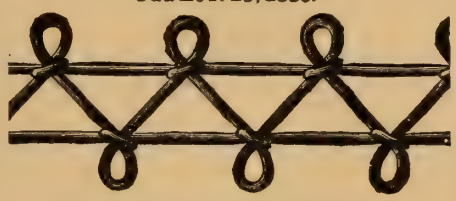
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Nails, Hinges AND Buts

Manufacturers of every description of these goods.

THE HATHEWAY PATENT FENCE WIRE.

Pat. Nov. 19, 1889.



Above Cut is One-half Actual Size.

The Hatheway Patent Fence Wire, the most popular fence wire throughout the United States, and fast gaining that position in the Dominion of Canada, as it contains all the requisite qualities of a fence wire, being handsome, strong, visible—seen at a long distance; will not sag or get out of shape; allowance for contraction and expansion, heat and cold; being broad, requires less strands to make a complete fence; easily put up, splices itself; will not injure stock. Put up in spools of 120 lbs. each. For sale by all the leading hardware stores in the Dominion.

Manufactured by THE COLLINS MFG. CO., 84 Adelaide st. E., Toronto.



NONE GENUINE WITHOUT THIS BRAND



STAMPED IN HEAD OF EVERY PACKAGE

Magee Mfg Co.

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Manufacturers of all kinds of

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Counter Measures, etc.

IMPROVED

Eclipse Horse Poke
Navey Barrows . .

OF ALL DESCRIPTIONS

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Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St, Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 x 4 Barb
Plain Twist and
Strip Fencing

And Staples for same.

Write for Prices and Discounts.

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"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

Compare

Any Lamp With the

"PITTSBURGH"

And see the Great Difference.



In every point you will see the vast superiority of the . . . .

"PITTSBURGH"

THE central draft in one is perfect, the other you will find fault with. See the wick-screw in The "Pittsburgh," see if the other has anything like it. Which is the simpler? The "Pittsburgh," of course. A child can take it apart without any trouble.

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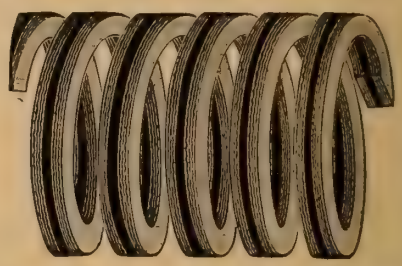
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BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7 16, 1-2, 9-16, 5 8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

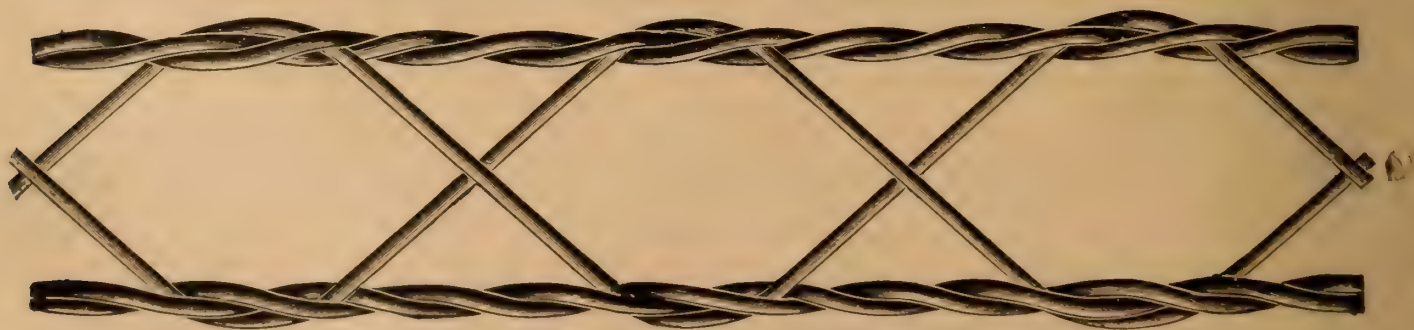
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TRUSS AND CABLE FENCE WIRE.



SIZE OF ONE STRAND.

Is Stronger and Costs Less per rod than any other Strand of equal width in the Market.

Manufactured by **Ontario Lead and Barb Wire Co., Ltd, TORONTO, ONT.**

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, JUNE 24, 1893. No. 25.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

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Owners and Sole Manufacturers,
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Carminette

What Is It?

It is the greatest Red Color known. It was invented and is made solely by **Mander Bros.**, London. It is an absolutely permanent color of great beauty and great strength, suitable especially for

THE word Carminette is registered in London and Ottawa under the designs and trade marks "ACH," and all persons using the word or any label describing a pigment color, render themselves liable to prosecution at law.

- **Coach Builders**
- **House Painters**
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Carminette is a handsomer color than English Vermillion. Goes farther and is more permanent. . . . . .

Send for sample stock showing Color and Price. . . . .

Sold only in Original Packages of 28 lb. Boxes, 14 lb. Boxes, 7 lb. Boxes, and 1 lb. Paper Parcels, by the Wholesale Agents for Canada.

Walter H. Cottingham & Co., MONTREAL

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ANCHORS = CHAINS

. Rope .

BLOCKS and TACKLE

. . OAKUM . .

Galvanized Tackle of all Kinds

RICE LEWIS & SON, LTD.

TORONTO.

BOOTH'S COPPER RANGE BOILERS

Best Workmanship.



Test Guaranteed.

26. 27. 27½.

IMPORTANT NOTICE.

Consequent upon the ordinary Range Boiler failing to fill the demands of the Trade, we are making a special Copper Range Boiler, Extra Heavy, of the best Lake Superior Copper, flat bottom, top and bottom Double Riveted, with a guaranteed Hydraulic Test of 200 pounds.

This Boiler is known as

"Booth's 27½ Copper Range Boiler,"

and meets the requirements as called for in the specifications of our leading Architects.

Correspondence solicited and Price Lists on application.

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PATENT ONYX STEEL WARE

Onyx Enamelled Steel Ware

SOMETHING ENTIRELY NEW!

SUPERIOR IN QUALITY!

SEND FOR CATALOGUE

Kemp Manufacturing Co.

TORONTO

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, JUNE 24, 1893 No. 25

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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NEW YORK OFFICE: Room 41, Times Building, Roy V. Somerville, Manager.
EUROPEAN BRANCH: Canadian Government Offices, 17 Victoria St., London, S.W. R. Hargreaves, Manager.
John Cameron, General Subscription Agent.

The question of taxing bicycles is at the moment occupying some attention in the United States. The cause is largely owing to the proposal of the assessors of Lowell, Mass., to emulate Paris, France, in taxing the silent steed. The question of taxation is sometimes a delicate one to decide, but a reasonable proposition to lay down is that levying of taxes shall, as far as possible, and within the bounds of reason, be confined to articles that are of the nature of luxuries. And it seems to us that the determining of this point in regard to bicycles should determine whether Lowell or any other municipality shall levy a tax upon them. A tax upon these machines would doubtless result in a comparative falling off in the manufacture and sale of them. And for this reason it is only to be expected that both maker and dealer should oppose the introduction of the innovation on this continent. But in deciding the question as to whether bicycles shall or shall not be taxed these are considerations which should not, in fact, ought not, to have much weight with municipal bodies. The question to be decided is, Are bicycles luxuries? If they are by all means tax them if increased revenue is necessary or if by so doing the burden of taxation can be made to rest less heavily upon shoulders now carrying too much. To demonstrate however that the bicycle is a luxury would be difficult. At one time it undoubtedly was, just as were chairs and tables, knives and forks, tea, coffee and sugar, but to-day these are necessities. And so it is with the bicycle. In Toronto alone to-day there are hundreds of workingmen who live in the suburban where rents are cheaper, the air purer and where it is more possible to procure dwellings of their own than in the city who would, were it not for the bicycle, be deprived of these advantages. Mounted on their silent steeds they can easily traverse three or four miles in the time that it used to take them to go one on foot, thus, as a rule being able to reach their suburban as quick if not quicker than they formerly did their urban homes. Another advantage of the bicycle is in regard to time-saving. This is no small thing, for time is money. Then, among other things, is its use in the facilitating of business. And even in military matters it is beginning to fill an important place. No, the bicycle has a utilitarian value, and to place unnecessary burdens upon it would be both unwise and unjust.

* * *

The linseed oil market is at the moment characterized by a good deal of firmness. In England there has been an advance of equal to one cent a gallon on account of the scarcity of seed. In this country supplies have not been coming forward freely, and, as a result, all concerned are experiencing a good deal of difficulty in getting enough to keep them going. Most of the Canadian jobbers have arranged to draw upon native manufacturers for their supplies, while the manufacturers themselves are assisting each other as much as possible. The latter are now so filled up with orders that it is difficult to get delivery, and dealers who require prompt shipment are being considerably inconvenienced. All that any manufacturer seems at the moment to be able to do is to fill each order in instalments. While the local market is firm there have been no changes; but in the United States prices are higher and equal to 71¼c. per imperial gallon here.

* * *

Glints of the sunshine of better times are beginning to peep through the clouds that have for so long been hovering over the British iron trade. At least this is the inference to be drawn from the tenor of the reports published in the English exchanges just to hand. In Birmingham and district there is a better feeling in iron, while makers of lamps, cooking stoves, bedsteads, culinary utensils and machinery and iron founders are fairly busy. A better tone prevails in the Cleveland crude iron trade, and there is more activity in finished iron and steel. From Cornwall and South Devon comes the information that whilst the output of tin from the mines is increasing, stocks continue to decrease, and so much so that they are lower now by 1,000 tons than they were two months ago. "It is," remarks Iron, "however, hardly possible, with stocks as they are, and the demand increasing, that the metal can long remain at present rates." In Newcastle crude iron is improving, but the demand there for manufactured iron for shipbuilding is still limited. Shipbuilding is looking up slightly in Scotland, and the warrant market in Glasgow is firmer and a little more active. Sheffield cutlery houses are busier on medium qualities and the country trade in agricultural implements is brisk, while there is some improvement to note in connection with one or two of the heavier branches. Lancashire and Swansea are exceptions to the rule, the improvement wave not having seemingly reached these centres yet. The improvements noted are practically confined to the home trade, however, and as long as the present depression obtains in the United States and a financial crisis hovers over Australia Britain's foreign trade cannot be expected to make a better showing.

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The trade prospects of the country are good. Fairly good crops are assured and a large yield of fruits, particularly the smaller varieties, is almost beyond peradventure. From the foundation to the ridge the trade superstructure is in at least fairly good con-

dition, and taken on the whole, probably as good as in any other country. In some respects it is better. There are its weak spots no doubt. To maintain anything else would be absurd, for they are apparent to every one. But as long as no heavy strains are put upon it there is no danger. And at the moment no sensible man is inclined to play loose. On the contrary business is being done on a conservative basis. In fact more so than probably ever before. And it is well that it should be. All around us—in the United States, in Australia, in Great Britain — depression is heavy, failures many and, as a consequence, stringency rules in the money market. The worst feature of the situation here is the matter of payments, although it is doubtful whether they are much slower than is usual at this time of the year. Farmers have not as a rule much money in the early summer months, and as long as the circulation is slow at the fountain head it cannot be expected to be active anywhere else. All that is wanted is confidence, patience to wait and the exercise of energy to hasten along the "better times a-coming."

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The trade and commerce of the world are passing through a marked evolutionary period. Modern methods are cheapening production and modern inventions are making oceans rivers, and continents narrow tracts of land. As a consequence competition is becoming keener and profits smaller. Never probably in the history of the world was it more a case of the survival of the fittest. In the manufacturing, in the mercantile and in the financial world the tendency is towards concentration; manufacturers are amalgamating their interests, the wholesale trade is gradually falling into fewer hands, retailers are building mammoth stores where they sell everything from a needle to an anchor and from food for the stomach to clothing for the back. The merchants who to-day find themselves being outstripped in the race by these class of competitors may just as well come to the conclusion that they must conform to their ways or get out of business. If they do not it is only probably a matter of time before they will be compelled to accept the latter alternative. It is folly trying to row a race in a tub against a competitor equipped with a modern-made boat. In these days merchants must get out and hustle. They need to buy cautiously, give credit sparingly, advertise judiciously and stick to business eternally.

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Want of courage is the cause of many bad debts. Every merchant should make an effort to get at least a rough idea of the capability of every one of his credit customers to pay. Then he should place a limit on each one. But the great difficulty is to say "No" when that limit has been reached. Competition is so keen and the desire to retain custom so strong that most merchants are afraid that by refusing further credit they will lose a customer and their competitor gain one. If the thing is done in a courteous manner it is seldom that a customer is lost. And he who would take umbrage at being politely told that his account has reached the limit which the merchant can afford to allow it to run is well worth losing. In fact if he did not go then he would probably later on, leaving an extensive account unpaid. A merchant never ought to be afraid to ask for his own or to refuse to give away what he already possesses. Too often the ambition to do a big business runs away with the common sense, and the desideratum is obtained at the expense of the profits. It is better to do a small business with good profits than a large one with little or no profits. Another mistake is often made in credit being granted to strangers. Credit should be given to no one regarding whom nothing is known. The credit system is risky enough at the best without any unnecessary danger being run. Anyhow it is a pretty old stager that would ask credit from a merchant with whom he has had previously no dealing, and nine times to one it is better to be without than with the custom of such an one. The merchant who quietly and firmly says "No" when his judgment tells him it is the better way may not to have so many customers for a while as his more careless competitor, but he will make more money and will be in business when the other fellows is forced out. If more noes were said in business than there are less clamoring for amendments to the law regarding the collection of accounts would be heard and far fewer failures would be chronicled.

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Keep insured. It is an old and oft-tendered advice, but as long as there are merchants whose stocks are either inadequately insured or not insured at all it is worth being repeated. To continue in business without being insured is neither just to the merchant himself nor to his creditors. The amount a business man shall carry on his stock should be determined by circumstances. Sixty per cent. of the value of the stock is urged by some wholesale men, but of course the merchant who has plenty of capital and is not much concerned about himself need not bother about carrying that proportion so long as he has enough to liquidate his liabilities; but the credit of such an one would be enhanced were it known that he was fairly well insured. For the merchant whose circumstances are merely ordinary to be lax in this respect, it is little short of criminal. He knows that if fire consumed his stock he would have little or nothing wherewith to pay his creditors, let alone to resume business with. And yet either through procrastination or hope that fire will never encroach upon his premises, he fails to protect himself not at all or only to a very small extent. If the truth was known, procrastination is the chief cause of so many finding themselves without a risk on their stock and buildings when fire has licked up their effects and left them, often penniless, on the world. Our advice is, insure your stock, insure it to at least 60 per cent. of its value, and insure it to-day.

* *

Many schemes have been suggested for easing the stringency on the New York money market, but the latest and the one which seems to find most favor is that not only advanced but put into practice by the clearing house of that city, namely the issuing of clearing house certificates. The object is to increase the stock of money available for loans and to tide the country over till the Sherman law shall be repealed, when it is expected confidence will again be restored. The Philadelphia clearing house has also followed the example of the New York association. The issuing of these certificates is receiving the endorsation of the Comptroller of the Currency, the banks, and financial men generally throughout the country, and as a result confidence is being restored. Whether it will have the effect of averting the financial crisis that nearly everyone has been predicting, remains to be seen. At any rate the movement is tending to alleviate the panicky feeling, which is after all an important step in the desired direction. An idea of how gold has been flowing out of the United States may be gathered from the fact that during the twelve months ending May the exports of the precious metal were $123,095,453, an excess of $102,436,728 over the amount imported, compared with $48,888,224 exported and $49,488,334 imported during the same period the year before.

BUSINESS MEN AS LEGISLATORS.

We have not a sufficient number of business men in our halls of legislation. There is no doubt about it; and the fruits of it are seen in so many laws that are detrimental to the business interests of the country and in so few that are beneficial to these interests. In the Dominion Parliament, out of a total membership of 215, purely business men—that is merchants—do not number one-fourth. Too often the good that these might do is minimized by their being divided into rival political camps in which they usually remain when questions of commercial interest are being weighed, and when independent action might be expected of them. In the Ontario Legislature the comparison of business men is more favorable, out of a membership of over ninety, about one-third are business men, but among this proportion are included lumbermen, millmen, miners, etc., so, after all, it is doubtful whether the interests of the merchants of the province are looked after any better in the Ontario Legislature than are those of the country at large in the Dominion Parliament. Certainly the obnoxious Pharmacy bill was given its quietus, but even in that instance the results might have been different were it not that a hue and cry was raised against the bill all over the province.

What is wanted in our legislatures is more business and less politics. At present the opposite obtains. Nine-tenths or more of the time of every session is taken up in discussing questions which, resolved down to a fine point, is merely the "outs" trying to get the "ins" out and the latter trying to keep in. Politics and partyism there have been and politics and partyism there always will be as long as men do not think and feel alike. And after all we do not know but that it is best that it should be so. A strong opposition is as essential to good government as is a strong administration. But the trouble comes in when every interest is made subservient to partyism. And just as long as our representatives are men whose profession is politics, and whose ambition is the advancement of the cause of their respective parties, just so long will the debates so seldom touch upon business matters, or shall we find so rarely enacted measures in furtherance of the trade and commerce of the country or province.

The duty of business men in the premises is to try and elect to the Dominion Parliament and Provincial legislatures men who have been successful as merchants. It is not necessary that a business man's party should be formed. In fact that could scarcely be accomplished if attempted; and even if such were possible it would hardly be advisable. Class legislation is not to be recommended any more than is legislation in behalf of any religious sect. Nor is it necessary that merchants should forsake their respective parties or that they should take less interest in the party caucus, in order to secure the desideratum. On the contrary, as far at least as the party caucus is concerned, it is desirable that they should take a more active interest, for there it is, we conceive, that they can do the most good by either proposing or supporting as the standard-bearers of their respective parties the desired class of men. Already in the Province of Ontario party candidates are being nominated for the next general election. A good many have already been selected, but there are still constituencies where one or both of the parties have not yet nominated their champions; and the merchants in these constituencies should not lose a moment in getting to work, for if they will it so it is yet possible to give a much better business complexion to the next legislature. At any rate they can be "getting their hand in" for the Federal elections. And what applies to Ontario applies to a more or less extent to the other provinces.

METALLURGY OF LEAD.

At the annual meeting of the Royal Society, London, on June 1, a paper on the metallurgy of the lead was read by Mr. J. B. Hannay, of Cove Castle, Loch Lond. The author said that the metallurgy of iron had obtained complete elucidation during the last twenty years, that of copper was pretty well known, while the chemists to the mint, notably, Roberts-Austen, had made the metallurgy of the precious metals their special study, but the fourth great domain of metallurgy, that of lead, was still in the empirical stage. Percy, the greatest authority on metallurgy, admitted, after spending some years at the subject, that the chemical changes involved in the metallurgy of lead were still unexplained. Mr. Hannay proceeded to describe several new volatile compounds of lead, the discovery of which, he said, gave the key to the solution of many of the difficulties which had hitherto beset the path of the investigator, and described the process consisting of passing a stream of water through the lead ore in a Bessemer converter, by which means the whole of the ore was converted into pig lead, or litharge, or sulphate of lead, as might be required, thus enabling the manufacturers to make the product bringing the best price in the market. The oxidation of the ore supplied all the heat required to conduct the process, so that no fuel was required. The importance of this process, Mr. Hannay declared, might be judged from the fact that not only was the whole of the lead obtained as finished products without loss, against a 20-per-cent. loss by the old method, but every ounce of silver was separated and collected without expense, no matter how little silver might be present.

SOLDERING IRON WITH TIN.

A German paper says that many articles made of cast iron may be soldered with tin by first cleaning the faces of the broken parts from all impurity, and then scrubbing the faces of the fracture with a brass wire brush.

By this means the broken parts become "dry-plated" with brass. The rough cast iron rubs off brass from the fine wires very quickly. The brazed surfaces are tinned just as brass is tinned, and then they may be soldered together in the ordinary manner.

This method of soldering cast iron should receive considerable testing before it is accepted as a reliable method. The probability is that the brass will form a coating easily detached from the iron. The most reliable way of soldering cast iron is to warm it to a temperature of 300 deg., then tin it in the usual manner with muriatic acid in which tin has been dissolved. This gives the iron a perfect coating of zinc, or, in other words, the iron is galvanized. It may be soldered when in this condition without danger of coming apart.

A CUT NAIL FACTORY IN 1799.

The following extract from an old copy of the Pittsburg Gazette gives notice of the establishment of the first cut nail factory in that city:

The subscriber having established a cut nail manufactory in Pittsburgh, respectfully claims the patronage of the citizens of the western country, and informs them that they may be supplied with nails and springs of every description at a low rate, and a generous discount will be allowed those who purchase a large quantity. It must be obvious to everyone that large sums of money are drained out of the western country for these articles, and the encouragement of this infant manufactory will in some measure prevent it. Orders for nails from any part of the country will be thankfully received and forwarded with despatch by George Holdship. Pittsburgh, January 31, 1799.—American Manufacturer.

Owing to great depression in the iron ore trade, ore shipments from the Northwestern States have been very light since the opening of lake navigation, and for the past ten days have fallen off. In consequence the Chicago and North-western railway has laid off several hundred employees and more will follow. Business in Escanaba, the ore port of the line, is practically paralyzed, as only a third of the normal business is being handled.

CORDAGE HAS A NEW PLAN,

What is vouched for by those who should know as the true report of the Cordage Trust Reorganization Committee was given out in substance late yesterday afternoon, says N. Y. World of a recent date. The plan, as printed, fills two pamphlet pages. It says that the National Cordage plant is worth $15,000,000, exclusive of letters patent, good will and contracts outstanding. It contemplates the floating of $6,000,000 in bonds and $8,000,000 in preferred stock. One million of the bonds will be retained in the treasury as working capital, with the amount raised by the proposed assessment of 10 per cent. on the common and 20 per cent. on the preferred as it now exists. The floating debt of $4,000,000 will be retired by the sale of $5,000,000 in bonds at 80 and 85.

This plan has received the sanction of all the banks interested. Two or three prominent bankers will be in the new directory if this plan goes through.

It has come out that the Vanderbilts are large holders of the preferred stock, and some predict that this interest will oppose any assessment of preferred stock. while others hold that the Vanderbilts will favor putting Cordage on its feet again.

That there is to be opposition to the plan of reorganization as it now exists is certain. Notice has already been given by a law firm representing holders of Cordage stock that their clients will not pay any assessment, and that an attempt will be made to get a majority of the holders of the preferred to take the same stand.

The Reorganization Committee, it is said, has provided a way of dodging this obstacle by stating in its plan that the old company may be reorganized or a new company formed. It is proposed, in the event of serious objection to an assessment that the creditors shall sell out the present company and organize a new one with the stockholders who are willing to submit to an assessment.

Judge Lacombe, in the United States Circuit Court, yesterday issued an order limiting the time in which creditors may file claims against the Cordage Trust to August 31.

BRITISH TRADE RETURNS.

The Board of Trade returns for the past month are, says the London Times, of a decidedly more favorable character than those of many months past, especially considering the fact that this year the month included Whitsuntide, which fell in June last year. The imports were £36,837,000, an increase of £1,801,000, or 5.1 per cent.; the exports of British and Irish produce, £17,822,000, an increase of £38,000, or 0.2 per cent.; and the exports of foreign and Colonial merchandise, £6,945,000, an increase of £354,000, or 5.3 per cent. Amongst the imports the largest increases are found in food and raw materials for manufacture. The net increase of foods is £668,153, and that of raw materials, £933,737. Metals also account for an increase of £207,319. In corn the chief feature is the large quantity landed, nearly two-thirds of the total import having come from Russia. The receipts of Indian corn were 3,771,312 cwt., and of this 2,128,976 cwt. came from Roumania and 1,126,006 cwt. from the United States. The Argentine Republic is at the present time shipping wheat very freely, the quantity landed thence reaching a total of 1,241,651 cwt., against 509,659 cwt. From the United States the quantity of wheat was more, but of wheat flour the receipts were slightly below those of last year. The quantity was, however, quite large enough to keep the price of wheat down, being 1,520,458 cwt. out of a total of 1,613,562 cwt. The number of cattle landed was again smaller during the past month, owing nearly entirely to reduced shipments from the United States. As regards the exports of British and Irish produce, the total value shows a small increase, which would be larger but for the low prices of coals and the large decrease in the shipments of cotton piece goods. Of cotton piece goods, 54,602,000 yards less were shipped, while the value is stated to be £356,188 below last year's total. Speaking generally, this decrease is found to be in the shipments to the East. Other textile manufacturers appear to be doing better, notably the linen, jute, and woollen industries. For the first time for some months past there is a very marked increase in the shipments of iron, amounting to 46,461 tons. Of the exports, it can be said generally, that, while the increases are spread over a large number of articles the decreases are confined to few.

BICYCLE OF THE FUTURE.

The bicycle of 1993, says a prophet in the New York Advertiser, will be built on much the same lines as the safety of 1893, i. e., with two small wheels very nearly of a size. This was the plan of the first machine built in 1817, and now, after a lapse of seventy-six years we have come back to the original design. A machine on this plan can be built stronger and lighter than on any other model. With the weight between two wheels there is less vibration than when it is over either of them, as in passing over an obstruction the weight is lifted only half the distance in the former case that it is in the latter.

Then by the use of some alloy of greater tensile strength, weight for weight than steel, and by filling the tires and the tubes in the framing with hydrogen instead of air, the weight of a road machine will be reduced to ten pounds or less, while racing machines will not weigh half that much. The machine will also be made so that it can be folded up and carried about or stowed away in some corner. By improvements in the construction of the bearings or moving parts friction will be almost wholly eliminated, and the method of applying power will be so perfected that there will be absolutely no such thing as lost power.

The roads will be especially prepared for bicycles, the grades being very slight and, in fact, only sufficient to provide proper drainage. The surface will be hard and smooth, the outer edge of all curves being raised, as on a race track. The roads will be kept clean, as by that time the horse will be found only in zoological gardens. The improvement in the rider will be equally marked. From the continued and increasing use of the wheel a race of people will be evolved that will take to cycling as readily as a foreign immigrant does to politics. Taking all these things into consideration, we may expect an average speed of thirty miles an hour on the road and sixty miles an hour on the track. The use of the machine will be universal. Children will be taught to ride as they are now taught to walk. The suburbs of our great cities will extend from sixty to one hundred miles in every direction. All patents will have expired, and such large quantities of bicycles will be manufactured that the cost will be nominal and within reach of all. There will be no more crowded tenement houses. The artisan, who will work only four hours a day, will live with his family in a cozy little home in the suburbs where he can see the sun shine and breath the fresh air. The use of the wheel will have so improved the stamina and physique of the race that the only causes of death will be old age and accidents.

Railroads will be used for the transportation of freight only. Every individual will own a bicycle. Those intended for long distance travel will be run by small but powerful storage batteries, which may be charged at automatic electric stations by connecting the battery to a dynamo and dropping a coin of small value in a slot. With machines of this character it will be possible to attain a speed of one hundred and fifty miles an hour, and to overcome the wind pressure they will be fitted with wedge-shaped wind shields made of some tough yet transparent substance. The bicycle will not be used in war for the simple reason that as dyspepsia will be unknown everybody will feel well and be so good humored and disinclined to quarrel that there will be no one to go to war.

NOVA SCOTIAN COAL AND NEW ENGLAND MARKETS.

The Halifax (N.S.) Herald says that one of the chief difficulties in the way of placing Nova Scotia coals in the New England market at a profit is the severe competition of the United States bituminous coal mines, not to mention the ever-increasing consumption of anthracite coal in the New England States. It says:

"It has been clearly demonstrated that coal can be carried long distances on the United States railways to the seaboard or to the New England markets at a cost of 1-4c. per ton per mile. Coal can be carried coastwise from Baltimore, Norfolk, and Newport News to the New England ports during the summer season at prices ranging from 50c. to $1 per ton, and no doubt even these low rates can be further reduced. Cheap labor and cheap transportation will, in the absence of combinations to maintain

high prices and yield large profits to the coal and railway companies, ensure cheap coal to the New England States; so that leaving out of consideration the question as to whether Nova Scotia coal is as good a steam producer as the bituminous product of the States above mentioned, we are not likely to make a very large increase of our sales in the New England market for some years to come."

THE HARDWARE SALESMAN.

The following is an extract from a paper read at the last convention of the Southern Hardware Jobbers' Association by O. H. Ireland, as published in the Chattanooga Tradesman:

The most brilliant man in business will fail eventually if his moral basis is lacking, so that in the selection of young men it is of the most vital importance that we select them with the greatest of care. At this point, sobriety, one of the chief qualities of moral rectitude, cannot be over-estimated or too much insisted upon, while purity of lips and purity of life must be insisted upon at any and all cost. Now in my employment of young men the following questions are asked: Do you drink intoxicants? Do you habitually use profane language? Have you any immoral habits of the baser kind? The answer in the affirmative to any of these questions closes our dealings at once. Now some may object to this as being too strict and as unwarrantable on our part. In reply to this I state, always, to my man: "I do not desire to dictate as to your habits, but I do insist that I shall say what habits men have who are in my employ, so that at any time if this engagement is objectionable you can terminate it on a moment's notice."

I hold that this business is peculiar in one particular that just any man cannot learn it. His mind must run in certain grooves or channels; his fondness for certain classes of work must be pronounced before he can be a successful and competent hardware man. A man may be as bright and intelligent as anyone, may be competent to make a dry goods or grocery man, lawyer, preacher or bank official, but still never able to grasp this business. Co-operation is necessary on the part of the employer. Give him a chance, watch him, and when opportunities arise aid him by letting him know you are in sympathy with him and try to instil into him the very spirit of yourself, so that when, after years in your service, the young man goes out to represent you, you can feel that he knows but one way to do it and that is just as you would yourself.

Five years under the most advanced opportunities is as soon as one can ever hope to become efficient as a hardware man, and seven years is better, but under no consideration should a man be allowed to go upon the road as a travelling salesman until he has had three years of the best possible training. Once upon the road patience should be used in handling him. The manager too frequently condemns and finds fault with the salesman not knowing the difficulties he has had to contend with. In many instances the remedy used is to blow the man up and, without going into details, condemn him, when, if the employer would patiently explain the errors the salesman has committed and endeavor to lead him into a more correct mode of overcoming unscrupulous competitors than that of meeting their prices, much better results would thereby be accomplished.

Have strict rules or none. When you say a thing, mean it; do not lay down a rule to-day and violate it to-morrow yourself; demand that your rules be lived up to, and the best way to get this done is to live up to them yourself. We cannot have moral, sober salesmen and be immoral and intemperate ourselves; we cannot have honest, square-dealing employees and be tricky ourselves; we cannot say with half the force, "Go, do," with the probability of having our orders obeyed as we can, "Come, let us do."

The question, "Who is my best man," is frequently a puzzling one. Too frequently it is the case that the one we deem our best is really our worst, the one we pay the largest wages to is the one to whom we should pay the least, the one we think does most to build up our business does most to break it down. Therefore, I suggest a plan of record of what each man does should be kept, and the man that makes the money is the one to pay. A man who sells $20,000 at 25 per cent. profit is worth more than the one who sells $40,000 or $50,000 at 12 1-2 per cent. or 15 per cent. But how often is it the case that the reverse is acted upon?

Man is a social creature, and if we employ the best young men in the country we must recollect that they are entitled to certain social privileges. My office door hangs on a hinge that opens but one way to my young men—inward. I would not have a young man who was afraid or unwilling to talk to me about his trouble, difficulties or trials, and from my colored porter to the highest man in the house there is always this understanding, that they can always secure an audience with the director of this business and have a patient and interested listener. Nor is this all. We have had ever since we have been in business a plan that at least once a year, after our stock-taking is over, we go to the best hotel in our place and have the best banquet prepared that they can furnish. When the evening is passed there can be but one result—sympathy between all the forces who compose the firm. These banquets generally cost us from $150 to $200. It may strike some as useless, but from actual experience, running through nine years, I would just as soon think of abandoning stock-taking as the banquet.

SMOKELESS COAL.

The burning question in the West just now is how to get a suitable fuel that will aid in the movement towards the abatement of the smoke nuisance, says Stoves and Hardware Reporter. Smoke consuming devices are generally entirely applicable only to steam boiler furnaces, but until the vast number of residence chimneys in a city cease to send forth their clouds of smoke, the black nuisance which clouds the sky cannot be abated.

True anthracite coal is almost as rare, west of the Mississippi river, as hen's teeth, and neither love nor money seems to be able to command it. What is sold under that name is only a kind hybrid product, containing the smoke producing quality of the bituminous variety, with hardly any more durable qualities, and only the price to entitle it to any claim to anthracite qualities. It is evident that if this alone is to be depended upon to reduce the smoking characteristics of dwelling chimneys, the millenium of smoke abatement will be placed very far in the future.

The reported discovery of a carboniferous deposit on the Ouachita river, a few miles above Camden, Ark., throws a slight gleam of light on this dark subject, however, and it may be that future developments may confirm it as the long sought substitute for the Eastern anthracite. It is said to resemble charcoal in appearance, and in the experiments recently made some very remarkable results were attained. A hot fire was maintained for fifteen minutes without discoloring a sheet of notepaper which had rested during the time on the end of the pipe. It gives off a slightly aromatic vapor which may be inhaled with impunity, as not the least trace of unconsumed carbon is to be found in it. It is said to burn freely without blast, and to possess the enduring qualities of anthracite. There are no clinkers, and the ash is an impalpable powder resembling flour. Its heating qualities as indicated by the amount of water evaporated by a given weight of fuel, is estimated at double that of ordinary coal.

Much more is claimed for this substance, but if it be found to possess the fuel qualities claimed a suffering public will rise up and call its discoverer blessed. The smoke commissioners of St. Louis, as well as many others, were interested witnesses of the experiments made, and if the apparent results were confirmed by further investigation relief from the exasperating experiences of the new discovery is that the material is found in practically inexhaustible quantities.

A LIVE DRUMMER.

"Apropos of commercial travellers' experiences," writes Vulcan, in the Ironmonger, "I heard lately of a smart stroke of business, which, although it happened years ago, is still capable of pointing a moral as to the value of promptitude. The hero of the story (a drummer of my acquaintance) happening to be one day in Glasgow looking after orders for ironwork, casually got to know that an eminent firm of shipbuilders in that city were in urgent want of a thousand tons of material for a new vessel. My friend, scenting business, called on the firm, obtained the specification, and, as there was no time to consult his employers, posted off by the first train to an ironmaster in Staffordshire, who, he knew, could supply the material on as favorable terms as anyone. This gentleman had gone home to dinner when the traveller arrived, but in view of the importance of the order he consented to go into the matter there and then. This was done and a price agreed on in time for my friend to catch the down Scotch mail. Arrived in Glasgow he handed in his quotation the first thing in the morning, and secured the contract. When the business had been completed the traveller advised his principals of what he had done. Congratulations and a good round sum by way of "comm." followed as a matter of course. The incident shows, I think, the value of prompt action, especially when a traveller enjoys the full confidence of his employers, and is allowed sufficient tether to act in an emergency."

BAD FOR THE HEMLOCKS.

A gentleman just returned from Lake Joseph says that, from present appearances, the hemlocks will be almost annihilated within a few years. Last year an insect appeared which destroyed the foliage of the trees on the shores and islands in the north and centre of the lake. This year the trees have not leaved out again. Many thousands of them are dead and present a pitiable appearance. Among the islands which have been devastated are Chief, Governor's, Elsinor, Laurie, Clareview, Badgerow, Cameron's, and nearly all the islands to the northward. It does not appear that anything can be done to stop the destruction. It would be worth while for the Local Government to send up an entomologist to ascertain the extent of the injury and the probable duration of the visitation, as, if the insect is not checked, the loss will mount into millions.—Toronto World.

THINKING IS GOOD.

When a young man does a wrong thing he is apt to excuse himself by saying he didn't think. More is the pity. Given a young man of honest intentions and intelligent mind and he will not go far wrong if he thinks before he acts. He will not commit a murder, or forge cheques, or run away with a woman or money that does not belong to him. It is presumed that every thinking person thinks it is a good thing to think.

An eminent teacher has said: "To call anyone thoughtful is almost the same as saying he is kind; his life is occupied, not in following out selfish inclinations, which come into one's mind without effort or praise, but in forcing them to submit to the test of thought, and to reveal how by energy here or abstinence there he may more truly live for others—thereby living more truly for himself!" The man who thinks broadly will get away from himself and from narrow creeds. He will love the whole world and give all who are in it, so far as may be, a living chance to act upon either better thoughts, and so make the world better.—Ex

TURNING THE LEDGER.

Some men receive very large salaries for turning the pages of ledgers in use. It seems an easy and almost useless occupation to the novice, but in reality it is the detective office of the firm. The ledger-handler is an expert in credits, who, by frequent inspections of the accounts of the firm's creditors, keeps an eye on just what they are doing. We imagine if dealers were aware of the close attention given by some firms to the history of every customer's account, that there would be a great improvement in some of the records. Step into one of the large jobbing houses, and ask the credit clerk if the firm sells Mr. A——, and if he is regarded worthy of credit. Instead of an immediate answer, you will be taken to a room full of filing boxes, alphabetically arranged. A box marked "A" will be removed, and in a few seconds the record of Mr. A—— will be before you. At a glance you will have the date his account was opened, the record of every purchase, the date each bill was settled, besides his personal statement as to his worth and that of the various mercantile agencies. If there has been any trouble with Mr. A—— or he has been delinquent, the facts will be on record.

Credit is getting to be an exact science with the larger houses. A first-class credit clerk must have tact, perfect self-command, shrewdness in asking and answering questions, keen perceptive faculties, thorough knowledge of the laws of trade and commerce, be quick to read character and swift to make a decision. Said one of the most expert credit clerks in the city: "Any man that is honest, and is industrious, can get a credit with us, if he has not much capital. We are simply allowing a thoroughly trustworthy man to hold our goods and save us the insurance and cost of storage. There is little risk in trusting merchandise to that sort of men."

The right sort of character is quite as good a recommendation for credit as money. When both are combined, the risk is beyond question. And rest assured those granting credits keep perfectly posted about their creditors, even to the relation of personal habits and personal expenditures to business career.—Ex.

GAS MOTORS IN GERMANY.

In a recent address before the Prussian Association for the Promotion of Industry, Herr W. Oechelhauser stated that the distribution of power, or rather of fuel, from gas works, has not made as much progress as it should have done. The practice goes as far back as 25 years ago. There seems to have been, two years ago, about 18,000 gas motors in Germany, with an aggregate horse power of about 60,000. To these are to be added the turnout during the last two years, amounting for the two greatest manufactories alone to 1,950 motors, of 8,830 horse power. At the beginning of 1892 there were in Prussia alone 69,087 steam horse power occupied in driving dynamos. It must, at the time, be remembered that it is only recently that gas has been cheap enough to enable gas motors to be pushed. The state of the gas motor industry is a thing for Germany to be proud of. The Lenoir machine of 1861 used 123.5 cubic feet per horse power per hour; the present motors use 28, or in large cities 23.75; so that a 16-candle incandescent lamp can now be kept going at an expense of 21.2 cubic feet of gas. And this consumption is not the consumption at full load, as it is usually reckoned for steam engines and electromotors, but the average consumption for all loads; and it may be expected to be reduced very soon, with motors of 500 horse power, to 17.6 cubic feet of 16-candle gas per horse power per hour.—American Manufacturer.

THE "MONKEY-WRENCH."

Recently there has been a good deal of discussion on the origin of the useful tool known the world over as the "monkey-wrench." We have insisted that the name "monkey" comes from the name of the inventor, and we have been criticised for so insisting. Now comes a writer in the Philadelphia Press, who says on this point: "The monkey-wrench is not so called on account of its fancied or actual resemblance to Dr. Garner's simian friends, or because it is a handy tool to 'monkey' with, but simply because it is the invention of one Charles Moncky, now of Kings County, N.Y. Although the world has pretty nearly lost sight of Mr. Moncky (not Monkey), it seems to be a settled fact that he sold his patent for $2,000 and invested the proceeds in a homestead in the above named county and state."—Milling World.

HOW TO ACQUIRE SUCCESS.

Among the papers read at a recent meeting of the Master Plumbers' Association was one by Thomas Caulwell on "How to Acquire Success in Business," and from it the following excerpts are made:

The subject I have chosen this evening is, "What Must We Do to Acquire Success in Business?" This answer is more particularly addressed to the younger members of our association, as nearly all of us older members have solved this problem by our energy, industry and patience.

Above all strive to elevate the standard of our profession by executing a high grade of work. If competition is so keen that you are forced to take work at such a low figure that you will have to slight your contract, you had better not make the contract at all; you can't make money by such a method and surely such work will not bring you business. Rather do a job you can be proud of, one you can show your would-be customer; it will surely win for you success. It is one of the objects of the National Association to elevate the standard of our work. See to it, then, that you prove yourself worthy of your membership.

To do a successful business you must have a practical knowledge of the business. A man who only knows how to wipe a joint should hesitate to embark in business until the equally important science of sanitation is understood. Be your own superintendent, for it has been well said: "If you want a thing done well, do it yourself." Be at your shop or building early. See that your men understand what is required. Treat them with consideration: you were but a short time ago serving in a like capacity. See that they have the proper tools and are supplied promptly with the necessary material. Practice econ-

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omy; who does not know that a penny saved is a hundred earned. When a job is completed do not allow surplus material to lay around the building; take it to the shop immediately, for it sometimes happens when you go for it it is gone and no one knows where.

Study to please your customers. Be courteous and patient; it will pay you every time. Impress upon your customer, not in an offensive and overbearing manner, but command respect by reason of your skill and knowledge, and I predict that he will send his neighbor around to see you.

In conversation be courteous; it will win for you friends and help to retain them. Be honest in all your dealings, young men just starting out. You may be able to buy for cash just now, but the day may come when you will want credit, so build up a reputation for honest dealing, and you will enjoy the confidence of all. Do not get hopelessly in debt by living beyond your means, for to be in debt to a man is to be his slave; 'tis not the road to success.

Do not build up your business by taking advantage of your less fortunate brother. You will not enjoy ill-gotten gains. Do you admire a man who, in his insatiable greed for wealth, has trampled on the inherent rights of others? A good name is more to be desired than great riches; in short, assist others as you go through your life's journey.

Do not gamble or frequent saloons. It begets a lack of confidence. The business training of our great men was not gained in the barroom.

MECHANIC AND PLUMBER.

A disagreeable leak had become manifest and word was sent to the plumber to come and find the cause of it and put a stop to it. He came, with gasoline fire pot, solder pot, and a bag of tools, and on investigation found a piece of pipe several feet long as thoroughly preforated as a well worm-eaten log; but, fortunately, a stop cock was placed near by for shutting off the flow of water through this pipe.

The plumber explained to the lady of the house that a piece of lead pipe of considerable length would have to be put in, and that he would leave the floor just as he had torn it up until he could get the pipe, but as it was near night he would not return till the next morning. This the lady deplored, as she did not want her house to look like a workshop and could not see why he did not mend the old pipe, but supposed a plumber had to put in something new to make the bill larger.

In the evening she told her troubles to the professional gentleman who was her beloved, and who, in sympathy, told her he would investigate. So, clothed in an old smoking jacket, he proceeded to the scene of trouble and carefully searched the offending pipe, from the point where the leak had first furnished an uncalled-for water supply clear to the stop cock. The pipe was perfectly dry, without any moist evidence of a defect in it. His wife had been a witness to the entire proceeding, and now, with impressive dignity, he told her to explain to the plumber that he was something of a mechanical expert and had considerable skill in practical mechanics, which enabled him to penetrate the scheme that was to be worked, and he would treat any extortionate bill accordingly.

In the morning, immediately on the appearance of the plumber, the good wife conveyed this information with a force well calculated to annihilate, and with a "there now!" pause waited for the response, which was: "Couldn't find the leak, eh? and is an 'expert practical mechanic,' hum! Well, why didn't he open the stop cock?"—"Jobs" in Metal Worker.

THE FABLE OF THE MAGNET.

"A seeming jest doth often hold
Some fruitful grain of truth."

A certain merchant who, for the sake of a handle, we will call Mr. B., had his store located on a prominent avenue where there was a great deal of passing. Thousands of feet rang upon the pavement hourly, but few stopped to look in the windows or enter his store. There were plenty of goods, the prices reasonable, and the windows carefully arranged; but the concern was but newly launched and the public seemed to sail serenely by, oblivious of its existence.

Age consumes time, and the time is money, which fact being well understood by Mr. B., he resolved in his fertile brain some scheme for bringing inside his doors that part, at least, of the daily throng who needed his goods.

The cellar of the store extended under the sidewalk to the curbstone, and the space was partly used for coal and rubbish. One morning Mr .B. happened to be down in the cavity preparatory to having it cleaned out, when the idea of utilizing it to attract customers occurred to him. Among Mr .B.'s acquaintances was a young man who was interested in scientific experiments, especially in the line of electrical appliances and developments ,and his co-operation was secured to help carry out the scheme which had suggested itself so suddenly to Mr. B.

The room under the sidewalk was immediately cleared of all rubbish, and a powerful battery placed upon a raised platform, above the floor, and directly under the sidewalk opposite the store door. A magnet of immense size and power was then sunk flush with the stone walk, with the under side exposed to the current of the electric battery, and when all was ready, the mechanism of this device (the detailed character of which is a secret of Mr. B.'s) was set in working motion, and the "inventor" and his assistants stood at the door to watch its effects.

The first person to come along was a gentleman, with a satchel, and seemingly in a hurry to catch a train or keep an appointment; he evidently did not notice the store as he approached, and was about to pass the door when something seemed to unconsciously draw his feet towards the entrance, and, remembering that his wife had asked him to bring home a paper of tacks, he stopped and bought them, and passing out, lingered for a moment by the window as if unwilling to leave the place. Another man came by, with his head high in the air, and a preoccupied expression upon his face, and he too was about to pass when the same "something" gently guided his feet and their owner into our enterprising Mr. B.'s store. When he found himself inside, and with no particular reason as he knew for being there, he was about to pass out again, but seeing a pocket knife in the show case by the door, casually enquired the price, and Mr. B. soon had him interested, and a sale was effected.

As the hours wore on, customers entered thick and fast, and the efforts of Mr. B.'s clerks were severely taxed to wait upon them and show the goods. Mr. B., who was highly pleased at the increased trade which his scheme had produced placed some more of these remarkable magnets at intervals along the store floor, so that customers who entered would be induced to walk through the store and see the variety of useful wares displayed on either side. One curious, but easily understood, if explained, feature of the scheme was that persons without money, or with bills which they did not care to part with, seldom were effected by the "magnet," but those whose pockets were well supplied with silver or gold, easily succumbed to its influence; the nature of the secret apparatus being such that it attracted these metals, when their possessor stopped upon the "magnet" embedded in the sidewalk.

This was of particular value, as the unsuspecting customers lingered in the store as long as their "change" held out, but were at liberty to leave without restraint when it had been exchanged for Mr. B.'s goods, which were artfully arranged to catch the eye.

The practical solution of the "magnet" idea is to be found in use among many successful traders everywhere,who place desirable articles of everyday use outside the entrance to their stores plainly ticketed, with a low price, to catch the loose change of the passing crowd, and thereby leading them inside the door, while the same system of "Plain Figures" serves as a "magnet" for capturing the balance of their coin.

—From Ideas for Hardware Merchants.

"And marked so plain it is,
That he who runs may read,
And purchase."

GAS-TIGHT QUALITIES.

During an address before the New Jersey State Sanitary Association, James C. Bayles said:

There are furnaces and furnaces. Some are made of spongy iron, with sand holes and other defects in dome and sides, and with joints so constructed that they cannot be made tight and kept so. Warping opens their seams, and they leak the gaseous product of imperfect combustion into the air-space surrounding them. To such causes we may always attribute the smell of coal gas noticed about the registers of many houses There is no more reason why the gases of the fire should leak from the furnace into the air chamber than why smoke should escape from the chimney into the upper rooms of the house. Defective flues and bad draughts are fruitful causes of leaking at joints, but poorly made and cheaply set furnaces cannot be accepted as the standard by which to judge the system.

The question, how is the householder to know whether his furnace is a good one or not, naturally arises, and is very easily answered. If, when the fire is bright and in good condition, he will put in through the feed door a pair of old boots, an Arctic overshoe and a marrow bone, and then give the furnace the indirect draft and go up-stairs, in the course of a very few minutes he will know whether the joints are tight and the furnace capable of retaining within its chambers and dome gases resulting from the imperfect combustion of coal. If his family do not find, without being told, that he is burning unusual fuel, he can feel pretty safe in concluding that his furnace is a good one. If, on the other hand there is an immediate and excited enquiry as to the cause of "that horrid smell," he may make up his mind that his furnace will leak gas more or less constantly, and that of the impurities it imparts to the air passing through it, those which make their presence known by an unpleasant odor are probably the least dangerous and objectionable. This, by the way, is a good experiment to suggest to some of the gentlemen who are in the habit of making strong claims for their furnaces. If, in buying, you will make this test, to be applied to a furnace in actual use, a precedent to acceptance, you will find very few furnace-makers will show any eagerness to accept your custom. It is not, however, an improper test. If the furnace is properly built, the connections with the smoke flue clear, and the flue a good one, you can burn anything in the fire-pot you like and will never know it, even with the indirect draft. I make this statement on personal knowledge, as I have tried the experiment.

The Cleveland Press says that several capitalists there think of establishing a steamship service between Cleveland and Port Stanley with a capital of $2,000,000. They purpose running two fine passenger and freight boats and building offices at Port Stanley. Nothing could be done this season, however.

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WROUGHT-IRON GAS PIPE.

The following paper was read by R. T. Crane at the Chicago convention of the Master Steam and Hot-Water Fitters' Association of the United States:

The demand for wrought iron pipe began with the invention of illuminating gas, but the introduction of illuminating gas at first was very slow in consequence of prejudice and want of appreciation of its importance. About the time of the invention of illuminating gas, which was in the latter part of the seventeenth century, the long war between England and France was drawing to a close. It had made a great demand for gun barrels, which were largely made at Wednesbury, England, and at its close it left a large amount of this stock on the market, which (there being no other demand for it) was used for the small gas tubes by screwing the small end of one tube into the large end of another. This supply apparently covered the demand for small tubes for some time and the larger ones were made in the same manner.

In order to understand the invention of gas tube welding it is necessary to describe the welding of gun barrels. This consists of taking a properly prepared piece of iron of the right dimensions, drawing the edge down thin, heating it, then rounding it up until the edges lay one over another. In this form it is called "skelp." It is heated in a forge fire, a few inches at a time; then a bar of iron is put on the inside, to give support to the iron while it is being hammered down on the outside and the weld made. Then it will be seen that only a few inches could be welded at each heating of the iron, making the process a very slow one, and the barrel, when the welding was completed, was left in a very rough and unfinished state.

It appears, from the best information we can get that about the year 1825, and in order to meet the largely increased demand for gas tubing it became evident that some better mode of manufaturing gas tubes should be sought for than the process of welding gun barrels. James Russell, in company with his brother John (who had been gun-barrel and gas-tube makers at Church Hill since 1811) appreciating this fact, set about making an improved gas tube. He concluded that it should be of a uniform thickness of iron, and also, as the pressure of gas was merely nominal, there was no necessity for so strong a weld as that of the gun barrel. He conceived the idea, and patented it, of welding his tube by butting the edges of the iron together instead of lapping, as in the case of the gun barrel. This invention was a great step in advance of this art, and enabled him to make his tubes much more cheaply and rapidly, and also of vastly superior finish. Still, compared with a later process, a description of which will follow, this production was very slow, as he was obliged to heat and weld it only a few inches at a time, after the manner of welding gun barrels.

To make this gas tubing complete it was necessary to have a device for connecting pieces of pipe, as the method employed in the case of the gun barrels was not practicable in this case, the iron being of uniform thickness. He now invented the socket, which is a short piece of pipe with a thread on the inside to fit a corresponding thread on the outside of the gas tube, the pipe being screwed in each end of the socket thus making any desired length of pipe. The effect of this improved process was to so cheapen and beautify the article as to greatly increase the demand for it, and it seems that the invention made a great sensation in England. But this particular process of manufacture must have been very short lived, it being patented in January, 1885, since it was followed by the patent of Cornelius Whitehouse in February of the same year for butt-welding tubes by drawing them through a die. This method of welding tubes being brought to the attention of James Russell, he saw its importance, bought it, and immediately proceeded to manufacture his tubes under this patent.

Mr. Russell recognized the principle of the strength of a circle—that is, when the iron for a tube is rounded up any amount of pressure may be brought to bear on the outside without danger of collapsing the iron, and this pressure was necessary to force the edges of the iron together in making the weld. His process of doing this was to heat a small piece of the iron, then place it between two semi-circular dies smaller than the iron, which necessarily forces the edges together, thus making the weld.

To return to the Whitehouse patent, and to make clear the principles involved in it, it may be stated that he takes such dies as Russell used, makes one end of them bellpshaped and fits them in a pair of tongs. He then takes a piece of the rounded up iron, called "skelp," and puts about half its length in the furnace, heating it to the welding heat. The die is then pressed on the iron, and by means of an endless chain the iron is pulled through the die. The die being smaller than the iron crowds the edges together, thus making the weld.

The principle involved in the Whitehouse method consists in the manner of applying the pressure to produce the weld; that is, he produced it by drawing the iron through the dies, and Russel by compressing the dies. So, to give proper credit for these advances in the art it should be said that Russell is entitled to the credit of discovering that a butt-weld is sufficiently strong to stand all ordinary pressure, and that a sufficient pressure can be brought to bear upon the circle of the iron to produce the weld. Mr. Whitehouse is entitled to the credit of discovering that the pressure to produce the weld can be obtained by drawing it through a die, which is simply an improvement upon the principle that Mr. Russell discovered; yet it was an invention of very great importance, as it enabled him to make tubes a hundredfold more rapidly, and also of a superior weld and much longer. Strange to say, this process has never been improved upon, and is the one in universal use for the manufacture of the small tubes at the present time.

The result of the Russell and Whitehouse improvements is the production of an article of great utility and beauty at an exceedingly low cost.

As an evidence of the importance of the advanced process of Russell and Whitehouse, it may be stated that they paid as much for welding the gas tubes under the gun barrel principle as the finished, vastly superior product, is being sold for to-day.

The above mentioned events took place in the early days of gas engineering, and, while steam engineering was also being developed, it had not, up to this time, reached any great degree of magnitude. But now its importance began to be more particularly recognized in connection with the building of railroads and locomotives, and through the discovery by Stevenson of the tubular boiler. This created a demand for a larger and different line of tubes, for which the butt weld was not adapted, as the tubes were required to be much larger, and stronger in the weld.

It was evident that the only way to produce an iron tube suitable for these demands was to make it with the lap-weld, as in the case of the gun barrel, and while it would have been possible to make lap-weld tubes of uniform thickness and moderate length by the methods employed in gun-barrel making, it is evident that the process would have been too slow and expensive in operation and the product too limited in length to meet the demands of steam engineering.

At this time, which must have been in the neighborhood of 1830 or 1835, the Messrs. Russell appeared to have appreciated the importance of manufacturing a new line of tubing, and set about making the machinery necessary for it. To accomplish this was quite a different task from that of producing the butt-weld tubing, as it called for the highest order of mechanical skill and ingenuity, and there is no doubt that it cost the Messrs. Russell a large amount of money in experimenting before they perfected their machinery. They must have met with untold annoyances in perfecting the machinery and furnaces which only persons who have gone through similar ordeals, though having the benefit of their experiance to commence with, can appreciate. They were certainly men possessing extraordinary courage and perseverance to contend successfully with apparently insurmountable difficulties.

About this time, or a little later, Martin Jones commenced experimenting in the same line. He also encountered many difficulties, exhausting his own and his wife's fortunes, and in order to save something from the wreck, placed his invention in the hands of a friend, who betrayed him, appropriating it to his own use, improved it by continued experiments, and patented it in his own name. He then took into partnership with him two gentlemen of large means, named Lindsam and Bowers, of Birmingham, where they established their works and produced the tubes on a large scale, there appearing to be at once a great demand for them. It is said that this purloiner of the "Jones" idea received for it during many years more than $100,000 royalty annually.

The difference between this and the Russell process appears to be only that the Jones made use of four rolls in the welding machinery and the Russell only two. The firm of Lindsam & Bowers, who were working under the Jones idea, brought suit against Russell for infringement of their patent, which developed into a bitter contest, involving the expenditure of $2,500,000, and resulting in victory for the Russells.

The process of lap-welding is as follows: The sheet of iron is rolled to the desired thickness, width and length. The edges are then scarfed, as in the case of

the gun-barrel. It is then drawn, while red hot, through a bell-shaped die, by means of an endless chain, which rounds it up and laps one edge over the other. The whole length is put in the furnace and heated to the welding heat, afterward pushed out of the furnace at the opposite end into grooved rolls of a size corresponding to the size of the pipe. The inside lap is supported by a ball attached to a long bar of iron which holds the bar in position in the roll. The ball and the iron and the groove in the roll all correspond, so that the roll exerts a sufficient pressure upon the iron and the ball to force the laps of the iron firmly together, thus producing the weld.

The entire process must be perfect in order to insure success; that is, the bending and lapping of the iron, the heating of the furnace and the adjustment of the rolls and balls must all receive the most scrupulous attention. This operation is one of the most beautiful in all the mechanical arts.

After the process of welding, the crude piece of pipe is passed through other rolls to give it the correct diameter, and again through others for the purpose of straightening it.

If the tubes are to be used in boilers they are only cut off the desired length and tested, being then ready for use. If the tubes are to be used for steam pipe, the ragged ends are cut off, screws cut on both ends, and a socket put on one end. The tubes are then tested and are ready for the market.

Probably the production of no other line of goods has ever created such a sensation as this, and never were manufacturers so harassed by pirates in the trade as were the Russells. It is a satisfaction to know that they successfully combatted all oppression and were successful in maintaining their patent, and that finally success crowned their enterprise, invention, skill and perseverance. The firm conducted business for many years, through different combinations of the Russell family, under the name of the Crown Tube Works, Wednesbury, England. As to the magnitude of their business, it is stated that in 1824 they made but 3,000 feet of tube, while in 1871 the number of feet supplied by the same firm reached the enormous figure of 6,000,000. This may give some idea of what the output must be of the 35 or 40 mills existing at the present day.

The volume of building operations for 1893 is less in the city of Toronto, as compared with the first five months of 1892, by half a million dollars. Contractors who have been in business in the city for twenty years state that never within their recollection were the conditions so unsatisfactory as at present. Work is being done cheaper to-day with wages at 36 cents per hour than when years ago the rate required to be paid was but little more than half this figure. Scarcity of contracts has engendered competition to an extent which makes it exceedingly difficult for honest work to be done at a profit. Moreover, the financial stringency is such that builders complain that after having fulfilled their contracts, much effort is often required before payment can be obtained.—Canadian Architect and Builder.

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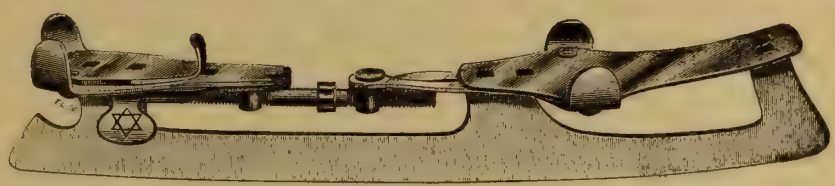
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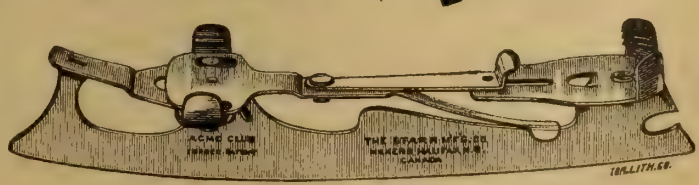


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TRADE CHAT

[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Tuesday.]

The Pedlar Metal Roofing Co., Oshawa, are running overtime.

There were exported from Montreal last week 5,162 head of cattle and 16 horses.

Two cars for the Winnipeg Electric street railway are being manufactured in Ottawa.

The Prince Albert Flat Hydraulic Mining Company has been inaugurated under a capital of $200,000 in $1 shares.

The Quesnelle Forks Canal and Hydraulic Company has just been incorporated at Victoria under a capital of $250,000.

Electricity has been applied to surgery with gratifying results and promises to become an important element in that profession.

The steamer Rosedale arrived at Owen Sound Tuesday with a cargo of 103,000 bushels of oats. This was the largest cargo ever taken in there.

The shipments of shellac from Calcutta during the first half of the current month were 1,800 cases to America and 1,000 do. to United Kingdom and Continent.

Owen Sound merchants complain that shoplifting has become an excessively frequent practice, and the police say they are going to prosecute the first person detected.

At a meeting held in the interests of the Hamilton, Grimsby, and Beamsville road, at Winona the other night, it was decided to grant a bonus of $3,000 to the company.

The production of pig-iron in Germany from January 1st to April 30th is reported at 1,528,247 tons, against 1,597,540 tons during the corresponding period of the year previous.

A permit has been granted to the Toronto Street Railway Company for the erection of a two-storey brick motor shop at the corner of Esplanade and Frederick-streets at a cost of $30,000.

The Hamilton Rolling Mills Co. has purchased the rails, amounting to about 300 tons, of the City Passenger Street Railway Co., Ottawa, which is going to lay down new rails on converting the line into an electric road.

The result of the meeting between masters and men of the Midland Iron Trade Wages Board has had good results, says an English exchange, and the wages question will probably now cause but little trouble in the future, as they have decided to re-construct the Board on a new basis, and the means they are taking should be such as to include all the owners of iron works in South Staffordshire to join and thus make a complete success of the Board as a really representative one.

The New Westminster correspondent of the Vancouver News Advertiser writes: The Reid & Currie Iron Works are busy catching up to advance orders, so much so that their forces are working overtime. This is a healthy showing in industrial affairs.

A movement is on foot to induce the C. P. R to run a series of excursion trains to Owen Sound during the summer months. A committee of the Council will act with a committee of the Board of Trade in placing the matter before General Passenger Agent Callaway.

Two English trade journals, Iron and Industries, have been purchased by C. Arthur Pearson and will be merged into one under the title of Industries and Iron. Iron has been in existence about seventy years, during fifty of which it was known as the Mechanics' Magazine.

A Kingston despatch says: The Gill-Smart Manufacturing Co., Brockville, has bought the plant of Chown & Cunningham. It is the intention of the company, if possession can be secured at reasonable figures, to run a foundry in Kingston. If a bargain cannot be struck the patterns, etc., will be removed to Brockville.

A Hamilton despatch says: The smelting works agreement has been signed by the Morehouse syndicate and forwarded to the city clerk. The plan of the proposed works is on exhibition here. It shows sixty acres of ground, covered with a frontage on Sherman avenue of a quarter of a mile. It is proposed to have about twenty-five acres of ground inside the city limits.

An Egyptian scythe, dug up on the banks of the Nile in 1890, and said to be as old as Moses, is exhibited among the antiquities in the private museum of Mr. Flinders Petrie. The shaft of the instrument is wood, set with a row of fine flint saws, which are securely cemented in a groove. This discovery answers the oft-asked question: How did the stone-age man harvest his crops?

The word bankrupt comes from two Italian words signifying a broken bench. The popuace of Venice, Florence and other Italian cities often became greatly incensed with the money lenders, who were frequently Hebrews, and bursting into the market place would steal the change and break or overthrow the bench. A broken bench implied a money changer without funds; hence the term.

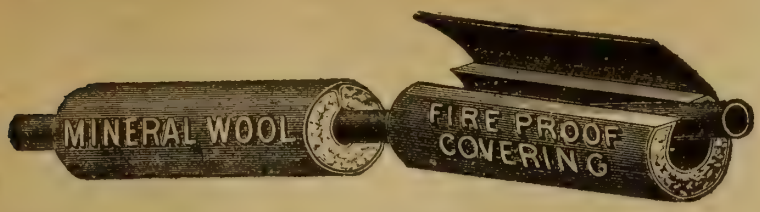
At the annual meeting of the St. John, (N. B.,) Gas & Electric Light Co., the financial statement showed a satisfactory improvement in the financial position of the company. The income fer the year from the gas and electric lights, tar, coke, meter rents, etc., was $76,523. The total expenses were $55,205, of which $46,427 were expenses connected directly with the manufacture of gas and electric light, including salaries.

During the year ending 30th April, 1893, they passed through the Suez Canal 2,267 steamers, with a net tonnage of 6,451,299 tons. This is a great falling off compared with the previous year when 4,156 steamers of 7,728,246 tons passed through. The average time occupied by a vessel in getting through the canal in 1892 was 21 hours 10 minutes. The average of actual steaming was 16 hours 54 minutes. Compared with 1891 this is a diminution of 2 hours 15 minutes in the canal and. of 46 minutes in time occupied in steaming.

The output of new shipping from the Clyde shipbuilding yards during May is somewhat large and compares favorably with the production in the corresponding month of last year. Altogether the new vessels numbered 30, giving a total measurement of 31,611 tons, as against 36 vessels aggregating 22,205 tons last May. On the other hand, however, the turn-out for the past five months, which amounts to 98,973 tons, shows a decrease of not less than 50,408 tons when contrasted with the corresponding period of 1892.

The Birmingham correspondent of an English contemporary says: The position of the iron trade is illustrated by the returns of the accountants to the North of England and Midland Iron Trade Wages Board. The figures are actual ascertained selling prices and not simply market quotations. The fall in the North of England has been 1s. 3d. per ton and in the Midlands 10d. per ton for finished iron. We thus seem to be coming gradually to the lowest prices, and as these returns refer to March and April, our market reports testify that since then prices have fairly held their own. The black sheet branch of the iron trade in South Staffordshire is feeling German competition in the London market, and makers say that wages must be reduced in this branch as the Germans are paying their rollers at the rate of 5s. per ton, whereas here we are paying as much as 20s. per ton for the same work, and with improved machinery.

The effect upon New Zealand of this grave commercial disturbance in Australia is somewhat mixed. It is stated that considerable amounts of money have been withdrawn from Australian banks, and have been lodged in the three banks belonging to this colony—the Bank of New Zealand, the Colonial Bank and the National Bank—and that our institutions have received an accession of general business. The finance of the colony being quite sound and plain, and there being no need to borrow, have placed our institutions in an advantageous position. In no quarter therefore is it anticipated that there is any danger of the panic spreading to New Zealand. But the failure of these institutions in Australia causes quite a dislocation in business which must be felt through all the colonies.—New Zealand Herald.



A GREAT LOSS?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss. The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

THAT FLYING MACHINE.

A representative of Engineering has witnessed a further trial of Phillips' flying machine, made in consequence of certain alterations in the design, which have turned out to be improvements. A few evenings ago, it is explained, the machine was run, and completed a flight of over 1½ turns round the track, or a little above 1,000 feet without touching. The speed on this occasion was timed almost exactly at forty miles an hour. There was a deadweight of fifty-five pounds, and the machine weighing itself 330 pounds the total weight lifted was 385 pounds. A new set of sustainer surfaces has been substituted for those originally used, and the pitch of the propeller was somewhat reduced in order to get a higher speed, for which the sustained surfaces were suited. The slats in this case are not quite horizontal when the machine is at rest, but when in the flying position the surfaces are nearly so.

THE FIRST BICYCLE.

"The popular belief is that the bicycle is a modern invention, when in fact it really dates back to the seventeenth century," says Dr. T. C. Minor to a reporter of the Cincinnati Star. "I learned this one day when I was making some translations from the Journal de Medicine de Paris. Ozaram in 1694 in his 'Mathematical and Physical Recreations,' tells of a carriage, as he calls it, 'in which one can ride without the use of horses.' And then he goes on to tell of how a lackey sits at the back, makes it run by 'walking alternately with his two feet by means of two small wheels concealed in a case just between the wheels behind and attached to the axle of the carriage.' This was the principle of the velocipede, so much improved since then. But the priority of the discovery of the bicycle I believe to be established without further argument or dispute. It was by a physician, Eli Richard, a young physician of Rochelle, France, who made the first machine after which our modern bicycle is patterned. He was a medical student in Paris in 1666, and became one of the greatest physicians of France. He died at the age of 61 at Rochelle in 1706, and there is a street in Rochelle named for him, and there is now a movement on foot to erect a bronze statue, not to Michaud, who it is claimed was the discoverer of the bicycle, but to the true discoverer, Dr. Eli Richard."

You will Insure Success
IN THE
STOVE
Business, by selling

"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.

The Gurney-Tilden Co. Ltd.
Successors to The E. & C. Gurney Co.
HAMILTON - - ONTARIO.



SPECIAL VALUES
—IN—
ICE PITCHERS AND WATER SETS
THE
Toronto Silver Plate Co.
Manufacturers of
Sterling Silver and Electro Silver Plate
Factories and Salesrooms:
570 King St. West,
Toronto.
E. G. GOODERHAM,
Manager.
JNO. C. COPP,
Sec.-Treas

VIEWS AND INTERVIEWS.

"As far as horseshoe nails are concerned," said a jobber to me, "I think they have got as low as they can. You see, there is no combine on horseshoe nails, and the bottom has fallen completely out of them. Consequently if there is a change, I fancy it will be upward."

* * *

"I have been making enquiries on the other side regarding the price of rope," remarked a wholesaler on Thursday, "and I find that the Consumers' Cordage Co. is offering at a shade under the National Cordage Co. Consequently we cannot bring in the American article, and even if we could, the Canadian company would go them one better."

* * *

"We have," said a jobber, "been making enquiries regarding the rumor that some men were breaking the price of bar iron in Montreal. We cannot trace it to any particular source and don't believe there is anything in it."

* * *

"Well, trade in poultry netting is about over," said a jobber to me in reply to a query. "There has been a very brisk business done in this line during the whole season, but," he added with a shake of the head, "Prices were very much cut."

* * *

"By-the-bye," incidentally remarked a dealer Wednesday, "there is some fear that there will not be sufficient Paris green for requirements. There is some talk among the trade of advancing prices, but I don't know whether there is anything in it. But there is one thing that I do know, and that is that we are getting better prices for what we have. What is the reason? O, the big influx of potato bugs. This year they are arriving in droves, especially in the Province of Quebec."

* * *

"I sometimes think that I would just like to sit down and write up the growth of the prepared paint trade," said a manufacturer, as with coat, vest and hat off he swung himself right and left in his office chair. "But then, you know I have really not the time. This year the increase is something terrible. There are more of us in the business and yet we all seem to have a good deal more to do than we had last year. What has been the increase, do you ask? Well, let me see," he added, still keeping up the swing and gazing intently on the ceiling. "Fifty per cent., I should think. Yes you can safely say the increase is this year fifty per cent. Why do you know that some of the painters, particularly those in small places, are beginning to use prepared paints quite extensively. As you doubtless know, some painters in country places are not well up in their business. Well sometimes these men when they have a job on hand that will require a good deal of paint of one color, will submit one of our's or some other manufacturer's card of colors, and the color that is selected will be used. Oh, it is getting a great industry, I can tell you."

* * *

"O, by-the-bye," remarked a manufacturer to me, "I have a good thing to tell you. I was in Montreal a few days ago. One day I took lunch in the new Board of Trade restaurant with a number of manufacturers and merchants. During the course of the conversation one gentleman present called across the table to Mr. Wm. McNally of Montreal: 'Say, McNally, I see you advertise in HARDWARE. What kind of a medium do you think it is? Did you ever get any results that you knew of from it?' 'I find it the best medium in Canada,' replied Mr. McNally. 'I get so many orders that I sometimes wonder how they came to be sent to me, and in almost every case where I have taken the pains to investigate I have found it was owing to my advertisement in HARDWARE.' Well, I thought it was so good that I must tell it to you," said my friend the manufacturer as he turned away.

BYSTANDER.

PERSONAL MENTION.

L. C. Bailey of Colborne, was in town Wednesday on his way home from Chicago. He was much pleased with what he saw at the Exposition and almost fancies he has visited every country in the world.

Among the country merchants in the city this week were: J. B. Eager of Aurora, E. J. Carter of Bond Head, J. C. Jenkins of Victoria Square, J. Peaker of Peaker & Son, Brampton, G. A. Binns of Newmarket.

THE AGE OF STEEL.

Steel in the rough is now sold in Pittsburg at $21.75 per ton of 2,240 pounds—a fraction less than a cent a pound. In 1867 steel rails at the same mart were $166 per ton; in 1872, $112; in 1882, $48.50; and to-day $30. How has a result so surprising been brought about? Why is it that the United States last year manufactured 4,277,000 tons of steel against 3,679,000 tons produced by Great Britain; with promise that the interval between these two great rivals will widen rather than diminish as the years roll by?

First and chiefly, from the richness and vastness of the iron mines of this country, and the good fortune that many of them, especially in Pennsylvania, Alabama and Tennessee, enjoy in being contiguous to coal beds, and where, as at the mines of the Vermillion range, in Northern Michigan, fuel is remote, water transportation charges to the furnace regions are nominal.

The cheapening of steel is in the main to be credited to the so-called Bessemer process, first devised by William Kelly, who, in 1847, at the Eddyville Iron Works in Kentucky, refined molten iron by a blast of air in an acid-lined vessel says the New York Sun. The English inventor developed this principle of burning the superfluous carbon out of iron until only steel remained, with so much ingenuity and boldness that his name is indissolubly linked with the process. While that process is employed in manufacturing much the larger part of our American steel, the open-hearth furnaces devised by Siemens and Martin are steadily gaining in favor. The first of them to be built in the United States was erected at Trenton in 1868, for Cooper, Hewitt & Co. Phosphorus in steel makes the metal brittle, and as many ores of iron, particularly those of the Southern States, contain a notable percentage of phorphorus, it was a notable discovery when in 1879 Sidney Gilchrist Thomas perfected his so-called basic process, by which such ores can be made into excellent steel. In England the bane becomes a blessing, the slag from a basic furnace, containing as it does, much phosphoric acid, yielding a valuable fertilizer. Mr. Thomas' discovery was first applied in America to an oper-hearth furnace in 1888, at the Homestead Steel Works of Carnegie, Phipps & Co. There are now six open-hearth steel works in this country.

Of still more influence in the cheapening of steel is the introduction of machinery in mining both ore and coal, in getting out the limestone to be mixed with the coal and ore, and in saving manual labor at every stage of the manufacturing process. At the Carnegie works in Pittsburg is the most elaborate and costly mechanical plant in the world, one machine alone representing an outlay of $1,000,000.

After the British and German mining engineers had met their American brethren in New York in 1890, they visited the leading iron and steel works in the country. What chiefly struck them was the pace at which operations were forced to a finish. Their observation on this point receives noteworthy proof in the Mining Department of the World's Fair. Among its exhibits are contours of the largest furnace in Great Britain, that at Newport, and the largest in the United States, that of the Edgar Thompson Works at Pittsburg. The English furnace has a capacity of 30,000 feet, produces daily 70 tons, uses 2,308 pounds of coke to a ton of product, with 150 hours as the time of a furnace operation.

Because it is stronger and tougher than iron, steel long ago ousted iron from use as the material for rails. A steel rail lasts about ten times as long as an iron one. This, of course, has cheapened rail transportation, and so helped to cheapen steel itself by lowering the freight tolls charged for hauling the ores and fuel needed to make it. As a material for machinery, steel not only wears better than iron, but can be run at higher speed. What this means in money saved in all the departments of the metal's application would require figures of astronomical audacity to express. And the end is not yet; nickel alloyed with steel exalts its tensile strength remarkably, as recent tests of armor plate made of nickel steel abundantly prove. Let experiment in the preparation of this alloy come to success, as it undoubtedly will, and we shall see the architect and the engineer take almost as long a stride as when they discarded iron for ordinary steel.—Chicago Journal of Commerce.



Monkey Brand Won't Wash Clothes

Removes Rust from Steel and Iron Makes Paint Look Like New

FOR

Marble, Stair-rods, Bell Handles, Windows, Fire-arms, Bicycles, Bronzes, Pots and Pans, Everything

Lancet says: "It answers admirably."
British Medical Journal says: "It is well adapted for removing stains, rust, and dirt."

It Makes Brassware like Mirrors, Glassware like Crystal, Zinc like Nickel, Tin like Silver, Copper like Gold, Marble like Ivory. Sells at a good price without trouble. Endorsed by 100 leading newspapers. Cases of 100 large bars 25s., cases of 60 large bars 15s., boxes of 48 half bars 6s. 3d.

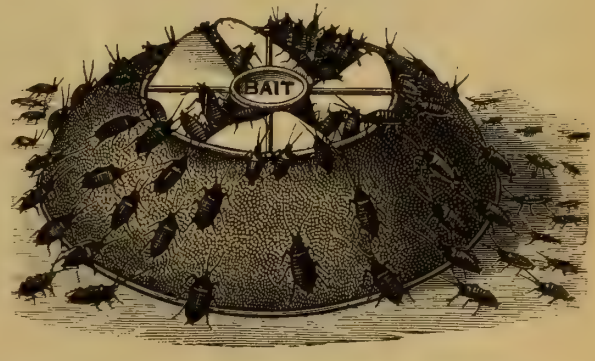
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The "Demon" Beetle Trap (Patented)

Used by the Government Departments, by the leading Steamship Companies, Bakeries, Hotels, Hospitals, Restaurants, Confectioners, and Public Institutions. It is admitted to be the Best and Cheapest Trap ever introduced.

☞ SPECIAL ADVANTAGES.—Beetles do not "get accustomed to it," as with other Traps. No glasses to get broken. Can be emptied with great ease. Is always ready for use, and will deceive and catch the sharpest beetle, whether young or old, and has been proved to catch THOUSANDS where other Traps fail. **Price, 8s. 6d. per dozen.**



- The Quite New "Hardware" Tool Baskets -



Nos.	1	2	3	4	5	
	23	26	28	31	34	inches.
	13s. 6d.	15s.	17s.6d.	20s.	27s.	per dozen.

THE IRONMONGER, 19th November, 1892, writes: W. B. FORDHAM & SONS, Limited, are placing before the trade, a set of tool-baskets, which, in all respects are a marked advance upon the ordinary kind. In the construction of them two fabrics are used, the outside one being a strongly-woven brown canvas and the inside a stout white canvas—the handles, straps, and binding being of the same stuff as the outer covering. The weight of the new articles is fully 25 per cent. more, but, as the baskets are light at the best, the extra weight is of no consequence from a portable point of view, whilst in the matter of substantiality and durability, it is necessarily of prime value.

W. B. FORDHAM & SONS, Limited,

ESTABLISHED 1825. 36-40 York Road, King's Cross, London, England.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, June 23, 1893.

HARDWARE.

There has been a moderate degree of activity in the hardware business during the week, but the demand is restricted to small lots on account of immediate requirements and the aggregate volume of business is not large. Some good letter orders are to note for shelf goods during the week for locks, keys, etc., while gardening tools have also attracted more or less attention. Nails have furnished some fair sized sales, but the demand for them is not of the active sort. Tinware is in fair demand and other lines furnish nothing noticeable.

WIRE—The demand for wire is moderate and there has been nothing special to note in connection with it during the week.

ROPE—Business has been of an inactive sort, but some lines have been moved during the week on country account.

NAILS—Rule quiet and neither makers nor jobbers have anything special to report. The former report some orders for fall delivery, but they complain that business in this way is light. There is no change in tone. The association meets sometime early in July for its quarterly meeting, but no important change is anticipated.

CHAIN—Trade is quiet in this line, for although retailers are filling quite a few orders in this connection, they seem to have sufficient supplies.

TINWARE—Has furnished quite a few good-sized orders during the week, and some fair sorting orders for enamelled goods have also been to note.

PLUMBERS AND BUILDERS SUPPLIES—Have been quiet.

METALS.

The market for heavy metals and hardware remains flat and dull. Advices from primary markets do not seem to call for any urgency, and, as a result, buyers are extremely indifferent about all lines from pig iron down. The movement ex ship and ex wharf is therefore small and the market in this respect without any interesting feature. The speculative markets in England have furnished considerable fluctuation on warrants, etc, but it has been purely speculative, as reports state that makers' iron is duller than ever.

PIG IRON.

There has been little or nothing doing in pig iron during the week, and if a holder wants to make a sale, and the most of them do, they have to submit to a substantial shading. We quote: Summerlee at $17.90 to $18.25 as to size of lot, and Gartsherrie at about the same figures. Eglinton has been moved at $17 and Carnbroe at $16.75, while Siemen's No. 1 is quoted at $18. There is only a small quantity of Langloan here, but its price also has been reduced to $18.50.

BAR IRON.

There is no change in bar iron and the association prices $1.90 to $1.75 seems to be universally adhered to.

SCRAP IRON.

There have been no important transactions in scrap iron, which we quote at $15 to $16 for No. 1 wrought. No cast scrap offering at present.

TIN PLATES.

There have been some round quantities of tin plates moved during the week, some cokes changing hands at $3.15 to $3.20, but in a jobbing way $3.25 to $3.30 is the idea. Charcoal runs from $3.50 to $4.25 according to brand.

CANADA PLATES.

Canada plates rule on the easy side as noted last week, and although we do not alter quotations it is more than likely that they would be cut in a case of a sale being possible. The range is $2 45 to $2.50 according to quantity.

TERNE PLATES.

This article has been featureless and unchanged since our last. Nominal quotations are $7 to $7.50.

GALVANIZED IRON.

There has been some fair sized lots of galvanized iron moved on the basis of 4½ to 4¾c. for No. 28 gauge, but there is no general demand for it.

SHEET IRON.

Sheet iron has furnished no business of importance, the range being $2 40 to $2.60 according to grade.

COPPER.

The copper market rules dull and easy, and although 11¾c is the nominal quotation, there is no doubt but that it would be shaded.

TIN.

Ingot tin is dull and unchanged, quotations ranging from 21½ to 22c. according to quantity.

LEAD.

Lead is dull and much the same as it was, at $2.90 to $3 per 100 lbs.

ANTIMONY.

There has been little change in antimony, last week's prices still holding, viz., 12 to 13c.

SPELTER.

Spelter is dull and unchanged at $4.75 to $5.00.

ZINC SHEETS.

Sheet zinc rules quiet at $5 to $5.50.

GLASS.

There is no change in glass, which is quiet on its former basis of $1 35 for the first break. Putty in bulk rules unchanged at $1.85.

PAINTS AND OILS.

A fair volume of business is reported in paints and leads at steady prices, although the margin for white lead on its present basis is said to be beautifully slim. Linseed oil has advanced in England and higher prices are anticipated here very shortly. Seal oil rules much the same at 47½ to 50c. according to quality. We quote: — Government standard, $4.75 to $5; No. 1, $4.50; No. 2, $4.25; No. 3 $4; No. 4, $3.75; dry white lead, 4¾c.; red lead, pure, 4¼c.; No. 1, 4c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil 60c., raw 63c. for boiled in round lots.

NAVAL STORES.

There has been a fairly good business in naval stores during the week, and a fair quantity of goods have been moved for the season. We quote as follows: Turpentine, 49 to 59c.; resins, $2.50 to $5.00, as to brand; coal tar, $3.75 to $4; cotton waste, colored, 5½; do. white, 7 to 10c.; oakum, 5½ to 7½c.; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep-sea line; pure Manilla, 12c. for 7-16 and upwards and 13c. for smaller sizes.

BINDER TWINE.

The demand for binder twine has been rather better during the week, several round lots having been shipped west. We quote the basis unchanged on the standard of 8¾c. for red cap and 9¾c. for blue ribbon.

CEMENT.

There is a fairly good demand for cement, but prices show no improvement. Arrivals

Refrigerators



Hardwood, Lined Galvanized Iron, Patent Locks, Four Sizes

These are **highly finished** and each season has shown an increasing demand. This year we are also **making a cheaper line** in above style, so as to meet all requirements.

Milk, Delivery and Creamery Can Trimmings.
All Sizes Body Stock for Cans and Cheese Vats.
Galvanized Iron Eave Troughs in 8 foot lengths.
Lithographed Tea Caddies and Signs.

We make and Supply everything used in the Stove and Tinware Trade.

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

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Safford Radiators

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Steam and Hot Water

ARE UP TO DATE

Trade Mark Registered

MOST EFFICIENT
NEWEST DESIGNS
BEST CONSTRUCTION

ALL SCREWED CONNECTIONS



RADIATORS PATENTED AND ALL DESIGNS REGISTERED

References: New Parliament Buildings, Board of Trade, Confederation Life Buildings, Freehold Loan Building University Buildings, Toronto; McGill University Building, Montreal; and many thousands of others which will be named in response to enquiries.

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THE Toronto Radiator Mfg. Co. LTD

TORONTO, ONT.

MONTREAL. QUEBEC. ST. JOHN, N.B. WINNIPEG. VICTORIA, B.C.

MONTREAL Markets Continued.

have been light, but stocks on spot continue large and in excess of the demand. Quotations are $1.95 to $2.15 for English and $1.85 to $1.95 for Belgian brands.

There is a good demand for firebricks in moderate sized lots, at $15 to $19.50 for Scotch and $14 to $19 for Newcastle, ex ship.

PETROLEUM.

A fairly good movement is reported in petroleum, but business is hardly up to the average, and Canadian refined has in consequence been marked down to 11¾c. Crude at Petrolea is quoted at $1.07 in tanks and $1.10 delivered. We quote Canadian at 12c. at shed in Montreal for round lots, and 12½c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c in 10-barrel lots, 19½c. in 5 barrel lots, and 19¼c. for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c, ; Canadian benzine, 10¾c. Petrola; 12¾c. for Montreal.

MONTREAL TRADE NOTES.

A. Ramsay & Son report a good seasonable demand for leads, paints and varnishes.

Painchaud, Squire & Co. note some good sorting orders for cutlery, especially razors.

H. C. McLaren & Co. report placing several good orders for steel clad baths during the week.

E. B Eddy & Co. have been receiving some good orders for their special lines of wrapping paper.

Several of the brass founders are busy here on some heavy copper work for the Street Railway Company.

It is the general talk among the trade here that Messrs. Crathern control the bulk of the galvanized plates on this market.

The demand for silver ware, plated goods, etc., is quiet at present, according to Manager Whinby, of Simpson, Hall, Miller & Co.

The hot weather has made an improvement in the demand for refrigerators, and those of the McClary Co. have not been neglected.

The Canada Iron Furnace Co have been placing some fair sized lots of their charcoal pig west of Toronto during the past month.

The case of the glass importers against the captain of the SS. Glengott will come up for argument shortly.

W. H. Cottingham & Co. have been furnishing quite a lot of orders for artists' materials which go to equip amateurs on their summer outings.

Wm Clendinneng & Son Co. are at present engaged in turning out some heavy lines of iron piping, the demand for which is somewhat improved.

TORONTO MARKETS.

TORONTO, June 23, 1893.

HARDWARE.

Trade continues good. One day it may evince some quietness, but probably the next it will be decidedly brisk, making the average by the end of the week a good one. The business being done is largely of a sorting up character, with the demand principally for ice cream freezers, churns, horse pokes, green wirecloth, screen doors and windows, and there is still a good enquiry in a sorting-up way for harvest and garden tools. Nails are moving well in good quantities, while the demand for wire fencing is gradually falling off. Rope of all sizes is selling well, and chain is quiet but higher. For poultry netting the season is about over. Green wirecloth, screen doors and windows continue scarce, and the few lots of the latter that arrived last week were gobbled up, and orders that were placed five or six months ago are not yet filled. Payments fair.

FREEZERS—The hot weather has induced a big demand during the last few days for ice cream freezers, and some makes are now nearly as scarce as green wirecloth.

CHURNS—The demand for churns this season has been unusually large, and they are at the moment scarce, but fresh stock is expected in the course of a few days.

NAILS—Cut and wire are going off well as before, large lots among them. Business is principally on country account and is better than is usual at this season. Horseshoe nails are also in good request.

WIRE—Is not so brisk as it was, the season for fencing being now pretty far advanced. We quote as before.

ROPE—There is quite a demand for rope of all sizes, particularly those for hay fork pulleys. Prices remain as before.

BINDER TWINE—Orders for this article are beginning to come in.

CHAIN—There has been an advance in sizes from ⅜c. inch coil in England. It has not exercised any influence on this market, stocks being already purchased. The advance is about 3d. per cwt. Little or no business is being done.

TOOLS—Sorting up orders are coming in in the usual quantity and supplies are now equal to the demand. Mechanics' tools are going out in the usual sorting up lots.

LAWN MOWERS—There is still a scarcity in this line, notwithstanding that some of the makers are working night and day without intermission. The manufacturers of the Woodyatt machine have found it necessary to stop their consignment intended for the English market.

WARE—Demand for tinware is slackening off, but a brisk demand is still reported for peerless, brass and enamelled ware.

PLUMBERS' SUPPLIES—There is no material change. Trade is of the usual character at this time of the year—quiet.

BUILDERS' SUPPLIES—Country trade is fairly good; city quiet.

IRON PIPE—The demand noted last week has been maintained.

METALS.

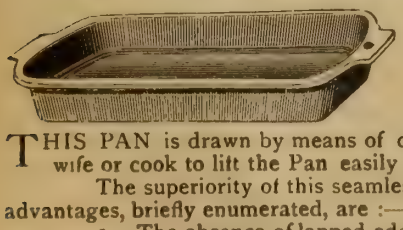
No distinctively new features have developed during the week in metals. Pig iron has not attracted much attention, but bar iron has been moving well. In antimony a scarcity is reported, and there have been some large sales in zinc spelter and in lead.

PIG IRON—Business seems to have been confined to the movement of a few small lots of Nova Scotian pig at $19, Toronto. Summerlee and Southern are nominal at $23 and $21 respectively.

Rogers, Brown & Co., Buffalo, report the Toronto pig iron market as follows: There are no encouraging features to report except the cutting down of production brought about by the stoppage of many furnaces. Consumers are buying very conservatively and are rarely anticipating their future expectations. Consumption has fallen off heavily, which added to the small amounts involved in each transaction, gives the appearance of slow trade. We have heard of no iron being forced on the market since the well advertised incident of a few week ago. Sellers are however keen for business, making competition strong and forcing prices to the minimun limits.

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1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
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4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

MARKETS—Continued

BAR IRON—Demand is good and enquiries are heard for large lots; $1 95 is as before the basis.

TIN PLATES—Quiet. Supplies of cokes and charcoals are ample, but ternes are scarce.

CANADA PLATES—Orders are coming in quite briskly for fall delivery and stocks for immediate business are ample. Prices are unchanged, all dull being quoted at $2.65, half-half at $2.75, and all bright at $2.80 to $3 per box.

CALVANIZED IRON—Demand is good for small parcels at 5 to 5¾c. for Queen's Head and Gordon brands.

INGOT TIN—There is the usual brisk demand at 23½ to 24c. for small lots, with large lots a shade lower.

INGOT COPPER—Trade is not very brisk and prices are steady and unchanged.

SHEET IRON—Trade is not brisk and stocks are ample; prices range from 2⅝c.

ZINC SHEET—Dull with prices unchanged at 5¾ to 6c. for 5-cwt. casks and 6 to 6¼c. for part casks.

ZINC SPELTER — Some large lots have been moving at the old figures, namely 3¾ to 5¾c.

LEAD—Large lots have changed hands at 3¼ and for smaller lots 3½ to 3¾c. is the idea.

ANTIMONY—Very scarce. In anticipation of a decline people allowed their stocks to run low, but since the expected took place the demand has been so good as to pretty well exhaust supplies. For small lots we quote Cookson's at 12 to 13c. and ordinary at 11 to 12c.

GLASS.

Fairly active and stocks are larger than usual at this time. Further shipments will soon be to hand.

PAINTS AND OILS.

There has been a good trade doing the past week. Linseed oil has been attracting a good deal of attention—owing to an advance of 1c. in the English market. Here there has been no change, raw still being quoted at 60 to 62c. and boiled at 63 to 65c., but the feeling is firmer. Local stocks are light and considerable difficulty is experienced in filling orders. Turpentine is moving freely and in much larger quantities than is usual, but this is no doubt owing to the fact that the trade have not purchased any more than possible for some weeks, awaiting the lower prices that were to go into effect on the 15th inst. The price is 45 to 47c., the latter figure being for outside points, freight allowed. The American market has been irregular for some weeks, but prices are again up to where they were two weeks ago. White lead is quiet and unchanged on the association basis of 4¾c. There is a good call for varnishes at unchanged prices. Trade in prepared paints is still brisk. Country payments are good and city fair.

OLD MATERIAL.

Offerings are still liberal, but there is not much wanted. Wrought iron is quoted 10c. and scrap rubber ½c. lower. We quote Agricultural scrap, 55c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40 to 50c.; No. 2, including sheet iron, hoop iron and mixed steel, 20 to 25c.; new light scrap copper, 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.: heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings, and turnings, 15 to 20c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—Not much doing. The financial troubles in the United States are effecting hides and prices are weak and lower. Jobbers are paying 4½c. for good buff selects and asking 5c., but there are little or no transactions.

SKINS—Calfskins are lower by 1c. a lb., 7c. being quoted for No. 1 and 5c. for No. 2. There is a demand for good stock, of which there is a scarcity. Lamb skins are quoted at 35c. and pelts at 20c., while wool skins are nominal at $1.25 to $1.50.

TALLOW—Not much doing and prices are somewhat lower, jobbers paying 5c. and selling at 5½ to 5¾c.

WOOL.—Lower. Dealers are paying 17c. for new washed fleece wool, 18 to 19c. for fine, and pure Southdown 20 to 21c., rejections ½c. off. The mills are still well employed.

PETROLEUM.

Trade continues much about the same at unchanged prices. We quote as follows:—Canada refined oil, 13 to 13½c.; carbon safety, 17½ to 18c.; Canada water white, 19c.; American water white, 21 to 22c.; photogene, 25c.

MARKET NOTES.

The gun and ammunition trade is reported by M. & L. Samuel, Benjamin & Co. to be opening up remarkably well this season.

Discounts have been raised on galvanized iron pipe, wrought brass butts, Standard drill bits, and Kearney & Foote's files and rasps.

M. & L. Samuel, Benjamin & Co. have had a large sale for oil stoves this season, and two and three burners are about sold out.

Retail men can gather pointers on how to dress a hardware window by taking a look at the arrangement of the windows of Rice Lewis & Son (Ltd.)

M. & L. Samuel, Benjamin & Co. report that orders are coming in quite freely for their special line of pocket knives, "Maple Leaf" brand.

H. S. Howland, Sons & Co. are introducing a new line of grain scoops for the fall trade. They will be printed and labelled "Samson." Customers will do well to book their orders early for these goods.

A new sweeper is being shown by M. & L. Samuel, Benjamin & Co. It is named the "Lady Stanley," and is made by the same people as the "Rapid." It combines neatness and efficiency with cheapness.

A consignment of the Woodyatt lawn mowers en route for England have been stopped by the manufacturers to supply the trade here. Mr. Woodyatt states that his factory has been running 24 hours a day for some time.

A first and final dividend of less than four cents on the dollar has been declared in the insolvent estate of the Niagara Casket Co. The total amount of the unsecured claims proved was $47,255.73, and the amount available for distribution among the same $1,819.94.

The Toronto Silver Plate Co. has issued its illustrated price list of souvenir and staple sterling silver spoons and novelties. The catalogue is well printed and contains 12 pages. What particularly strikes one on perusing its contents is the beauty and extraordinary variety of the souvenirs that are manufactured by the firm.

Nearly everybody knows Carminette, the strong carmine vermillion pigment manufactured by Mander Bros., of England, and controlled in Canada by Walter H. Cottingham & Co., of Montreal. The Messrs. Cottingham have only been selling the article for six years but owing to its own inherent merit and judicious advertising by the Canadian agents it has become a household word with good painters and decorators, and the demand for it is increasing each year. Under ordinary circumstances carminette stands as well as vermillion when well covered with varnish and, unlike the latter, has no tendency to blacken by exposure to the atmosphere.

AMERICAN MARKETS.

New York, June 23.

PIG TIN.—Speculation in pig tin was very tame in this market, and cable advices noted a dull condition of affairs in London also. Prices were moved somewhat higher, however, in the face of speculative inactivity, and merely routine trade and consumptive demand. In point of fact the opposition is so faint that the bull interests have matters pretty much their own way for the time being, as far at least as making prices is concerned. The steamship France, from London, brought 210 tons, making a total of 1,908 tons received here since the first instant. There are 809 tons additional afloat from British ports. The statistical position appears to have been discounted in a great measure, however, and the McKinley duty has also lost force as a factor in the market. Late in the day transactions were reported on 'Change of 50 tons July delivery at 20.40c., 50 tons ditto at 20.42 1-2c., and 50 tons do., at 20 3-8c.

Quotations by cable from Holland were 54 1-2 florins for Banca and 54 florins for Billiton, against 53 1-2 florins and 52 3-4 florins a week ago.

COPPER.—Several hundred thousand pounds of Lake Superior ingot were sold late Saturday and on Monday at 10 3-4c.



All kinds of Office and Store Fittings and Furnishings



MARKETS—Continued.

per pound. That price seems now to be strictly an inside one at the present time, and, if anything, the market is showing better tone at present than it has for some time past. The supposed sales recently at 10 1-2c. are still in doubt, and, if effected at all, were under strictly exceptional conditions. Electrolytic copper is quoted at 10 3-8 to 10 1-2c., and common casting stock at 10c., with fair business passing, chiefly in rather small lots. London cables reported a lively market there, with sales for the day of 1,050 tons for prompt and 750 tons for future delivery. Prices advanced to £45 2s. 6d. for prompt delivery and £45 10s. for three months' futures.

PIG LEAD.—Under the weight of pressure of a few hundred tons for sale there was further weakening in prices, and the market closed extremely flat, with prices leaning in buyers' favor. Probably 500 tons were sold late Saturday and on Monday for near future delivery, at the equivalent of 3 5-8c. landed in New York. Additional quantities could have been secured at the same price, and St. Louis quoted a weak market there at 3.40c. London cable was £9 7s. 6d. for soft Spanish.

SPELTER.—The demand in this quarter continues exceedingly slow, and the market shows weakish undertone. Western brands were offered at 4 1-4c. delivered, in carload and larger lots, regular way, and on the Metal Exchange there were sellers at 4.22 1-2c. for August and September delivery. St. Louis quotation was reduced to 3.95c. London cable was £17 12s. 6d. for good merchant brands.

ANTIMONY.—Business is of strictly routine character and moderate all told. Current quotations are 9 3-4 to 9 7-8c. for Hallett's and 10 3-8 to 10 1-2c. for Cookson's.

TIN PLATE.—For other than moderate quantities of plates for prompt delivery there is hardly any demand, and the market shows the same dullness that has prevailed for several weeks. Prices are still irregular and more or less in buyers' favor.

MINING ROYALTIES.

Competition and the pressure of economic conditions resulting therefrom are slowly forcing the necessity of reduced expenses on the mining interests of this and other countries. In this readjustment every factor of disturbance has its place, and eventually will have to share in the process of equalizing matters. It is evident that the costs of labor and production are not susceptible of any great change in favor of a wider or even payable margin of profits. Intelligent labor gradually climbing to higher planes of living, and mechanical ingenuity in labor-saving appliances approximating the highest possible efficiency, both render any decline in present costs almost impossible. Relief must come from other directions, as in rates of transportation and royalties. These conditions are at present more acute in Great Britain than in the United States, and have led to the appointment of a commission, endowed with all necessary powers of securing evidence. It has but recently concluded its task, which has been, to say the least, of an onerous and complicated nature. It had to do with conflicting interests, and with a mass of information taking time and a severe amount of conscientious labor to classify and analyze. The facts deduced are not without interest to the coal and iron ore mining interests of the United States. The conditions are, of course, different in the two countries, but the lessons of one are not without educational value to the other.

In Great Britain much of the coal and ore land is entailed and held by large land owners, usually the nobility or some religious or educational institution. The right to mine is leased on royalty. The time limit varies from 21 to 63 years. Royalties are generally a fixed sum per ton, but in some instances vary with the price of coal. The estimated royalty payable in 1889 was in excess of $20,000,000; what are known as way-lease charges were over $1,000,000, making a total of $21,000,000. Taking the total output for the year as 177,000,000 tons, the royalty and way-lease was equivalent to rather more than 5 pence per ton. In the matter of iron ore the royalty was estimated at over $3,000,000 on 14,500,000 tons. Royalties, including other metals, such as copper, tin, lead, etc., are estimated as being in excess of $435,000.

In the United States, until recently, most of the coal and ore mined was produced by the owners of the land. Time, however, has developed new conditions, and in the coal mines of Pennsylvania and West Virginia and iron ore mines of Lake Superior and other regions, there is an increasing amount of coal and iron mined on royalty. Coal mined in the Flat Top region is mined on a royalty of 10 cents per ton. In the Connellsville region some royalties are as low as 7 and some as high as 11 cents per ton. In the anthracite region royalties are rated much higher, 20 cents being not unusual, some ranging as high as 40 cents.

In the matter of iron ore royalties vary greatly, but from 20 to 30 cents per ton is not unusual. As to how far some of these are arbitrary or avericious the question is open to discussion, but that in some forms they are hurtful to public good there can be no serious doubt. There are rights in royalties as in other things, and these have to be respected, but when these are abused to the detriment of any industry, their correction becomes a social and economic duty. The objections brought out by the British Commission to the systems and methods of that country were: (1) that royalties are too high; (2) that "shorts" and unexhausted improvements are confiscated; (3) that the restraints on alienation and surrender of mining leases are too severe, and (4) that the powers of land owners enable them to exact heavy way-leases. Further, it was alleged that copy holders abuse their rights, and that the powers of limited owners to lease their mining property was not sufficiently extensive.

Legislative interference with the amount of royalties was not thought desirable by the commissioners. Reform as they suggest lies in the general adoption of the principle of varying royalties by a sliding scale, the establishment of a tribunal for dealing with way-leases, and the organization of a Department of Mines in connection with the Home Office. As might be inferred from the nature of the subject discussed, the question of the nationalization of minerals was raised. That sooner or later this phase of the question will come to the front there is no doubt, but as yet public sentiment is shy of so radical a change. Under present conditions, both economic and statutory, reform lies along the lines indicated by the recommendations of the commission, the fact remaining as stated above that the retrenchment in costs of mineral production is scarcely possible on the labor side can only have its opportunity in the reduction of transportation rates and royalties.—Age of Steel.

EARLY IRONWORKING IN SCOTLAND.

At the meeting of the Birmingham Philosophical Society, on May 24th, a paper on "Early Ironworking in the Highlands of Scotland" was contributed by Professor Tilden and Mr. G. E. Brown. In the summer of 1892 the authors made an excursion to the district round Loch Maree, and examined some slag-heaps and other relics which show that the operation of extracting iron from the ore was practised there in times far remote. Of these workings they had been unable to find mention in many books on the antiquity of iron and steel which refer to the Forest of Dean, Sussex, Kent, and Surrey as the scenes of smelting operations. It appeared, however, from a book by Mr. J. H. Dixor, F.S.A., on "Gairloch: Its Records, Traditions, Inhabitants, and Natural History," that the whole iron industry of Scotland sprang from workings established early in the seventeenth century on the shores of Loch Maree by Sir George Hay. There were three furnaces and each annually used as carbonised fuel the product of 120 acres of wood. They produced wrought-iron, pig-iron, and cast-iron. The ore was probably a form of hydrated oxide known as bog-iron. The wrought-iron was smelted with charcoal into blooms, which were hammered while hot into bars. An analysis of a sample of cast-iron found at Fasagh by the authors showed that it contained 0.047 per cent. of silicon, too small a quantity of sulphur to estimate, 0 249 per cent. of phosphorus, 0.08 per cent. of manganese, and 0.14 per cent. of carbon. It was, in short, comparatively pure iron, containing streaks and layers of steely iron, and was therefore similar to the charcoal-iron which to this day is made in small bloomeries in India and in some places in the Pyrenees. It resembled also to a certain extent "puddled steel," the chief difference being its very small admixture of manganese.

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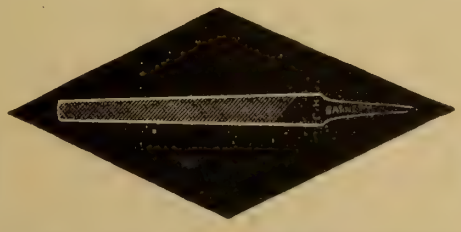
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IRON ORES AND COAL.

The connection of engineering projects with the manufacturing interests of the United States explains why Congressman John De Witt Warner, who is prominently identified with the subject of tariff revision, has been asked to contribute to the Engineering Magazine a paper entitled, "What will the Democrats do?—A Forecast of Tariff Legislation." Referring to probable changes in the existing schedule, Mr. Warner writes:

It may be expected that iron ore will be put on the free list. It is a typical so-called raw material, hence certain to be so treated by Democrats who believe in promptly carrying out the Chicago platform. Moreover, with the development of the Vermillion and other iron ranges, including the Giant Messaba, the competition for the supply of the west and central portion of our country is finally settled about Lake Superior as compared with the seaboard slope of the Alleghanies. In other words, the section that but shortly since procured "protection" in order to enable it to control the extending market afforded by our country's development, now sees this market exploited by those who, except for the most inviting new worlds yet to be conquered in the west, would drive the east from its home fortresses. As a result, the eastern seaboard is abandoning the attempt to control the western market for bulky iron products, and it is anxiously devising economies and facilities to hold its own market in this regard, while still extending its sales of the more specialized lines of manufacture, and the capital and local interests of New England, New York, and New Jersey, which have for years demanded relief by free raw materials, are now being reinforced from Pennsylvania, Maryland and West Virginia.

With coal, somewhat similar conditions are adding daily to the interests to which free coal is a longed-for advantage; and in this case the relations of our western coal fields with central Canada are such as to offer the further inducement of a far larger foreign market for Mississippi valley coal by reciprocity in this respect than would thus be given in the United States to the coal of the Canada seaboard; while our Pacific States are finding it more and more desirable to secure cheaply the coal of British Columbia. Though logically not so urgent, yet the extent to which the interest that would still shut them out is becoming plainly confined to a few, who wish to monopolize the riches which, in their opinion, the Almighty has too generally distributed, to the direct detriment of a far greater number both of capitalists and laborers among their own countrymen, bids fair to secure the admission of silver lead ores either free or at a nominal duty.

These so called "raw materials" being put on the free list, or admitted at nominal duties, a substantial reduction in duties on manufactured goods would follow. For it would be an indefensible increase of "protection" to leave untouched the present rates on manufacture while taking the duty from raw materials.

VENTILATION CONSIDERED.

Ventilation is a good thing, and one of which we have too little; and yet, in writing for people of common sense, it isn't necessary to go into thrilling details, not to indulge in hysterical paragraphs as to the absolutely poisonous condition of the air we are constantly breathing. That air is sometimes villainously bad. In crowded school-rooms, churches, halls, theatres, and most places of public assembly, we often indulge in some that is not merely second-hand, but several times so; in air that has been several times inhaled and exhaled by a mixed assembly of clean and dirty, and healthy and diseased people; by people who haven't bathed for a month, who eat onions, who expectorate tobacco juice, and who chew tutti-frutti; by people, too, with decayed teeth, dyspeptic stomachs and diseased lungs. And yet, in considering pure air for our homes, it isn't necessary that we lose our heads and go entirely daft. The writer was nearly stifled in the ill-smelling sitting-room of a man who was just planning a ventilating system that was to include a shaft for the removal of foul air from a sash-enclosed storm vestibule on the north-west corner of his house. Such people, once they get the fever, are apt to demand results outrivaling the air of the sun-bathed and breeze-fanned hill-tops. They usually fall victims of the promoters of ventilation humbugs who have all sorts of schemes for air purifying, but in connection with whose schemes pure air is an absolutely foreign consideration.

Ventilation, briefly defined, is a system of air changing: of expelling the impure, and replacing it with pure air. A good system, for winter, substitutes pure warm air for the cooler foul air, and does it in a manner to equalize the temperature and to prohibit cold drafts. To ventilate the steam or hot water heated room, warm air must be expelled and cold air substituted: hence, in such rooms, ventilation is usually omitted. The only way to avoid cold drafts is by providing supplementary, or indirect radiation, this meaning the enclosing of coils in a box or room, the passing of cold air over them, and the conveying of this air, after being warmed, to the rooms, the principle thus becoming exactly the same as that of the warm-air furnace, but its employment being of a less effective character. People who have fire-places, or base-openings into flues in steam or water-heated rooms, sometimes think they are ventilating them. It should be distinctly understood, however, that there must be inflow as well as outflow, and that when air is being expelled from such rooms cold air is getting in about doors or windows or in some other manner, to supply the place of the warm air drawn out.

Ventilation, in connection with a furnace, if it be of sufficient size and proper construction, may be had to a degree almost, if not quite, perfect. But it must be arranged for. There must be a natural and sufficient flow of pure air from the outside; it must be warmed, but not over-heated, by passing against the heating surface, and must naturally flow through the pipes and registers into the rooms, room being made for it by the passing out of the cool foul air that it is to replace. Success, be it remembered, is dependent upon both inflow and outflow. How these are to be had it would be impossible to answer comprehensively in small space. In a general way it may be said there must be fire-place, vent-flue, or shaft of some kind to take the air from the room: that this flue or shaft must be effective in the way of draft, and proportioned, in the matter of capacity, to the desired inflow of warm air. Attempts to secure either good ventilation or sufficient heat without due proportions and working qualities, in the respects mentioned, will utterly fail, and where they cannot be, had attempts to ventilate should be wholly abandoned, for it is better to have a good warming system without ventilation than to make a failure of both warming and ventilating by attempting the impossible. Desirable as is ventilation, one may have of it, as in other matters, too much of a good thing. The properly equipped house, to our mind, is the one in which the air supply may at will be drawn from out of doors or be returned from the rooms, the owner's judgment to determine as to when the temperature and other conditions demand liberal ventilation. In the latitude where furnaces are most used, the use of "inside air," so called, is often not only safe, but sensible. With the mercury at or below zero, and the wind blowing severely, the heating of a constant inflow of air from out of doors is not only expensive, but is also without compensating advantage. The ideal "lay-out" is that embracing the most complete facilities for ventilation and the most perfect system of air circulation, pure and simple, either to be used at will. There are times, even in bitterly cold weather, when it is desirable to have an abundance of fresh air, as on occasions of large social gatherings, and especially when there may be sickness

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SITUATION VACANT.

TINSMITH—WITH ABOUT $1,000 TO $1,500 capital, to take an interest in a hardware store and tinware business in a rising Ontario village on the C. P R. Apply Box 26, Shelburne. 28

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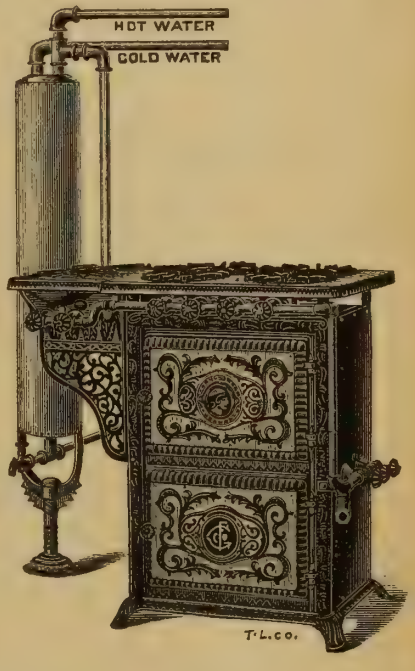
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All burners are operated with Steel Needle Valves which produce sharp blue flames. The body is made of heavy Cold Rolled Sheet Steel Asbestos lined. The front and top are beautifully carved, heavy smooth castings with nickel-plated medallions and Tile panels.

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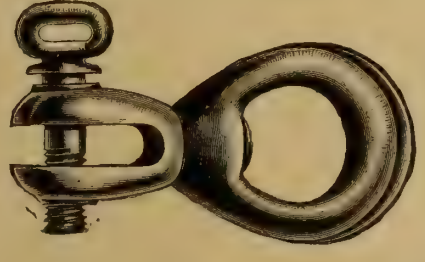
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The Gurney Foundry Co., Ltd., TORONTO



THE WHITMAN & BARNES MFG. CO.

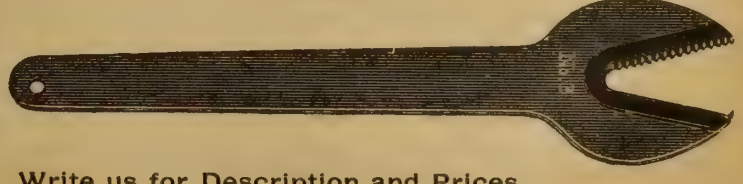
Canadian Branch: St. Catharines, Ont.



This new **Swivel Clevis** can be attached to any Plow Clevis, used in place of Shackle or End Clevis.

MADE OF MALLEABLE IRON.

ALLIGATOR WRENCHES



Write us for Description and Prices

in the household. The success of either the air-circulating system alone, the ventilating system alone, or the two combined, is dependent, let it always be borne in mind, on the intelligence and skill with which the equipment is attended, as also upon the capacity and other qualities of the heating apparatus proper.—From Handbook of Hints on Warming and Ventilation.

PUDDLING AT LOWMOOR.

A good deal of interest has always attached to the methods of manufacture at Lowmoor, since its iron probably stands unrivalled, says an exchange. E. Windsor Richards, in an address as president of the Iron and Steel Institute, describes the process at the works which are under his charge. Cold-blast pig iron—really cold blast—has always exclusively been made at Lowmoor. It contains from 1 to 1 1-4 per cent. silicon, and 0.3 phosphorus; a very rich gray forge quality is preferred. The whole of the pig iron is passed through the refining process. There is no pig iron puddled. The refinery eliminates the whole of the silicon, and reduces the phosphorus to 0.1 by constant practice with materials of very slight variation, the refiner knowing how to leave the carbon untouched. The puddlers, therefore, have only to perform the duty of eliminating carbon and the small remaining quantity of phosphorus, in order to obtain a practically pure lump of iron. As it is of vital importance that the puddling should be as nearly perfect as possible and that the shingling under the steam hammer be equally well performed, rewards and fines are established in order to procure even quality of workmanship. The method of inspection of the puddled and hammered lump is as follows: The foreman every day chooses from each man's work any heat he desires to test, and has one or more pieces broken through. The fractures of these lumps are carefully examined and numbered according to the degree of perfection attained. These numbers are added up at the week end. The workmen having the most numbers, representing the worst samples in evenness of quality, have to stand out, or, in other words, are not allowed to work on the following week, while the men who have the least numbers, representing the best samples of work during the week, are rewarded by money prizes. This system necessitates the keeping of surplus men, who are waiting to be taken in when others are turned out. The decision of the foreman in judging the samples is never disputed. The samples are exhibited so that the men have every opportunity of examining for themselves the work they produce, the figures showing each man's work being posted up daily, so that the men are satisfied that no partiality is shown, no errors of judgment made. This system has been strictly carried out day by day, and every day over many years, and creates a very desirable competition, keeping the men's attention centred on their work. The puddler works ten heats of refined metal of three hundredweight each per turn. The puddled bars are all worked under 50 hundredweight steam hammers into slabs about 12x10 of varying thickness. Each slab bears the puddler's special mark. These slabs are then piled and repiled to make the required weight for rolling into the various sizes of finished iron, whether plates or bars. All these weldings require the greatest care in heating and hammering; the iron bears a very high heat without any deterioration of quality.

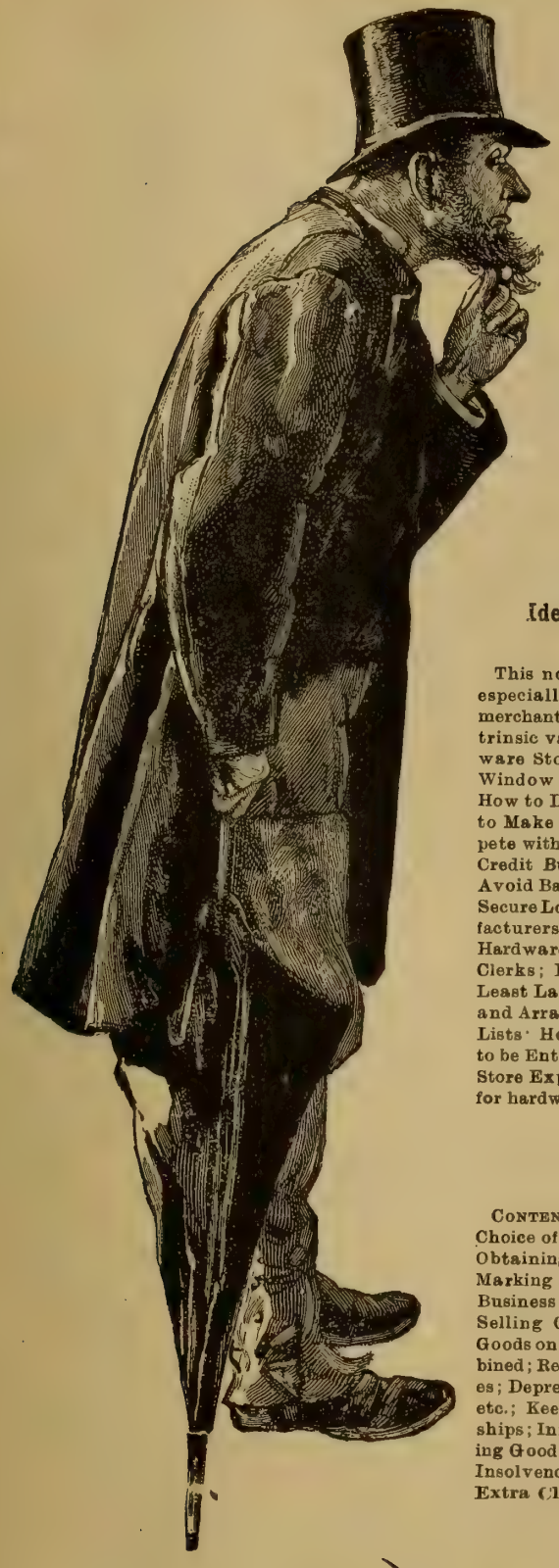
In plate rolling the greatest care, too, has to be taken to avoid laminations and blisters; the purer the iron, the more difficult it seems to be to prevent them. Careful examination is made when rolling by having jets of water playing on the surface of the plates to detect blisters or unwelded portions. The inspection is continued when the plate is cold by rapping all over both surfaces with a hammer and noting the sheared edges all round the plates. The workmen having inherited their fathers' positions have done no other work all their lives but manipulate the same class of materials to produce the same results. Only one quality of iron being made, the same method of working having been pursued over very many years, each workman is especially skillful at his respective task.

The result of all this care and skill and good materials is a soft, ductile and reliable iron. Best Yorkshire iron has attained its high reputation by reason of its power to withstand many sudden shocks without fracture, its reliability and its welding qualities. The tensile strength that such iron naturally gives, or, as Sir James Kitson better expresses it, "cheerfully gives," should be accepted, when all the processes of manufacture are conscientiously performed by those who value their reputations, and, indeed, whose very experience as manufacturers is at stake. Some engineers insist on higher tensile strains in iron, when at the same time they require fiber to give a safety and softness to give weldability. Professor Arnold has just made the following interesting experiment. He took 50 pounds of pure wrought iron and fused it in a special crucible, so as to free the mass from interposed slag. The lump hammered and rolled exceedingly well. It contained iron 99.76 and carbon 0.07. The mechanical tests gave 21 tons tensile strain in 2 inches; elongation, 50 per cent.; reduction of area, 80 per cent. Now, for mild steel to stand Lloyd's tests of from 28 to 32 tons tensile strain with 16 per cent elongation in 8 inches we find that for a plate 1-4 inch thick the carbon should be 0.15, and for one inch thick to stand the same tests, and allowing for the smaller amount of work on the plate, the carbon should be 0.25.

Best Yorkshire iron, on a plate 1-4 inch thick, will stand 23 tons tensile with the grain and 16 per cent. elongation, and 20 tons crossways with 12 per cent. elongation, and a plate 1 inch thick will stand 22 tons with the grain and 16 per cent. elongation, and 20 tons crossways with 12 per cent. elongation, with the carbon something above traces. These examples prove what everyone knows, but which is sometimes lost sight of, that to increase the tensile strain the carbon must be increased, and the greater the amount of carbon the greater the difficulty in welding. It is easy to increase the carbon in a molten metal by increasing the quantity of ferro-manganese, but fiber cannot be obtained in this manner, so it follows that by increasing the carbon in iron to obtain higher tensile strains, its welding properties and the fibrous nature of its texture are destroyed, giving a harder and more brittle metal, unsuitable for the work that soft iron is called on to fulfill, and to be even dangerous under certain conditions in proportion as the tensile strains, or, in other words, as the carbon is increased.

RUBBER TESTS.

Lieutenant L. Vladomiroff, a Russian naval officer, has, according to an exchange, recently carried out a series of tests at the St. Petersburg Technical Institute with a view to establishing rules for estimating the quality of vulcanized india rubber. The following, in brief, are the conclusions arrived at, recourse being had to physical properties, since chemical analysis did not give any reliable result: 1. India rubber should not give the least sign of superficial cracking when bent to an angle of 180 degrees after five hours exposure in a closed air bath to a temperature of 125 deg. C. The test pieces should be 2.4 inches thick. 2. Rubber that does not contain more than half its weight of metallic oxides should stretch to five times its length without breaking. 3. Rubber free from all foreign matter, except the sulphur used in vulcanizing it, should stretch to at least seven times its length without rupture. 4. The extension measured immediately after rupture should not exceed 12 per cent. of the original length, with given dimensions. 5. Suppleness may be determined by measuring the percentage of ash formed in incineration. This may form the basis for deciding between different grades of rubber for certain purposes. 6. Vulcanized rubber should not harden under cold. These rules have been adopted for the Russian navy.



It is more honorable to have built a dog-house than to have dreamed of building a palace. . . . . .

BOOKS FOR BUSINESS MEN.

Ideas for Hardware Merchants.

By D. T. MALLET.

This novel book is the only book ever written especially for hardware men, and every hardware merchant will find it of decided help and of intrinsic value. It tells How to Advertise a Hardware Store; How to Dress a Hardware Store Window; How to Select Seasonable Goods and How to Display Them to Best Advantage: How to Make a Success with Hardware; How to Compete with "Department Stores;" How to Turn a Credit Business into a Cash Business; How to Avoid Bad Debts and Increase Trade; How to Secure Low Quotations from Jobbers and Manufacturers; How to Arrange the Fixtures in a Hardware Store; How to Treat and Manage Clerks; How to Keep Your Accounts with the Least Labor; How to Systematize Your Business and Arrange Its Details; How to Arrange Price Lists; How to Meet Close Competitors and How to be Enterprising; How to Properly Proportion Store Expenses, and thousands of practical hints for hardware merchants. **Paper cover, $1.**

How to Keep a Store.

By SAMUEL H. TERRY.

CONTENTS: The Selection of a Business; The Choice of a Locality; On Buying a Stock of Goods; Obtaining Credit on Purchases; Examination, Marking and Arranging of Goods; Advertising a Business; Employment of Clerks; The Art of Selling Goods; Selling Goods for Cash; Selling Goods on Credit; Selling for Cash and Credit Combined; Replenishing Stock; Settling for Purchases; Depreciation of Goods; Losses by Fire, Theft, etc.; Keeping Accounts; Expenses; Co-partnerships; Influence of Social Life on Business; Buying Goods at Auction: Investment of the Profits; Insolvency; Business Qualifications, etc. **12 mo, Extra Cloth, $1.50.**

300 Ways to Dress Windows.

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Fully explained. For grocers, general dealers and all lines of business. 250 pages, 150 illustrations. Price, post paid, $1.75 This includes a nickel hammer and a pamphlet on show windows. **SENT FREE**, a sample of Bon Ami cleans windows, show cases, brass, etc., with a 44 page catalogue of window supplies.

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Nath'l C. Fowler, jr., the eminent advertising doctor and expert at business, has written a book all about advertising in daily papers, weeklies, magazines, religious and agricultural papers, in street cars, signs, lithographs, novelties, calendars; about cuts and how to use them; window dressing; store decoration; points on selling; keeping accounts; everything about publicity and business outside, written from the merchant's standpoint—a book worth its price to the man who spends $25 for printing, and the more to the extensive advertiser and merchant; 177 great advertisers answer the vexed questions of advertising, presenting individual and collective opinion of positive value—most important chapter written. **Cloth $3.75, half leather $4.50, full leather, $5.**

Self Instruction in Practical Business Qualifications.

By CHAS. S. MCNAIR.

Size, 8½ x 11 inches, 256 pages. **$2.50**

How to Sell Goods.

By B. F. CUMMINGS.

A Prize Essay, 10c.

METHOD IS THE SECRET OF SUCCESS.

The Publishers of this paper have arranged to accept and transmit to the U. S. and Canadian publishers, orders for these books. Money should be sent by P. O. Order or register letter to

THE J. B. McLEAN PUB. CO., LTD.
10 FRONT ST. EAST,
TORONTO.

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

J. C. Bernier, tinsmith, Farnham, Que., has assigned.

Daniel McIntyre, harness maker, Canterbury, N.B., has assigned.

The bailiff is in possession of the furniture store of Thomas Brenton, London.

M. P. McCuaig, general merchant, Dalhousie Station, Que., has assigned.

Demand of assignment has been made on Charles Levesque, general merchant, Levis, Que.

A demand of assignment has been made on J. L. Preville, general merchant, Joliette, Que.

The stock of John H. Selfridge, stoves and tinware, St. John, N.B., has been taken under bill of sale.

The assignees of Herman Schaffner & Co. report there will be an excess of liabilities over assets of $37,192.

W. Davidson, formerly Davidson & Kelly builders and contractors, 10 and 12 Sherbourne street, has assigned.

Arthur J. Trueman and E. C. Moore have been appointed liquidators of the St. John Nut and Bolt Co. of St. John, N.B.

The estate of Daniel McLean, general merchant, Orangedale, N. S., has been reconveyed to him by the assignee.

A demand of assignment has been made on Richard Lamb, trader, Montreal. A like demand has been made on J. N. Masse, general merchant, Vandreuil Station, Que.

The Reimers Piano Co., 26 Queen street west, is in process of liquidation. The liabilities, exclusive of those to the bank, which are secured, amount to some $6,500, with assets nominally amounting to $12,000 as a going concern. The company is composed of Jeronimus Reimers, Thomas Iredale and Edward Smith. The business has been running since September, 1891.

PARTNERSHIPS FORMED AND DISSOLVED.

The Elmwood Lumber & Mfg. Co., is applying for charter of incorporation.

A charter of incorporation has been granted the J. E. Patmore Co. (Ltd.,) of London.

The Union Furniture Co. (Ltd.), of Wingham, is applying for charter of incorporation.

The Bothwell & London Crude Oil Co. (Ltd.), is applying for charter of incorporation.

The Furnace and Crematory Co., of Toronto, is applying for charter of incorporation.

W. S. Richardson has been admitted a partner by Richard Richardson, planing mills, Bedford, N.S.

Louis Girard and Charles Girard have been registered partners to carry on business as blacksmiths, Montreal.

Ferdinand Robert, Amedee Robert and Emie S. Bournet have registered proprietors of the hardware firm of Robert, Piere & Co., Lachine.

The Safety Barb Wire Company and the Carey Wire Sewing Process Company, Montreal, have been incorporated by letters patent.

Thomas Evans and Edward Reil, general contractors, Montreal, have registered to carry on that business as partners under that firm name.

E. J. Estey and Rich. H. Peardon have registered as partners to carry on business as general merchants at Eastman, Que., under the style of E. J. Estey & Co.

G. N. Holmes and A. F. Holmes have been registered partners to carry on business as general merchants at Mansonville, Que., under the style of G. N. Holmes & Co.

Fred Kegworth and Wesley Galbraith have been registered partners to carry on business as dealers in scrap and metals, Montreal, under the style of Kegworth & Galbraith.

A co-partnership has been registered by Laura M. and Ellen Routledge to do business at Lorway Pines and Bridgeport, as general merchants, under the firm name of Routledge & Co.

Hunter, Eagen & Co., manufacturers of spring beds, Toronto, have dissolved, N. T. Eagen retiring. Business will be continued by W. R. Hunter and John Amraux, under style of Hunter & Co.

Charles J. Arthur, Thomas H. Turton, William Angus, James B. Kerr, all of Montreal, and Frederick Jones, of St. John, N. B., are seeking incorporation as the Coal Saving and Smoke Consuming Company, limited, with a capital of $50,000.

John H. Jasberg has registered at the Tutelle office, Montreal, that the Oldenburg-Jasberg company, whose principal place of business, that of general steamship and foreign agents, is in Minneapolis, also carrying on business in Montreal.

CHANGES.

Angus Cameron, blacksmith, Hopewell, N.S., is out of business.

Harbot & Son, furniture and undertakers, Cobourg, have been succeeded by J. C. Elliott.

J. M. Menarey, general merchant, Cartright, Man., has sold out hardware branch to Phillips & Coade.

F. W. Shaw, wholesale lumber and coal, Forest, has sold out to John Shaw. Charles Stewart, carriage-maker, of the same place, is out of business.

FIRES.

Cap. James Burke, general merchant, P.E.I., has been burned out.

Levi Densmore & Co., lumber, Noel, N.S., have been burned out.

The mill of J. D. Shier, lumber and shingles, Bracebridge, has been damaged by fire.

J. R. Lundy & Co.'s planing mill, Niagara Falls, Ont., was burned to the ground early Sunday morning. The mill was well filled with worked lumber and frames for several houses, all of which, with the machinery plant, is a total loss. The loss to building, stock and plant is about $7,000, with only $1,500 insurance on all.

The stock of F. Cross, manufacturers of trusses, Montreal, has been partially damaged by fire.

SALES MADE OR PENDING.

The assets of the estate of the Toronto Drop Forge Co. have been sold.

A. M. Hamilton, general merchant, Warkworth, is advertising business for sale.

The general stock of Boomer & Co., Point Edward is to be sold by auction June 26.

The crockery and glassware stock of McMullen & Morrison, Toronto, has been sold.

The Collingwood stock of A. G. Smith & Co., general merchants, Collingwood and Byng Inlet, has been sold.

The factory, plant, etc., of J. T. Weston & Co., stove manufacturers, Tilsonburg, are advertised for sale by tender.

The estate of C. L. Heckbert, general merchant, Commercial Cross, P.E.I., is advertised by the assignee for sale.

The assets of Wm. Darling & Co., wholesale hardware merchants, have been sold to Thos. J. Darling, and the unsecured creditors receive 30c. on the dollar cash.

Auctioneer Jones has sold these two stocks: William Kenney's stock, of Sarnia, at 45 cents on the dollar to James D. Tytler. The stock amounts to $2,831. F. Hatch's stocks, of Waterford, hardware, etc., amounting to $4,505.92, was sold to Mr. Sheldrake at 45 cents also.

DEATHS.

John Laurie, manufacturers' agent, Montreal, is dead.

Frank Bailey, coal and wood dealer, Queen street, Parkdale, died suddenly from pneumonia on Sunday evening. He had caught cold from taking a bath on Friday

IRON FROM SAND.

The extraction of metal from the magnetic iron-sands found on certain portions of the Pacific North American coast seems to be making progress. We learn that a plant is being erected on the shore at Crescent City, California, which it is expected will obtain daily 100 tons of iron from 1,000 tons of arenacious matter treated, the metal to be shipped to San Francisco for further manipulation. The operations are to be conducted under the supervision of a Mr. Arkew, who has patented an electrical process of manufacturing iron from black sand, and whose services have been engaged by a convention known as the Lawson-Rice Syndicate.—Iron.

"Jock when ye hae naething else to do, ye may be aye sticking in a tree; it will be growing, Jock, when ye're sleeping."

Merchant (about to engage a traveller): "I am told that you have been in gaol once; for what reason, may I ask!" Traveller: "Ah, yes;—it was for thrashing a person who would not give me an order." Merchant: "Your are engaged!"

TORONTO CUTLERY CO.,

M. MAYER, Propr.

65 and 67 Yonge Street, Toronto

Imperial Razors

Joseph Allen's NON-XLL Cutlery

T. C. Co.'s Shears and Scissors

G. A. Mix & Co.'s Chisels

The Most Complete Lines of all Kinds of Cutlery in the Market.



S.S. SMOKELESS POWDER is the best Made by the Smokeless Powder Co., of London, Eng. A stock kept in Montreal. 25 lb. Drums, 2 lb. Cannisters, ½ lb. Cannisters. Send for Prices. **WILLIAM DARLING & CO.**, Wholesale Hardware Merchants, 30 St. Sulpice Street, Montreal.

A FEW REASONS WHY

You should Keep your Stock fully Assorted With

Boeckh's Superior Brushes

They are always reliable and as represented.

They are guaranteed in every particular by the manufacturers.

They are made of the very best material and workmanship

They are sold at closest possible prices.

They are finished and put up in neat and attractive shape.

They are well known throughout the Dominion and are popular with all classes of consumers.

They are handled by all leading Hardware and Paint and Oil trade.

See that the name "BOECKH" Is on every brush.

Boeckh's Flexible Bridled Brushes.

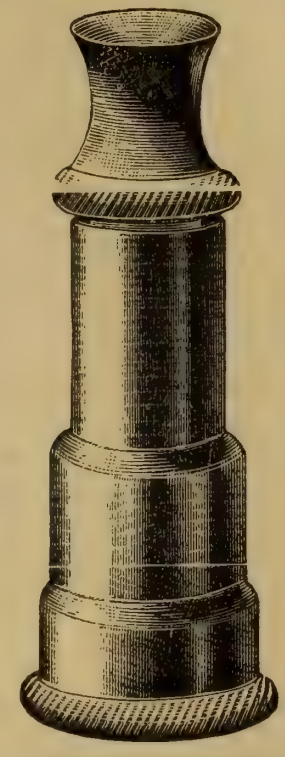
Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

TORONTO, - CANADA.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it.

It is impossible for this pipe to get out of order

Give it a trial and you will use no other.

Hamilton Brass Manufacturing Co.

HAMILTON, ONT.

WHEN IN WANT OF

LAWN MOWERS

Write The James Smart MNFG. CO., Ltd.

Brockville - Ont.



The Largest Assortment.

The Lowest Prices.

The Promptest Delivery.

Brockville Lawn Mowers

The Standard for Easy Running, Durability, and Handsome Appearance. Every machine guaranteed.

PROFITS IN HARDWARE.

N. Y. Metal recently offered a prize for the best essay relating to a comparison of the advantages for profit offered by the hardware business as compared with other lines of trade. Out of a number submitted the following was adjudged the best:

I would say that the advantages for profit offered in the hardware business are at least as good as in any other line. Where aptitude and a thorough knowledge of the business go hand in hand with fair opportunities the advantages are probably greater than in most other lines. Allowing for exceptions I believe a study of the business offers greater rewards. Its scope and possibilities are so extended, the diversity of articles coming properly under the head of hardware so large, that a wide choice is afforded as to which or how many of the various branches are to be embraced. The hardware business in its broader sense appeals invitingly to the intelligent mind. The faithful and earnest worker finds an endless field in which to exert his abilities. Nor is it merely technical knowledge, but a goodly store of practical knowledge as well that can and should be acquired. It follows that those who are willing and capable will find in the hardware business marked advantages over other lines for the reasons stated:

Those who possess great business capacity might nevertheless fail to be a distinct success in the hardware business, for it requires a greater amount of previous training than other trades, and probably to-day no class of young men are more certain of finding employment than those who understand the hardware business. In the grocery business, for instance, almost any intelligent person can acquire a working knowledge in a very short time; after that he can do comparatively little more than exercise those other business qualifications that are conditions of success in any line.

Taking the average hardware business, does it stand an equal chance for profit with the grocer, dry goods merchant or druggist? I say, yes. It is true that in many sections the margin on staples is reduced to a minimum, but no business presents a better opportunity for adjusting the average of profit than the hardware business. The grocer has a steadier trade in supplying the daily necessities, but he is confined to a narrower limit, both in the diversity of his work and the scope of his territory. The dry goods merchant is hampered by greater expense in the need of a choice location and a larger force of employees; also in the disadvantages of changing fashions, and the change of seasons, which may leave him with large stocks of unsold goods to eat up the profits. The druggists' business is popularly supposed to be an enviable one from the standpoint of profits. I will grant the percentage of profits, but recognize that the chance for expansion is circumscribed, and perhaps this is as good an opportunity as any to demonstrate a popular fallacy. Assuming that the druggists are 35 per cent., and the hardware man's 20 per cent., on sales of $10,000 per year for the former and $25,000 for the latter, the result would leave the hardware man as well off at the end of the year, with $1,500 to spare towards the greater expenses of his business. It goes without saying that marked success is attained in all lines of business, and that is by no means controlled by the percentage of profits afforded by the goods sold. But the hardware business compares favorably with any, because it offers a large area to be exploited; grocers must live wherever people live in numbers—not necessarily hardware stores, and, if so, not with extensive assortments. It affords a larger scope for the supply of new wants, and by ordinary care in buying a very small amount of goods need be carried which are unsaleable either from change of taste or other reasons. One of the great drawbacks in business to-day is competition, not so much because this tends to obliterate profits, but because it reduces the volume of business capable of being transacted. This is an important feature as already indicated. Modern civilization is constantly adding to our daily requirements, resulting in an ever increasing variety that the dealer is called upon to carry, and unless his sales increase proportionately he finds himself at a disadvantage. His percentage of profits may be all right, but if his stock is not turned over often enough he finds that his expenses absorbs the profits. The service required is also greater: more help is needed to take care of the different branches; customers are more exacting and want to be served more rapidly, thus increasing the ratio of expense. Probably there are few retail concerns but what would increase their business 25 per cent. without adding anything to their expenses. Therefore the volume of sales cuts an important figure. I might say a word about the equalizing of profits. As in all lines hardware has its list of articles that are sold at a nominal profit; the proportion of course varies according to the nature of the business; the larger this proportion is the greater effort should be made to foster other lines which afford especially good profits. Prominent among these is cutlery, to which could be added many specialties. If for every $300 worth of nails and other goods sold at a profit of 10 per cent., sales of $100 in cutlery, etc., are effected at a profit of 40 per cent., the average would stand:

Nails . .	$300	at 10	per cent. profit,	$30
Cutlery .	100 "	40	" "	40
	$400			$70

Making the average over 20 per cent. on the cost of the goods, the $100 sale having double the net profits. "When you come to consider every other business superior to your own, you may conclude that your own business is superior to yourself."

HEMATITE PIG-IRON.

From the north-western district we learn that there has been an increase in the number of blast furnaces in operation; but the statistics of the trade that are given in the latest report from Workington show its deeply depressed condition. Messrs. Bourke & Company's report gives us the following figures for the West Cumberland and North Lancashire district: Blast furnaces built, 75; blast furnaces in operation, 34; idle furnaces, 41. With a price for Bessemer iron as low as 45s. 6d. per ton, free on board, there are more than half the furnaces idle that are between Maryport and Carnforth; and even this condition is slightly better than it was a month or so ago. It is a condition of trade that is of importance to the Durham coal and coke trade, for the supplies of coke are drawn largely from this district; and idleness of so much of the blast furnace plant of the north-western district means that many of the coke-ovens of this district are also idle, and that some of the locomotives that usually draw the coke waggons across to Carlisle or Tebay are also idle. The loss may have to us its counter balance—for this district is also a large producer of hematite from Spanish and other ores. But the north-western district is believed to be for the present past the worst point of the dullness. In any case the production has been increased, and is expected to be more largely increased. The iron smelters have got a concession of some moment from the railway companies—a reduction of the cost of carriage of coke, which will greatly benefit them; and they have been able to reduce the cost of the production by comparatively heavy reductions in the rate of wages; and the sliding scale that is so general there in relation to royalties on iron ore must have been moved to their benefit. The north-west is able to produce pig iron more cheaply than formerly; but it remains to be seen whether it can produce in competition with the cheap ores of Spain. The latter, however, are being drawn on very freely, and the tendency in the past two months has been upwards in the freights that form an appreciable part of the cost of iron from these Spanish ores, so that it may be that the north-western hematite makers will be better situated comparatively than they were, though they will have to await an increased demand.—Newcastle Daily Chronicle.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

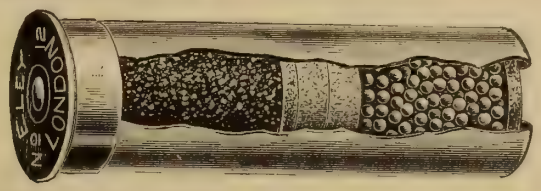
Head Office and Factory: Montreal; **J. J. McGILL, Man.**

WESTERN BRANCH :

Corner Front and Yonge Streets, TORONTO.

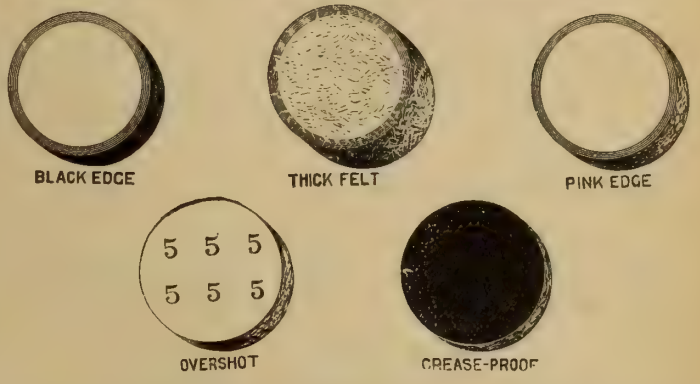
J. H. WALKER, Manager.

. . ELEY'S . .
CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. **Wholesale Only.**

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

. . THE . .

"ETNA"



. . HOT
. . WATER

BOILER

We claim is perfect. It is the original Round Boiler, patented by U. Beaupre, Dec. 1st, 1880 and May 2nd, 1889. Each year improvements have been added; and to-day it stands at the head.

We are willing to give any guarantee necessary to protect Architects or Contractors, that the Boiler will do all we claim for it.

The Boiler costs less than those of our competitors, and we will assume all risks.

We are in the field to stay and are bound to push this Boiler to the top rung of the ladder.

The Boiler previous to our purchasing it, had never been properly advertised or pushed, consequently, is to-day not as well known as some other makes.

Since buying out the former maker the sales have increased over 200 per cent.

If you have not a cut of same, drop us a card and we will be happy to forward one with full particulars.

As we said before, the Boiler is perfect, the price less, and we will guarantee it in every particular.

We have also bought most of the Grand Universal line of Patterns from the Estate of J. M. Williams & Co., of Hamilton.

We can supply all Repairs at the Regular trade price.

We still make the old reliable line of "Leader" Stoves.

Kindly remember us when any thing we manufacture is needed by you.

Wm. Clendinneng & Son, 145 to 171 WILLIAM STREET MONTREAL QUE.

Cutlery

SPECIAL VALUE IN

Dickinson's "Damascus Blade" Carvers.
Dickinson's Improved Ivoride Tables, warranted not to shrink or discolor.
Joseph Rodgers & Co.'s best quality Pen, Pocket, and Butcher Knives.

. . . SAMPLES now ready for Fall Trade.

STEEL. Full stock of Jessop's warranted Tool Steel, at lowest prices. . .

A. C. Leslie & Co., Agents
MONTREAL and TORONTO.

You can lose more than we do by not subscribing for this paper.

MUNN'S LIQUID GLUE
IS THE BEST.

Kennedy Bros., Agents
101 Bay Street, TORONTO.

Clarkson & Cross
ACCOUNTANTS . . .

Established 1864.
26 Wellington St. East, TORONTO

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.
CALVANIZED SHEET IRON. SP



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	23½ 24
trip "	25, 25½

Tin Plates—*Charcoal Plates, Bright.*

M.L.S. equal to Bradley	Per box
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 25 4 50
I.X., "	5 25 5 50
I.X.X., "	6 25 6 50
I.XXX., "	7 25 7 50
D.C., 12½ x 17	3 75 4 00
D.X.,	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

C okley Grade—	Per lb.
.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6½ 6½
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¾ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2⅞, 3
22 to 24 "	2⅝, 2¾
26 "	2⅝, 3
28 "	3 , 3¼

Canada Plates.

Blaina	½ bright 2 75 ....
Abercarne	2 75 ....
Lion	....

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4⅞ 4⅞
" ⅜ " "	4⅞ 4⅞
" 7-16 " "	4¼ 4½
" ½ " "	3⅝ 4
" ⅝ " "	3⅜ 3⅝
" ¾ " "	1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 12½ 0 13
Lake Superior	0 13 0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 19½ 0 21
" 35 to 45 " "	0 17½ 0 18
" 50 lb and above per lb	0 16½ 0 17

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 05 0 05½
Domestic "	0 04½ 0 05

Zinc Sheet.

5 cwt casks	0 05½ 0 06
Part casks	0 06 0 06½

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04½ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¾ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 17 0 19
Standard	0 16 0 18
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 13
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	4 75
No. 1 Do. "	4 50
No. 2 Do. "	4 25
No. 3 Do. "	4 00

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red " "	1 50
Venetian Red, (best) "	1 80 1 90
English Oxides per cwt	3 25
American " " "	2 25
Canadian " "	1 75
Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" Lemon pure, 8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 70
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	2 00 2 25
Hard Oil Finish	1 30
Oil Shellac	1 40

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 45 0 47

Castor Oil.

Best, per lb	0 08½ 0 09

Cod Oil.

Cod Oil, per gal.	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet makers	0 17 0 18
White	0 16 0 17
London Town	0 7½ 0 08½
Gelatine	0 22 0 27
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmcur's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... ..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10 p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass,

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb . 0 25 0

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross..... 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05¼
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½
Per doz. sets
Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.
Per doz. pairs
Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

Philadelphia 1892 Improved

7½ inch Wheel. 4 Blades.

12 in.	14 in.	16 in.	18 in.
$4.40	$4.65	$4.90	$5.40 list

LAWN . . MOWERS

. The Woodyatt 1893 .

10½ in. Wheel. 4 Blades.

12 in.	14 in.	16 in.	18 in.
$6.75	$7.00	$7.50	$8.25 list

Liberal Discounts to Trade, and Prompt Shipments Guaranteed.

BOWMAN, KENNEDY & CO., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 6 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy.....	2 30
40dy.....	2 35
30 dy.....	2 40
20, 16 & 12 dy.....	2 45
10 dy.....	2 50
8 & 9 dy.....	2 55
6 & 7 dy.....	2 70

2. American Pattern Only

from 4 to 5 dy	2 90
3 dy. (lath).....	3 30

3. Canada Pattern Only

from 4 to 5 dy	2 80
3 dy. (lath).....	3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Star, R & L Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, 1bs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33½ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	10 10½	11 11½
¼, 5-16, ⅜ in.....	10½ 10¾	11½ 11¾
Cotton, per lb.....	18	20
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.

Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 60 per cent.
" N.P,, 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen..... 1 25

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....	per gross	7 50	12 00
Dessert "	"	21 00	.....
Table "	"	30 00	30 00
Dessert Forks....	"	24 00	.....
Medium "	"	27 00	.....
Table " ...	"	36 00	.....

Squares.

Iron, per doz 1 65 2 00
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.
Stove Polish, (Catchpole's).
Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb	0 25	50
Hindostan, per lb.....	0 06	07
" Slips, per lb		9
Labrador, per lb	....	0 13
" Axe, "	....	0 15
Turkey "	....	0 50
Arkansas "	....	1 50
Water-of-Ayr "	....	0 10
Scythe, per gross.....	3 50	5 00
Grind, per ton	15 00	18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 51½ per cent.
Channel nails 5c. lb. off list.

Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33½ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33½ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9 00

Twines.

Bag, per lb	0 12½	0 20
Wrapp'g, mottl'd, pr. pack.	0 50	0 60
" cotton, per lb ..	0 18	0 20
Mattress, per lb	0 33	0 45
Staging "	0 27	0 35
Broom "	0 30	0 50
Binding, flax, per lb	....	.....
" jute "	....	.....
" Blue ribbon	.....	0 12½
" Red cap.....	.....	0 11½
" Crown.....	.....	0 10½
" Silver Composite		0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz. coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " " } 4½ 4¾
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Genuine, dis. 32½ to 35 p. c dis.
Diamond, dis. 33½, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TPADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS, KNIVES, FORKS, SPOONS

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

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FIRE BRICK
FIRE CLAY.

Scotch . . English or American

GAS RETORTS
GAS WORKS SUPPLIES

Write for Prices to

The Colman-Hamilton Co., Ltd.

44 Price Street, TORONTO

Also for Sewer Pipes, Invert Blocks, Flue Linings, Portland Cement, Calcined Plaster, Keen and Roman Cements, Etc.

Phone. 3763 Mention this Advt.



C. C. HARRIS

Manufacturer of Solders and Antimonial Alloys.

Cor. Wickson Ave. and Yonge St., Toronto.

E.O.W.



TELEPHONES

For Offices and Warehouses.
Sold Outright. No Rentals

Sample Testimonial Letter

"THE GLOBE."
TORONTO, Jan. 5th, 1893

T. W. NESS, ESQ.,
749 Craig St., Montreal.

Dear Sir:—I am pleased to state that the Telephone system in our establishment is working satisfactorily.

Yours faithfully,
C. W. TAYLOR,
Bus. Mgr.

Send for Special Catalogue No. 6.

T. W. NESS

749 Craig St., Montreal.
106 King West, Toronto.

COWAN & BRITTON

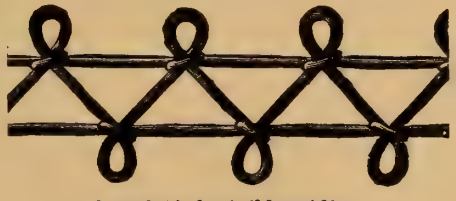
GANANOQUE, ONT.

Nails, Hinges AND Buts

Manufacturers of every description of these goods.

THE HATHEWAY PATENT FENCE WIRE.

Pat. Nov. 19, 1889.



Above Cut is One-half Actual Size.

The Hatheway Patent Fence Wire, the most popular fence wire throughout the United States, and fast gaining that position in the Dominion of Canada, as it contains all the requisite qualities of a fence wire, being handsome, strong, visible—seen at a long distance; will not sag or get out of shape; allowance for contraction and expansion, heat and cold; being broad, requires less strands to make a complete fence; easily put up, splices itself; will not injure stock. Put up in spools of 120 lbs. each. For sale by all the leading hardware stores in the Dominion.

Manufactured by THE COLLINS MFG. CO., 81 Adelaide st. E., Toronto.



NONE GENUINE WITHOUT THIS LABEL



Magee Mfg Co.

LONDON, ONT.

Manufacturers of all kinds of

Lumber and Log Rules
Counter Measures, etc.

IMPROVED

Eclipse Horse Poke
Navey Barrows . .

OF ALL DESCRIPTIONS

Special Lines Made to Order
Write for Prices

Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St, Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 x 4 Barb Plain Twist and Strip Fencing

And Staples for same.

Write for Prices and Discounts.

ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

Compare

Any Lamp With the

"PITTSBURGH"

And see the Great Difference.



In every point you will see the vast superiority of the . . . .

"PITTSBURGH"

THE central draft in one is perfect, the other you will find fault with. See the wick-screw in The "Pittsburgh," see if the other has anything like it. Which is the simpler? The "Pittsburgh," of course. A child can take it apart without any trouble.

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GOWANS, KENT & CO.

Sole Agents for Canada

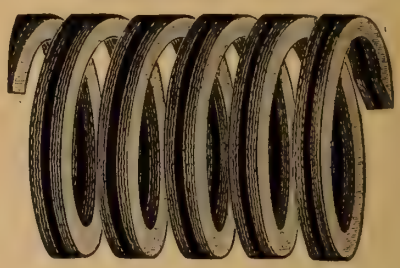
TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
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"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

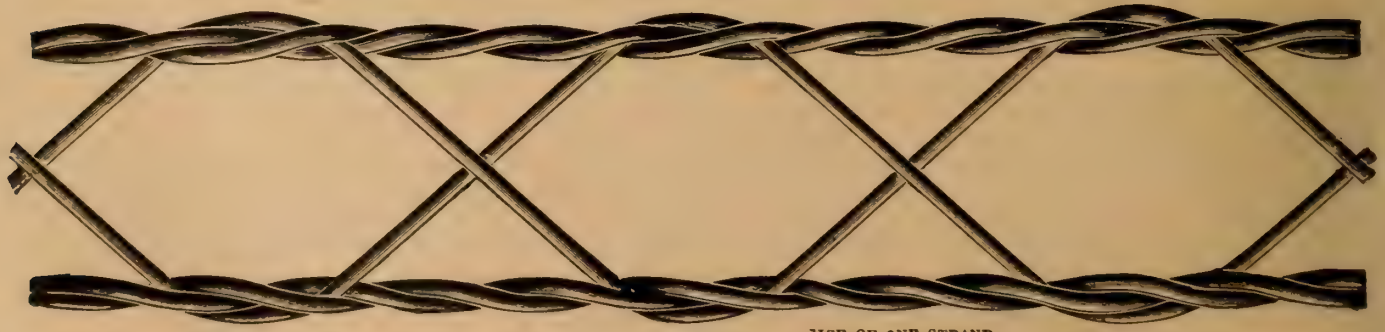
Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., **Toronto.**

TRUSS AND CABLE FENCE WIRE.



SIZE OF ONE STRAND.

Is Stronger and Costs Less per rod than any other Strand of equal width in the Market.

Manufactured by **Ontario Lead and Barb Wire Co., Ltd., TORONTO, ONT.**

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, JULY 1, 1893. No. 26.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

MAGNOLIA ANTI-FRICTION METAL CO.,

London Office: 75 Queen Victoria St.
Chicago Office: 41 Traders Building.
Montreal Office: H. McLaren & Co., Agents

Owners and Sole Manufacturers,
74 Cortland Street, NEW YORK.

Carminette

What Is It?

It is the greatest Red Color known. It was invented and is made solely by **Mander Bros.**, London. It is an absolutely permanent color of great beauty and great strength, suitable especially for

THE word Carminette is registered in London and Ottawa under the designs and trade marks "ACT," and all persons using the word or any label describing a pigment color, render themselves liable to prosecution at law.

- **Coach Builders**
- **House Painters**
- **Printers AND Lithographers**

Carminette is a handsomer color than English Vermillion. Goes farther and is more permanent. . . . . .

Send for sample stock showing Color and Price. . . . .

Sold only in Original Packages of 28 lb. Boxes, 14 lb. Boxes, 7 lb. Boxes, and 1 lb. Paper Parcels, by the Wholesale Agents for Canada.

Walter H. Cottingham & Co., MONTREAL

This Advertisement is Printed with "Carminette" Ink.

.Ship Chandlery.

ANCHORS = CHAINS

.Rope.

BLOCKS and TACKLE

. . OAKUM . .

Galvanized Tackle of all Kinds

RICE LEWIS & SON, LTD.

TORONTO.

Steel-Clad Baths

Manufactured and Patented in

CANADA,

ENGLAND,

UNITED STATES

Also Patented in Australia.

AGENCIES AND WAREHOUSES AT

MONTREAL, Que. ST. JOHN, N.B.
VICTORIA, B.C. NEW YORK, N.Y.

HEAD OFFICE FOR CANADA:

Toronto Steel-Clad Bath and Metal Co.

LIMITED

123 Queen St. East, **TORONTO.**

PATENT ONYX STEEL WARE

Onyx Enamelled Steel Ware

SOMETHING ENTIRELY NEW!
SUPERIOR IN QUALITY!

SEND FOR CATALOGUE

Kemp Manufacturing Co.

TORONTO

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, JULY 1, 1893 No. 26

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

HEAD OFFICE: - - 10 Front St. E.
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NEW YORK OFFICE: Room 41, Times Building.
Roy V. Somerville, Manager.
EUROPEAN BRANCH:
Canadian Government Offices,
17 Victoria St., London, S.W.
R. Hargreaves, Manager.
John Cameron, General Subscription Agent.

A window needs to be seasonably as well as skillfully dressed. At the moment there is a seasonable demand for garden tools and by the aid of these the tasty retailer can make up an attractive and unique display. Spades and shovels, hoes and rakes, shears and mowers, nozzles and hose, ladies' and childrens' garden tools, and the many odd little garden appurtenances can be utilized to make quite an artistic display. Even wheelbarrows can be made to lend effective aid. A Toronto house has at the moment a large and brilliantly-painted one suspended from the ceiling over a variety of garden tools in one of its windows and the effect is striking. But this is by no means the only way in which the cumbersome wheelbarrow can be used. To the resources of the ingenious man there are no limits.

* * *

The terrible disaster which befell the British warship Victoria seems to have led most naval experts to turn their attention more to the consideration of the utility of the ram as a factor in naval warfare than to the devising of means for preventing the repetition of such dire calamities. But then we suppose it is a case of "everyone to his trade." It seems to be generally conceded that last week's disaster off Tripoli was the result of a hitch in the steering gear of one or other of the ships immediately concerned in the the collision. Whether investigation will prove this to be so or no remains to be seen, but the mere supposition that such was the case will doubtless result in all naval powers beginning a self-examination in this respect. It has just leaked out that during the course of the voyage of the vessels of the naval review fleet from the Pacific to Hampton roads that two of the modern built ships recently added to the U. S. navy signaled on two occasions the admiral that their steam steering gear had absolutely failed. "Had this happened," says the admiral, "when the vessels of the fleet were in close formation the results might have been disastrous collisions." It is beginning to look as though the powers, while perfecting means to increase the efficiency of the warship as a destroyer of life and property, have been paying too little attention to what should be probably the most to be relied upon of a vessel's appurtenances.

* * *

Illimitable seems to be the inventive genius of Edison. Thanks to it we talk with one another through perhaps hundreds of miles apart; speak or sing into a conical-shaped tube and our words or songs can be reproduced years afterwards faithful to tone of voice or air, and we walk abroad at night in almost the brightness of the noon-day sun. But still his busy mind continues to evolve new things. He is now at work on an invention which is to simplify and cheapen the prevailing methods of extracting magnetic iron ore from earth and rock. He claimes to have already mastered eight out of the ten important details which, he says, are necessary to produce a perfect machine. That work finished he will turn his attention to conserving the energy of coal. This work he considers will be the greatest and most important he has ever undertaken. In converting coal into power now ninety per cent. of its existing energy is lost. Should the great inventor succeed so well in this invention as he has in others, it will create a revolution in the industrial world compared with which all previous ones will be infinitismal. Cost of production and and transportation would be reduced and, as a natural consequence, cheaper food, raiment, and in fact almost everything else would follow.

The action of the Indian Council in closing the mints to the coinage of silver has awakened fresh interest in a question that has for some time been anything but asleep. For 58 years silver has been coined free in India, and the market there has for a long time absorbed an amount of silver equal to more than two-thirds of the production of the mines of the United States. The imports of this metal into British India in 1892 were $42,738,088, while the previous year they aggregated $51,956,717. In other words India has been taken about one-third of the world's production of silver. Under the new law the demand for silver will be limited to the use of silver for ornaments instead of for both coinage and ornaments as heretofore. What this means is evidenced by the immediate dropping of the price of silver to the lowest point it ever touched, bringing with it the value of the bullion in the American silver dollar down to less than 59 cents. It is now no wonder that there is increased concern in the minds of the financial men of the United States; and the belief that India intends to ultimately establish the currency on a gold basis is not at all adding to their comfort. Our cousins across the border are now showing more haste to repeal the Sherman Act than they were to enact it. Even some of the pronouncedly free silver journals have joined the processsion. But the Cabinet will not summon Congress till September as decided some weeks ago. In the meantime our friends to the south will have to sit for another two or three months on the blisters of their own creation.

* * *

The action of the Indian Council in closing the mints to the free coinage of silver was the occasion of some discussion in the British House of Lords and the House of Commons Monday last, during which some interesting information was adduced. The

statement made by the Secretary of State for India confirmed the expectations of those who anticipated that a gold standard would be introduced in India, although that in the meantime gold would not be the only legal tender. Mr. Gochen pointed out that the silver possessed by the natives of India amounted to one hundred million rupees, and injury might result to these. Mr. Gladstone, while not in possession of precise information, did not think the Indian Government would make discriminatory arrangements to the disadvantage of the native, and he fancied that most of the uncoined silver held by the latter was in the form of ornaments. The total active circulation of India is estimated to be 115,000,000 rupees, while a much larger amount is hoarded to establish a gold currency. The Financial Secretary of India thinks that with a full legal tender currency composed entirely of gold it would be necessary to withdraw from circulation 1,150,000,000 of rupees replacing them by £77,000,000 sterling gold. He therefore contends that with a gold standard in India a large proportion of the circulation must continue in silver, with silver a legal tender to any amount. If both metals be maintained in circulation a gold coinage to the amount of £15,000,000 will suffice.

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The secretary of the Montreal Board of Trade is in receipt of a letter from Richard R. Dobell announcing that he is about to load a small ship for the Cape of Good Hope and will be able to arrange with the captain to send samples of goods should any members of the board so desire. "I am satisfied," he adds, "that a large trade could be done with the Cape in many articles of Canadian produce, but particularly in cheese, agricultural implements and sewing machines." Of all the British possessions of importance, Canada's trade with Africa has been the smallest. The actual trade between Cape Colony and Canada the official returns do not reveal, all the dealings between the Dominion and the British possessions in the Dark Continent being bulked together under the head of imports to or exports from British Africa. The Trade and Navigation returns of last year give $91,487 as the total value of our trade with the African colonies. Of this $69,581 were imports and $21,906 exports. Nearly all the imports consisted of wool, all but $450 worth being in that article. Our chief article of export to these colonies is agricultural implements, of which last year we sent $10,655 worth, while African homes were blessed by Canadian musical instruments valued at $5,025. Doors, sashes and blinds they took to the value of $4,132. We sent them material for creating light in the shape of $1430 worth of lamps and lanterns. Our contribution of mental food was confined to $198 worth of books. It will be seen that while Canada has already opened up a trade with British Africa in one of the articles—agricultural implements—enumerated by Mr. Dobell in his letter to the secretary of the Montreal Board of Trade, in the other two we last year did nothing. Why we should not in the future does not appear. In cheese particularly the present seems to be opportune for introducing it into Africa. At Chicago it has carried off the honors with flying colors, and far and wide throughout the civilized world will the fact be told. While a thing is being talked about it is a good time to push it. Canadian sewing machines have also a record that should warrant their being introduced to the matrons and seamstresses who stitch and sew in Afric's sunny clime.

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Things unlooked for often arise as the result of a certain action. This is apparent at the moment regarding the direct steamship line between Canada and Australia. When it became known that the line was to be established the discussion in commercial circles turned on the relative value of the trade and what articles of Canadian growth and manufacture would find the readiest sale in the Antipodes. From this it turned on the question of how best to secure the desired extension of trade. A protective tariff obtains to a more or less extent in all the colonies interested, and it is not to be surprised at therefore that there should have arisen in this country a desire for a reciprocal arrangement whereby existing barriers may be lowered a round or so. Already the Toronto, New Westminster, Victoria and Nanaimo boards of trade have pronounced in favor of it, and, with the press of the Coast, are urging the Dominion Government to move in the matter.

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The different colonies in Australia being separate and independent, have not a uniform tariff, and in order to assist those who may be desirous of opening up trade with Australia the Canadian Department of Trade and Commerce has issued a circular showing the customs tariff rates now in force in New South Wales, Victoria, Queensland and New Zealand. The peculiarity of the different modes of arriving at the value for duty of imported goods is also pointed out. In New South Wales, Western Australia, Queensland and Fiji, the value for duty is the value at the port of shipment. In South Australia and New Zealand it is the value at the port of shipment plus 10 per cent. In Victoria goods subject to ad valorem duty are dutiable at their fair market value at the principal market of the country whence they were exported with 10 per cent. added. In Tasmania imports liable to ad valorem duty are estimated at their value at port of shipment with 12½ pe cent. added.

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Our exports to Australia since 1889 have not been satisfactory. Although in 1891 they were a good deal larger than in 1890, yet last year they fell off over $146,000 compared with 1891, and $221,687 compared with 1889. The imports on the other hand exhibit an increase, the totals being $229,464 in 1889, $205,384 in 1890, $169,065 in 1891, $264,783 in 1892. The increase has been confined wholly to wool, in other articles there being a decrease. In fact outside wool our imports from Australia are practically nil. Now however, with direct steamship communication the possibilities are bright for a larger trade both ways.

CUTTING ON CANADA PLATES.

Canada plates and the operations that are being carried on in them constitute one of the more interesting features of the heavy hardware situation at present. In our regular market reports from Montreal reference has been made before to the fact that some dealers were offering very low prices on the article, in fact discounting the market on the possibility of lower prices. This course has, it is understood, been followed both on account of business for importation by some sales agents in Montreal and also by representatives of some of the regular jobbing houses on the road. One of the big wholesale men in Montreal, speaking to HARDWARE'S representative in reference to the latter, said that the figures were cut so close as to leave hardly any margin at all, and that of course those dealers who did not want to do business for the mere object of selling goods were not in it with people who sailed so close to the wind. As a result they were not doing any business. Since then it has transpired that there have been quite a few orders coming to Montreal for Canada plates from the West, and the supposition is that these cheap sellers in

some cases cannot get all the supplies that they want and have been compelled to let some of the orders come east. Besides, one big firm in Montreal controls perhaps the biggest block of stock there is at present in the country, and parties who have tried to buy at less than $2.45 from them have been unsuccessful. There is a feeling also that values on all kinds of heavy material at primary markets are down to bed rock, and an impression that if there is any change it will be up instead of down. This of course is having its due effect.

VIEWS AND INTERVIEWS.

"There," said a jobber to me the other day, as he picked up and laid down again an ax that comprised one of a row of different grades, "is an ax that is a credit to the manufacturers. It is impossible that any of the makers in the United States can turn out a better article. Whose make are they? Why, Broad & Sons, St. Stephen, N.B. Don't you see the stamp on them? You will notice too that the weight is stamped on each ax. This will be a great convenience to the retailer, who, when a customer wants an ax of a certain weight, he will not have to go to the trouble of weighing one or more to find what is wanted. Are we handling it? No, but I admire the firm's enterprise. Broad & Sons' factory is situated right on the border line, so it has ax-ess to both markets and——" But his jaw refused to work. The pun had dislocated it.

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"I don't know whether you know it or no," said a jobber to me the other day, "but the quality of the white glue being sent to this market this year is not up to the usual standard, but prices have been high all through the season just the same. The reason, I fancy, for the high price, is the dearness of pig stock. Chicago is the principal white glue manufacturing centre."

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"Mark my words, you'll see D. W. Weismiller, of Hensall, sitting in the Ontario Legislature as member for South Huron," said a traveller to me Saturday. "Why do I think so? Well, I'll tell you. He is clever and a jolly good fellow to boot, and what is more, his friends want him to represent them. But what makes me think that it will not be long before he will have M.L.A. tacked on to the end of his name is this: This week I was up through his part of the country, and on all the billboards along the railways I saw big flaming posters announcing that D. W. Weismiller, the gifted orator of Hensell, was to deliver a lecture on temperance. Now, knowing the circumstances, don't you think that Dave is preparing for the fight?" added the C. T., as with a wink he stuck his thumb into my ribs. "O, yes, Dave's a great boy."

The City Travellers' Association of Toronto and the Hamilton Retail Grocers' Association will hold their annual picnics at Niagara Falls on the same date, July 19, Messrs. Maxwell, Owen, Dack and Macguire, representing the former, and President B. Winnifrith, J. O. Carpenter and W. R. Harvey, representing the latter, were all at the Falls on the same day last week making arrangements. "We're going to have a big time," said one of the Toronto men to me. "The Hamilton people told me that they would have the celebrated 13th Batt. band and at least three thousand people. We are going to have Ghioni's string band and—a big crowd"

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"There," said a friend of mine as he stuck under my nose a rocky-looking substance, similar in appearance to asbestos, "is something that will interest you. What is it? Why, it is a piece of talc—or, to be more technical, a piece of silicate of magnesia. I was over in the States the other day"—and here the nasal twang he had cultivated while there became pronounced—"and I was informed that a new industry had sprung up in northern New York State to grind this into powder for adulterating flour. And there is a sample of the powder," he added as he carefully unfolded a piece of paper containing a powder of almost dazzling whiteness. "It's perfectly uninjurious," he explained. "Will pass through you without doing you the slightest harm. But it's heavier than flour. You can thus see the object they have in mixing it with that article. Is any of it being used in Canada? I think so. At least I have taken the pains to investigate, and I am told that a mill for grinding the silicate is being started in Belleville. There's tricks in every trade but ours," concluded my friend as he carefully stowed the powder in one pocket and the stick of talc in the other.

BYSTANDER.

EVOLUTION IN POSTAL DELIVERY.

At the time the Campania made her first quick trip it was suggested in this paper that steamship companies might be able to arrange their hours of sailing so that answers could be taken out Saturday afternoon to letters received here Saturday morning, and an English merchant might send a letter and get a reply from New York in a fortnight. That possibility has become an actuality Letters that left England a week ago Saturday on the Campania were delivered here last Saturday morning. Replies to these letters were sent out by the Etruria the same afternoon, and will reach London next Saturday. Between three and four days' time was saved by the Etruria's departure in the afternoon instead of in the morning, as the next steamer does not sail till Tuesday, and she is slower.—N. Y. Bulletin.

DEPRESSION IN MINING.

A Cleveland, O., despatch of June 28, says: The situation on the lakes and in the relative industry of ore mining is in such a depressed condition as has not been know in years. Mine after mine is shut down, and W. G. Mather, president of the Cleveland Cliffs Mining Company, all of whose shafts and mines will be closed down Friday night, says that the shipments of ore down the lakes will be curtailed nearly 50 per cent. this season.

"We shut down," said Mr. Mather, "simply because we are unable to dispose of the product at a cost price and we cannot tell when we will resume; certainly not until there is a demand for our ore at better prices."

A THRIFTY MECHANIC.

The following interesting account of a thrifty old mechanic is given in the London Ironmonger: Charles Barton, who occupies a workshop all to himself in Eyre street, Sheffield, no more than six or seven feet square is a rather notable old fellow in his way. Barton is a cross between a "little mester" and an operative cutler—a handy, all-round workman, with a wonderful capacity for hoarding up out-of-the-way curiosities, natural and manufactured, and who has himself made, perhaps, the tiniest pocket knife in existence—only a quarter of an inch long when closed—and a wonderful little piece of rounded wood, which rolls up hill without being assisted. Originally hailing from Birmingham, he has resided nearly half a century in Sheffield. Thrifty to an extreme he has been all that time, and makes no secret of the fact that his eating and drinking costs him no more than threepence-halfpenny per day. This is how the thing is managed. A loaf of white bread, costing twopence, serves him one day; he spends a halfpenny on coffee and sugar, and a penny on soup. He neither smokes tobacco, takes snuff, nor drinks beer or spirits. Hale and hearty at three score years and ten, Barton looks as if he could live and thrive another couple of decades on threepence-halfpenny per day.

A great many storekeepers only advertise when they want to get rid of shop-worn, out-of-date or unsaleable stock. They advertise the goods in glowing terms, announce unprecedented bargains and congratulate themselves on their ability when they have emptied their stores of all refuse. The public, however, finds that it has been more or less victimized, thinks that all goods in said stores are of like undesirability, and passes by to rival establishments. The best plan is to advertise for a reputation and not for a store scouring.—Printers' Ink.

HAMILTON BOARD OF TRADE.

A meeting of the Hamilton Board of Trade was held Monday afternoon to nominate officers. President Lottridge declined re-election. The following nominations were made: President, A. T. Wood, J. M. Lottridge, St. C. Balfour, J. J. Mason, Archdale Wilson, H. N. Kittson and John Milne; vice-president, St. C. Balfour, J. J. Mason, Archdale Wilson, H. F. Gardiner, Alexander Turner and William Young; secretary, C. R. Smith; members of the council for three years, W. H. Classco, J. Hoodless, A. Gartshore, St. C. Balfour, John A. Bruce, W. A. Robinson and A. Wilson; board of arbitration, J. Turnbull, John Calder, F. H. Lambe and Robert Thomson. The election will take place next Monday.

THE POWER OF CREDIT.

Although a hundred years ago the meaning of the term credit carried with it but little significance, conditions have gradually grown to be such that now without credit business would practically cease says Ohio Merchant. Contract credit and you diminish trade, for it and it alone is the adhesive material with which commerce is cemented. The humblest tradesman or the broadest speculator feels its power and recognizes its importance. As each year goes by the scope of it widens, and although it started, according to the oldest traditions, in the form of personal accommodations, it now shapes the course of nations.

In mercantile life fully ninety per cent. of the heavy transactions of to-day are made upon some form of credit, and while the individual duration of credits may have shortened somewhat in recent years, the amount of it has been greatly increased. Its advantages over cash transactions are, in one sense, so great, that were it not for this system of extended payment probably not one-half of the present business could be done, while the accumulation of wealth would be rendered many times more difficult.

To the tradesman the condition of his credit, and to what extent it is good, is of the utmost importance, and anything which has a tendency to reflect upon its strength is particularly avoided. It is not a characteristic, but a condition, and there are many elements upon which it rests. Of these honesty and ability rank as foremost, and without these qualifications the obtaining of it is almost impossible. Many tradesmen, although possessing the former, are yet unable to obtain credit because lacking of the latter. The man of good intentions is a most common individual, but good intentions, unless backed by thorough ability, are worthless as an inducement for being allowed time.

To gain the stepping-stone of long extended credit a man must thoroughly understand his business, and in all his operations harmonize honesty and forethought with ability and determination. Smart men are not rare, nor is it at all difficult to discover perfect honesty; hence the combination of these two all-important factors in the large majority of tradesmen, whether large or small, has produced the real basis of credit. The extension of it in this country, which is far in advance of that in some nations, was created, however, by causes born of necessity as much as by an inducement to increase business.

When our cities were yet young the pioneers did not, as a rule, carry much collateral in their belts, and as a consequence the mutual dependence incident to primitive conditions created a common confidence which in a large measure constituted the basis of credit in those early days, which has only increased with successive years. To what extent it will eventually reach is of course only a conjecture, but even at the present time it is the ruling power in commerce. It never knocks at the door of the indolent, nor lingers in the shadow of indecision, but to the able and progressive it forms the stepping stones to success.

THE NEW PETROLEUM ACT.

The amendments made to the Petroleum Inspection Act go into effect Saturday next, and meanwhile an order in council has been passed declaring the following as the ports at which tank cars with petroleum for illuminating purposes may be imported, subject to such regulations for the protection of the revenue as the Department of Customs may establish, namely:

Ontario—Toronto, Hamilton, St. Catharines, Whitby, Oshawa, Owen Sound, London, St. Thomas, Stratford, Brantford, Guelph, Galt, Berlin, Sarnia, Cornwall, Prescott, Smith's Falls, Perth, Ottawa, Pembroke, Kingston, Belleville, Port Hope, Peterborough, Brockville, Napanee, Fort Erie, Sault Ste. Marie, Port Stanley, Port Arthur.

Quebec—Montreal, Quebec, St. John's, St. Hyacinthe, Sherbrooke, Sorel, Joliette, Three Rivers, St. Jerome, Coaticook, Stanstead, Fraserville, Rimouski.

New Brunswick—Sussex, St. John, Moncton, Fredericton, Chatham, St. Stephen, Edmunston, Woodstock.

Nova Scotia—Halifax, Truro, Pictou, Yarmouth, Sydney, Lunenburg, Antigonish.

Manitoba and the North-west Territories—Winnipeg, Brandon, Calgary, Lethbridge, Regina.

British Columbia—Vancouver, Kamloops, New Westminster.

His Excellency is further pleased to order that petroleum in packages of 50 gallons or less may be entered at any duly established custom port, and at all such ports when no excise officer is present or available. The duty of inspection shall be performed under the supervision of the Collector of Customs for such port.

The amending Act of last season makes important changes in the tariff of inspection fees. For both Canadian and imported oil the charges are made uniform, which is a large reduction on the American product For instance, a package containing from 10 to 50 gallons will only cost 10 cents, instead of 30 cents: a package containing from 5 to 10 gallons, 5 cents instead of 10 cents, and less than 5 gallons 2½ cents in place of 5c. Oils intended solely for use as lubricants and unfit from their properties for illuminating purposes, are exempt from inspection, but the packages in which such oil is contained must be conspicuously marked or branded "non-illuminating."

CROPS IN MANITOBA.

The Manitoba Government has just issued its first crop bulletin of the season. The subjoined statement gives comparison of acreage with last year:

Acres.	1892.	1893.
Wheat	875,990	1,003,640
Oats	332,974	388,529
Barley	97,644	114,762
Potatoes	10,003	12,387
Roots	17,498	20,919
Fallowed for crop	250,255	274,588
Fall ploughed	325,717	473,410

These figures show a considerable increase over last year's average. Taken by districts the southwestern district shows the greatest increase of acerage, due to the impetus given by the extension of branch railroads during the past year there. Potato and root crops are also largely increased over last year. There are nearly 13,000 acres planted with potatoes and 21,000 with root crops. The area under rye is 2,229; under flax, 9,637, and area under corn, peas, etc., 1,059. The total area under all crops is 1,533,262 acres, while that of last year was 1,341,270 acres, showing an increase of 211,992 acres. It is pleasing to notice that there is a decided increase in the number of acres fallowed, while special attention was given to fall ploughing. So much land being prepared for seed last fall has enabled the farmers to put in seed this spring in a very short period of time. Over 5,000 men are now employed as hired help, and reports indicate that about 2,000 extra men will be required to assist in taking off the harvest. It is expected that these 2,000 men will be obtained from Ontario and Quebec. The wages paid for hired help run from $15 to $25 per month with board. The bulletin reports great scarcity of female help, and every inducement will be offered to secure females from the eastern provinces. All reports agree that the crops promise magnificently, and that the growth has been phenomenal. The weather has been particularly favorable, and continues to be.

What is ment by preferred creditors? The ones that don't bother you, usually.—Brooklyn Life.

NET PRICES OR DISCOUNTS.

N. Y. Metal offered a prize for the best essay on the subject: "Do you approve of discounts from lists or do you prefer net prices?" Subjoined is the paper that was adjudged the best:

It would seem that in response to these questions there could be but one answer, and that is in favor of lists and discounts. Still I know there are people who will take the negative. This I cannot do, and at times when the subject is mentioned to me I get the impression that it is a ruse on the part of a few jobbing houses that would enable them to manipulate prices. This was the experience with me a few years ago, with a house that had adopted net prices. Upon receipt of bill I found that net prices amounted to 7 3-10 per cent. more than the same bill would with discount. It was returned, listed, and discounted, with a great deal of grumbling, but it ended my experience with net prices and that house.

Hardware is a line of merchandise manufactured in so many different sizes to each article, and sold in such various quantities, to such a promiscuous class of buyers, and manufactured on a margin that necessitates a frequent fluctuation of price according to the cost of production, that it would be exceedingly difficult for a buyer to memorize net prices with every change of the market, and for a manufacturer to issue net lists with every change would also prove unsatisfactory. The travelling salesman would find it a most tedious task to be quoting net prices on every different size of one article, and wait until the buyer had ascertained what some one else had priced them at before making an entry on the order book.

It would seem that the trade should have had ample experience with the condition of the nail quotations during the last few years to demonstrate this erroneous system. Becoming accustomed to the inconvenience has made it more tolerant than it otherwise would have been; but how much more convenient to all concerned would it have been had the nail association established a schedule list and let this remain without change, and then placed a discount upon this, so that when there was any fluctuation we would get it in per cent, and know just what it was. I do not think one hardware man out of ten knows what a keg of nails in the smaller sizes costs him today without chasing up a schedule and figuring a minute or two; whereas, if they had a standard list, which by continual use becomes fixed upon his mind, it would only require an instant in making a mental calculation of percentage, or, at most, three or four pencil marks to determine its cost. I only take this as a means of illustrating my meaning, which will apply to nearly all this class of goods, and can be applied on them just as well as it can on screws, bolts, wrought goods, etc., which, I am thinking, would cause considerable of a consternation to have quoted at net prices.

On these goods, when a man tells us 70 per cent. on wood screws we know just what he means on every size from the smallest up without his running over ten or fifteen different sizes. We know what the list is; we know also immediately if we have got a high or low offer. Again, if for any prudential reason A is entitled to any different price from what B is, the salesman can so quote them without any confusion to either party, which he most certainly could not do had he to deal with net prices.

With stoves, refrigerators, and that class of goods, there is another reason. Very often a retail dealer makes sales from the catalogue, and makes prices while his buyer is before him. Where he does this he wants figures where they are convenient, without divulging any of his private business, and this he can do with good grace from a listed catalogue.

In my estimation it makes very little difference if the discount be high or low, just so that the list need not be changed every year. If we can give our customers a discount so much the better in their estimation; but the list must not be so low that a percentage must be added. I do not know what goods could advantageously be priced net. If we must have them, let it be on such articles that are not made up in a variety of sizes and upon those that the manufacturer has enough margin that he need not change the price with every turn of the market. Building paper, lubricating oils, tin plate, and these kinds of goods would be all right at net prices. But refrigerators, stoves, nails, tin and sheet iron ware, builders' hardware and similar lines are well adapted to discounts. Before a satisfactory accomplishment of this could go into practice, however, standard lists should be adopted by the manufacturers, otherwise they would be a little better than net prices. Such is the case with the tinware lists of to-day, and they prove very confusing, and it is a chance if we find two lists the same.

Taken as a whole, I do not think it is a move that will receive the sanction of either the manufacturer or the retail dealer. But I do know that the travelling men are encouraged by the jobbing houses to quote net prices, and they do so whenever they find a party who thinks that he is saved some figuring, and that it is done for accommodation, which it is. I do not favor these long discounts, however, such as 80, 10, 11 and 5, 77 1-2, 10 and 5, etc. I think it could just as well be figured down to two figures. Another nonsensical and ancient custom is listing by dozens, gross, etc. Why this is thus I know not, especially in the hardware trade; but our money is in tenths and hundredths, and it would certainly be a more practical numeration for the hardware trade than "dozen;" but as this is not what we are discussing, I will not say anything more about it now. But, for lists and discounts, support to those who maintain them is inscribed upon my pennant

THE CAT MOTOR.

"I had a large cork and bung factory in Grand avenue, and I needed power to run my machinery. You know, of course, that there is an immense amount of electricity stored up in a cat. The problem for inventors has been to invent a way to extract it profitably. In the rear of my factory I constructed a one-story circular building, some sixty feet in diameter. On the floor of this I coiled a glass pipe 6 inches in diameter. The first coil ran around the outside of the room, the coils gradually growing smaller, till the last, in the centre, was no larger than this table. It gave me something like a mile of pipe. The top and sides of this pipe were lined with rather stiff hair brushes, the bristles being a little more than an inch in length.

"At that time Milwaukee was overrun with cats. It was impossible to sleep nights. I put a notice in the paper that I would pay 10 cents a dozen for prime cats, delivered at my factory. I got sixty dozen the first day, and stored them in the basement of the power house. The motor operated thus: Placing in the outer end of the glass pipe an imitation rat, made of rubber and propelled by a small interior storage battery, I would then adjust a cat immediately behind it. The rubber rat would start off at a terrific rate—it was made to go through the mile of tubing in from two to three minutes—and the cat of course followed furiously, thinking to catch the supposed animal throughout the entire distance. Gentlemen, it was exciting to watch a healthy, active cat whip about those spirals, with the mechanical rat about a foot ahead, and going like a cannot ball. The cat's back and sides rubbed against the brushes, and her electricity was thus extracted. With a storage battery, and by sending a cat through every five minutes, I generated enough electricity to operate my entire plant, light my factory, and sell power to run neighboring passenger elevators and small machinery. It gradually took the yowl out of the cats, and gradually the city became quiet. At the end of a week a cat could be caught and used again."—Harper's Weekly.

GROWTH A SIGN OF HEALTH.

Natural and vigorous expansion is a sign of health in a business as well as in an individual. Some months ago HARDWARE noted that owing to increasing business H. D. Simmons, manufacturers' agent, had removed to larger and more convenient premises. Now we have to announce that he has found it necessary to take in a partner in the person of Hugh W. Hood. The very nature of his business necessitates Mr. Simmons' being out of the city a good deal. While away his local interests did not always get the attention they demanded, and one of the principal objects in view when the new partnership was being formed was to ensure one of the members of the firm being on hand always to attend to any important business that might crop up. Mr. Hood has had many years' experience on the road, and as his route and Mr. Simmons' were often much the same they were brought into frequent contact with each other. Ultimately they became fast friends, and now partners. Some English firms have been trying to get Mr. Simmons to control their goods in this country. As his facilities are now increased he is inclined to consider the matter, and on Wednesday next he leaves for England to perfect arrangements.

NEW GLASS ANNEALING OVEN.

About a year since, several practical glass workers at Ithica, N. Y., announced that they had invented a glass annealing wheel that received the flattened rollars of glass and rotated them on a wheel through a glass lehr without disturbance or repeated liftings and settlements as they progressed through the lehr. They now announce another invention, which consists of a muffler put over the flattening stones of the flattening wheel, and this section or division they continue over the glass while in the annealing oven. They at first applied it to their annealing wheel, but the same structure is not confined to their annealing wheel, but is applicable to every form of annealing lehrs.—Ex.

CORDIAL COMPETITORS.

"One touch of nature makes the whole world kin;
To hurl one's fellow creature is a henious sin."

In a fair sized city which I have in mind not far from Chicago, there were four hardware stores. The place is a steady growing one, and the stores in question did a very fair business, and were, in short, so prosperous that two young men worked their way up to make a start for themselves in the retail line in the city referred to. Their business advent naturally made some division in the trade of the four old concerns, especially as they were young men of considerable push and natural ability, and eager to obtain a foothold.

The proprietors of these four original stores, feeling the loss of a portion of their trade, determined among themselves to combine against the new enterprise, and use their influence, where possible, to hinder its success. To this end, they individually, with a mutual understanding, circulated among the wholesalers and manufacturers, insinuations which reflected upon the methods and integrity of these two men, with the object of indirectly depriving them of the support and credit of the wholesale houses. They also refused to make purchases of "drummers" who sold the new concern, and made it a condition when they bought, that the goods should not be offered to them. However, in spite of these unfair obstacles, the new store continued to secure goods from other sources ,and demonstrated the business aptitude of its owners by the increasing trade which they drew to its doors.

Finding that these tactics did not dampen the ardor or retard the progress of the new store, the four original proprietors put their heads together again and determined, as they were all comparatively well off, from the profits of the past, to sell their goods for a time at cost, and thereby "freeze out" the new store, which was not so abundantly supplied with cold cash.

Accordingly all prices were reduced below the point of profit, and buyers of Hardware in that section found that a dollar went nearly twice as far as before, when expended in these stores.

The situation was becoming somewhat critical for the new concern, as they were, of course, forced either to meet these low prices of give up their trade.

They had a decided advantage, however, in the matter of expenses, which they at once reduced to a minimum, and depended entirely upon their own exertions to hold and serve their customers. They also had the further advantage, which their competitors had not probably considered, of enjoying a nearly cash trade, while the old concerns had been in the habit of giving long credit and accepting their customers' commercial paper. Before many months of this condition of affairs had elapsed, one of the four old concerns lost several large amounts by the failure of some of its customers, and, as its expenses were still as large as before, while its profits were comparatively nothing, it was obliged to suspend and go through the hands of a receiver. The remaining three original houses, for other similar reasons, found themselves severely pushed for funds, and were therefore slow in their payments, and their commercial rating being thereby reduced, found that the wholesalers did not seek their trade as eagerly as before, and charged them a higher price for goods when they went to market to insure their accounts.

In the meantime the new store, while of course not coining money, still by the hard work and continued application of its owners, held its trade and made new customers, and by reason of its low expenses and cash trade, was able to always meet and often discount its bills, and had gained the confidence of the wholesalers who had formerly been influenced against them. Among the clerks in the wholesale house in which these two young men had formerly served, were several who were looking for a favorable opening to make a start for themselves. Our two young merchants, who, it must be said to their credit, had long heads in comparison to their short years, opened up a correspondence with four of these former fellow clerks, and laid the situation before them, and urged them to make the attempt to buy out the original firms.

By the assistance of the wholesale creditors of these old concerns, who were extremely weary of the slow and unsatisfactory condition of affairs, they were encouraged in the attempt, and before long were the owners, in name at least, of the original stores. When this had been established, the new proprietors of these stores, including, of course, our two young friends, formed a sort of "Board of Trade" among themselves, to givern prices. in a measure, and to promote general good fellow feeling. Meetings of the members of the Board were held at regular intervals, and friendship was engendered.

Prices naturally returned to a profitable basis by degrees, and they were, in consequence, mutually benefited, and were in time able to pay off their indebtedness to the creditors of the old concerns which they had assumed from the start. The meetings referred to were held by turns in each others' stores, and while there was competition in pushing for trade, they were cognizant of the fact that individual prosperity was inseparable to, and a part of, mutual advancement.

Subsequently another store was opened, by a stranger to all of them, but they did not either attempt to "freeze him out" or to injure his business reputation. On the contrary they invited him to join their meetings, and by this means enlisted his support to maintain prices at a fair margin of profit, and secured his confidence and respect for their business methods.

The moral, if it needs one, of the above rather long drawn out tale, is to be found in the fact, often ignored, that while "competition is the life of trade," still, if pushed too far, and by unfair means, it becomes its own "boomerang," and, like all principles of action, contains the law of compensation, which then makes it read—Competition fairly, is the life; but unfairly, the death of enterprise.

The next time you have an inclination to speak disparagingly of your fellow tradesman or to cut a price for no other object than to cripple his busi-

BINDER TWINE

Best Makes

Write us for Prices and Special Terms before ordering elsewhere.

H. S. HOWLAND, SONS & CO.,

WHOLESALE HARDWARE

57 FRONT STREET WEST - - - **Toronto**

Carriage Paints . . .
Superfine Coach Colors
Varnishes . . . . .
Linseed Oil . . . .
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Our Pure Prepared Paints
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STANDARD CANADIAN MAKE
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SPECIAL ATTENTION AND PROMPT SHIPMENT.

White Lead . . . .
Colors in Oil . . . .
Oil Stains . . . . .
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Carriage Top Dressing
Etc., Etc. . . . . .

ness, or to avenge a rumored report of his low prices, reflect a little, from policy, if not from principle, and seek to enlist his help for mutual benefit by personal interviews and business cordiality.

"Heat not a furnace for your foe so hot
That it do singe yourself."

—From Ideas for Hardware Merchants.

WASTE IN ANTHRACITE MINING.

The commissioners appointed to investigate the waste in anthracite coal mining in Pennsylvania has made its report. It is stated that at the Parish colliery, where all the small sizes of coal are saved, as high as 19 per cent. of the total output of coal goes to the culm bank. This is not culm,but coal. In 1890 and 1891 the Clear Spring Coal Company sent all its buckwheat coal to the culm bank. At some of the oldest collieries the culm bank with its valuable deposits of coal is more than half of the total product. In the Panther Creek Basin, from 1820 to 1883, 20 per cent. more coal went to the culm bank than was marketed. It is estimated that since the commencement of mining 35 per cent. of the total product, or 315,700,000 tons, of coal and coal dirt have been sent to the culm banks, which are, therefore, extensive deposits of fuel on the surface of the earth to be bought at a very low price, and which modern inventions in furnaces, blowers and grates have made of great value to manufacturers.

VENTILATING APPARATUS.

Fans and other classes of ventilating apparatus should be in improved request in the potteries, as the result of the annual report of the chief inspector of factories. The opinion is quoted of W. D. Cramp with reference to the china and earthenware factories of North Staffordshire. He says that since the introduction in 1887 of the process of "towing"—or dressing the scraped and sandpapered surface of dried clay articles with a bunch of tow—some kind of mechanical means, more or less effectual, has been provided to carry off the dry dust. He is, however, of opinion that much more should be done in this direction. Mr. Cramp further points out that to be effective fans require to be put up on scientific principles, and kept in good order. The success of fans at various works has shown that where these conditions are attended to, "even in the dustiest of all processes in an earthenware factory—namely, that of towing—the rooms and the persons of the workers, and their lungs also, can be kept as clear of dust as in the least dusty processes." What is required, he further declares, is "the perfection of the fan system, in all towing shops, and its extension to all shops in which flat-pressers, hollow-ware pressers, turners, ware-cleaners, etc., are employed." Dr. Arlidge, certifying surgeon for Stoke & Longton, is also quoted as strongly advocating extended fan ventilation, not only to draw away dust, but also to change the air; for when hot steam pipes are used for drying purposes, "the air becomes very stagnant and requires mechanical means to constantly change it.—Engineer and Iron Trade Advertiser.

HINTS TO MECHANICS.

One horse power requires 15 square feet of heating surface. Effective power of an engine: Multiply area of piston in square inches by average force of steam, and by the velocity of piston in feet per minute; divide the product by 33,000; and 7-10 of the quotient equals the effective power. One square foot of grate surface consumes, on an average 12 pounds of coal an hour. Doubling the diameter of a pipe increases its capacity four fold. Pressure of the atmosphere is 14.7 pounds per square inch. The amount of pressure that can be exerted by an engine: Multiply the area of the steam piston by the steam pressure. Diameter of circle multiplied by 3.1416 gives you the circumference. To find the area of a circle, square the diameter, multiply by 1,7854. Weight of wrought iron, multiply square of diameter in inches by length in feet, and the product by 2.6. One cubic foot of iron weighs 540 lbs. One cubic inch .25 of a pound. There are 1,728 cubic inches in a cubic foot, 144 square inches in a square foot. Water boils at 100 deg. Centigrade, 212 deg. Fahrenheit. Ice melts at 32 deg.; temperature of the globe 50 deg.; blood heat 98 deg.; alcohol boils at 174 deg.; lead melts at 594 deg.; heat of a common fire 1.140 deg.; brass melts 2.233 deg.; iron melts 3,479 deg.

ARSENIC AS AN EXPLOSIVE.

Recently powdered metallic arsenic which, in the process of powdering, had been moistened with water to prevent dusting, is recorded by E. Hirschsohn as capable of spontaneous combustion. A quantity of powdered arsenic in a double paper bag had been received late in the evening, and set aside over night in a basket containing other articles packed in straw and sawdust. The next morning, upon opening the store, the peculiar garlic-like odour attracted attention to the basket containing the powdered arsenic. An examination disclosed that the arsenic had agglutinated to a solid glowing mass; that the paper bags had been charred, and that a portion of the straw was scorched; a number of bottles in the basket had also burst, owing to the high heat, and upon the charred paper bag were sublimed some beautiful crystals of arsenious oxide.

"If you don't go out of here in a minute, I'll scald you!" exclaimed the wrathful woman of the house to the persistent peddler. "That water on the stove won't be hot for half an hour yet," answered the merchant. "So you had better let me sell you one of these patent automatic tea-kettles that heats water in two minutes over a slow fire. If you had had one of them I should have been scalded and on my way to sell something to the red-haired woman who is attempting to keep house next door."

THE NICKEL SUPPLY.

The world's greatest nickel mines, from which comes the metal for the incomparable nickel-steel armor plates of our new navy, centers about this little backwoods mining town of Sudbury, in Ontario, about seventy miles from the "Soo" on the main line of the Canadian Pacific Railway, and from this city the work of their development is directed. Cleveland capital controls the most extensive and best known deposits, and an establishment has been erected here for refining and separating the nickel from the copper, iron, sulphur, cobalt and slag with which it is combined when it leaves the Sudbury furnaces. The Canadian Copper Co., which owns them, is composed of a few rich capitalists who have no stock for sale, but mean to keep a close control of mines that could easily produce all the nickel now used in the world.

The extent of the Canadian deposits is almost beyond comprehension. In the French mines in New Caledonia a very large amount of ore doubtless exists, but the veins are not known to extend deeper than from 300 to 500 feet, and very rarely more than 200. At Sudbury, however, whole ranges of hills are composed of nickeliferous pyrrhotite, and the veins have greater depth. Most of the mining done thus far is near the surface, but a shaft at the Copper Cliff mine sunk to a depth of 700 feet, found ore carrying four times as much nickel as the surface deposits, or about 11 per cent. The nickel and copper outcroppings occur at intervals across 14 townships, from Wapnapitæ to the north of the Spanish river, the tract being roughly described as 70 miles long by 50 miles wide.

The Treasury officials who investigated the region in 1890, before Secretary Tracy gave the large order for nickel for the armor of the new navy, estimated that not less than 650,000,000 tons of ore were in sight, while but 160,000 tons a year were being mined. The Government is not dependent upon one company for its supply, however, though all orders have thus far been given it. Six other mines have been opened, the Dominion, Vivian and Drury companies having developed their properties most extensively, but the extent of the deposits of the Canndian Copper Company, their greater development and better facilities for refining gave it a distinct advantage which was increased when the old duty of 15 cents a pound on nickel ore and matte was repealed by the McKinley law. But for that the works in Cleveland would not have been built. The other companies, in which English capitalists and some California and Michigan men also are interested, depend upon Swansea, Wales, for their refining.

As it comes from the mine the ore varies widely in richness, running from 2½ to 40 per cent. nickel, the usual average being not far from 3 per cent. At rare intervals sulphide nickel carrying 15 to 40 per cent. is found, the principal point where it occurs being near Massey, some 45 miles southwest of Sudbury. The reduction of the nickeliferous pyrrhotyte has some picturesque and unusual features, but they are most emphatically of a nature not calculated to make the vicinity inviting as a place of residence, and could only be carried out in a wild and barren region where the population is sparse. Particularly is this true of the roast beds. A large area is given over to them, and from it go up continually burning sulphur fumes and gasses such as might hang thick above the infernal regions. Oftentimes the yellowish red ore is kept baking away for six weeks or two months.

After a layer of fine ore is laid on the ground, it is covered 18 inches deep or more with dry pine, upon which more ore is spread, and above that still another layer of wood. Through the mass, here and there, stand upright sticks of pine which burn out and leave flue-like vents for the fires below, which get their draughts from the openings at the ends and sides.

From the roast beds, the ore goes to the furnaces, which are of the Herreshoff water-jacketed pattern, a water space existing between the outer and inner shells of steel. When the time for drawing occurs, the matte is run into water-jacketed cooling pots, the slag going off in a small stream and the matte in a larger, a series of sharp reports attending it. The sight is pretty and oftentimes startling.

The matte reaches this city in the form it leaves the cooling pots, and every ton of it contains all the nickel in from five to eight tons of ore. More recently a Bessemer furnace has been put into operation, and, by its simple process of blowing air through the molten mass, has greatly increased the percentage of copper and nickel in the matte, one ton of which often carries all that is of value in 30 tons of ore, thus saving a handsome margin in the cost of transportation. Experiments are being made steadily with furnaces in hope of securing better results. One of the most promising and unique is the invention of a Californian, and is intended to reduce the ore with no other fuel than the sulphur it contains. If it is successful, the picturesque but unpleasant roasting process will be unnecessary, and the fuel problem, which, with coke at $7 a ton, is no small one, will be solved.—Pittsburg Dispatch.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOT NAILS, ETC.
Hamilton. Ontario.
8P

TORONTO PLATE GLASS IMPORTING CO.,
TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."

BRITISH SHEET GLASS
P.B.

These words and brand are on every box. None genuine without this Trade Mark. We warn our friends against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

WE CAN SELL YOU

Solder and Babbitt

Cheaper than You can Make It

TORONTO SMELTING and REFINING WORKS

FRANKEL BROS., Props.

92 and 94 Queen St. East, TORONTO.

Daily Capacity 10,000 Pounds.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT

Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
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NEW. CLEAN. GOOD.



Meat - Gutter

WHITE ENAMELLED

Inside, and Brown Japanned outside.

H BOKER, Manufacturer. | For Sale by Leading Wholesale Houses.

WEIGHT OF A GALLON OF WATER.

Well, now, the answers that you get to this question will not agree, for some will say 10 pounds, and others 8.3 pounds, and so the student wishes to know which is right.

While reading a certain book a few days ago, which is published for the benefit of engineers and firemen, and is now in its seventh edition, we found that, according to the author, a gallon of water weighs 10 pounds, and in another part of the same book we were informed that a cubic foot of waterweighs 62.5 pounds nearly, and contains 7.5 gallons in round numbers. Now 62.5 divided by 7.5 equals 8.3, which is not 10 by a considerable. Again, if one gallon of water weighs 10 pounds, and there are 7.5 gallons in a cubic foot, then the latter must weigh 10 multiplied by7.5, or 75 pounds, which is much more than 62.5 pounds. The explanation of these discrepancies is readily made, for the English Imperial gallon weighs 10 pounds, and if it is used in any book published for the use of mechanics in the United States, it should be so specified. What use have we in this country for an Imperial gallon? None whatever.

American boilers are good enough for us to make steam in, American engines are the proper machines for us to utilize this steam with, American coal (not English or Canadian) answers our purpose very well indeed, and American water measured by an American standard of 7.5 gallons to the cubic foot, 8.3 pounds to the gallon, and 62.5 pounds to every cube which measures 12 inches in each direction, is what we want, and no other will answer our purpose.—American Mechanic.

SUBSTITUTE FOR GLASS.

The substitute for glass, brought to notice some time ago by a manufacturer in Vienna, Austria, observes a writer in the New York Sun, is pronounced a practical thing, likely to be introduced as valuable for certain purposes. The article is produced by dissolving from four to eight parts of collodion wool in about 100 parts by weight of ether or alcohol or acetic ether, and with this are intimately combined from 2 to 4 per cent. of castor oil and 4 to 10 per cent. of resin or Canada balsam. This compound when poured upon a glass plate and subjected to the drying action of a current of air of about 50 per cent, solidifies in a comparatively short time into a transparent glass-like sheet or plate, the thickness of which may be regulated as required. The sheet or plate so obtained has substantially the same properties as glass, resisting the action of salts and alkalies, and of dilute acids, and, like glass, is transparent and has no smell. Again, it is said to be pliable or flexible and infrangible to a great degree, while its inflammability is much less than that of the collodion substitutes. Any desired color may be imparted to the compound by admixture of the necessary pigment, the latter to be soluble in the solvent used in the preparation of the compound if incorporated therewith; but color may be imparted by surface application, anniline dyes being employed, and thus the sheets may be used in lieu of stained glass.—Baltimore Journal of Commerce.

DIDN'T BLAME THE MACHINIST.

The following, told by a manufacturer of steam engines, conveys a good moral, says an exchange: "A large pulley was to be turned up in its bearings; and as the water accumulated in the pit and interfered with the work, a pump was arranged, a laborer supplied to work it, and a machinist from the engine shop left in charge of the job. On his next visit the builder of the engine found everything in confusion,—the pit flooded, the tool chattering and spluttering on a wet wheel, the laborer drunk, the machinist excited, and nothing done. The machinist began at once in great agitation to make excuses for this state of affairs, but was reassured by the builder, who said, "That is all right, Mr.——; I do not blame you in the least.' 'I am glad to hear that,' said the machinest; 'I was afraid you would blame me for not having the job done.' 'Oh, no!' was the reply. 'You are not to blame. I am to blame for leaving you in charge of the work.'"

HEAVIEST THING IN THE WORLD.

The metal osmium is the bluish white metal with violet lustre, which Smithson Tennant discovered 90 years ago in the residue from dissolved platinum ores. This metal has a specific gravity of 22.477, that of gold being 19.265, lead 11,367, iron 7.79, and lithium, the lightest, only 0.594. The French chemist, M. Joly, has just placed it beyond question that osmium is likewise the most infusible of metals. It could never be made to yield to the oxhydrogen flame which makes platinum and iridium run like water. But M. Joly has been subjecting osmium to the excessive high temperature of the electric arc which M. Moissan has of late employed successfully in the manufacture of diamonds. Under this fierce heat the rare metal, ruthenium, which used to be deemed all but infusible, readily melts. But osmium remains refractory, there being apparent only the faintest traces of fusion. On this account osmium cannot be prepared in sufficient quantity to make it very useful in the arts. But its alloy with iridium, which defies the acids, is of some value, nothing better having been found wherewith to tip gold pens. Being unoxidisable and non-magnetic, its employment for the bearing of the mariner's compass has been advocated. —Ex.

COAL PRICES ADVANCED.

The selling agents of the anthracite coal companies met in New York city Wednesday and ordered an advance in prices for July delivery, as follows: 15 cents per ton on egg, 20 cents per ton on stove and chestnut, 25 cents per ton on all sizes for the Western markets. The matter of restricting the output for July was a topic discussed at some length, and it was finally decided to fix the amount at 3,000,000 tons. The meeting devoted considerable time to a consideration of the coal market as affected by the Reading's troubles. It is understood that the sentiment of the meeting was that Reading's necessities are not likely to be the occasion of an immediate forcing of coal upon the market. Otherwise, not all the companies would have been likely to agree to an advance in price for next month's delivery. Another point brought out at the meeting was a continuance for an indefinite period of the coal-selling contract between the Reading Company and the Finance Company of Pennsylvania, as originally established by ex-President McLeod.

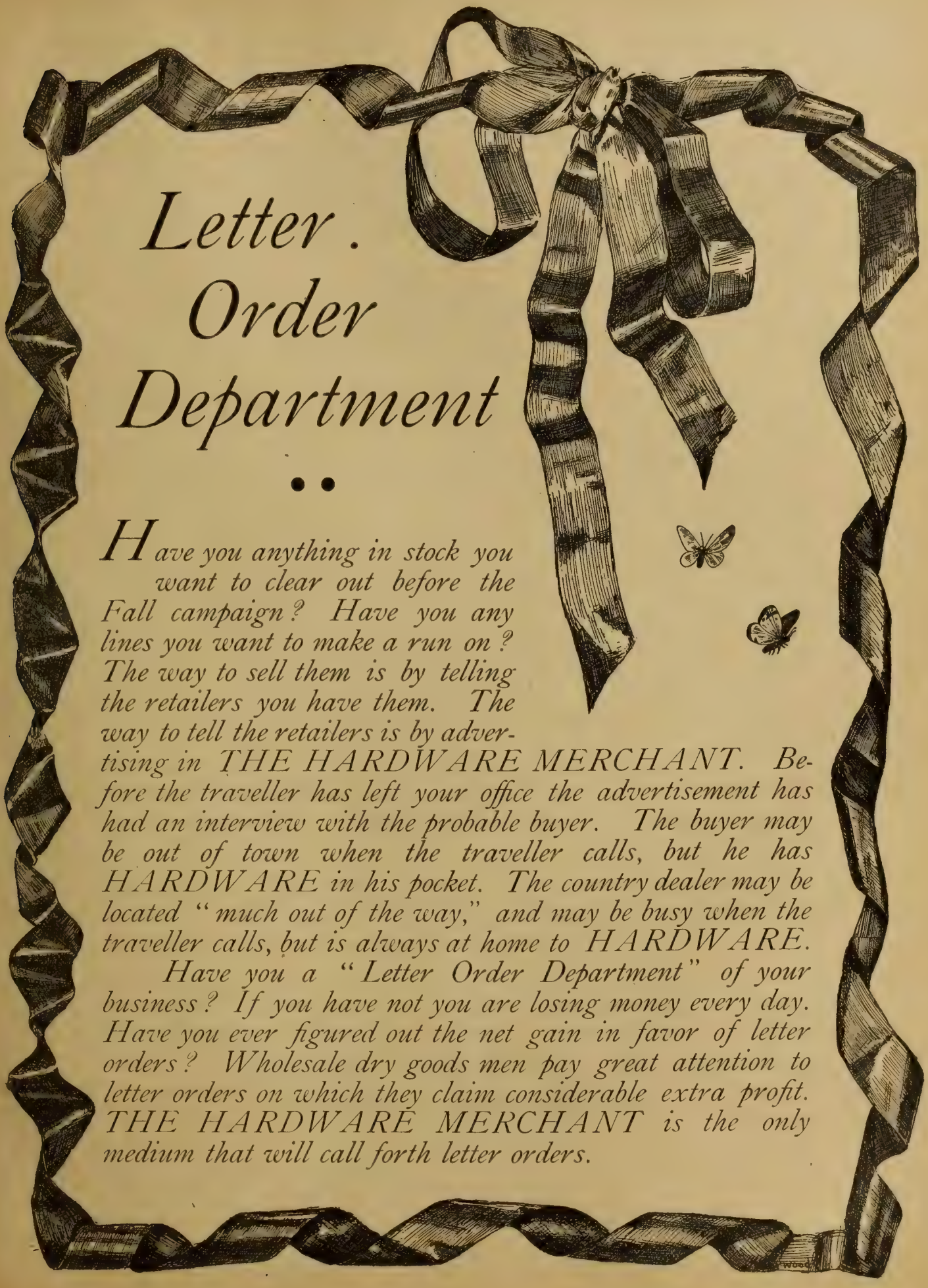
REGARDING CANALS.

The Chignecto Ship Railway, which was to greatly shorten the distance between ports on the Atlantic and those on the St. Lawrence Gulf and river, is reported to be in a bad way. It was estimated that $3,500,000 would build the road; the contractors have taken $500,000 of common stock, $1,500,000 of preferred stock and $2,000,000 of debentures have been sold, all the money has been spent; but little more than half the road is completed, and no more capital can be raised. The triumphant success of the Chignecto Ship Railway was to have proved the feasibility of Capt. Eads's larger scheme for Teherantepec, but Capt. Eads is dead and the Chignecto Railroad is far from completion, the Nicaragua Canal is waiting for the Government to take hold of it, the Panama Canal is only kept in public mind by the exigencies of French politics, and vessels are still sailing around the peninsulas and the continents that lie across their courses.

Business men complain of a number of dead beats, chiefly young men, who run up bills here and there and then refuse to pay. Some of them clear out of town and the others who remain brazen it out. It is of little use to invoke the law, as it entails expenses, and a dollar a week is about all that can be collected from them at best by a judgment summons.—Tribune, Deseronto.

RAZORS, SCISSORS
POCKET KNIVES


TABLE KNIVES
BUTCHER'S KNIVES



Letter. Order Department

Have you anything in stock you want to clear out before the Fall campaign? Have you any lines you want to make a run on? The way to sell them is by telling the retailers you have them. The way to tell the retailers is by advertising in THE HARDWARE MERCHANT. Before the traveller has left your office the advertisement has had an interview with the probable buyer. The buyer may be out of town when the traveller calls, but he has HARDWARE in his pocket. The country dealer may be located "much out of the way," and may be busy when the traveller calls, but is always at home to HARDWARE.

Have you a "Letter Order Department" of your business? If you have not you are losing money every day. Have you ever figured out the net gain in favor of letter orders? Wholesale dry goods men pay great attention to letter orders on which they claim considerable extra profit. THE HARDWARE MERCHANT is the only medium that will call forth letter orders.

TRADE CHAT

[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Tuesday.]

It is proposed to increase the capital stock of the Brockville Gas Light Company to $250,000.

The directors of the Manchester Ship Canal announce that it will open for traffic in January next.

To clean stove pipe from soot, put some kindling in stove and place on top some old scraps of zinc. This will effectually clean pipe.—Ex.

The B. C. Provincial Government has created the new mining division of Lardeau. The boundaries of the Illecillewaet and Revelstoke divisions have also been readjusted.

A millionaire lumberman of Niagara Falls, who is in Winnipeg, is said to be contemplating the building of a cold storage warehouse for butter, cheese, etc., there, which will cost over $50,000.

It is said that the telephone system is interfering with railroad travel, as boards of directors and others in business can talk to each other from a distance without the necessity of being visibly present.

It is stated that the nine-hour movement recently inaugurated among the brass workers of Boston and vicinity is meeting with success, and that eight of the leading brass concerns have acceded to the demands of their workmen for a nine-hour work day without reduction of wages.

The whole of the men employed in the marine engineering industries in the Hartlepool and Teesdale districts have agreed to accept a reduction in wages of 10 per cent. recently proposed by their employers—a 5 per cent. reduction to take place forthwith and another 5 per cent. in July.

A cablegram has been received by the firm of M. & L. Samuel, Benjamin & Co. announcing the death of David Benjamin, father of Alfred D. and Frank D. Benjamin, of this firm, at Hyde Park, London, England, last Sunday. The deceased was a retired Australian merchant, and was in his 76th year.

It is interesting to note from recent returns, says an English contemporary, that of the Swiss through railway lines in 1892 37.8 per cent. rested on iron, 32.7 on oak, and 29.5 per cent. on soft-wood sleepers; and that some 28 per cent. of the rails still in use are of iron, owing probably to the fact that the light traffic has not yet worn out the rails which were laid before steel came so much into vogue. The heaviest rails, weighing from 88 to 96 lbs. per yard, are on the St. Gothard line, but the Jura-Simplon Railway has 84 pound metals.

The Industrial World warns the tinplate workmen of Wales against a representative of American manufacturers, who, it states, is about to visit Wales for the purpose of engaging men to proceed to the States, where an attempt will probably be made to effect a reduction in the wages, and thus counteract the effects of a modified tariff.

An incendiary made an attempt the other night to destroy the large brick building adjoining White & Sons' foundry on King street, London, Ont., and occupied by them as offices, and also by Goldstick & Lehrfeldt, hat and cap manufacturers. A pile of boxes and inflammable material was found by the firemen in the celler under the hat factory, where they had evidently been placed purposely. Loss $200.

Some of the largest steel plates ever made in England have been turned out at the works of the Cousett Iron Company, Durham. They measure 60 feet 2 inches in length, 50 inches in width, and 11-20-inch in thickness. They are for use in the construction of some large cattle ships which are being built at West Hartlepool for a firm in the United States.

W. G. Clark, of Adelaide, South Australia, has patented a new process for welding copper and iron. A piece of metal treated by this method is said to have been immersed in sea water for six months without showing signs of any weakening action. The process is cheap and is claimed to have received the approval of those who have used it.

News has been received from Halifax, N.S., to the effect that a Boston syndicate has purchased the blast furnaces and the iron mines at Ferrona and the forge and steel works at New Glasgow. They propose to revolutionize the iron industry in Nova Scotia and to supply the New England markets with pig iron in case the tariff is altered to suit their desires in the premises.—Age of Steel.

A contemporary says that an Australian inventor has just perfected a method of plowing with the help of dynamite. The explosive is used in very small quantities, and there is an apparatus for touching it off underground. The result of this is to thoroughly disintegrate the soil. It is asserted that there is no possibility of an explosion, and that owing to the small quantity of dynamite used the cost is very little, while the resulting benefit is enormous.

Grain freights to Europe have been more active and profitable to steamship owners during the present month than at any time during the last three years. This is a consequence of the financial pressure and break in wheat prices to the export basis, and the temporary scarcity of grain tonnage on this side of the Atlantic.

The Ottawa Electric Railway has declared a dividend of 8 per cent. as a result of last year's operations, besides placing a substantial sum to the rest account. The gross receipts of the year amounted to $105,000, representing 2,095,000 passengers. J. W. McRae was elected president, and G. P. Brophy, vice-president. The question of Sunday cars was discussed, but it was not thought advisable to take any action in the matter until public opinion had made itself felt.

A collection of tools used by workmen in building the pyramids of Egypt form one of the most interesting exhibitions in connection with the recent Oriental Congress in London. They have been gathered and are exhibited by the illustrious Egyptologist, Flinders Petrie, and indicate that many tools which we have been accustomed to consider essentially modern were as well known to ancient workmen as they are to ourselves.

A contract for 1,500,000 pounds of forgings for guns will soon be awarded by the United States navy department. It will supply ordnance for the Iowa, Brooklyn, and the three gunboats. The plans for the latter vessels have just been drawn up and contemplate for the armament of those ships 24 guns. The forgings for which contracts will be made will furnish the service with 72 guns of calibres from 4-inch to 12-inch. —American Manufacturer.

A small instrument, which promises to be of great service to certain metal workers has just made its appearance. The invention, which is to be known as the "Schisphone," has for its object the discovery of any secret crack, rent, or fissure, however minute, which may exist in any mass of metal, such as the axle of a locomotive, the metals of a railway line, or the bronzed metal of a cannon.—Ex.

The Scientific American recommends the following paint for iron or shingle roofs: The most durable paint for roofs is red oxide of iron or Prince's metallic paint (dry). Mix it with raw linseed oil for shingle roofs; first coat it thin, so as to spread easily with the brush. When this has well dried, which may be several days, paint with the same paint mixed with boiled linseed oil, just thick enough to spread well with a brush. For iron roofs use boiled linseed oil with the same paint for both coats.

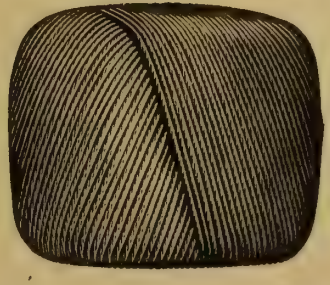
Many men have been prevented from participating in the delights of bicycling because of the great cost of the machines. The bicycle trust has steadily kept up the price of wheels of all descrip-

THE ONLY RELIABLE

. . . LOW PRICED . . .

BINDER TWINE

IS THE



Common Sense . . Brand .

REGISTERED.

MADE BY DICK'S PROCESS

(Full Patents Applied for.)

CHEAP AND EASY TO WORK.

Follows Manilla on all Machines in good order without Change of Adjustment. . . . . .

Completely Weather and Rot Proof.

FEW TONS REMAINING.

Immediate attention given to any enquiries or orders. . . . .

WHOLESALE AGENTS:

M. & L. Samuel, Benjamin & Co. = = Toronto.

tions, and the manufacturers have made enormous fortunes. Now, however, a break has come in the ranks, and one of the largest manufacturing concerns has withdrawn from the trust, and advertises all wheels of its make at a selling discount of 40 per cent. The drop in prices cannot fail to popularize the healthful, useful and pleasant pastime. —Ex.

One of the largest iron girders ever made has just been turned out at the Philadelphia Bridge Works, belonging to Messrs. Cofrode & Saylor, of Pottstown. It is 58 feet long and 11 1-2 feet high, and it weighs nearly 50 tons. The special trucks which were used to convey Krupp's 120-ton gun to the World's Fair were utilized for the transport of the monster girder to Philadelphia, where it will be employed by the Pennsylvania Railroad Company in connection with the construction of its new Broad Street Station in that city.

During warm weather it is necessary to have green hides salted promptly or they will spoil, but hides can be shipped green in the winter season in a frozen state without salting. To cure a hide properly it is first necessary to trim it by cutting off what does not belong to the hide, such as horns, tail bones and sinews, then spread the hide on the floor and sprinkle salt evenly and freely over the flesh side. In this way, pile one hide on the other, flesh side up, head on head, tail on tail. Stretch out the flanks and legs so as to give the hides a chance to drain. It will take a week or more to cure hides thoroughly.—Ex.

The total shipments of cattle from the port of Montreal during the week ending Saturday last were 2,275 head.

Maycock & Newman, Essex, have prepared plans for a $7,000 business block to be erected by Thorne & Campbell, for John Baines, on Sandwich street, opposite Ferry's building.

Newly-married commercial's wife: "Promise me, John, that you will not get into any terrible railway accidents, or be burned to death at a hotel. Promise me that, John, or my heart will break." John promised faithfully that he would not.

The following postoffices were opened in Ontario on June 1: Devon, South Perth; Ellengowan, East Bruce; Jacks' Lake, North Simcoe; Melissa, Muskoka; Pentland, Centre Wellington; Saintsbury, North Middlesex.

It is officially shown that the total immigration from Japan into the United States from 1861 to 1892, inclusive, has aggregated 5,271. During this time many of these have returned and some have died, so that the present number of Japanese in the United States is quite inconsiderable.

Put pulverized potash, which soon become sticky when exposed to the air, in all the rat holes about the house. The special detestation of a rat is anything which will stick to its silky coat. Some persons find a mixture of equal parts of cayenne pepper and Scotch snuff sprinkled well into the holes still more efficacious.

Those who growl about the vacation "fad" forget that it cannot reduce the volume of business. It merely transfers a large portion of summer trade to spring and fall. People must eat, drink and wear clothes wherever they are. The additional luxuries of travel and summer outing provide employment for a host of wage earners that become themselves consumers.—Ex.

The young Boston Clerk who helped himself to his employer's securities very likely was underpaid. But the re-employment of him at an advanced salary, after his confession of his weakness, is something of a novelty in the "fitting of the punishment to the crime." It recognizes one thing, however, and that is the moral responsibility of employers who place large financial trusts in the hands of poorly paid employes.—Ex.

N. Y. Bulletin in reply to a query: The value of unmanufactured corkwood annually imported into the United States is about one million dollars. The value of the annual imports of manufactured corks and cork bark is between a quarter and a half million dollars. The largest imports of unmanufactured corkwood during any one of the last five years was $1,368,244 in 1892, and the smallest was $902,047 in 1889. Of manufactured corks and cork bark the largest importation made in any year within the same period was $425,942 in 1891, and the smallest was $255,636 in 1889.

The favorite examples of meanings out of joint are Irish bulls (so-called), and their name is legion. "'Tis better to be a coward for five minutes than dead the rest of your life," affirmed an Irishman in the witness-box. A Kerry man who fell down on a mountain walk exclaimed, with satisfaction, "Glory be to God that I wasn't walking back over the mountain a dead man!" And Sheridan Le Fanu has furnished a gem—"The only way to prevent what's past is to put a put a stop to it before it happens." In much the same way an Irish tenant observed that "it was a hard thing for a man to be turned out of the house which his father built and his grandfather was born in."

PERSONAL MENTION.

H. D. Simmons, of H. D. Simmons & Co., sails for Europe Wednesday next on a business trip.

Mr. McLaughlin, buyer for the Bowman Hardware and Sporting Goods Co., of Hamilton, was in Toronto this week on business.

Mr. Robertson, of R. Robertson & Co., Dunchurch, was in Toronto this week "sorting up." He says the hay crop in his neighborhood was never better, and that trade prospects are good.

GOOD TIN, GOOD ROOFS.

Action has recently been taken by the metal roofers in one or two prominent centres of trade to secure a discrimination in favor of good roofing upon the part of the architects. Their petition is, instead of the roofing contracts being included with other work in the bid of the general contractor, that it be given out as a separate part by the architect, thus making the roofer responsible to the architect and house owner instead of being responsible to the builder. This movement, which, in various quarters, has the approval of all who are interested in good roofs, has its origin in the abuses which have grown up in the roofing trade under the existing plan. At present, if a builder secures a contract for putting up a building, including the roofing, his desire is to let the roofing to the lowest bidder in order to make the largest amount of money possible. Connivance between roofer and builder very easily thwarts the efforts of the architect to secure a good roof. The architect, assuming that he wants a good roof, is, under these conditions, at a great disadvantage. By making the roofer responsible directly to the architect the elements of uncertainty and the opportunity for mismanagement for which the general builder is responsible would be removed.

There is at present a crisis in the metal roofing trade. The quality of metal that is being very generally used at the present time is so poor that it means that tin roofs will soon be driven out of the market unless a change for the better takes place. Tin roofs deserve to be driven out of the market if poor plates are to be used. Nor are the roofers in the country entirely free from blame in this matter. In putting blame upon the general builder, we do not relieve the roofer from the responsibility which justly attaches to him. When tinners are calling for wasters weighing so little as 80 pounds to the box, in place of using primes weighing 112 pounds to the box or upwards, a state of affairs existing at the present time, it shows the depths of degradation to which the trade has been reduced in many parts of the country. It means that tinners are using an article that is inferior to slag roofing, poorer than the worst of tar roofing, less desirable in fact than a dozen other despised forms of roofs with which they are in competition. Builders' bids to a certain extent are forcing this class of material into use, and yet tinners and roofers in general are lending themselves to such an end.

If the tin roofers of the country value their trade in the least, if they desire to perpetuate the industry in which they have made their livelihood in the past, or if they desire to continue in the roofing business at all, it is high time something was done in the matter. Many



Tecumseh Rifles

Calibers 22 and 32 Rim Fire.

Instantly taken apart. Well made
Finely finished. One in a box. . . .

WONDERFUL VALUE

Sole Agents for Canada:—

Painchaud, Squire & Co., Montreal.

Full Illustrated List to the Trade Only.

changes have been brought about in the tin plate trade simply by unanimous action and well enforced demands upon the part of consumers of roofing plates. The time was when good roofing plates could not be obtained, no matter who wanted them nor the price offered. All this has been changed. Plates of the very best quality are now in the reach of all who choose to buy them. Guaranteed plates have been brought to the front, and the responsibility of the maker of the plates has been established. But with good plates possible, and poor plates also possible, there is the temptation under existing conditions to use the poor plates and let the good plates alone. What will the roofers say to the question now before them? Will they rise en masse and say once for all, "We will use good plates?" or will they allow their trade to drift away because poor material has the call?

In determining to use good plates it is not necessary to forego profits. A low price as a rule means a poor profit and a high grade of work almost always carries a profit. What to do then is to establish conditions in such a way as to get the demands enforced by architects' specifications and controlled by the methods of doing business.—Stoves and Hardware Reporter.

"There are geniuses in trade, as well as in war or the state, or letters; and the reason why this or that man is fortunate is not to be told. It lies in the man."—EMERSON.

SAFE WANTED

Large Fire Proof Safe Wanted at once. State dimensions and price. Address H. M., HARDWARE Office, Toronto.

The James Robertson Co.,

LIMITED.

LAWN SPRINKLERS,
GARDEN HOSE,
HOSE REELS,
GARDEN RAKES.

Toronto

You will Insure Success
IN THE
STOVE
Business, by selling

"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.

The Gurney-Tilden Co. Ltd.

Successors to The E. & C. Gurney Co.

HAMILTON - - ONTARIO.

MONTREAL MARKETS.

MONTREAL, June 30, 1893.

HARDWARE.

Trade in general has been fair during the week, and in several cases some of the orders have assumed too extensive a character to be properly classed as sorting up trade. This more especially applies to farmers' tools and implements, in which the movement has been large, all the houses reporting a good business. Wire screens, freezers, etc., have also furnished a fair movement, although not to the same extent as the above. Nails have been fairly active also, quite a few 25-keg lots of 100-lb. packages of wire nails having been moved during the week. In heavy hardware, however, business still rules on the quiet side so far as the spot movement is concerned. It is understood, though, that low prices on the other side have induced the placing of some large orders for tin plates, etc., for importation, the impression prevailing with a good many that values in this respect are about as low as they are likely to go. Payments have been much the same.

WIRE.—There is no change in wire, which rules as before.

NAILS.—The trade in nails has been fair on the whole during the week, several 100-lb. kegs of wire nails being moved. Prices are the same. The cut nail association meets this week in Toronto, but the trade here generally don't seem to anticipate any change.

CHAIN.—Business in chain has been quiet, the only business that we note being the filling of some fair orders on account of dealers in naval supplies.

TOOLS.—There has been a good demand for farmers' and harvesting tools during the week, the aggregate movement in scythes, whetstones, etc., being large. Other lines of this description did not furnish anything special.

PLUMBERS' AND BUILDERS' SUPPLIES.—Business in these has been dull as noted last week, and there are no notable features to mention.

WARE.—Tinware has been featureless but there has been some demand for enamelled preserving kettles, due to the approach of the season for this kind of work.

METALS.—The market for metals and the heavier lines of hardware rules as dull as ever. Very little was doing on spot except in Canada plates, and values generally are unchanged. For importation, however, the low prices have induced some good sized orders for future delivery, more especially in tin plate. The impression prevails that values are about as low as they are going to be and the fact is inducing some importers to go in before the market takes a change in an upward direction.

PIG IRON.—The spot market for pig iron furnishes no notable transactions, and the easy feeling already noted rules. We quote Summerlee, $17.90 to $18.25, as to size of lot, and Gartsherrie at about the same figure. Eglinton can be had at $17, and Carnbroe at $16.75.

BAR IRON.—The association meets in Toronto this week, but up to the time of writing dealers here had not been informed of any change in values, and they did not anticipate that there would be any.

SCRAP IRON.—Scrap iron has been featureless and dull, and we quote No. 1 wrought scrap unchanged at 15 to 16c

TIN PLATES.—There has been very little doing on spot in tin pleates, but we understand that some good orders have been placed for importation on the other side induced by the feeling that prices are not going any lower. We note purchases of 5,000 boxes on this account at figures which are slightly inside of the present spot basis. For business here we quote cokes $3.15 to $3.20 for round lots and $3.25 to $3.30 for jobbing business. Charcoal rules at $3.50 to $4.25, as to quality.

CANADA PLATES.—Canada plates still rule on the easy side owing to low offers that are being made, but the feeling is that the first cost of the article is about as low as it is likely to go. During the week several 100-box lots have been moved in the basis of $2.45.

There is no change in ternes, which remain as before, $7 to $7.50.

GALVANIZED IRON.—Some moderate lots of these have been moved at former prices, viz., 4 1-2 to 4 3-4c., and 5c. for No. 28 guage.

SHEET IRON.—Sheet iron remains much the same, and we note the sale of no round lots. Values rule as before, viz., $2.40 to $2.80, according to grade.

HOOPS AND BANDS.—Some fair sized lots of these have been moved for country account during the week. Prices remain as before, $2.35 per 100 lbs.

COPPER.—The copper market is somewhat steadier, and we now quote 12 to 13c. in a jobbing way, but 11 3-4c. would still move a round lot.

TIN.—Tin is a shade firmer in tone, and we quote prices 22 to 22 1-2c.

LEAD.—There is no change in lead, which rules as before, $2.90 to $3.

ANTIMONY.—Antimony is dull and unchanged at 12 to 13c.

SPELTER.—Former quotations can be repeated on spelter, which we quote at $4.75 to $5.

ZINC SHEETS.—A few small lots of zinc sheets have been moved at last week's prices, viz., $5 to $5.50.

GLASS.—There is no change in glass and business is dull. We quote first break as before, $1.35, and so on. Putty in bulk rules steady at $1.85.

LEADS AND PAINTS.—Business in leads and paints continues much the same. Linseed oil is firm at 60c. for raw and 63c. for boiled. We quote: Government standard, $4.75 to $5; No. 1, $4.50; No. 2, $4.25; No. 3, $4; No. 4, $3.75; dry white lead, 4 3-4c.; red lead, pure, 4 1-4c.; No. 1, 4c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, 60c. for raw, 63c. for boiled, for round lots.

NAVAL STORES.—There has been a fair demand for cordage, but while business is quite as good as last year the movement is rather small on the whole. We quote: Turpentine, 49 to 50c.; resins, $2.50 to $5, as to brand; coal tar, $3.75 to $4; cotton waste, 5 1-2c. for colored and 7c. to 10c. for white; oakum, 5 1-2 to 7 1-2c., and cotton oakum, 10 to 12c. Cordage, sisal, at 9 3-4c. for 7-16 and upwards, and 15c. for deep sea line. Pure manilla, 12c. for 7.16 and upwards, and 13c. for smaller sizes.

BINDER TWINE.—There has been a fair demand for binder twine, several good sized orders having been received from the West during the week. We quote the basis as before at 8 3-4c. for Red Cap and 9 3-4c. for Blue Ribbon.

CEMENT.—There is a good movement in cement both on local and Western account, and quotations are not quotably changed. English brands have been moved at $1.95 to $2.15, and Belgian, $1.85 to $1.95. Firebricks are in good demand at $15 to $19, as to brand, ex ship.

PETROLEUM.—There is a fair business in petroleum, the movement being equally as good as for the same period last year. Prices are unchanged as follows: Canadian at 11 3-4c. in shed at Montreal for round lots, and 12 1-2c. for five-barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots,

Refrigerators



Hardwood, Lined Galvanized Iron, Patent Locks, Four Sizes

These are highly finished and each season has shown an increasing demand. This year we are also making a cheaper line in above style, so as to meet all requirements.

Milk, Delivery and Creamery Can Trimmings.
All Sizes Body Stock for Cans and Cheese Vats.
Galvanized Iron Eave Troughs in 8 foot lengths.
Lithographed Tea Caddies and Signs.

We make and Supply everything used in the Stove and Tinware Trade.

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

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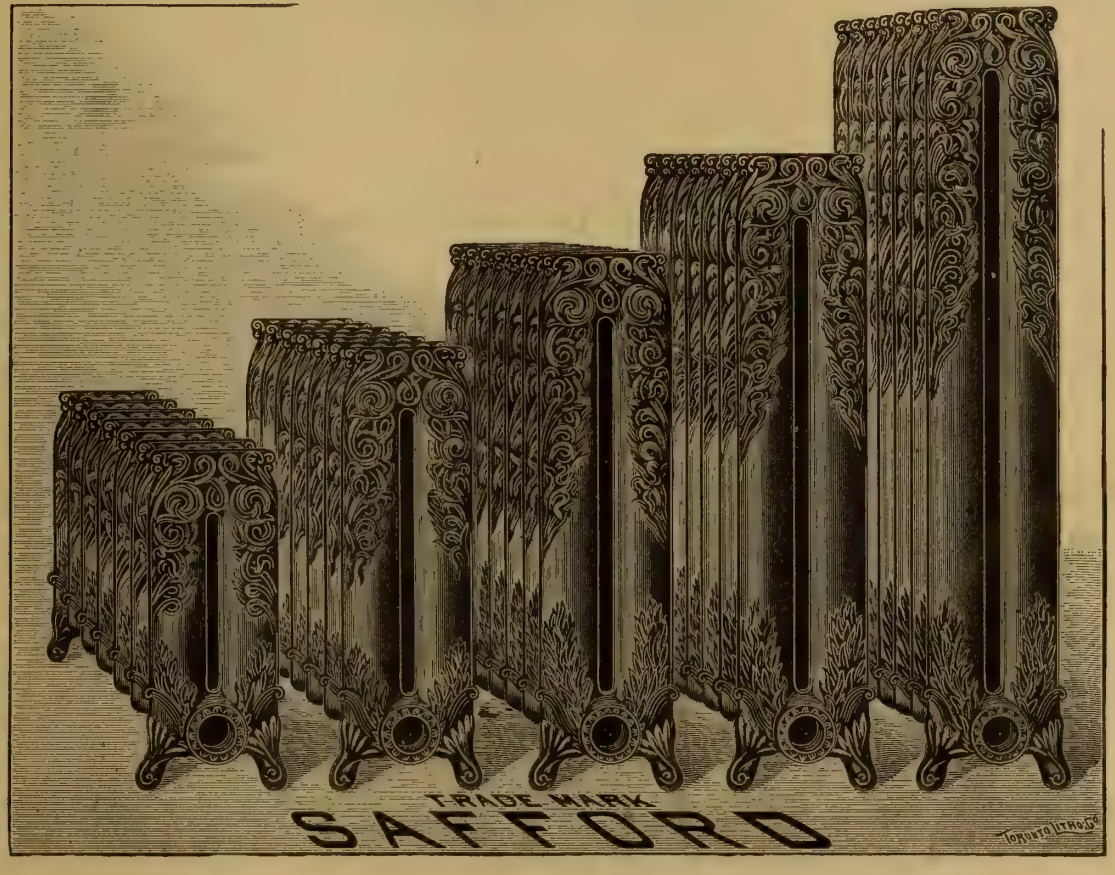
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BEST CONSTRUCTION

ALL SCREWED CONNECTIONS



RADIATORS PATENTED AND ALL DESIGNS REGISTERED

References: New Parliament Buildings, Board of Trade, Confederation Life Buildings, Freehold Loan Building University Buildings, Toronto; McGill University Building, Montreal; and many thousands of others which will be named in response to enquiries.

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THE Toronto Radiator Mfg. Co. LTD

TORONTO, ONT.

MONTREAL. QUEBEC. ST. JOHN, N.B. WINNIPEG. VICTORIA, B.C.

MONTREAL Markets continued

19c. in 10-barrel lots, 19 1-2c. in 5-barrel lots, and 19 1-4c. for single barrels, 2 per cent. off for cash; American benzine, 23c. to 25c.; Canadian benzine, 10 3-4c. Petrolea, 12 3-4c. for Montreal.

MONTREAL TRADE NOTES.

W. H. Cottingham & Co. have placed no less than four different big war canoes recently with the different rowing clubs of the vicinity.

Mr. Thorpe, of the Messrs. Pilkingtons, says that the case of the glass importers against the SS. Glengott will be argued in the course of a fortnight.

TORONTO MARKETS.

TORONTO, June 30, 1893.

HARDWARE.

Trade is absolutely without any predominating feature. Trade is fair for the season, although the time is getting near for the usual summer quietude, but it is uninteresting. Travellers' orders are good, but there is not much doing in the city. Country payments are also better than are those from the city The movement in garden and harvest tools is still exceptionally well maintained, but trade in this particular line is evidently receiving its final touches for the season. About the only change is a drop of ¼ to ½c. a pound in rope. The iron, nail, bolt and tack manufacturers met in Toronto this week and as far as known no changes have been made, the previous prices being confirmed.

WIRE—Quiet and unchanged and without any special feature.

ROPE—The Consumers' Gordage Company have issued a new list, which shows, compared with previous prices, a decline of ¼c. in Manilla and ½c Sisal. There is still a good demand for ¾, ⅞ and 1 inch sizes for hay fork pulleys.

NAILS—There are a good many wire and iron nails moving at unchanged prices.

CHAIN—There is nothing doing. A few enquiries have been heard and quotations given, but results are not yet apparent.

WARE—There is a continued good movement in brass, peerless and enamelled ware, and fair quantities of tinware are selling.

PLUMBERS' SUPPLIES—Not much doing.

BUILDERS' SUPPLIES—Demand is limited.

SCREENS—The season is about over for screen doors and windows.

GREEN WIRE CLOTH—Only an odd order or so is being received, the season being about over, but there is still a scarcity. Manufacturers say they will be unable to supply 18, 20, 22, 38 and 40 inch sizes for another month, and travellers have been instructed to sell no more of these sizes, as there will be little or no use for them after that. Trade in green wire cloth, so far as supplies are concerned, has been unsatisfactory all season.

TOOLS—There is still quite a good sorting-up trade being done in harvest and garden tools. In fact there are more selling in small lots than for years at this time.

METALS.

The metal market is quiet and without special interest. In pig iron there seems to be nothing doing. Bar iron continues to move fairly well at unchanged prices. Lead is easier, some large lots having changed hands at low figures.

PIG IRON—There have been a few enquiries, but they do not appear to have led to any business. Nova Scotia is quoted at $19 and Southern at $21.

Rogers, Brown & Co., Buffalo, report Toronto pig iron market as follows: The demand continues to be light but is well distributed. Conservatism is still the leading feature of the market. Prices are week but sellers are not pushing for business. We quote for cash f. o. b. cars, Toronto, in bond: IX Foundry Strong Coke Iron, Lake Superior ore, $15.20; 2X Foundry Strong Coke Iron Lake Superior ore, $14.45; 2 Foundry Strong Coke Iron Lake Superior ore, $14.20; Jackson County Silvery 1, $18.00 to $18.30; Jackson County Silvery 2, $17.30 to $17.80; Lake Superior Charcoal, $17 70; Southern Soft 1, $14.10 to $14.35; Southern Soft 2, $13.85.

BAR IRON—There is a fair seasonable business doing in small lots at unchanged prices, the manufacturers at their meeting here this week simply confirming the present basis of $1.95.

EASTLAKE
MANUFACTURED BY
METALLIC ROOFING Co
TORONTO
ILLUSTRATED CATALOGUE FREE
STEEL SHINGLES

TIN PLATES—There is a fair demand; stocks are ample and prices unchanged.

CANADA PLATES—Trade in this line is looking up, and prices are unchanged, all dull being quoted at $2.65, half-half at $2.75, and all bright at $2.80 to $3 per box.

GALVANIZED IRON—There is quite a good movement in case lots at 5 to 5¾c. for Queen's Head and Gordon brands.

IRON PIPE—There is some enquiry for sorting up lots.

CORRUGATED IRON—A few sales have been made, but the demand cannot be called good.

INGOT TIN—There is the usual demand for this without any change in price, 23½ to 24 still being quoted for small lots.

INGOT COPPER—Trade continues quiet and unchanged, prices ranging from 12½ to 13¼c. for small lots.

SHEET IRON—There has been an improvement in this line, demand this week being fair at 2½c. up.

ZINC SHEET—Still dull, although in another month the trade will begin to book orders for the fall trade. We quote as before, 5¾ to 6c. for 5 cwt. casks and 6 to 6¼c. for part casks.

ZINC SPELTER—There is nothing doing in this article, the large sales reported last week having seemingly satisfied the demand for the time being; 3¾ to 5¾c. is the idea for small lots.

LEAD—Weak, with sales of large quantities at very low prices; 3¼c. is quoted for large lots and 3⅝ to 3¾c. for small, but there would be no difficulty to get concessions on these prices.

ANTIMONY—Scarcely anything doing and prices are unchanged at 12 to 13 for Cookson's and 11 to 12c. for other makes, for small lots.

GLASS.

Demand is quiet with prices unchanged at $1.25 to $1.35 for first-break. There is a fair quantity of glass on hand.

"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

MARKETS—Continued

PAINTS AND OILS.

Trade continues fairly active, and for the month is better than a year ago. White lead is more enquired after, business in this line being brisk at the 4¾c. basis. Trade in prepared paints has, on the other hand, slackened off, although there is still a fair quantity selling in a sorting-up way. Prices remain as before. Varnishes are selling freely. Pure orange shellac, which a few weeks ago was advanced to $2 to $2.25, has dropped down to $1.90 and $2.05. Linseed oil is in fair demand at unchanged prices, namely, 60 to 62c. for raw and 63 to 65c. for boiled. It is still difficult to get delivery. Turpentine, the demand has fallen off some, but there is still a fair trade doing for the season, but in small lots only. Stocks here are fair. The foreign markets are a little stiffer, but here prices are unchanged at 45 to 47c. There is no feature to note in castor oil, and prices are unchanged at 8½ to 9c. In glue a rather better demand is reported. Demand continues good for Paris green and prospects are that it will continue so for some time. No complaints are heard regarding payments.

OLD MATERIAL.

The bottom seems to have fallen out of the market, offerings being liberal but demand almost nil. Wrought scrap is 10c. per cwt. cheaper, and a decline of 10c. is announced in borings and turnings. We quote Agricultural scrap, 55c. per cwt ; machinery cast, 60c. per cwt. ; stove cast scrap 40 to 45c. ; No. 1 wrought scrap 40 to 50c. ; No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c. ; new light scrap copper, 8c. ; heavy scrap copper 9c. ; old copper bottoms, 8c. ; light scrap brass 5½c. : heavy yellow scrap brass 7c. ; heavy red scrap brass 8¼ to 8½c. ; scrap lead 1½ to 2c. ; scrap zinc, 2c. ; scrap rubber, 2c. ; country mixed rags, 75 to 95c. per 100 lbs ; clean dry bones, 50 to 60c. per 100 lbs. ; borings and turnings, 10 to 15c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—Market demoralized. There is no enquiry, and while 5¼c. is being asked for good buff selections, less would probably be taken.

SKINS—Calfskins are dull and unchanged at 7c. for No. 1 and 5c. for No. 2. Lamb skins are quoted as before at 35c. and pelts at 20c., while wool skins are nominal at $1.25 to $1.50.

TALLOW—Quiet; jobbers are paying 5¼c. for rendered and selling at 6c. ; rough, unchanged at 2c.

WOOL—Easier. Dealers are paying 17c. for new washed fleece wool, 18 to 19c. for fine, and pure Southdown 20 to 24c., rejections 12 to 13c., unwashed 9 to 10c. The mills are still well employed, but while they are free purchasers in the country they are not taking much wool from dealers.

MARKET NOTES.

Pure orange shellac is cheaper at $1.95 to $2.05.

Manilla rope is 1-4c. and sisal 1-2c. cheaper.

Stewart & Wood report that everybody seems to be wanting "Medal" glue.

The London Foundry Company are making Lane's barn door hinges and tracks.

The Gurney Foundry Co., Ltd., have secured the contract for heating the public schools at Niagara Falls South ; also for heating the Bruce County Court buildings at Walkerton.

H. S. Howland, Sons & Co., report the receipt of a large number of orders for binder twine.

Some large sales of lead are reported to have been made at low prices on the Toronto market.

The iron, bolt, nail and tack makers met in Toronto this week. The prices already existing were confirmed.

A large sale of Rixford's harvest tools is reported by H. S. Howland, Sons & Co. The manufacturers cannot keep up with the demand.

The Gurney Foundry Co., Ltd., have just received an order from the Secretary of Public Works for a pair of their largest Oxford hot water boilers for the new post office at Vancouver, B.C.

The Gurney Foundry Co. shipped one of their largest Oxford Crown boilers to New Westminster, B.C., Tuesday last, where it will be placed in the public school.

The contract for the radiation of the College of Philosophique, Montreal, has been awarded to the Gurney Foundry Co., Ltd., of Toronto. Some 400 radiators will be required.

The Kemp Manufacturing Co. has issued this notice : On and after July 1st, the terms of sale on the following goods will be four months, or 3 per cent. cash discount if paid within thirty days from date of invoice : Stamped, japanned and pieced tinware, coal hods, wire goods, copper ware, copper pits, sheet copper, lanterns, oil stoves, bird cages, milk can trimmings and cans, house furnishing goods, tinners' trimmings, galvanized ware, sheet iron ware, stove boards, tin spoons, oilers, stove pipes and elbows, stove pipe thimbles, granite, agate and peerless ware, ironclad ware, onyx ware, blue and white enamelled ware, gray enamelled ware, enamelled ware, sheet and cast, of all kinds. Current monthly accounts will date from average date ; no cash discount will be allowed after thirty days.

AMERICAN MARKETS.

New York, June 30.

PIG TIN.—The drop in London of £2 10s. per ton, combined with the further decline in silver, and the almost stagnant trade in the country, had a depressing effect on our market, and tin for spot, June or July delivery was freely offered at 19.50, and August was offered at 19.85. After second call, there was more disposition to close up some short sales, and prices rapidly reacted, and at the close there was a firmer tone to the market.

COPPER.—Some private cables report rather lower prices ruling for copper in London, and the market is decidedly easier on account of the demoralized condition of silver.

SPELTER.—Quiet at 4.22 1-2c.

Copper and antimony are steady and lead is easier.

Pittsburg reports state that the only feature in the iron trade is the increasing pressure upon manufacturers, and the growing recognition of the fact that prices are too low for profitable operation. There is, in fact, a general winding up of business, simply because there is no money in it, and because there is no definite prospect of anything better. The scale question is being discussed with closed doors ; two meetings have been held. The case stands : The manufacturers offer $4 for puddling and a 20 per cent. reduction all round. The association demands last year's scale.



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A NEW HORSE RASP.

A new horse rasp has been introduced on this market. It is manufactured by Ager & Rich, of Lockport, N.Y., and H. S. Howland, Sons & Co., of Toronto are



sole agents for Canada. It is hand made and is guaranteed to be equalto Heller's celebrated horse rasp. The accompanying cut will give the trade an idea of what the rasp is like.

FINE STEEL.

One of the Western papers recently published a long and somewhat imaginative article in regard to the cutlery produced by the Japanese. One of the objections which experts have to this product of imagination is that they are not half as wonderful as the real facts would be, properly stated. For example: A friend of the writer some three years ago became possessed of a fine sample of a Japanese short sword. It had a sharp edge, as sharp as an ordinary pocket knife, though not as thin. After trying it in various ways in cutting paper and wood, an ordinary board nail was laid upon a piece of shafting for an anvil, and the sword was used to cut it in two. The edge of the sword was not marred nor injured, and apparently was as sharp as before the nail was cut. Such steel as that is a wonder. not because it cannot be made at the present day, nor because it cannot be made by civilized steel makers, but because it is so rarely used or seen. Just as good a quality could be had at any time if people were willing to pay for it. An example of this came up not long since in a Western city. A steel maker was turning out a remarkably fine grade of tool steel and charging a very remarkable price for it, something like four times as much as would be obtained for what would pass for the ordinary best steel on the market. There was a limited demand for it, and there was considerable curiosity among tool makers and others as to how such a quantity could be produced. One day someone asked the manufacturer how it was that he could make so much finer steel than any one else. His reply was a straightforward one. "You cannot make good steel out of poor stock. Come and look at the stuff I put into the melting pots and you will understand." He then took them out into the works and showed the finest Norway iron cut up to be used as material for his steel. "There," said he, "that explains the quality," Then some time later a customer complained that the price was too high. He remarked, "Well, that is my price." "But," said the customer, "I can get tool steel for 25 cents a pound." He said, "Then, go and buy it for 25 cents a pound; my price is $1." "But we would like to have your steel." "Then you must pay my price for it." So when his fine steel was sold he always received his very fine price for it.—N. Y. Metal.

IDEAS FOR HARDWARE DEALERS.

Some excellent suggestions may be found in the following article from the St. Louis Stove and Hardware Reporter:

"The question of how one's trade may be increased, is one of prime importance to every merchant, however successful he may be, and in no line of business is this subject more deserving of investigation than in the hardware trade. There is a spirit of conservatism observed in this line of business that is seldom to be observed elsewhere. Dominant prejudices and inherited ideas that controlled other avenues of trade have long since been set aside. Rigid classifications have been ignored, and the question as to what could be profitably handled has been the sole determining consideration in making up the stock in trade. This is notably true among dry goods houses. Every line of trade has been laid under contribution by the great department stores, and not the least sufferer from this departure has been the hardware trade. It is, therefore, an important consideration for the hardware merchant, not only how he can recoup himself, but how he may increase his business by a similar course of action.

Obviously, the first step is to get rid of the idea, altogether too prevalent, that there is something in the business inherently opposed to flexibility. Whatever force there may be in the philosophical speculation that the business tends to develop sterner stuff in the dealer in hardware than in other goods, is largely theoretical. There has been a notable expanse in the ordinary hardware stock in the last thirty years, and the only reason that it has not been greater is due to the conservatism based on the illusive theory referred to. The sale of nails was not long ago the exclusive prerogative of the grocery dealer, and tinware was an unknown article of the hardware line.

The broader term of house furnishing goods is employed by the larger stores to cover everything used in a house, and if the trend of such departures is not checked the hardware trade will be gradually reduced to the coarser staples in iron and steel. Without entering into any competition in the line of carpets, draperies and furniture, the hardware merchant may as readily avail himself of this comprehensive term as the dealer in dry goods, and there is no insuperable obstacle to his handling floor covering for the kitchen if he chooses.

The fact is, that novelties naturally belonging to the hardware business fall into the hands of other dealers, and are employed as leaders to sell their regular goods. When the sale becomes dulled, they are dropped, and the hardware trade is practically compelled to take them up. This is true because the trade permits it, not because it is necessary. There never was a period when so many household novelties in metal were offered to the trade. These include articles designed for use in the drawing room as well as the kitchen, and involves the precious as well as the commoner metals. Such material affords opportunity for a rich display as well as for a remunerative profit.

Another suggestion for the development of the hardware trade growing out of these facts, is that more care should be taken to attract the interest of the women of the household. This has already been done by some city retail dealers in stoves and occasionally in purely hardware establishments. As a rule, they are the autocrats in the selection of household furnishings, and yet comparatively few hardware stores attract them. In the arrangement of stock and the management of the storeroom the convenience or carelessness of the dealer is suggested rather than the convenience of a lady customer. Not long since a lady customer retired from a store greatly irritated by a torn and soiled dress to hunt for an article in a dry goods establishment that could have been readily obtained in any hardware store. A stove dealer said, not long ago, that he employed a man solely to keep his place clean, so that a lady would not soil her glove in touching any article in the show room. And, he added, it pays. There is enough such testimony to indicate that such a course is in the direction that the hardware dealer must seek for the improvement of his trade, and should not be deferred.

The deposits in the postoffice savings banks of the Dominion during May amounted to $669,710, and the withdrawals to $546,412. In the Government savings banks the month's deposits amounted to $289,179 and the withdrawals to $320,236.

The council of the Montreal Board of Trade has decided to postpone the formal opening of the new building until about September. This action was deemed advisable owing to the unfinished state of the building and the absence of a number of the members of the board, who in this warm weather spend their time out of town. The opening will be celebrated by a banquet and other festivities. A large number of delegates will be invited from the various cities in Canada and the United States. It is expected that the Earl of Aberdeen will also attend.

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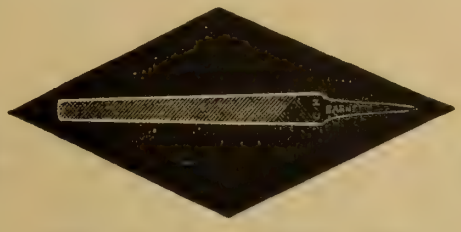
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CASE-HARDENING.

Case-hardening, explains B. F. Spalding in Age of Steel, is a process employed for producing a certain change in the surface of iron or steel. The nature of this change is to make the exterior hard, but the process is quite often undertaken simply for the purpose of producing a mottled appearance in various colors upon the surface of articles for the purpose of ornamentation, and for this purpose only, without regard to making the surface hard, and, in fact, with the design of producing the colors without altering the substance. In other classes of work it is the object of the process to both harden and ornament, then it is not successful unless it accomplishes both of these results.

The principle of case-hardening is the same as that of converting iron into steel by the old method of cementation. This is the method employed before Huntsman's time for making the steel employed by the cutlers of the European nations for all kinds of cutting instruments except, it may be, that some rough agricultural tools were made from steel produced by a direct process from the ore.

The principal of the cementation process is, that at a red heat in an atmosphere of gaseous carbon not only unites to the particles which come in contact with this gas, more and more of it, as they remain longer in its presence, but that this gas seeking to diffuse itself equally, only charges the outer particles of iron to a certain degree before being favored by the facility of the opening caused by heat, it passes on and unites to a less extent with the next interior particles. It is only a question of time, continuing with these conditions, when the whole interior part of the iron will be charged with carbon, or when the carbon shall have penetrated to any particular depth and have converted that portion of the iron into steel.

The process of cementation is carried on in "chests" or fire-brick troughs from 8 to 15 feet long, and 2 feet wide, arranged so that they can be heated and kept at a temperature of about 2,000 deg. F., which, according to Poillett's determination, is a dull orange. A bright cherry is 1832 deg., and a bright orange 2192 deg.

The iron which is to be changed into steel is flat, and not over three-quarters of an inch in thickness. The reason for this choice in shape is because the carbon can penetrate to the centre of a thin bar with greater expedition. Indeed, iron less than three-quarters of an inch is preferred, for it requires a week's time for a charge of this size to attain the required temperature and to acquire the proper degree of carbonization. It must retain this temperature for a week longer before the fires are quenched, and it is allowed to cool so gradually that another week is consumed.

Before the iron is placed in the chest a layer of coarsely ground charcoal is spread over the bottom; a layer of iron is then packed in with fine charcoal between the bars; over this layer of iron is placed another layer of charcoal, and thus, with alternate layers of iron and charcoal the chest is filled. A thicker layer of charcoal being on top is covered with sand or clay, and the sand ground from grindstones is plastered over all to thoroughly exclude the air.

In this chest, then, when it is heated from all sides by surrounding fire, the desired atmosphere of gaseous carbon is produced which occasions the changes intended in the substances so closely and intimately confined together within it. The wide bars are, from the nature of the case, more highly carbonized at the edges than in the centre. Some idea of the form of their carbonization may be obtained by examining a cross section of artificial ice, frozen in a mold, into which, in freezing, the cold, so to speak, has made its way in much the same manner that the carbon has entered the iron.

In case-hardening by the regular method, the pieces which are to be operated upon are enclosed in an iron box, packed in animal charcoal, and subjected to heat as long as may be necessary to convert an exterior thickness of the depth which may be required into steel, or if only the coloring is desired the heat is maintained only as long as may be required to disengage from the packing, or "brasque," as it is called, that unanalyzed substance which exhibits these colors, and fix them upon the surfaces of the pieces exposed for their reception.

Surface irridescence or peacock coloring, such as is seen on fine specimens of case-hardening, is due, according to Bauerman, to "the formation of very thin layers of one substance upon the surface of another, and therefore marks the commencement of alterations in the second. It is usually spoken of as irridescent tarnish, and is seen in many sulphides."

Some of the most beautiful specimens of this coloring I have ever seen have appeared upon smooth but unbrightened steel forgings scaled in water, and then annealed, closely packed, and not again exposed to the air before they were cold.

In order to secure the variegated colors with a fair degree of permanence on case-hardened work, it is necessary that the pieces shall remain hot long enough to part with the extra gloss of their polish, and be immersed in water directly from the box, before the air can strike them. Close observation of a piece taken hot from the case-hardening box will detect a light blue haze enveloping it; if the piece is poured immediately from the box at not too great a distance it will retain this, which is a portion of the atmosphere of the box which it attracts around it, until it enters the water, and will exhibit, when cold, the phenomena of coloring, but if the air drives away the haze and reaches the surface of the piece, the colors are lost, and the piece will look as if it was undecided whether to be black or white.

If the piece is poured before it has been in the fire long enough to lose its gloss, it will show the colors with a glossy brightness when it is removed from the water, and if it is oiled without too much rubbing, and placed in a glass case, it will retain for some time; they are, however, like the bloom of a grape and will not bear handling.

Animal charcoal is used in case-hardening in preference to vegetable charcoal because it has been found that its disengaged gases penetrate the iron with greater facility, probably on account of the wonderfully diffusive nature characteristic of nitrogen, of which it furnishes a greater proportion.

The greater amount of material used for case-hardening previous to 1860 was old leather in the shape of old boots, shoes, harness, and scraps from the leather workers, but about this time the gunmakers, who made the most use of the process, found that they were confronted with the circumstance that besides obtaining the colors they wanted, they were also getting their work galvanized with zinc, which they did not want. A little investigation disclosed the fact that boots and shoes were fastened with zinc pegs, and that when the leather was carbonized and pounded up for case-hardening, the zinc mixed with it and finally melted, or sublimed, upon the work.

The principal material now used is bone, which is ground in five grades, as an article of commerce, and ranges from bone meal, which is fine enough for the smallest articles, up to No. 5, which is coarse enough to case-harden locomotive work.

A good authority has said: "The action of the phosphate of lime upon animal charcoal is to isolate and individualize the carbon, and this makes the carbon particles specially and powerfully active." In Prof. Thurston's "Materials of Engineering" he says: "The hardness of iron increases with the addition of carbon, manganese, chromium or phosphorus," and states as the conclusion of Euverte, that "phosphoretted steel should not exceed 0.3 to 0.35 per cent of phosphorus, and in order that even this proportion may be admissable the carbon must not exceed .015 to 0.18 per cent." These conclusions point out the danger of using bone as a case-hardening material when the heat is too long continued. The use of fresh bone for a heat not to exceed three hours, at a temperature not much in excess of a cherry red—about 1,700 deg. Fahr.,—would probably exhaust the animal charcoal, and feed the iron with the mineral phosphate, but if the heat is continued longer it should be at a lower temperature and the bone should be coarse, or the material which hardens the iron will

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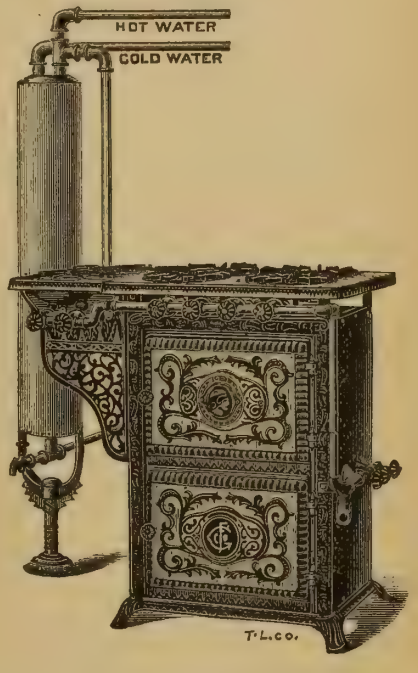
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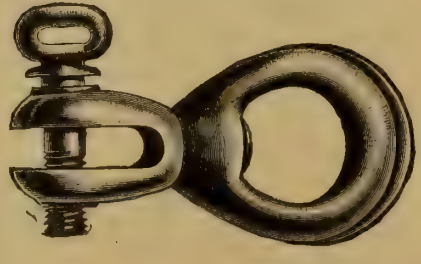
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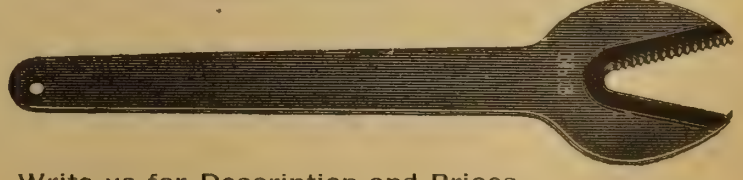
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also impair its tenacity. Fresh bones contain some 80 per cent. of mineral matter and water, and about 20 per cent. of animal matter, but when they have been through the digester of a fat rendering establishment, it would require several tons of them to furnish matter for a very small animal. It is, therefore, of importance that such material should be selected for case-hardening as is not already deprived of the properties most valuable for this purpose.

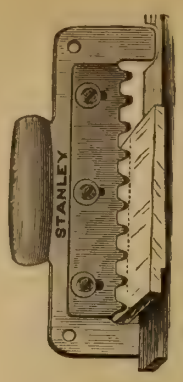
Besides bone, leather is still to be obtained, but with some trouble. The United States armory at Springfield, Mass., uses bone exclusively, but the fine case-hardening on the Smith & Wesson pistols, in the same city, is done with layers of burned leather, alternated with layers of bone. In the use of all materials, when case-hardening is done for colors, care must be taken to char the substance before it is used for packing, to such an extent that no smoke will be emitted from it in the box, as smoke will ruin the effort, the work will appear murky and the colors rub off.

Prussiate of potash, chromate of potash, and cyanide of potash are used to produce the effect of case-hardening, by forming a hard skin upon the surface. Their action is the most prompt of any substances used for the purpose. Pieces of iron heated in the open fire and sprinkled with these, and then quenched in water, will become hard. The most effective is the cyanide; it melts and flows on hot iron with great facility, and has the power to penetrate and convert its surface into carbon steel. The chromate is not quite as prompt in its action, but, used as packing, with sawdust, for case-hardening, it introduces the element chromium, which has hardening properties of its own, besides the carbon which it also conveys; it may be used with the prussiate or ferrocyanide.

The kind of material selected for case-hardening must be determined by the quickness of the process, and depth of hardening required, one or the other of the salts of potash may be used for the quickest work, leather from one to three hours, fine, and the coarse granulated bone may be employed as the time ranges from one to twenty-four hours. Any of these may be mixed together to graduate the time in which they may remain hot, and continue to supply a suitable atmosphere in the space which encloses them with the pieces to be hardened Beyond a period of twenty-four hours, the dependence would probably be upon vegetable charcoal, salt, saltpetre, and ferricyanide of potassium.

If fine coloring is to be desired on work which must be deeply case-hardened, it is not difficult to accomplish the two ends at one heat, but the pieces may be heated before polishing, for as long a period as will suffice to carbonize them to the required depth, and they may then be allowed to cool without quenching, but not brought in contact with the air until they are below a red heat. After they are cold they are polished and subsequently heated long enough only to gain permanent colors, then, when they are quenched, they will also be hardened as deep as is required.

Good tough iron well case-hardened retains a fair proportion of its toughness, and hence is preferable to steel in many cases where it is desirable to have a capacity to resist the breaking strain of shock, coupled with a hardness of the surface which will endure wear, shield from indentation and resist abrasion.

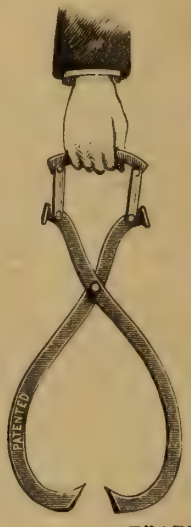


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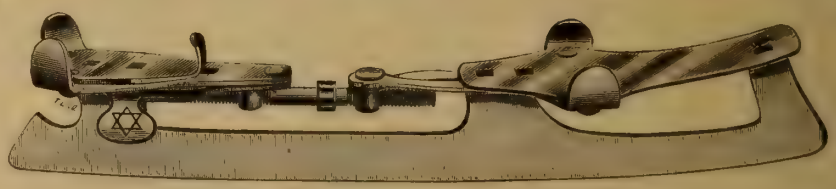
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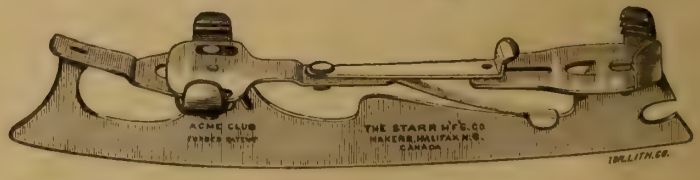
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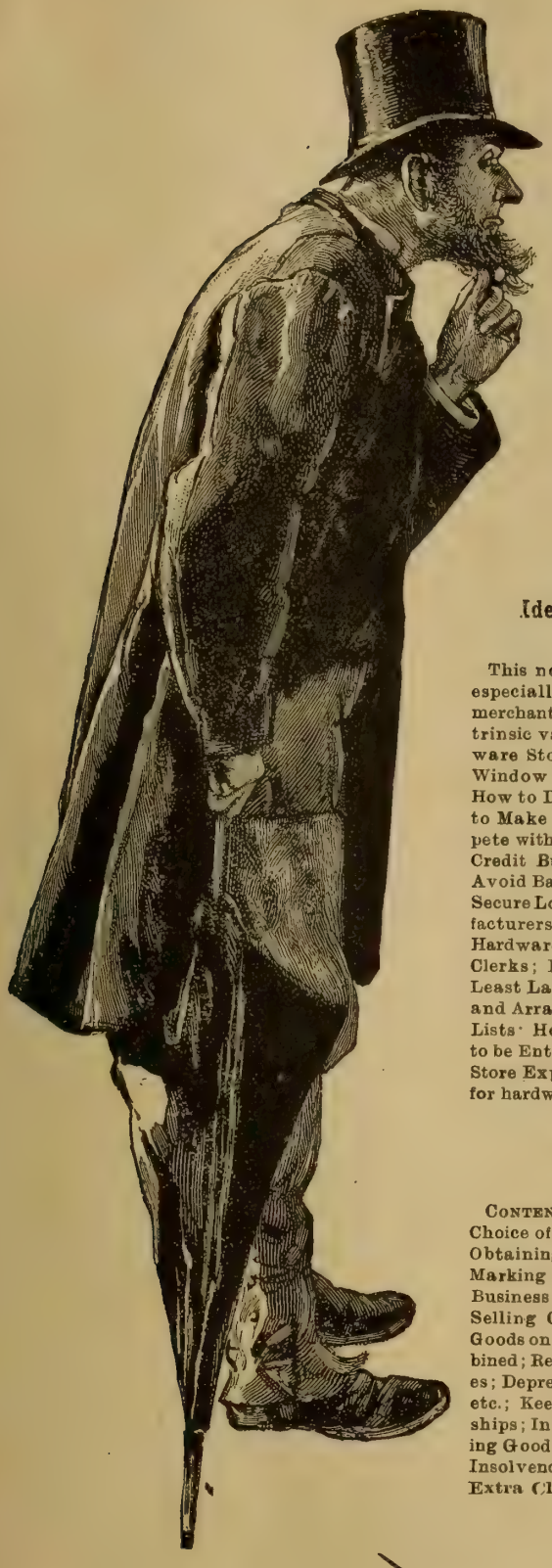
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THE J. B. McLEAN PUB. CO., LTD.
10 FRONT ST. EAST,
TORONTO.

BUSINESS CHANGES.

SALES MADE AND PENDING.

The stock of Neil Black, coal and wood, Toronto, has been sold.

The furniture stock of F. X. Roy, Montreal, has been sold at 53½c. on the dollar.

The stock of N. Wilson & Co. was sold Monday in London to J. H. Slater, at 50 cents on the dollar.

The stock of P. Therein, Jr., general merchant, St. Antoine Abbe, Que., has been sold at 65c. on the dollar.

The foundry of T. L. Moffatt & Son, foundrymen and store manufacturers, Markdale, is advertised for sale.

The stock of J. P. McCuaig, general merchant, Dalhousie Station, Que., has been sold at 67½c. on the dollar.

The effects of the French Co-operative Co., general store, Northfield, B.C., are advertised for sale by tender.

The general stock of Antoine Lachamhe and L. H. Bauchard, St. Etienne de Bolton, Que., is to be sold to-day (Friday).

The stock, etc., of the wholesale hardware firm of William Darling & Co., Montreal, is advertised for sale by auction July 4.

The general stock of W. S. Given, Paisley and Tiverton, is to be sold by auction, July 4. The stock of Mrs. E. Watters of Thetford Mines is to be sold the same day.

PARTNERSHIPS FORMED AND DISSOLVED.

B. Mooney & Sons, builders, St. John, N. B., have dissolved.

Baucher & Laponte, carriage makers, Latbiniere, Que., have dissolved.

The Chatham Wired Hoop Co. (Ltd.) has been granted a charter of incorporation.

The La Force Pneumatic Bicycle Tire Co. (Ltd.), Toronto, is applying for incorporation.

The Calgary Light, Power and Healing Co. is seeking incorporation. So is the Edmonton Electrical Co.

J. C. Rose and William Sterling Laflamme have been registered to carry on business in Montreal as manufacturers' agents.

P. C. Blouin and P. Blouin have formed a partnership to carry on business as general merchants, uuder the style of P. C. Blouin & Frere, St. Jean D'Orleans, Que.

The Standard Ice Machine and Refrigerating Co., of Toronto (Ltd.), has been granted charter of incorporation. So have the James Hay Co. (Ltd.), furniture manufacturers, and the Bain Waggon Co. (Ltd., of Woodstock.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

George Dalley, coal and wood, Toronto, is financially embarrassed.

W. J. Christie, general merchant, Little Bras D'Or, has compromised at 40c. on the dollar.

Robert Lindsay general merchant, Dougastown, Que., has compromised at 25c. on the dollar cash.

Pritchard & Blair, general merchants, North Wakefield and Zazibazud, Que., are offering to compromise at 60c. on the dollar.

H. F. Switzer, real estate agent, Midland, has assigned to E. R. C. Clarkson. His liabilities are about $11,000, and exceed his assets about three times.

Thomas Coulter, coal and wood, Toronto, has assigned to Henry Barber & Co. His liabilities are estimated at $35,000. During the past week he sustained heavy losses by the failure of other firms.

Joseph Little & Co., coal and wood, 868 to 872 Yonge street, have assigned to J. R. E. Winters. The liabilities are $5,625, and the assets nominally $6,000, of which, however, a large portion is represented by bad and doubtful book debts.

M. E. Gouertin and F. L. Bourgeois have been registered as partners to carry on business in St. Hyacinthe, Que., as general merchants under the style of S. Bourgeois & Co.

CHANGES.

The B. C. Carrage works of Vancouver, B. C., have sold out to James Duke.

J. C. Richardson & Co., general merchants, Beeton, have sold out to F. T. Andrews.

Sheriff Mowat has sold the stock of lumber belonging to the estate of Davidson & Kelly, Toronto, valued at $900, to Mr. Meaney for 70c. on the dollar.

DEATHS.

Peter Belanger, contractor, Ottawa, is dead.

J. W. Proctor, general merchant, Ottawa, is dead.

Ross Hammond, general merchant, Lockeport, N.S., is dead.

Arch. D. White, of Archibald White & Son, Charlottetown, P.E.I., is dead.

George Leslie, sr, nurseryman, Toronto, is dead. Deceased was in his 90th year.

FIRES.

Schleihauf Bros., saw mill, West Lorne, Ont., has been burned out.

Cullis Bros., saw mill and stave manufacturers, Huron Co., has been burned out. Loss about $2,500.

H. W. Wilson & Co.'s store, Sparks street, Ottawa, was damaged to the extent of $5,000 by fire Monday. The loss is covered by insurance.

HOW TO AVOID WASTE.

The following is the third of a series of articles on "Waste in a Store, and How to avoid it," that have appeared in The Iron Age:

A careful business man tries to avoid wasting anything useful as much as possible, not merely alone for economy's sake, but also from principle. It is wrong to let any substance, whatever it may be, go to waste, instead of turning it into use. Careful husbandry means to apply everything to its proper use, and is therefore the source of order, and without order there can be no success—no lasting one anyhow. A careful salesman will, without showing any niggardly disposition, do all he can to turn everything into use, and never forgets that the smallest sales are the ones which naturally bring the highest percentage of profits; purchasers who have any common sense do not expect it any other way. It would, therefore, be foolishness not to charge for trifles out of a false sense of liberality or chevalierly impulse. There are exceptional cases, though, where a certain display of liberality is well placed. It is a safe rule to remember, notwithstanding, that everybody who tries to make a living by selling merchandise, that goods are kept in store to bring financial returns and not to be given away as little tokens of friendly feeling.

In weighing or measuring articles which you sell you must be just, but need not be liberal. To do so it requires some skill, as it looks very mean if you make your efforts at strictness too noticeable. A salesman who takes out a few nails to drop them back again, and maybe repeats this, gives the impression of trying to treat his customers rather niggardly and will drive them away, by and by. It requires a good deal of practice to use a scale in such a way that, without your giving anything more than the strict weight, you create the impression of liberality. In measuring goods with a yard measure it is the same thing; it demands practice, and the first rule should be exactness and justice to both sides concerned—the seller and the buyer.

Economy can further be practiced by using your wrapping paper carefully and by never taking any more than is necessary for immediate use, also by keeping it as much as possible in a cool place, out of draft, to prevent it from getting too brittle and thereby weak. Goods which you receive and unpack have in most cases their wrappings, boxes or twine well enough preserved that they can be made to do service once more, and there are always some spare moments in any salesman's business hours which he can utilize by making such odds and ends fit to be used over again.

In many places of business it is necessary to have a light burning even during daytime, as without it desks or counters or storage rooms would be too dark to work in. Such lights should always be turned low if not really wanted for work. You will be astonished what a difference it makes after the end of a month in your gas bill if you mind your gas lights carefully.

In every packing room there might be a convenient hook fastened in the neighborhood of the packing counter or table, on which you should hang all the ends of twine which can be used over again, while a convenient space should be found for your odds and ends of wrapping paper and for your used boxes, none of which need go to waste.

Empty pasteboard boxes will form very practical and welcome receptacles for nails and different hardware. Mechanics who have to work outside prefer them greatly to paper wrappings. You will save by so doing the outlay for new wrapping paper and gratify your customer besides. Try to get rid of remnants of goods also, even if you have to sacrifice a cent or two. If, for instance, you can sell a remnant of picture wire, let us say one and three-quarter yards, it is more practical than if you would sell two yards which you would have to cut off from the piece.

It is also true economy to try and sell the last articles out of a lot rather cheaper than the regular price. This is wiser than to keep them and have them thrown into the background by the new stock, which always looks fresher and more inviting.

TORONTO CUTLERY CO.,

M. MAYER, Propr.

65 and 67 Yonge Street, Toronto

Imperial Razors

Joseph Allen's NON-XLL Cutlery

T. C. Co.'s Shears and Scissors

G. A. Mix & Co.'s Chisels

The Most Complete Lines of all Kinds of Cutlery in the Market.



S.S. SMOKELESS POWDER is the best Made by the Smokeless Powder Co., of London, Eng. A stock kept in Montreal. 25 lb. Drums, 2 lb. Cannisters, ½ lb. Cannisters. Send for Prices. **WILLIAM DARLING & CO.**, Wholesale Hardware Merchants, 30 St. Sulpice Street, Montreal.

A FEW REASONS WHY

You should Keep your Stock fully Assorted With

Boeckh's Superior Brushes

They are always reliable and as represented.

They are guaranteed in every particular by the manufacturers.

They are made of the very best material and workmanship

They are sold at closest possible prices.

They are finished and put up in neat and attractive shape.

They are well known throughout the Dominion and are popular with all classes of consumers.

They are handled by all leading Hardware and Paint and Oil trade.

See that the name "BOECKH" Is on every brush.

Boeckh's Flexible Bridled Brushes.

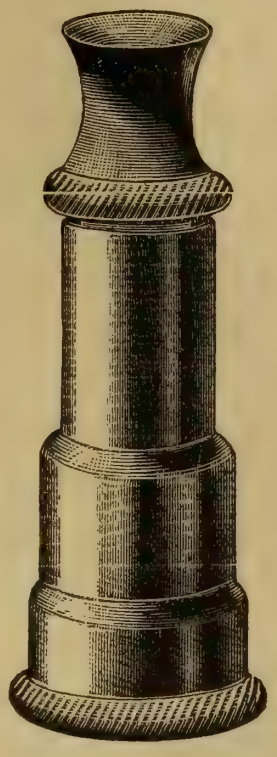
Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

TORONTO, - CANADA.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it

It is impossible for this pipe to get out of order

Give it a trial and you will use no other.

Hamilton Brass Manufacturing Co.

HAMILTON, ONT.

"Favorite"

Stoves and Ranges

Announcement . . .

WE beg to advise the Stove Trade of Canada that we have purchased the entire line of patterns and the stock-in-trade of the Chown & Cunningham Co., Limited, of Kingston, Ont. Orders and inquiries for the above mentioned line of Stoves and Ranges, and for repairs for same, as well as for the miscellaneous goods hitherto supplied by the C. & C. Co., should now be addressed to us at Brockville, Ont., and will have prompt and careful attention. Respectfully,

The James Smart Manfg. Co. Limited

Brockville, June 27, 1893. BROCKVILLE.

MANUFACTURER AND JOBBER.

The question is often asked whether it is more profitable to engage in the manufacture of stoves or to become a jobber.

At the first glance this question appears to the average reader one of very easy solution, with the advantage, if any, greatly in favor of the manufacturer; but to be as brief as possible without going deeply into figures, the writer, who has had some experience in both branches (from a financial point of view) is inclined to favor the jobber, for the following reasons: In the manufacture of stoves, with its large amount of invested capital, from the erection of the plant, its completion and in complete running order, the manufacturer's life is anything but rosy. His associates must be men of thorough practical knowledge, sound judgment and good readers of human nature.

The necessity of keeping in stock a large amount of his product, in and out of season, ready at a moment's notice to meet the demands of the dealer, requires large amounts of capital, which is practically sunk until fall. He at times (not always) relies on the suggestions made by his travelling men for such alterations and improvements in patterns which from their observation and judgment are warranted. He is, or should be, careful not to sell directly or indirectly to the consumer, else the dealer stigmatizes him as a robber. In fact, a thousand and one complaints and annoyances fall to his lot, which require judgment, skill and tact to surmount. But aside from the above facts, the manufacturer is supposed to have sufficient safeguards thrown around him by his association, which fixes and regulates his prices to meet all necessary requirements, yet from the very formation of his association it has been known to be unstable. Outside competition, no doubt, is an important factor in the above complication, but it can undoubtedly be traced to self-interested zeal among the different members themselves rather than to any outside influence. The position of the manufacturer appears to be getting more and more uncertain. It is quite noticeable to the jobber that the tendency of the manufacturer is to enter into competition, noticeably in gasoline, oil and gas stoves, thus showing a want of stability in the manufacture of his own product.

But the jobber, outside of his original investment, situated as he is with an open market from which to select his numerous wares, has none of the above obstacles to contend with. His judgment in the selection of marketable goods must be broad and liberal, a man of far-reaching capability, quick to grasp and hold a good thing when he sees it. It must be borne in mind that it is an utter impossibility for a jobber to handle with profit stoves exclusively. In the selling of stoves, side lines form an important adjunct. They are, in fact, the bulwarks of his business, for what he loses on one he gains on another. Besides, he has four seasons in which to dispose of his wares, whereas the stove manufacturer has only one. His stock must be kept constantly replenished, for in this, one of the most important essentials, rests his success. With his various and unlimited resources at command, his position when placed as an antagonist to the manufacturer becomes formidable. His position in the market becomes more tenable in proportion to any weakness displayed by any association or combination. There should be the utmost reciprocation, as far as mutual interests are concerned, and closer ties binding manufacturer and jobber for mutual benefit.—E. W. Belson in The Metal Worker.

CHIMNEY CONNECTIONS.

The cold winter just closing has universally increased the use of the oil and gas stoves, as we have had occasion to remark several times, and with their use has come a danger which is not so generallly recognized as it should be. With good combustion neither gas nor oil stoves produce any odor, and people are prone to forget that all the products of combustion are discharged into the room. Only a few weeks ago the newspapers recorded the death of a young man in a bath-room, where he was found lifeless within half an hour of the time of entering. The water for the bath had been heated by gas apparatus. The bathroom was without ventilation, and the whole of the product of combustion was discharged into the room. People would never think of doing a large quantity of heating by means of a coal furnace, or a coal stove, and allow the gas and smoke to come directly into the room. There is sulphur enough in the ordinary coal smoke to give a warning of the danger. The disagreeable quality of the gas is sufficient to drive people to a chimney connection. Gas and oil stoves can be used with perfect safety in rooms if a little attention is paid to ventilation at proper times. This is shown by the fact that we use lamps and gas burners without danger, and have done so for years. If people will bear in mind the fact that the bases from these stoves and heaters must be gotten rid of and not allowed to stay in the room, there would be no practical difficulty whatever. In fact, such stoves are no more liable to cause death than the ordinary coal stoves. Even the latter (as is shown by a dispatch in the daily papers) recently have produced asphyxiation, and the wise reporter, in commenting on it, says that a bad stove was blamable for the deaths. He then goes on to say that the draught of the stove had been cut off, and the doors opened in such a way as to throw all the gas into the room. A more reasonable comment would have been, "death from criminal ignorance." In all cases where a large gas or oil stove is used, it is safer to have a chimney connection, and this is not at all difficult, because the chimney pipe can be of very small diameter as compared with that for a coal stove.—Ironmonger.

BURNING TIN.

The metal tin can be burned as easily as paper, and to do it makes an interesting parlor experiment. A candle, blowpipe and tin foil are necessary. With the blowpipe direct the flame of the candle against a strip of tin foil, and it will readily take fire and burn with a brilliant light, the melted incandescent globules falling to the table and dancing about in a very curious manner. It will be noticed that the product of the combustion of the tin is a white powder, the oxide of tin, and it was observed many years ago, that this calx, as it was called, weighed more than the original tin. This simple observation was the beginning of a long series of investigations which finally led to the discoveries of Priestly, Scheele and Lavoisier, and laid the foundations of the modern science of chemistry.—The Manufacturers' Gazette.

POINTS FOR FOUNDRYMEN.

The following hints on mending holes in castings are given in Age of Steel: The first filling is a cement, composed of sulphur in powder, 1 part; sal-amomoniac in powder, 2 parts; fine iron borings, 80 parts. Make into a thick paste and fill the holes. These ingredients can be kept separately and mixed when required. Another composition is made up of sulphur, 2 parts; fine black lead, 1 part. Melt the sulphur in an iron pan, then add the lead; stir well and pour out. When cool, break into small pieces. A sufficient quantity being placed on the part to be mended can be soldered with a hot iron.

To fill holes in castings, take of lead, 9 parts; antimony, 2 parts; bismuth, 1 part. Melt together and pour in. This mixture expands in cooling.

Mr. Charles W. Sisson in his "A B C of Iron," gives these two tests for determining sulphur in coke:

1. Dip in water and allow to dry in air. Sulphur will show in rough spots like iron pyrites.

2. Nearly every foundry uses sulphuric acid or oil of vitriol in the wood pattern shop. Pour a little of it on a piece of coke, and if the latter is high in sulphur the odor will be very perceptible.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

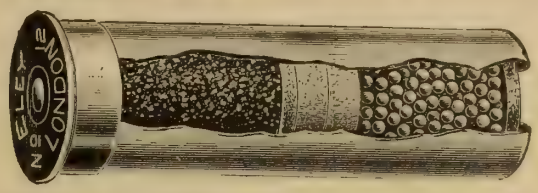
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CANADIAN CARTRIDGE



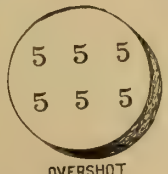
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ELEY'S GUN WADDING


BLACK EDGE


THICK FELT


PINK EDGE



OVERSHOT


CREASE-PROOF

Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. **Wholesale Only.**

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

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"ETNA"



. . HOT
. . WATER

BOILER

We claim is perfect. It is the original Round Boiler, patented by U. Beaupre, Dec. 1st, 1880 and May 2nd, 1889. Each year improvements have been added; and to-day it stands at the head.

We are willing to give any guarantee necessary to protect Architects or Contractors, that the Boiler will do all we claim for it.

The Boiler costs less than those of our competitors, and we will assume all risks.

We are in the field to stay and are bound to push this Boiler to the top rung of the ladder.

The Boiler previous to our purchasing it, had never been properly advertised or pushed, consequently, is to-day not as well known as some other makes.

Since buying out the former maker the sales have increased over 200 per cent.

If you have not a cut of same, drop us a card and we will be happy to forward one with full particulars.

As we said before, the Boiler is perfect, the price less, and we will guarantee it in every particular.

We have also bought most of the Grand Universal line of Patterns from the Estate of J. M. Williams & Co., of Hamilton.

We can supply all Repairs at the Regular trade price.

We still make the old reliable line of "Leader" Stoves.

Kindly remember us when any thing we manufacture is needed by you.

Wm. Clendinneng & Son, 145 to 171 WILLIAM STREET MONTREAL QUE.

Cutlery

SPECIAL VALUE IN

Dickinson's "Damascus Blade" Carvers.
Dickinson's Improved Ivoride Tables, warranted not to shrink or discolor.
Joseph Rodgers & Co.'s best quality Pen, Pocket, and Butcher Knives.

. . . SAMPLES now ready for Fall Trade.

STEEL. Full stock of Jessop's warranted Tool Steel, at lowest prices. . .

A. C. Leslie & Co., Agents

MONTREAL and TORONTO.

You can lose more than we do by not subscribing for this paper.

MUNN'S LIQUID GLUE

IS THE BEST.

Kennedy Bros., Agents

101 Bay Street, TORONTO.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.

GALVANIZED SHEET IRON. SP



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucpan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	23½
trip "	25, 25½

Tin Plates—*Charcoal Plates, Bright.*

M.L.S. equal to Bradley	Per box
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 25 4 50
I.X., "	5 25 5 50
I.X.X., "	6 25 6 50
I.XXX., "	7 25 7 50
D.C., 12½ x 17	3 75 4 00
D.X.,	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

Cokley Grade—	Per lb.
.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6¼ 6½
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¼ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2⅞, 2¾
26 "	2¾, 3
28 "	3 , 3¼

Canada Plates.

Blaina	½ bright 2 75 ....
Abercarne	2 75 ....
Lion	....

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5¼, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5¼, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4¼ 4⅝
" ⅜ " "	4⅝ 4⅞
" 7-16 " "	4¼ 4½
" ½ " "	3¾ 4
" ⅝ " "	3¼ 3⅜
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 12½ 0 13
Lake Superior	0 13 0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 19½ 0 21
" 35 to 45 " "	0 17½ 0 18
" 50 lb and above per lb	0 16½ 0 17

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 05 0 05½
Domestic "	0 04¾ 0 05

Zinc Sheet.

5 cwt casks	0 05¾ 0 06
Part casks	0 06 0 06¼

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¾ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 17 0 19
Standard	0 16 0 18
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 13
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	4 75
No. 1 Do. "	4 50
No. 2 Do. "	4 25
No. 3 Do. "	4 00

Prepared Paints.

(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red " "	1 50
Venetian Red, (best) "	1 80 1 90
English Oxides per cwt	3 25
American " " "	2 25
Canadian " "	1 75
Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure, 8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 70
Extra " "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	2 00 2 25
Hard Oil Finish	1 30
Oil Shellac	1 40

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 45 0 47

Castor Oil.

Best, per lb	0 08½ 0 09

Cod Oil.

Cod Oil, per gal.	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet makers	0 17 0 18
White	0 16 0 17
London Town	0 7½ 0 08½
Gelatine	0 22 0 27
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18
Chisels—*Socket, Framing and Firmer*
American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 0

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 5

Sledge

Canadian, per lb..... 0 12½ 0

Ball Pean.

English and Can., per lb . 0 25 0

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross..... 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c
" Shepard's Noiseless, dis. 60 p.c
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05¼
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½
Per doz. sets
Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.
Per doz. pairs
Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

Philadelphia 1892 Improved

7½ inch Wheel. 4 Blades.

12 in.	14 in.	16 in.	18 in.
$4.40	$4.65	$4.90	$5.40 list

LAWN . . MOWERS

The Woodyatt 1893.

10½ in. Wheel. 4 Blades.

12 in.	14 in.	16 in.	18 in.
$6.75	$7.00	$7.50	$8.25 list

Liberal Discounts to Trade, and Prompt Shipments Guaranteed.

BOWMAN, KENNEDY & CO., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 6 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   - Basis—50 to 60 dy 2 30
   - 40dy 2 35
   - 30 dy 2 40
   - 20, 16 & 12 dy 2 45
   - 10 dy 2 50
   - 8 & 9 dy 2 55
   - 6 & 7 dy 2 70
2. American Pattern Only
   - from 4 to 5 dy 2 90
   - 3 dy. (lath) 3 30
3. Canada Pattern Only
   - from 4 to 5 dy 2 80
   - 3 dy. (lath) 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 35 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross 1 00 4 25
" Carpenter 2 25 3 60

Picks

Per doz 6 00 9 00

Picture Nails.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p. c.
Button's Imitation, per doz 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz 1 35 2 00

Pruning Shears.

Per doz 4 00 5 50

Pulleys

Hothouse, per doz 55 1 00
Axle. 22 33
Screw 27 1 00
Awning 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, 1bs 2 50 2 75

Rail.

Barn Door, per foot 3 3½
Sliding Door, " 3½ 3⅝

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

Per lb.

	Sisal.	Manilla.
7-16 in. and larger..	9½	9⅝ 10¾ 11
¼, 5-16, ⅜ in.....	10	10½ 11½ 11½
Cotton, per lb.....		18 20
Russia Deep Sea, per lb..		13½ 16
Jute ..... " ...		08 08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb 1½ 1⅝

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.
Hack, complete, each 75 2 75
" frame only 75

Saw Sets.

Per doz 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P,, 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen 1 25

Soldering Irons.

Per lb 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 50 per cent
" " tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 51½ per cent.
Channel nails 5c. lb. off list.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9 00

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 50
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4½ 4⅝
" 4 " 4 & 6 " }
" Plain twist, 2&3 wires 4½ 5
" Steel thorn and ribbon .....
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz 5 80 7 0
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

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SEWER PIPE
WATER PIPE
INVERT BLOCKS

Canadian, Scotch or American

Write for Prices to

THE COLMAN-HAMILTON CO., LTD.

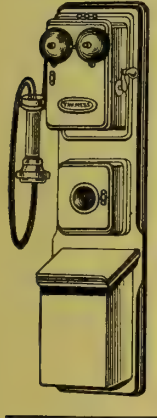
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Also for Fire Brick, Fire Clay, Gas Retorts, Gas Works Supplies, Portland Cement, Keen's Cement, Roman Cement, Mortar Colors.

Phone. 3763 Mention this Advt

TELEPHONES

Private Line Installed and sold outright.



Why pay rental when you may own your telephones?

Sample letter from a well known firm using a large number of our instruments.

WALKERVILLE, ONT.
Jan. 9, 1893.

T. W NESS, ESQ.,
Montreal.

"Pleased to say that both the Switch Board and Telephones bought from you have given entire satisfaction."

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Manufacturer of Telephones and Electrical Supplies. . .

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Manufacturers of

1, 2, 3 Bushel

Grain

AND

Root

BASKETS

THE OAKVILLE BASKET CO.

COWAN & BRITTON

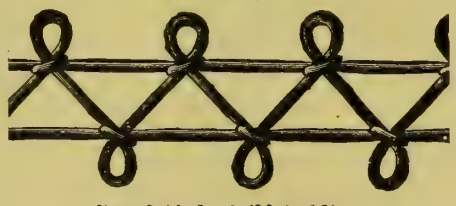
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Nails, Hinges AND Buts

Manufacturers of every description of these goods.

THE HATHEWAY PATENT FENCE WIRE.

Pat. Nov. 19, 1889.



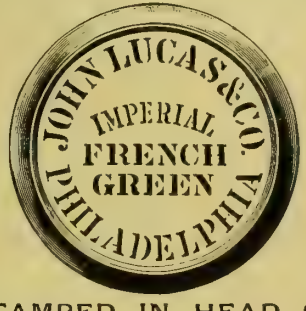
Above Cut Is One-half Actual Size.

The Hatheway Patent Fence Wire, the most popular fence wire throughout the United States, and fast gaining that position in the Dominion of Canada, as it contains all the requisite qualities of a fence wire, being hand ome, strong, visible—seen at a long distance; will not sag or get out of shape; allowance for contraction and expansion, heat and cold; being broad, requires less strands to make a complete fence; easily put up, splices itself; will not injure stock. Put up in spools of 120 lbs. each. For sale by all the leading hardware stores in the Dominion.

Manufactured by THE COLLINS MFG. CO., 81 Adelaide st. E., Toronto.



NONE GENUINE WITHOUT THIS BRAND



STAMPED IN HEAD OF EVERY PACKAGE

Magee Mfg Co.

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Manufacturers of all kinds of

Lumber and Log Rules
Counter Measures, etc.

IMPROVED

Eclipse Horse Poke
Navey Barrows . .

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Special Lines Made to Order
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Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St, Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 x 4 Barb Plain Twist and Strip Fencing

And Staples for same.

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ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

YOU WOULD BE GREATLY SURPRISED

- - IF YOU GOT - -

As much light from one lamp as you get from the half-dozen you now have. Such will be the case if you use The "PITTSBURGH"

Made in

- HANGING -



- VASE -

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- BANQUET -

The "Pittsburgh" burner is made in two sizes. The small size is 50 candle power, while The Mammoth Hanging Lamp is 300 candle power, lighting a room 40 ft. square, brilliantly. Write for Primer.

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Sole Agents for Canada

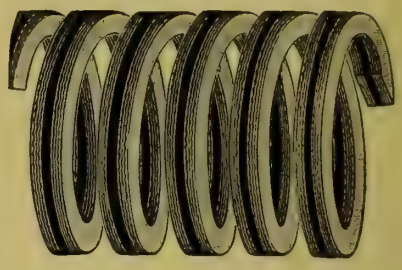
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BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7 16, 1-2, 9 16, 5 8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

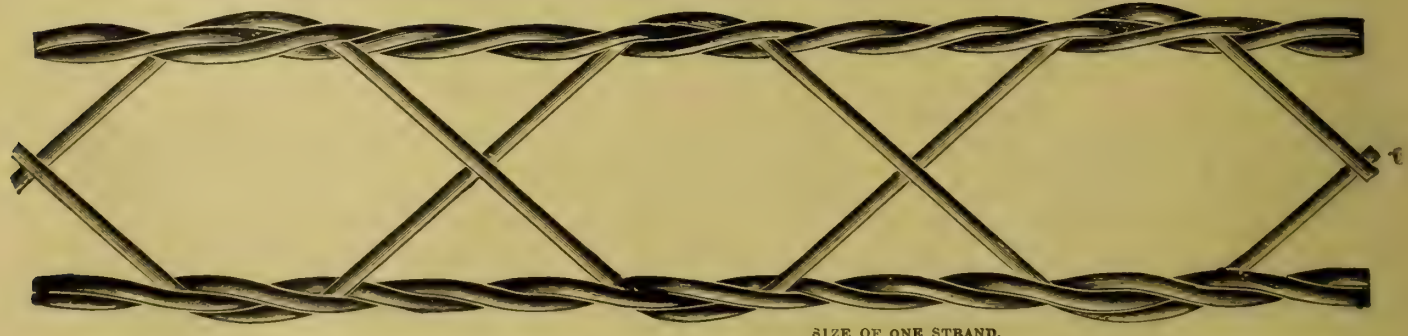
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TRUSS AND CABLE FENCE WIRE.



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Is Stronger and Costs Less per rod than any other Strand of equal width in the Market.

Manufactured by Ontario Lead and Barb Wire Co., Ltd., TORONTO, ONT.

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, JULY 8, 1893. No. 27.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

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What Is It?

It is the greatest Red Color known. It was invented and is made solely by **Mander Bros.**, London. It is an absolutely permanent color of great beauty and great strength, suitable especially for

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Carminette is a handsomer color than English Vermillion. Goes farther and is more permanent. . . . . .

Send for sample stock showing Color and Price. . . . .

Sold only in Original Packages of 28 lb. Boxes, 14 lb. Boxes, 7 lb. Boxes, and 1 lb. Paper Parcels, by the Wholesale Agents for Canada.

Walter H. Cottingham & Co., MONTREAL

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ANCHORS = CHAINS

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BLOCKS and TACKLE

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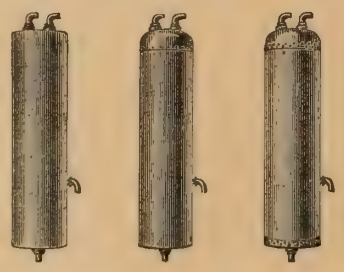
Galvanized Tackle of all Kinds

RICE LEWIS & SON, LTD.

TORONTO.

BOOTH'S COPPER RANGE BOILERS

Best Workmanship.



Test Guaranteed.

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IMPORTANT NOTICE.

Consequent upon the ordinary Range Boiler failing to fill the demands of the Trade, we are making a special Copper Range Boiler, Extra Heavy, of the best Lake Superior Copper, flat bottom, top and bottom Double Riveted, with a guaranteed Hydraulic Test of 200 pounds.

This Boiler is known as

"Booth's 27½ Copper Range Boiler,"

and meets the requirements as called for in the specifications of our leading Architects.

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GEO. BOOTH, Proprietor, formerly Booth & Son.

PATENT ONYX STEEL WARE

Onyx Enamelled Steel Ware

SOMETHING ENTIRELY NEW!

SUPERIOR IN QUALITY!

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TORONTO

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, JULY 8, 1893 No. 27

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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The new tariff on bar, block and pig tin entering the United States went into force Saturday last. It is one of the provisions of the McKinley Act, and imposes a duty of four cents per pound on all pig tin imported into the country. This is the last of the metals that were on the free list. Three years ago there were two, aluminum and tin. The former was placed on the duty list then and the turn of the latter came Saturday. If there is one clause in the McKinley law that is more unwise than another it is probably that regarding pig tin. The total number of tin mines in the United States is three, and they are located in California, Dakota and Virginia. By some the last named is not taken into the reckoning at all. It is claimed that up to the present the total pig tin output of these three combined is 150 tons. Of this quantity California contributed 134 tons, Dakota 10 tons and Virginia 8 tons. At the moment none of these mines are being worked. Various attempts have been made in both the United States and in England to procure the necessary funds to work them, but the capitalists of neither country could be induced to invest, and one of the owners of the Cleveland mine the other day told a reporter that "this company does not propose to open up the mine. The property is a good one, but so much capital was absorbed in experimental work that we have come to the conclusion that we will sell out."

* * *

The importation of tin into the United States averages about 21,000 tons annually, and it is estimated that manufacturers will have to pay twenty-five per cent. more under the new than under the old order of things. And this to sustain an industry that does not now really exist! The faith of Congress in the efficacy of legislative enactments to stimulate the pig tin industry was evidently not strong, for it stipulated that the law should be abrogated if after two years the production of the mines of the country failed to produce 5,000 tons of pig tin in one year. What the chances are of this stipulation being complied with are obvious. The press generally of the United States realized what they were months ago. During the last session of Congress an effort was made to have the law repealed. The bill to do so was actually introduced, but in the hurry and bustle of prorogation it was overlooked. Although, it will be remembered, despatches were sent broadcast over the continent announcing that the bill had actually been repealed, and even some of the Senators were under the impression that it had. What the last Congress failed to do the next, it is pretty sure, will accomplish, and that too before many months have elapsed.

* * *

In anticipation of the law which was to go into force July 1, the imports of pig tin into the United States have been unusually heavy for some months, and to-day it is estimated that there are some 10,000 tons in store, enough to supply the wants of the country for the next six or seven months. But something not to be forgotten is the fact that this supply has been purchased at a higher price than it otherwise would. Some dealers estimate the difference at 5 to 6c. It is expected that by the time existing stocks are exhausted that the law will have been repealed. The effect of the imposition of the duty on the tin-plate industry is ruinous. The mills have shut down and business is at a standstill. Ill-advised indeed seem some of the acts of the last Congress to have been.

* * *

The enormous trade of this season in harvest and garden tools was not without its unsatisfactory features. The whole trouble was in regard to the supply. From the opening of the season till the present, and from early morning till late at night—in fact in some instances day and night—the manufacturers have been trying to cope with orders which came in faster than they could fill them; and although the trade is pretty well supplied, a great deal of difficulty is still experienced in getting goods from manufacturers. As a result it is to be expected that complaints should be heard from both wholesaler and retailer. Some blame the manufacturers for not anticipating a little more. And while results have since shown that more conservatism was exercised than necessary, the course pursued was after all the best looking at it from the standpoint of some months ago. No one knew how the crops were going to turn out and the financial conditions the world over were not of a character to encourage speculation. The experience of the season now drawing to a close is likely to induce manufacturers to branch out a little more next; and while this is no doubt warranted to some extent it might be well for those concerned to make haste slowly.

* * *

The man who hopes to achieve success in any calling needs to trim his sails to catch every favorable breeze. Failure to take advantage of a passing opportunity at a critical moment has been the cause of many failures in life. Many on the other hand have achieved success because they were equal to the task of coping with the emergency which arose at a critical period in their lives. An incident that came under our own observation illustrates this. A boy without either parents or education was employed by a physician as stable-boy. With the surplus coppers that fell in his way he bought candles, and by the light of these he would at night, while either unemployed or waiting for the return of his master, pour over the medical works in the library. This was unknown to anyone. One day a man

was brought to the surgery with a broken leg. The doctor was absent and would be for some time, and as there were no other physicians in the neighborhood the outlook for the injured man was not bright. In this emergency the stable-boy stepped forward. He had read a good deal on fractures, and, while he had had no practical experience, he undertook to set the limb. This he did, and with success. So much so in fact that his master could scarcely credit it. Instead of stable boy he became a student with his master and ultimately a skilled and popular physician. He made use of his opportunities. And so must every clerk or merchant who hopes to achieve success. Every opportunity must be grasped of learning something that will make them better acquainted with the particular trades in which they may be engaged, of cultivating the acquaintance and good will of their customers and of husbanding their resources—the one for the favorable opportunity that may arise for him to start for himself and the other for the opportunity of extending his business or of reaping the advantages that sometimes fall in the way of the man who has a few surplus dollars at hand. This is one of the prices that has to be paid for success, and it is not such an arbitrary price after all.

* * *

President Cleveland has after all decided to call Congress together earlier than he had at first intended. It will now meet Aug. 7. After the collapse of the free silver policy of India the newspapers that are classed as his organs stated that the President had decided to remain by his original purpose. Even the day before the proclamation some of them made an announcement to that effect. But the excitement in the financial centres and the public clamor for a still earlier session evidently induced him to change his mind and call Congress together a month earlier than he originally decreed. Speculation is now rife as to results; and while there is a well-settled conviction that the Sherman law will be repealed there is some doubt whether it can be accomplished unconditionally. There is little doubt about the House. The anxiety is in regard to the Senate. Radical silver men proclaim that while the Sherman act has proved ruinous in its effects it cannot be repealed without a compromise which will give silver a better recognition. The repeal of the Sherman act they say will totally demonetize silver, and they declare it their policy to prevent repeal unless a substitute is offered.

IRON ON THE MEND.

The excessive quietness of the market for heavy iron and hardware during the present spring and summer has been a subject of general discussion all along. Lately, however, although the spot market in Montreal does not reflect any decided change, advices to importers there indicate that a change for the better is maturing on the other side of the water, and this, no doubt, will make its influence felt on this side in the near future.

The symptoms of improvement in the British iron market first made their appearance early in June, and during that month the tendency was all toward an improved tone, prices at Middlesboro' advancing the first week in the month owing to the heavy shipments. This was followed up the following week by a further advance of nearly a sixpence per ton on the week, favorable Board of Trade returns, cheaper money, and a better feeling in financial and commercial circles generally contributing in bringing about the improvement. Another encouraging feature to the British iron makers was the improving tendency in the demand for home consumption on account of the increased activity in several branches of the steel trade, notably those connected with shipbuilding. All these encouraging signs were maintained until the close of the month, and the consequence is a more cheerful feeling noticeable in the comments of the British iron and steel journals on trade conditions, and the outlook, even although the increase in the demand is not markedly perceptible as yet. The Ironmonger quotes remarks of Sir James Kitson, President of the Iron and Steel Institute, to the effect that the situation is much more encouraging. The road to this improvement, according to Sir James, lay through low prices in raw material. Steel rails were now being shipped for 75s. per ton, perhaps less, steel ship plates were being produced at £5 per ton or under, and the results were already apparent. In the steel shipbuilding trade, more orders had been placed during the last four months than for at least twelve months past owing to the extraordinary low prices at which ships were being produced. Within the last month he has heard that cargo steamers with triple-expansion engines could be put on the market at £6 10s. per ton on measurement, a state of things, which would make England sure to remain the first shipbuilding country in the world. More ships were being put on the market because there was more trade in the world. Freights were increasing. Commenting on these remarks of Sir James, the paper says: "What Sir James means is that the lower prices now obtaing are having the natural effect of tempting buyers, and are bringing out orders which have been kept in abeyance until purchasers felt a reasonable measure of certainty that the bottom had been reached, or, at all events, that the further fall, if any, would be a very slight one. This evidence, it must be confessed, is of excellent augury, and, coming from a gentleman whose wide experience and varied business connections enable him to speak with exactitude and authority, must be accepted as being weighty testimony."

With regard to the statistical position as shown by the stocks in store the movement in pig iron has not shown much increase during the month of June, but compared with the stock for the corresponding period last year they still show a remarkable decrease. In Connol's, Glasgow, stores during the last week in June there were 336,771 tons of Scotch pig against 433.743 tons for the same time last year. At Cleveland there there was 69,027 tons against 41,004, and at Cumberland 63,832 tons against 45,643 tons. This is a total of 469,630 tons in public stores against 520,390 tons for the same week last year, or a decrease of 70,000 odd tons. The shipments of pig iron for the last week in June show an increase as compared with the same time last year. From Scotland from the 1st of January to the last week of June the shipments were 151,069 tons against 148,870 tons last year; from Cumberland 119,447 tons against 186,757 tons, and from Middlesboro' 421,077 tons against 290,-130 tons. This makes a total for the present year from these three centres of 691,593 tons against 625,757 tons for the same time last year, an increase of 65,836 tons.

WHAT MAKES A GOOD CLERK.

Clerks need to be live, energetic, obliging and original. At no time in the history of business was this more imperative than to-day. And no matter how well qualified a merchant himself may be he has little chance of success if his staff of clerks are not of the desired stamp. Here one meets a clerk who is little better than a machine. He shows the customer just what he wants to see and just what he asks for, nothing more and nothing less. New goods his employer may have in stock, but he apparently knows nothing about them, no matter how desirous it may be that they should be introduced. The only difference between the mechanical clerk and the nickel-in-the-slot machine is this: you drop a word in the ear of the one and a nickel in the slot of the other. The advantage, however, is rather with the latter, because it is cheaper. And if the principle of the nickel-in-the-slot machine goes on extending in the future as it has in the past it is probably but a matter of time before the metal machine will supplant the automatic clerk. You can already get a cup of coffee, a cigarette, and in fact numerous other things by dropping a nickel in the slot, and why not a pound of tea or sugar, or a can of fish meat or vegetables?

A clerk to be of any value must be live and energetic, a man prolific in ideas and that has judgment to turn these ideas

to account whenever a favorable opportunity offers. It is the only road to success. If one employer does not recognise your services it is only a matter of time before another will. Merit will meet with its reward in the long run. Push goods at every opportunity, and if you have a new or desirable line in stock be sure and acquaint each customer of the fact. But tact is as essential as any any other qualification. It would be infinitely better for some clerks, and merchants too for that matter, if they never undertook to induce a customer to purchase something in addition to what he or she may have entered the store for. In their anxiety to sell they overdo themselves. It is uot advisable to be too pressing; and here is where a good many make a mistake. Never force goods. To state that you have a nice line of such and such an article in stock, to point out its peculiarities as to quality or cheapness, and to politely ask if the customer would like to try it is practically all that is necessary. When they give a negative answer do not persist. People do not like to be bored. Some people are particularly difficult to approach; and this suggests the idea of the advisability of all clerks making a study of human nature in general and of the peculiarities of their customers in particular. No two are constituted alike, and the man who fails to realize this will neither make a successful merchant nor a successful clerk. Learn the likes and dislikes of your customers and how you can best handle them. That is the foundation of success; and there is no other.

HAMILTON BOARD OF TRADE.

The annual meeting of the Hamilton Board of Trade was held Monday afternoon. The report of the council of the board was presented congratulating the board on the prosperity of the country and reviewing the action of the board on various matters during the year. A hope was expressed that the smelting works by-law would be passed by the people on Thursday, as well as the bonus by-law for the H., G. and B. railway, and also that the T., H. and B., C.P.R. and other projected roads would be built into the city at an early date.

The report of Senator Sanford on his visit to the commercial congress to the World's Fair was read, and on the motion of Mr. Wood, seconded by Mr. Knox, a warm vote of thanks was passed and tendered to the senator.

The following officers were elected: H. N. Kittson, president; Archdale Wilson, vice-president; C. R. Smith, secretary-treasurer. Council—St. C. Balfour, W. H. Glassco, M. Leggat, A. Gartshore, J. A. Bruce, John Hoodless, W. A. Robinson. Board of Arbitration—J. Turnbull, Robert Thomson, John Calder, F. H. Lamb.

RETURNED GOODS.

The article referring to returned goods from the jobber's standpoint, which we published in a recent issue, says Iron Age, has called out the following communication on the same subject, which is written from the purchaser's standpoint:

In reading your late article on above subject from the jobber's standpoint, I wondered whether the jobber suffers half as much from the purchaser's impositions on him as the purchaser suffers from impositions of the jobbers.

Three months ago I ordered of a St. Louis house, through their travelling agent, 1-2 dozen Badger's Emerson's razor strops. The agent was sure they had them, and, indeed, the catalogue described them perfectly—number and quality. When received they were inferior goods, made by some party who had appropriated the numbers and description of a reputable manufacturer. I returned the package, express paid.

I have on my receiving counter now a gross common cut tacks, which were sent by a manufacturing company in response to my order for carpet tacks. Carpet tacks have large heads, cut tacks small heads.

Last night a customer asked me for a Bailey Iron Plane. I handed him the plane from a late supply just in from Kansas City. "This is not a Bailey plane," said my customer. "If it were it would have 'Stanley Rule & Level Co.' stamped upon it." Too true. This jobber had the impudence to fill my order for Bailey planes with an imitation. I had received the goods, marked them myself, and put them away without discovering the imposition. I knew there were imitations of this plane, but did not think a respectable jobber would commit such a contemptible imposition. Again, I ordered, two weeks since, a supply of rules from a commercial traveller. "Stanley rules," said I. "We have them" replied the agent. At the same time I ordered half a dozen Morrill's saw sets. The goods were laid on my receiving counter yesterday, and that indignant jobber who complained in your issue of March 30 would hardly believe that there is one solitary box of Stanley rules, five boxes of Chapin's and about a dozen of some other kind, of which I have never before heard, but which are plainly an inferior article.

The saw sets are marked "Morrill's patent," but are a new Morrill to me, and not the goods ordered.

I have a man in my employ now who came to me with the recommendation of one of the most prominent hardware firms in Chicago. He says that the Chicago house paid him and the other clerks a percentage for overcharging the boxing on goods shipped out.

During the past winter I received three boxes sharp toe calks from a St. Louis house. They were one size larger than we use. We immediately notified the house, and when the travelling salesman again called on us we notified him. The house wrote us explaining how it happened, but made no disposition of the goods.

A short time since we returned them by freight, making no charge for the freight and cartage we had paid on them.

That jobber surprised me. He credited me with the goods, but charged me with the freight from here to St. Louis, and for carting.

I immediately replied and charged the above mentioned freight back, also the original freight from St. Louis to Denver, the carting at St. Louis which he charged me when first shipped, the carting when received by me, and the carting when returned by me to St. Louis.

He made the mistake. It is right he should pay the carting when shipped and when received, and the freight both ways.

It is my opinion that the jobber should be made to employ competent assistants and ship goods as ordered. Most of the mistakes are made by poor assistants, who are employed to economize.

BUSINESS AND RULES.

A good merchant, who lived in Florence in 1400, Agnolo Pandolfini by name, wrote out in his old age some of the rules and methods of business which had helped him to attain success in life, and this is what he says in regard to the management and advertising of his business: "I would have many workmen and boys, and would not put my own hand to anything, further than to command, provide and regulate, so that each one did his duty; and often I would say to them, 'Be honest and just, reasonable and friendly, not less with strangers than with friends; with everyone be truthful, and take good care that no one goes out of the shop deceived or discontented by your cunning or hard dealings, for this would be to lose liking and good will. A pleasing seller will always have plenty of customers, and among artizans good fame and competition do more than wealth.' I should command my workmen to sell nothing too dear, and with whatsoever debtor or creditor they made engagements, the contract should always be distinct and clearly expressed; that they should never be importunate, proud or evil-speaking, not quarrelsome, but agreeable, and, above all, anxious and diligent in writing, and in regard to what has been written."—Fame.

According to Sir N. Barnaby, says the Montreal Gazette, with the exception of about 400 vessels, there are no iron steamships afloat that would keep above the water if a hole were made in the bottom plating anywhere abaft the collision bulkhead and outside the engine room, or which would not founder were water admitted through breaches made by the sea in weak superstructures or deck openings. Of the 400, 200 are cargo carriers. The same writer says that of 120 iron steamships lost between June, 1881, and February, 1883, not a single one was properly constructed in the opinion of the council of the Institution of Naval Architects. At the same time the rules of the British shipbuilding registries are precise and strict and by these rules the builder who seeks a certificate must be guided. The result of the careful framing and honest enforcement of these rules is that English-built ships are generally honestly and solidly constructed.

HOW TO WIRE A BUILDING.

All concealed wires placed in buildings in course of erection, in addition to being of superior insulation, should be supported upon other equally good non-combustible insulators, says a contemporary, but approved wood cleats may be used in perfectly dry places. In threading joists, etc., in places liable to become damp, wires must be kept from contact with wood, or any part of the building, by means of insulating and waterproof tubing of approved material, extending through such joists, etc., rather than depend in any instance upon the insulating covering of the wires. If it becomes necessary to run wires in brickwork, etc., under plaster, such wires must be protected by an approved conduit and placed in such a manner as to be out of reach of nails, etc.; and they must not contain either joints or splices. Burying wires in plaster, however, is never advisable and should rarely be done. All concealed wires must be cleared of plaster, dirt, rubbish, chips, shavings ,etc., before being closed in; and particular care must be taken in new buildings to see that wires are not stretched or abraded by lathers, plumbers or others. When metal lathing, girders, etc., are used in buildings, wires must be so run and supported that no contact with such lathing can occur. Permission to throw current on to wires that have been "fished" over or across metal will not be given. When buildings are wired for incandescent lights, and the voltage of the source of supply has not been determined upon, a capacity of one ampere for each 16 candle power lamp must be allowed throughout. The insulation of joints in concealed wires must be as good as that of the rest of the line. Outlet wires must be protected by an approved tubing.

SMOKELESS POWDER.

A second series of experiments has, according to an English contemporary, just been carried out by Sir W. G. Armstrong and Company, the great gunnery firm, in connection with the newly invented smokeless powder made by M. St. Mare, a French officer, who resides at 14 Rue des Bordeaux, Charenton, near Paris. The results of the first experiment, which were conducted at the Armstrong experimental station at Silloth, near Carlisle, have already been published. The second trial of the powder has proved even more satisfactory. The gun used was a quick-firing Hotchkiss, having a calibre of 47 millimetres, while the projectile weighed 3 livres 1,800 grammes. The distance from the mouth of the gun to the target was 50 metres. With a charge of 12 oz. of powder an initial velocity of 657 metres per second was obtained, with a 14 oz. charge 702 metres, and with a 16 oz. charge 874 metres. The powder is blue in color, the size of each grain being 10 millimetres by 4 millimetres. The inventor claims that it will keep for an indefinite period, absorbing no moisture, which quality all smokeless powders hitherto invented have failed to possess. The gunnery firm on the Tyne and another firm in Belgium are in treaty with M. St. Mare for acquiring his secret. Experiments were to have been carried out with a big gun at Silloth, but a license to make the required amount of powder could not be obtained from the Home Office without it being stated of what materials the powder was composed. M. St. Mare has now returned to Paris, where he will make a quantity of his powder and bring it over to this country for the purpose.

THIN SHEET STEEL FROM INGOT.

The Foreign Abstracts of the Institution of Civil Engineers contain a translation of an article by Herr A. Frappen, from which we learn, says Iron and Steel Trades Journal, that at the Rudolfshutte, near Teplitz, in Bohemia, a method of producing thin sheet steel from the ingot, without intermediate cutting into lengths or cooling, has been introduced by Mr. Carl Wittgenstein, the managing director. The plant, designed by the author, includes a three-high universal and a Lauth mill for cogging and roughing, and five two-high finishing mills, worked in continuous series. The ingot of 11 to 12 cwt., measuring about 16 in. broad, 12 in. thick, and 24 in. long, is reduced to a slab 2 in. thick and 39 in. broad in the cogging mill, the edges being kept square by the combination of vertical and horizontal rolls, which make it possible to get a powerful pressure on all four sides. The rough end is then sheared off, and the slab is immediately returned to the furnace to be brought to a finishing heat. When drawn, it is rapidly turned over by machinery to allow the scale and cinder to be removed, and goes to the Lauth three-roll mill, which reduces the thickness to 1-3 in. (5 millimetres), and delivers it to the live rollers of the finishing mills. These are all placed in the same horizontal plane, at 2 1-2 metres distance apart, so that the rough slab, without changing direction, emerges in a few minutes as a finished sheet from 1 1-2 to 2 millimetres (1-16 to 1-25 in.) thick. A live roller train, 50 metres long, is placed on the delivery side, with a shearing machine at about two-thirds of its length. Here the sheet is divided by two cuts into three pieces, from 14 to 17 metres long, which can then be carried to the machines for shearing to finished sizes as required.

In order to obtain such very rapid reduction a triple engine power is necessary. The cogging and roughing mills, which are never both in use at the same time, are driven by an engine having cylinders of 35 in. diameter and 52 in. stroke, and the finishing train by another of 39.2 in. diameter and 54.8 in. stroke. Steam is used at an initial pressure of 120 lbs. per square inch, with a high degree of expansion but without condensation, owing to a difficulty in obtaining injection water. The rolls in all the mills are of the same diameter, 630 millimetres (24.7 in.), and are made of cast steel; the rolled screws are adjusted mechanically, and the feed tables, together with the ingot charge and drawing cranes, are manipulated by hydraulic machinery under pressure from an accumulator. The finishing mills are driven by a train of spur gearing, which includes 14 V-toothed spur wheels and pinions of different sizes, in addition to two others driving the live rollers on the intake side.

The total length of the mill from the ingot shears to the end of the delivery roller is about 330 ft., and from the roughing rolls to the sheet shearing machine about 200 feet. The finishing mill is in charge of a single attendant, who looks after the adjustment of the rolls, the work being accompanied in its passage by the men belonging to the roughing train. The mill was started in July, 1892, and in November of the same year the output of 30 tons of sheets in 24 hours had been reached. It was originally intended to subject the work to a finishing process, but this has not been found necessary, a sufficiently good result being obtained in the single operation.

NEW BRONZE HARDWARE.

Old copper surface finish on bronze is acquiring a fast growing popularity, and seems destined to be permanent until something better turns up, remarks a contemporary. It not only wears well but needs no attention in the way of rubbing and always looks attractive. It shows to best advantage on figured surfaces, though it is used very extensively on plain surfaces as well, but not with as good results, the trouble being that where there is any wear of the hand the old copper finish must necessarily be rubbed off and leave a rather ugly mottled appearance. In a cheap line of builders' shelf hardware it is also being used to a great extent on smooth iron surfaces, but the success of this is still in question. The matter or ornamentation of fine bronze is crystalizing into a definite demand for a design that represents an idea, and is not simply scroll work. The various ornate schools, such as those of Louis XIV, Italian renaissance, East Indian and Rococo, are in great favor, and are especially attractive when finished in old copper or in oxidized silver. Square patterns of plush plates, escutcheons and the like have given place to more fantastic and original designs.

HARDWAREMEN AND LAMPS.

About a year ago it was our pleasant duty to say in these pages why we believed that the retail hardwareman should add to his stock a line of lamps, says N. Y. Hardware. We have knowledge that more than one accepted this advice, and that the results have fully justified their so doing. They found that it paid them well, and what has paid one will, under similar circumstances, be of financial benefit to another.

The reasons why the lamp should find a place in the retail hardware store are many and obvious. Competition in the standard lines is keen, and margins reduced, and it is from the special lines that the best results are obtained. The department stores may serve as a fitting object lesson in this regard, and their experience, especially with lamps and similar goods in the line of house-furnishing and home ornamentation,can well serve as a guide to the retailer of hardware.

A lamp is an absolute necessity in the household in the country or the small town where gas and electric lighting are unattainable; it is almost universally found in some shape even in the houses where these means of lighting are at hand. The larger cities will, perhaps, support an exclusive lamp store, but the smaller towns will not. There must, however, be someone to supply such demand as there is in the places last named, and the hardwareman, rather than the dry goods man or the grocer, is the one to supply it. The lamp is surely in his line; it goes with the other goods he sells; it adds to the appearance of his store; it adds materially to his profits; it draws custom, and aids in the sale of his other goods.

The lamp industry in our country is becoming one of the most important, not only in the volume of money interested in the manufacture, but also in the extent of goods turned out. "If," as we said a year ago, it is good policy for dry goods stores and drug stores to sell lamps, which fact is demonstrated by looking around your own towns for example, why is it not an equally good move for the hardware dealer to wake up and make a little innovation? While you may not sell lamps as rapidly as you would sell barb wire or nails or mechanics' tools, still, when you have sold, say ten dollars' worth of lamps, you will have made as much profit as you would on three times that amount in standard articles." The subject is one of special moment just now, when the lamp men are abroad for further outlets for their product, and we bespeak for the representatives of these houses, or of the jobbers who handle their goods, a cordial reception; at least give them a chance to demonstrate the truth of what we here say. Start a lamp department; put yourselves in possession of the facts in the case by writing to the manufacturers and jobbers who handle lamps—the cards of the leaders of the trade will be found elsewhere in these pages. This information will cost you nothing, and it may lead the way to a better balance sheet at the end of the year.

FUN IN THE HARDWARE STORE.

Enter maiden lady who gravely surveyed the assistant through her glasses, and asked, "Do you keep door-mats?" "Oh, yes, madam, we have always a good stock of them—about what size may I show you?" "I want one for my hall door, and it measures a yard, half-a-quarter of a yard, an inch and a little bit." The assistant tried hard to keep a sober face, but the effort was a vain one. However, he showed her some mats which measured three feet six inches, assured her they were the size of her measurements, and succeeded in selling one.

A lady, who was one of our customers, asked a porter who was delivering goods at her house on one occasion to take back a gasolier, which required to be altered to suit the height of the room. In order, as he thought, to save a second journey, he suggested to the lady that as he was on the spot he might as well take the measure of the height, to which she consented. Although he was not provided with a rule, yet he managed it in a sort of a way, and when he got back to the shop caused us considerable amusement by gravely explaining to the governor that the height of the ceiling was "the height of himself standing upon a kitchen table with his arm stretched out so," suiting the action to the word, "a hammer in his hand, and a few inches over."—Ex.

POINTERS FOR SALESMEN.

The places where goods are sold without profit seems to have a strange fascination for some salesmen. If a salesman of this class finds a dealer who is buying goods somewhere at prices below zero, he becomes seized with a mad desire to count that dealer as his own special customer. Why cannot his house sell goods as cheap as any other? What a business this salesman could do if his employer would but allow him a reasonable discretion in prices. Some salesmen lose their energy and efficiency as soon as they encounter a price which they cannot match. The soul of a salesman of this sort is filled with terror by the fact that there is some other salesman roaming around with lower prices than he can make, and he cannot do business even where prices are normal and his scalp is safe. I have known salesmen who were completely demoralized by finding two or three places on a route where prices have been cut below them. Some manufacturers and some salesmen seem constantly to be in search of rat holes into which they can pour their goods at or below the cost of production. It should be the policy of the salesman to develop and cultivate the trade where prices are remunerative, shunning the sections and the special trade where goods, if sold at all, will yield no margin or profit.

Much of the money spent by the manufacturers for salesmen's salaries and expenses is wasted. I know a small stove dealer located in a cross-roads town in Pennsylvania, who keeps a record of every visit paid him by salesmen. This record for 1892 shows that seventeen stove manufacturers spent, in visiting this one dealer, at least 60 per cent. of the total amount of his stove purchases. This, of course, is an extreme case, but I am convinced that manufacturers, in many instances, spend an amount of money in visiting the small country trade which is out of all proportion to the amount of goods sold.—From a paper read by C. S. Prizer at National Stove Association meeting.

DOOR CHECKS AND SPRINGS COMBINED.

One of the greatest conveniences to-day is the combined door check and spring, causing the door to close automatically and still prevent its slamming. The first invention of this kind used the air cushion as a check, and many experiments resulted in a reversible check and spring combined, which works very well with a moderate degree of attention. The limitations are the lack of knowledge of the country carpenter, as to putting on these articles, and the fact that few people will give them any attention and still complain if in the course of time with much wear the check springs get out of order. An occasional drop of oil or regulating the tension of the spring is really all that is necessary. The sagging of the doors is provided for within reasonable limits. Of course it is impossible to render these articles automatic so that they shall adjust themselves to every change in the wind, and this is the principal weak feature in popular favor. The next step was the substitution of a liquid as a checking power in place of the air cushion. The first results in this line were not satisfactory, the liquid either escaping or else gumming up. Great improvements have been made, and there are to-day upon the market articles of this kind which seem to be thoroughly practical. They are in use all over the country, especially in large office buildings, and as a general rule seem to give great satisfaction. It will require several years time to absolutely settle the question as to whether the liquid as a permanent checking power will answer.—Age of Steel.

HINTS ON SELLING.

The following article is the concluding one of a series that have appeared in Ironmongery, London:

Hitherto, I have only spoken of the assistant in his actual everyday contact with the customer; but besides this direct intercourse, there are other means which exert important influences on the sales of an establishment. Some of these I have alluded to in a former article, and I will now endeavor to describe them more fully. I would venture to say the greatest reliance should be placed on a well-dressed shop window, which, of course, ought to have been designed with a view to accommodate and set off the varied articles which go to form an ironmonger's stock, and fitted with all the necessary appliances which are necessary for the proper display of the same. Unremitting attention must be paid to the arrangement of the goods, showing only such articles as are suitable to the season or are likely to sell; and the contents should be changed at least once a week. Seasons' goods should be shown a little in advance. Good taste is absolutely necessary to the window-dresser, whether it is sought to arrange the goods artistically, or whether they are placed in heaps with a sort of studied negligence. And it is a good idea to make use of some novel contrivance, so as to arrest the attention of passers-by. Price tickets should be used unsparingly, and also descriptive labels to indicate special information, such as, for instance, "This grate can be supplied with any other pattern tiles"; "Only Blank's table cutlery kept in stock"; "Lawn Mowers Repaired."

The interior of the shop ought to be made as inviting as possible, so as to encourage customers to enter. The glass cases should be kept nicely dusted and arranged, the counters free from opened parcels or litter of any kind. The various stands about the shop should be dressed with suitable goods tastefully displayed, and the floor kept as clean as possible; if the latter is covered with a neat pattern oilcloth, all the better. A sufficiency of chairs for the use of customers must be provided, and in winter time the shop should be properly heated, both for the sake of keeping your stock from deteriorating, as well as for the comfort of your employees and customers. Like window-dressing, the arrangement of the shop is a subject upon which much might be written. It can hardly be dealt with, unless in the briefest manner, in a paper like the present; and I am sure it would prove of immense benefit if some specialist in these duties would contribute an article dealing exhaustively with them.

Wherever the surrounding circumstances will permit, a cash discount should be allowed off all goods paid for on or before delivery. In a large town this is almost an essential to a retail trade; but there may be serious difficulties towards introducing the system all at once into a shop situated in a rural district, where, likely, the chief customers are farmers and graziers, who only receive payment for their commodities at certain times of the year, and who are not always provided with ready money to secure the cash discount for prompt payment. The chief advantages of the cash system are, that bookkeeping is practically dispensed with, bad debts are unknown, the ironmonger is enabled to buy on better terms by being in a position to pay cash himself, and there is a freedom from the worry consequent on hearing that any of your customers have failed. But I would not think it prudent to refuse credit to customers who are known to be perfectly safe, after having made due enquiry. Better prices would, of course, be obtained from this class, and when it is remembered that civil servants, bank clerks, and even professional men and others in good positions are only paid their salary every month or quarter, it is quite apparent that such people must require more or less credit, but they are, on account of the positions they occupy, perfectly safe, as a rule. The discount allowed for prompt cash ought not to be too much, 5 per cent. is a moderate rate, but in no case should it exceed 10 per cent.

Advertising is another of the principal means which largely influence trade, and when judiciously done, is productive of much advantage. To spend money too lavishly on advertising is foolish, and, instead of a benefit, only proves a monetary loss to the person who does not give it due consideration. A little experience will readily prove which are the best newspapers to make use of; but the leading papers circulating in the neighborhood should, on no account, be omitted. A lengthy advertisement is not at all necessary; a number of small paragraphs in different parts of the paper being much more advantageous; and the matter should be continually changed, so that the same goods do not always, for the entire round of the year, strike the reader's attention. Advertising by circular has much to be commended, especially for goods in season, and if averse to spending money on printing, many manufacturers will be only too glad to send a supply of printed matter, relating to their manufactures, gratis to any ironmonger, and have his name and address printed on same. This is invariably the case with such goods as lawn mowers and garden requisites, though in some cases a nominal charge is made. If an ironmonger sets about compiling a catalogue to suit exactly the needs of his own trade, and endeavors to make it as complete and as telling as possible, and then takes care to circulate it amongst the class of people likely to become customers, there is no doubt but that he will reap a great benefit, and be fully repaid for all the labor and expense bestowed upon it. If an article is stocked which is of small demand, such as cork drawers, and it would not be deemed of sufficient importance to have a circular printed, although you desired to introduce it to the score or two of people in your district who would be interested in such an article, I would advise the use of a copying apparatus, of which Zuccato's Papyrograph is an example. A letter or circular is written on a sheet of prepared paper with a style, and this sheet, being fixed in a hinged frame acts in the same manner as as a stencil, so that by using an inking roller on the upper surface, an exact copy of the writing is reproduced on a sheet of ordinary paper underneath. Wherever possible, I recommend, however, that a printed sheet be used in preference, because it looks more business like and up to date; it is also easier to read, for sometimes the copying apparatus turns out illegible work, unless great care is used. I have known that, under some circumstances, it is a very good plan to write by hand a special letter to each customer, because such a missive appeals directly to the person to whom it is addressed. He feels you have taken the trouble to write specially to him, and will, accordingly, treat it with more consideration than if it were a printed paper sent broadcast to everyone; of course, this plan would not be practicable where more than a dozen or so people had to be written to. Another plan from which I have seen some very good results is the sending of free samples accompanied by a letter or circular; but this is more applicable to the building trade than to any other description of hardware goods. Sash fasteners and lifts, bolts, hinges of iron or brass, lock furniture, samples of nails, etc., lend themselves readily to this method of pushing.

The commercial traveller acts an important part in the selling of goods, whether he is calling on a customer in the next street or in a town a hundred miles away; and for the purpose of this article I will make no distinction between the traveller who is on the road from Monday to Saturday and the assistant who is deputed to wait on a special customer once in a while. In this age of competition, it is often necessary, when a customer has received an estimate, to follow it up by sending a smart assistant to wait on him to explain details or to receive instructions, or submit samples, and to do his best to book the order. It is the traveller's duty to look up new buildings or works and interview the architect or builder, and request to be allowed to compete for the orders. He should also, of course, call on all persons who were likely to buy goods of the class sold by the ironmonger. He should be entrusted with a certain amount of discretion in the matter of prices; for it may occur sometimes that an order is offered at a limited figure, and if he is bound by a hard and fast rule, may have to decline it, though otherwise it might be accepted with advantage to all parties.

The public seem to have an infatuation for buying anything which is offered at a special bargain or job lot, and there it is no reason why the hardware trade should not indulge in an occasional clearance sale. It will have the advantage of getting rid of a lot of old stock (indeed, this reason is a real necessity for a "sale") and of attracting many new customers to your place. I am not going to describe how a clearance sale can be conducted, as this was very ably done in a former article in Ironmongery (Jan., 1892, p. 297), to which I would refer readers. I am acquainted with one ironmonger who habitually advertises second-hand lawn-mowers principally for the sake of selling his stock of new ones, the prefix "second-hand" with which he commences his advertisements in the local papers seeming to attract customers to his shop. I have also known as wire netting being advertised as "remnants," though existing in the ironmonger's shop as rolls, the idea being to cut the "remnants" off to order, and the plan was successful. A very large trade is done in defective sheets of corrugated iron sold and advertised as "wasters." All this goes far to illustrate how easy it is in some cases to overcome the difficulty of old or shop-soiled stock, and at the same time create a name for selling cheaply.

There are many personal advantages which distinguish the successful salesman, which ought to be acquired by

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Etc., Etc. . . . . .

all of us whose principal duty it is to serve customers; a cheerfulness and brightness of manner, a thorough command over one's temper, and an earnest desire to please, are the most important, whilst any approach to foolishness must be strictly avoided. If we are in the position of assistant or manager, we must endeavor to show a good example to those under us by doing our share of the work fairly and honestly, and otherwise acting up to the strict letter of the rules of the establishment. We must work in harmony with our fellow assistants; for it endangers an employer's business to a very serious extent if any friction or jealousy exists amongst his employees.

HELLO ACROSS THE CONTINENT.

The longest telephone circuit in the world is now projected by the automatic Telephone Company of Canada, which intends to lay a line of copper wires on the metalic circuit plan from Halifax to Vancouver. This is a distance of 3,500 miles. Copper is by far the best conductor, and electricians have so far advanced their methods that they can calculate to a nicety what is required. The circuit will be, of course, in sections, and be available for communication to many intermediate points. It is a great and wonderful experiment which the scientific world will watch with intense interest. If it proves a success there seems to be no good reason why the instrument cannot be used to transmit speeches across the wide oceans.—Montreal Star.

BAD STOCK KEEPING.

"Why do you suppose it is that you don't sell more goods?" was asked of a country merchant whose trade was not very prosperous. "I don't know. People tell me my prices are too high." "But why don't you put your prices down?" "Because I don't sell goods enough to make it pay."

The above reminds us of the methods of some of our local merchants who are such poor stock keepers that people when shopping seek in vain for certain articles required, that because they have not been of universal demand are not deemed necessary to be kept in stock. "Oh, we don't keep them; we have no demand for such goods," is the common reply to the shopper, who certainly did demand them then and there. "If no havee now can?" as a Chinaman once said. A good merchant will keep anything commonly sought for in his line, even though it be of slow sale. There is such a thing as pushing goods, and thus creating a demand; and while a merchant can not be supposed to keep everything, yet if in his line of trade, any article be called for should be supplied if possible to obtain, or at least a willingness to order on the part of the merchant should be expressed. "We don't keep it in stock" has been the death knell of many an otherwise thriving trade. "I can't bear to shelve goods that do not sell briskly," said a merchant. Well, all we have to say is what the doctor said to the old maid when she said, "Doctor, I can't bear children," to which the doctor replied, "Maybe if you could you'd like them better."—Herald of Commerce.

RATIO OF STORE EXPENSES TO SALES.

"A business with an income at its heels,
Furnishes always oil for its own wheels."

The regulation of the expense account of a store is one of the most difficult problems which confronts the proprietor, and it is to the perusal of this account to which he is indebted for a majority of the wrinkles which time and worry bring to us all. To the careless or thoughtless manner with which this account is suddenly reduced or increased is due at least 90 per cent. of the business failures of our times. The finest business in the world can be seriously embarrassed or entirely ruined by improper management of its expenses, and an unusually prosperous year of sales be turned into a total loss when the balance-sheet is handed to the proprietor at the end of the year. It is not only against excessive expenses that the successful merchant must guard his business, but also he must not yield himself to the impulse to reduce his expenses too low, and while effecting a saving in cents, cause thereby a loss in dollars.

Business prudence is a very good quality, and most writers and speakers have extolled the virtue of prudence and economy until many business men, especially as they grow older, have come to believe that a saving in expense is a net gain equal to the amount by which they have reduced the account. While in some cases the nature of the business may demand a decided reduction in its expenses to meet a turn or change in trade, still I believe it will generally be found true that where a business has sustained certain necessary and proper expenses for a number of years at a reasonable profit, a reduction of the expense account will ultimately cause more loss than the temporary saving produced. This is shown very often in the matter of salaries. Take, for instance, a firm which has been employing a number of first-class salesmen, at a good salary and which has prospered and made money above its expenses. Now suppose the business to have reached a firm and solid foundation, through the efforts of these salesmen, until it almost seems to "run itself." Then suppose the owners in looking over their expense account, find the item of "salaries" quite large and prominent, and decide to reduce their help or secure lower-priced men, with a view to pocketing the difference between what they were paying their old salesmen and the cheaper and less experienced substitutes. For a time there will be an apparent saving, the expense account will be less, and the momentum which the business has acquired will carry it along for a time, as before.

But soon customers begin to find fault; they are not properly or intelligently waited upon, orders become mixed, and the stock confused, and as a consequence the customers become offended or disgusted, and bestow their patronage elsewhere. After a year of this trial of "reduced expenses," the proprietors would be perfectly willing to return to the former basis of salaries, and may do so, if sensible, but it will take years of uphill work to regain the prestige which one year of this experiment has lost.

Now, as to what should be the proper ratio of expenses to sales, of course this depends upon the nature and margin of profit which the business affords. It is safe to say, however, that legitimate expenses should be kept up to the point which will afford a reasonable living to the proprietor, and at the same time do justice to his trade.

To illustrate this point, imagine a retail store which has, say a cash capital, in stock, of $10,000. Suppose the sales to average $25,000, half cash, and half 30 to 90 days' credit, and the per cent. of the gross profit 30 per cent. on sales. To support the proprietor it is necessary for him to make $1,500 clear and he wishes to increase his sales for the future rather than reduce his store expenses and diminish his trade. Now let us glance at what his expenses would consist of, and their ratio:

Capital	$10,000
Sales per annum	25,000
Gross profit (30 per cent.)	7,500

EXPENSE ACCOUNT.

Items.	Amount	Per cent. to sales.
Rent	$1,500	6
Clerks	2,250	9
Freight and cartage	300	1 1-5
Advertising	500	2
Telephone	50	1-5
Light	100	2-5
Fuel	50	1-5
Insurance	50	1-5
Postage	100	2-5
Taxes	150	3-5
Stationery	50	1-5
Bad bills 2 per cent.	250	1
Interest on capital 6 per cent.	600	2 2-5
Sundries	50	1-5
Totals	$6,000	24

Under this set of expenses a net profit accrues to the proprietor of $1,500, which covers his personal expenses, and 6 per cent. on his capital, which represents a gain of $600 to be added to his stock the following year. He is able to discount his bills, is paying fair wages to competent clerks, and is advertising moderately. The result will be, other things being favorable, that the next year will show an increase of sales of say $2,000, and the gross profits will then be $8,100, and if he decides to help his increasing trade by more advertising or another clerk, his expenses will be limited to 24 per cent. of the sales ($27,000) and will amount to $6,480, an increase of expenses of $480. His net profit, aside from interest, under this set of expenses, will be $1,620, or a gain over the former year of $120 net. Now, as he has added $480 to his advertising bill or clerk hire, it is reasonable to suppose that his business will continue to increase in a few years to $30,000. The gross profit is now $9,000, and as he has continued to keep his store expenses up to the 24 per cent. standard, the expense account will figure up $7,200, leaving him a net profit of $1,800, which, with the 6 per cent. on original capital included in expense account, makes his total income $2,400 for the year.

Just at this point a great many near-sighted merchants would fall into the error of supposing that a reduction of the expense account was the proper thing to increase their profits, and substitute cheaper help and curtail their advertising, these two being the items which are most readily reduced. The result would be that in a short time the trade would drop off much faster than it had grown, and, the rent and other stationary expenses being the same, the net income would fall below the living necessities of the proprietor.

On the other hand, had he still continued to keep up the ratio of expenses for clerks, advertising, and the other items to a total of 24 per cent. of his sales, there would be no reason why, if the population was sufficient, his sales should not finally reach the amount of $50,000. The expenses would then be $12,000 and the gross profits $15,000, a net profit to the owner of $3,000 in addition to his interest on the capital which would swell his total income to over $4,000. It is also apparent that as he sold so many more goods than formerly, he would be able to obtain better prices and rebates, which would cover the lower prices which he might be obliged at times to accept from his larger customers. This is the way his expense account would now appear on the books:

Capital in stock	$20,000
Sales per annum	50,000
Gross profit (30 per cent)	15,000

EXPENSE ACCOUNT.

Items.	Amount.	Per cent. to sales.
Rent	$3,000	6
Clerks	4,500	9
Freight and cartage	600	1 1-5
Advertising	1,000	2
Telephone	100	1-5
Light	200	2-5
Fuel	100	1-5
Insurance	100	1-5
Postage	200	2-5
Taxes	300	3-5
Stationery	100	1-5
Bad bills 2 per cent.	500	1
Interest on capital 6 per cent.	1,200	2 2-5
Sundries	100	1-5
Total	$12,000	24

The items which form this expense account are of course subject to the peculiarities of different businesses, and the figures are merely speculative, but the principle remains the same.

"If a man had 20 Pounds a year for his income, and spent 19 Pounds 19 Shillings and Sixpence he would be happy; but if he spent 20 Pounds, One Farthing he would be miserable."

—From Ideas for Hardware Merchants.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOT NAILS, ETC.
Hamilton. Ontario.
SP

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friends against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

BINDER TWINE.

Refrain from purchasing Unknown Brands when you can secure the Old Reliable

Crown, Red Cap and Blue Ribbon.

Read carefully what the Toronto Globe states regarding our Company under date June 11 :

'Wholesale dealers have received the price list of Binder Twine this week from the CONSUMERS' CORDAGE COMPANY The price list last year was lower than the previous season, and the quotations this year are 1 to 1½ per cent lower than they were last season. This was hardly expected after the deal which brougnt the various cordage mills in Canada under the control of one concern ; so that we have the somewhat singular sight of a combine reducing prices."

WE CAN SELL YOU——

Solder and Babbitt

Cheaper than You ——can Make It

TORONTO SMELTING and REFINING WORKS

FRANKEL BROS., Props.

92 and 94 Queen St. East, TORONTO.

Daily Capacity 10,000 Pounds.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

NEW. CLEAN. GOOD.



Meat - Cutter

WHITE ENAMELLED

Inside, and Brown Japanned outside.

H BOKER, Manufacturer. | For Sale by Leading Wholesale Houses.



A GREAT LOSS?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss. The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

VIEWS AND INTERVIEWS.

"Yes," said a jobber to me Wednesday, "the tinware manufacturers of the country have entered into an agreement regarding terms. In fact we are all in it. That is, I mean that the agreement has been signed by the wholesalers as well as the manufacturers. And it is a good thing. Heretofore everybody went his own way. Some would give 5 per cent. off for cash and credit for five months, six months and others—well they would about give their goods away. As you stated last week the terms are now four months or 30 per cent. cash discount if paid within thirty days from date of invoice. I think those terms are liberal enough, don't you?"

* * *

"Nearly every time I ask a customer if I shall show him carpenters' tools the reply I get is, 'No thank you,'" said a salesman in one of the leading wholesale houses the other day. "That will give you an idea what trade in that line is like these days."

"There," said the representative of a jobbing house, "is a pretty nice thing in the way of syphon oil can. You can see for yourself that it is named the 'Queen City.' There you see," he added as he picked up the can and unscrewed a cap three or four inches in diameter, "that the syphon and the pump handle are covered by this cup, a decided improvement over the old style of syphon can. I think it is going to take well," he concluded as he laid the can down with a satisfied air.

"There is a thing we're selling a lot of these days," said a jobber as he picked up a ball of "Common Sense" binder twine, gave it a toss in the air, clapped his hands and caught it again. "During the past week a number of repeat orders have been handed in."

* * *

"Have I an inkling what the wire nail men are going to do at to-day's meeting? Well, can't say that I have," said a wholesaler in reply to a query of mine, "except it be to talk over the preferred list matter. Over that I expect there will be quite a little wrangling. As far as I am concerned I would like to see the preferred list done away with altogether. It would only be justice. Here there are, we'll suppose, two hardware dealers—Smith and Jones—side by side. Now Jones may do just as good a business as Smith. Yet, probably because he hasn't as many friends at court he is not allowed to enjoy the advantages which accrue from being on the preferred list. Yes, sir, I say away with it," he concluded with a sweep of the hand that came dangerously near smiting my nose.

BYSTANDER.

LOVING CUPS

In Sterling Silver and Electro Silver Plate.



: : *The* : :

Toronto Silver Plate Co.

FACTORIES and SALESROOMS: 570 KING ST. WEST.

E. G. GOODERHAM, Manager. -:- JNO. C. COPP, Sec.-Treas.

PERSONAL MENTION.

James Hamilton, of Port Credit, was in Toronto this week on a sorting up trip. Mr. Hamilton has been visiting Toronto as a buyer for some 45 years. There are probably few or any who can boast of such a record as that.

N. Courtemanche of Penetang, was in Toronto this week and left some nice orders.

C. Mason, of Richmond Hill, was on the street this week doing a little sorting up. "He is," said a friend of his, "struggling hard these days to acquire the art of riding a bicycle."

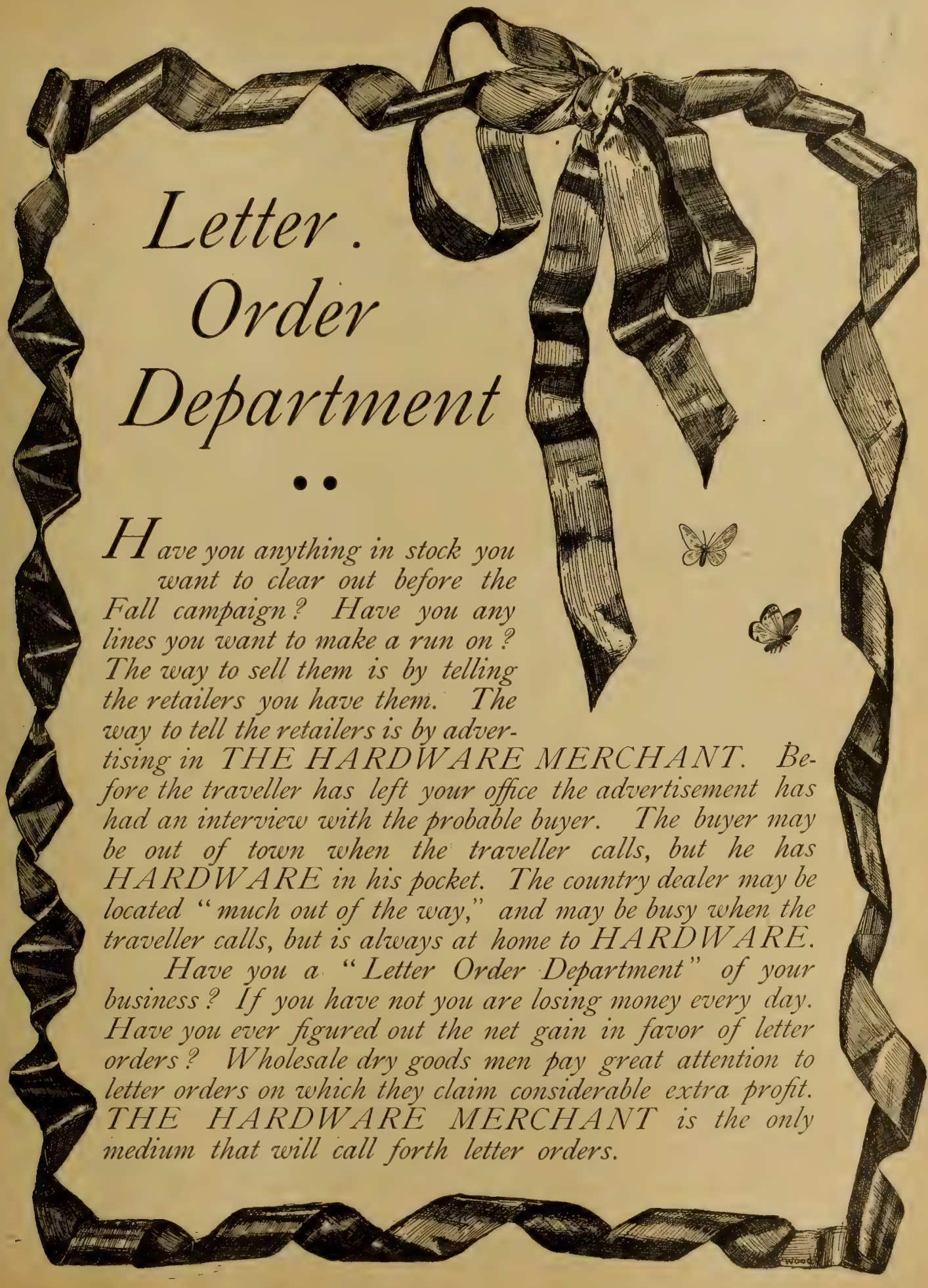
E. W. Cox, of Kingston, was among the buyers who paid Toronto warehouses a visit this week. Until within a few months ago he was with M. & L. Samuel, Benjamin & Co., and he left them to go into business for himself in the Limestone City. He is already well on the road to success.

J. Peaker, of Brampton, was noticed this week making one of his periodical tours among warehouses.

Wm. H. Carrick, manager of the Gurner Foundry Co., Ltd., and Mrs. Carrick, leave to-day for Chicago to see the World's Fair. They go by the rail and lake route via Collingwood, and will be away two weeks.

THE DAY OF BIG SCHEMES.

The advancing years seem to produce an increase rather than a diminution in the number of gigantic schemes. We have all heard of the scheme for expending $40,000,000 in the construction of a monster dam in the vicinity of Newfoundland that would turn the gulf stream back on itself and give New England a tropical climate so that the Granite State boys could climb palm trees to shake off the succulent cocoanut on their own bleak hill-sides, while the Rhode Islanders would offer scant encouragement to the peripatetic Italian Banana vender, as each and all of them would have a banana tree in close proximity to his own back porch. A more recent scheme is the bridging of the English channel between Dover and Calais. It is said that this scheme has gone so far that a company has been formed to secure the necessary concessions from the British and French Governments. The cost of the bridge is some such bagatelle as $240,000,000. The latest scheme is one for roofing London and other large cities, and thus doing away with the umbrella trust. The projector has not yet considered any such vulgar and insignificant detail as the matter of cost and hence has not enlightened the public on this point. Such schemes are, of course, largely visionary, but they indicate a tendency to grapple with the most stupendous undertakings that is in a manner characteristic of the nervous and progressive age in which we live.—American Artizan.



Letter. Order Department

Have you anything in stock you want to clear out before the Fall campaign? Have you any lines you want to make a run on? The way to sell them is by telling the retailers you have them. The way to tell the retailers is by advertising in THE HARDWARE MERCHANT. Before the traveller has left your office the advertisement has had an interview with the probable buyer. The buyer may be out of town when the traveller calls, but he has HARDWARE in his pocket. The country dealer may be located "much out of the way," and may be busy when the traveller calls, but is always at home to HARDWARE.

Have you a "Letter Order Department" of your business? If you have not you are losing money every day. Have you ever figured out the net gain in favor of letter orders? Wholesale dry goods men pay great attention to letter orders on which they claim considerable extra profit. THE HARDWARE MERCHANT is the only medium that will call forth letter orders.

TRADE CHAT

[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Tuesday.]

Suspension bridges antedate the Christian era.

The foundations are being laid for the rolling mill to be erected on the Indian Road by the McDonnell Rolling Mills Co.

The smelting works and Hamilton, Grimsby and Beamsville Electric road by-laws were carried in Hamilton Wednesday.

Cassady & Co., of Vancouver, B.C., propose building extensive additions to their sash and door factory soon, as well as adding new machines.

The Pullman car shops at Detroit, which have given employment to 1,100 men, will be closed within two weeks, and those who are in authority say they will never be reopened.

The work of rebuilding the premises of the James Robertson Co. (Ltd.), King street west, Toronto, partially destroyed by fire some time ago, is being rapidly pushed forward.

The smokestacks of ocean steamers are much larger than is generally supposed. They range from 14 to 18 feet in diameter. Those of the Etruria are over the latter figure.

At a meeting of the council of the Board of Trade Monday N. H. Cowdry, grain merchant, of Lindsay, and Charles A. Hunter, broker, of Toronto, were elected to membership.

Owners of iron ore land are invited by the Peteroboro' Board of Trade to furnish information as to extent of development, probable quantity, location, and if possible the analysis of the ore.

Angus Morrison, of London, Ont., who for a quarter of a century has been the principal representative in Ontario of the Imperial Oil Company, has accepted the position of manager of the Hamilton branch.

The total shipment of tin plates at Swansea, Wales, in 1880, was 405,488 boxes, weighing 25,343 tons, which had increased in 1890 to 3,710,552 boxes, of 229,791 tons in weight, of the value of $17,234,325.

The gold mines of Chester Basin are in full blast. Prospector Heisler is now engaged locating another mine about a mile and a half from the present one. There are two crushers at work.—Critic, Halifax.

An American firm are selling bicycles on the Island of Java. Already there is a club formed there where both men and women are members. It is plain to be seen that they can do something but raise coffee in Java, for many tourists who witnessed a bicycle club meet there say the women riders were the handsomest and most graceful they had ever seen.—N. Y. Hardware.

Nelson's, South Kootenay, Board of Trade asks the Dominion Government to improve the mail facilities of the district, and calls upon the Provincial administration to make without delay a ten mile wagon road from Watson to New Denver.

The telegraph and telephone lines of Switzerland are owned and operated by the government. There are 1,411 telegraph offices and 12,595 telephone offices. The profits derived from them amount to more than $250,000 yearly.

The shipyard joiners on the Tyne having decided to accept the reduction of 1s. per week in wages, the committee of the employers' association met on June 7th and resolved to adhere to their demand for the reduction, with the alternative of a general lockout.

The intensity of confined sound is illustrated at Causbrook Castle, Isle of Wight, where there is a well 200 feet deep and 12 feet in diameter, lined with smooth masonry. When a pin is dropped into it the sound of its striking the surface of the water, 182 feet below, can be distinctly heard.

Dealers in bicycle tools and supplies cannot be too energetic in pushing their goods. Our word for it, says an exchange, we have seen a good many people within the past month who have taken on bicycles and yet know nothing about the special tools that could also be sold as well.

The American Iron Company has rented the Clute & Jenkins iron mine adjoining the Coe Hill mine. The same company is in treaty for the purchase of the Nugent iron mine, one mile and a half west of Coe Hill. Mr. Nugent was notified that his iron ore is the purest that has been sent to the World's Fair.

The Bethlehem, (Pa.) Iron Company has completed and shipped to the American Line a spare crank shaft for the steamship Paris. It is made of nickel steel, and has a tensile strength of 90,000 pounds. This is 25,000 pounds in excess of the strength of any shaft ever made by English or German manufacturers. One of the crank pins alone weighs 3,000 pounds.

A block of coal believed to be the largest ever mined in the United States was taken out of a mine at Rosslyn, Wash, several days ago. It is 24 feet long, 5 feet 8 inches wide, 4 feet 8 inches high, and weighs 41,000 pounds. It is, perhaps, the largest lump ever mined in the world, as it is larger than the block England is sending to the Chicago Fair as a prize specimen.

Further large finds of silver and grey copper ore and galena are reported from the Lardo district, and now prospectors are on the lookout for tin, which is often found in rock ledges of similar character to those of many parts of the West Kootenay district. Up to the present, however, no tin has been discovered.—News-Advertiser, Vancouver, B. C.

The U. S. ordnance department of the army is preparing to begin the manufacture of the new army rifle at the Springfield armory immediately after the beginning of the new fiscal year. The rifle is of very small calibre, intended to use smokeless powder, and is a magazine arm. It is estimated that within one year the output will be 12,000 rifles, which will probably suffice to arm the infantry and artillery. The carbine for cavalry has not yet been designed.

According to a cable of Monday last, Herbert Gardner, President of the Board of Agriculture, states that a microscopic examination of the lungs of animals landed from the steamship Lake Winnipeg, from Montreal, has proved that the animals had been affected with contagious pleuro-pneumonia. The prohibition against the importation of Canadian cattle must therefore be maintained.

It is said that the famous Silver King mine near Nelson, B.C., has been sold to an English company for $200,000, mostly in paid up stock. The company is organized, so the report adds, with £300,000 capital. In all about £70,000 will be represented in cash available for working purposes. The news is not yet fully authenticated, being at present stated by the Colonist on the authority of a mining broker.

A chemist has invented a sensitive paint, which is a bright yellow at the ordinary temperature, but upon being warmed changes color gradually, until at 220 degrees becomes a bright red. It returns to its original color upon cooling, and may be heated with the same effect over and over again. It is suggested that this paint may be used with advantage to detect a rise in the temperature of the frictional parts of high-speed machinery.—Saw Mill Gazette.

It does not look reasonable that six to twelve months should be needed to make a billard ball, but a first class ball cannot be made in less time, owing to the tendency of carved ivory to shrink. If it shrank equally a ball could be cut and polished in a few hours, but it does not, the shrinkage being greater in the direction of the width than of the length of the tusk. A ball must thus be roughly shaped, then kept for a number of months, until the shrinking process has been completed, when the fine cutting and polishing may be done.

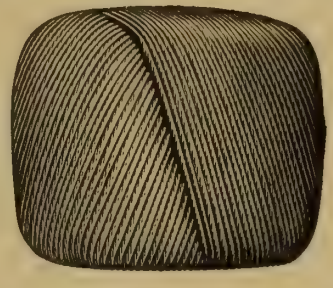
McGillivary & Co., of New Westminster, B.C., have contracted with the owners of the Horse Fly mine, Cariboo, to supply them with 500 tons of 30-inch steel pipes. The steel, which is ordered from Glasgow, will be brought to Montreal by steamer and thence conveyed across the continent on 40

THE ONLY RELIABLE

. . . LOW PRICED . . .

BINDER TWINE

IS THE



Common Sense . . Brand .

REGISTERED.

MADE BY DICK'S PROCESS

(Full Patents Applied for.)

CHEAP AND EASY TO WORK.

Follows Manilla on all Machines in good order without Change of Adjustment. . . . . .

Completely Weather and Rot Proof.

FEW TONS REMAINING,

Immediate attention given to any enquiries or orders. . . . .

WHOLESALE AGENTS:

M. & L. Samuel, Benjamin & Co. = = Toronto.

cars. The pipes will afterwards be forwarded to Ashcroft and carried thence 150 miles to the Horse Fly mine. "It is thus made evident that the mine will be well worked by a large body of men employed by large capitalists," adds the News-Advertiser.

In weighing or measuring articles which you sell you must be just, but need not be liberal. To do so it requires some skill, as it looks very mean if you make your efforts at strictness too noticeable. A salesman who takes out a few nails to drop them back again, and maybe repeats this, gives the impression of trying to treat his customers rather niggardly, and will drive them away by and by. It requires a good deal of practice to use a scale in such a way that, without your giving anything more than the strict weight, you create the impression of liberality.

The gas and multitudinous emanations of a city will unconditionally tarnish all kinds of silverware. The tarnish on electro-plate goods may be removed by immersing the article from 1 to 10 or 15 minutes, or until the tarnish has been removed, but no longer, in the following solution: Rain water, 2 gallons; potasium cyanide, 8 ounces; dissolve and put into a strong jug or jar, and cork tightly. After immersion, the article must be taken out and thoroughly dried in two or three waters, then dried with a soft linen cloth, or, if frosted or chased work, with fine and clean sawdust. Tarnished jewelry may be speedily restored by this process; but make sure work of removing the alkali, as it will corrode the goods.—Ex.

The bill to prevent the use of barbed wire for fences in roads, streets, lanes, and other thoroughfares, has been reprinted as amended in committee. The object of this bill is to empower any local authority or any person to serve notice in writing upon the owner or occupier of such land, requiring him within a given time to take down and remove such barbed wire. If the occupier fails to comply with such notice, the local authority may apply to a Court of Summary Jurisdiction, which may, by summary order, direct such wire to be removed. Cleft oak or other solid fences, on or over which barbed wire may be fixed for the protection of the property enclosed, are exempted from the operations of this act.—Ironmongery, London.

A Woodstock despatch of Wednesday last says: The business difficulties that have lately harassed James Hay & Co., Woodstock's largest industry, have been adjusted, and in future the business will be run under the name of James Hay & Co. (Ltd.), a joint stock concern with a capital stock of $200,000. A claim to be paid in full is the wages of employees at the factory, which is said to amount to over $10,000. The liabilities in town will be considerable, but most of the parties interested are able to bear whatever loss they may sustain. From the best information obtainable the unsecured liabilities will be $60,000 or $70,000, for the payment of which $16,000 has been put in trust. The change here does not affect the Brantford and Almyer factories, which are separate concerns. A meeting of the creditors will be held as soon as possible, when definite information will be more easily secured than at present.

THE PIG IRON SITUATION.

The May statistics for blast furnace capacity indicate, says Age of Steel, that the weekly production of pig iron has declined 7522 gross tons, as compared with production in March figured from returns of a kind. This is good news to furnacemen, signifying, as it does, that the forces of reaction against extremely low prices for their product are now actively at work. True, it also implies a marked curtailment of demand for the metal, but while this is conceded, the change in production will be welcomed by pig iron people generally; not only and solely because, for several months past, through sheer fatigue and unreasoning disgust they have felt that any kind of a change must be for the better. There are other grounds upon which their satisfaction for the present and their expectations for the future rest.

For one thing, it appears that the fault of the situation has not been so much with the consumption as with the production of pig iron. This view of the case is graphically illustrated by the statistics of indicated output. According to these, production has been steadily on an ascending scale since September last, except in December and January, when the weekly production declined by 5,000 tons in the full time. But with this exception there were steady gains from first to last in the period named, from 151,648 weekly output September 1st to 181,551 tons by May 1st last.

In the meantime stocks in first hands, sold and unsold together, have declined more or less, according to furnace reports. They are given as having fallen since March 1st from 735,424 tons to 642,190 June 1st. But the statistics showing these changes admit of an explanation, and perhaps of a reasonable doubt as to their disinterestedness. For they make no distinction between sold and unsold stocks, but take the two together—obviously an easy way of doing, but one not calculated to promptly particularize the varying relations of demand to supply, however accurately the aggregate of the two classes of stocks may be reported.

Nor does this point lose any of its force in the light of the conditions which have confronted the pig iron market latterly—conditions apart from those applying merely to production and stocks. For weeks past all lines of business have been affected by an acute monetary stringency and wide-spread failures. This circumstance, while it has only recently begun to reduce the rate of consumption of iron this year, has put a check on buying, notwithstanding that prices are down to bed rock. Consumers, keenly aware of the rapid decline of new business since May and earlier, startled by the tightness of money and frequent collapses in the business community, have been working up the iron in their yards and keeping out of the market as much as possible. This policy has been adhered to all the more closely, especially among the mills and some other classes of establishments, because the usual hot-weather shut-down is now almost at hand and may be protracted beyond the ordinary by wages disputes.

The furnace stock reports, notwithstanding their undiscriminating character as to sold and unsold iron, give some hint of this recent abatement of demand. They show a decline in stocks from the total holding April 1st of 671,274 tons of only 29,084 tons to June 1st, two months, whereas the fall in the single month preceding was 64,150 tons. Of charcoal pig iron there was a very slight increase in stocks for May, and of 6,742 tons since April 1st. Coke iron fell away only 2,877 tons last month, and but 16,093 tons since April 1st. In short, the only marked reduction in stocks since April 1st has been in anthracite iron, whose total stock, although ordinarily not equalling much more than a third of that of coke pig, was diminished by 20,733 tons. Of this reduction 15,604 tons is to be credited to the month of May.

But for reasons in part already suggested, the consensus of opinion among pig iron people is that the cessation of demand is too complete to hold for any great length of time. June and July—and at least the early part of the latter—invariably constitute a dull period. The call for iron might be expected to be light at this time, in any event. When this condition is emphasized by an apparently temporary, but unyielding, disposition on the part of consumers to collect as much cash and incur as few obligations as possible— then there is little wonder that iron doesn't move as well as a while back. The money disturbances add to its burdens immeasurably; but there is comfort in the thought—with many, a belief—that the stringency in the currency cannot outlast the summer period of inactivity for iron.

Business of almost all kinds, it is reasonably safe to say, is only awaiting the removal of this incubus—the nightmare of vanishing cash and contracted credit—to resume its former proportions. It is inherently sound. Prices of manufactured articles were never lower than in the present year, and during this whole money pinch have demonstrated their stability in a way as remarkable as it is encouraging. Practically everything having a marketable value—manufactures, agricultural products, stocks, and what not—is down to bed-rock. Southern pig iron has actually firmed up in this market in the past thirty days.

In view of all this, pig iron producers can contemplate a reduction of 7,522 tons in the weekly output of the furnaces with quite a degree of satisfaction, and especially so since there is promise of a further reduction in June, by the blowing out of additional stacks.



All kinds of Office and Store Fittings and Furnishings



SAFE WANTED

Large Fire Proof Safe Wanted at once. State dimensions and price. Address H. M., HARDWARE Office, Toronto.



C. C. HARRIS
Manufacturer of Solders and Antimonial Alloys.
Cor. Wickson Ave. and Yonge St., Toronto.
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CEMENT..

7,000 Barrels of
GENUINE WHITE'S
and other best London Brands in stock and to arrive.
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FIRE BRICK, DRAIN PIPES,
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Of English, Canadian, and American designs. . .

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LAWN SPRINKLERS,
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The Turney-Tilden Co. Ltd.
Successors to The E. & C. Gurney Co.
HAMILTON - - ONTARIO.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

HARDWARE.

MONTREAL, July 7, 1893.

There is very little change in iron and hardware to note this week. A fair jobbing trade has been doing in general hardware, several lines of which have shown a gratifying degree of activity, while the tone in respect to heavy goods, such as pig iron, tin plate, etc., which have ruled extremely dull, shows symptoms of improvement in sympathy with a tendency that way advised from primary centres in Great Britain. Importers in consequence show more disposition to take hold, and the consequence is that several sales agents have to report negotiations in connection with pig iron and tin plate which, although no sale has transpired, indicated that a demand on this account is likely to ensue. It looks also as though Canada plates had been oversold, which we hinted at in the course of a special article last week. The demand for harvesting tools has been maintained, while wire screens, freezers, etc., have also furnished a fair movement. Values generally remain much the same, for at the meeting held in Toronto last week no important changes were decided upon except in the case of some lines of tacks.

WIRE.—The manufacturers are holding their quarterly meeting in Toronto this week, but no change of a material kind is anticipated by the trade. Business is quiet at the moment.

NAILS.—Nails have shown a little more life in so far as cut nails are concerned, as buyers know now that prices are fixed for another quarter. Makers report some enquiry, and the jobbers also have been placing some lots. In wire nails, the manufacturers meet this week, and business is dull in the meantime. No change is looked for.

Tacks.—Tacks rule quiet. The only lines which were changed at the meeting last week were: Tin trunk tacks, copper clout, and slating nails, the discount on which is now 62 1-2 of both descriptions. Trade is quiet.

OTHER SMALL LINES.—The associations consider bolts, nuts and rivets also this week, but the trade have not been advised of any change as yet.

CHAIN.—Trade in this article has furnished nothing important during the week.

TOOLS.—Farmers and harvesting tools generally have continued to show considerable activity. In fact these are the single really active lines with the jobbing houses here at the moment.

BUILDERS' SUPPLIES.—There is little demand for either plumbing or building supplies at the moment.

WARE.—There is nothing special to note except a moderate demand for preserving utensils.

METALS.

Heavy material generally has not developed any pronounced change, but although business rules on the dull side the tone is distinctly better.

PIG IRON.—The pig iron market continues very flat at the moment, and holders say that in order to effect sales prices have to be shaded. We quote as before: Summerlee and equal brands, $17.90 and upwards, according to quantity; Eglinton, $17, and Carnbroe, $16.75.

BAR IRON.—Trade in bar iron rules quiet, and prices are unchanged as before, as no alteration was decided upon last week at Toronto.

SCRAP IRON.—There have been some sales of scrap iron at $15 to $16 for No. 1 wrought, but the market is dull on the whole.

TIN PLATES.—There is no change in tin plates, and business during the week has been almost a blank. We quote cokes, $3.15 to $3.20 for round lots, and $3.25 to $3.30 for jobbing business; charcoal is unchanged at $3.50 to $4.25 as to quality.

CANADA PLATES.—There has been no new feature in Canada plates, business ruling quiet. Inside offers are reported from the West, but the very lowest figure that can be quoted locally is $2.45 and this is possible only on a good sized lot.

TERNE PLATES.—No business in terne plates can be quoted, and former prices, $7 to $7.50, can be repeated.

GALVANIZED IRON.—The week has not witnessed any large business in galvanized plates, which rule steady at 4 3-4 to 5c. for No. 28 gauge.

SHEET IRON.—No change is to note in sheet iron. Some moderate quantities have been moved at former prices, $2.40 to $2.60, according to grade.

HOOPS AND BANDS.—These have ruled quiet and unchanged at $2.35 per 100 pounds.

COPPER.—The market is quiet and unchanged under a small jobbing business at 12 to 13c.

TIN.—The feeling is steady, but business is quiet. We quote as before, 22 to 22 1-2c.

LEAD.—Former prices are maintained with only a small jobbing trade to note at $2.90 to $3.

ANTIMONY.—The market is quiet and prices are rather easier at 10 1-2 to 12c.

SPELTER.—Prices are the same and trade dull at $4.75 to $5.

ZINC SHEETS.—No important business is to note, prices being quoted as before, at $5 to $5.50.

GLASS.—Business rules quiet and the market featureless. We quote former prices, viz., $1.35 for first break, etc. Putty in bulk is unchanged at $1.85.

LEADS AND PAINTS.—A fair business is reported in leads, although this is usually the quiet season of the year. Linseed oil rules firm, a further advance having been advised from England of equal to 1c. per gallon on spot, but the quotation is as yet unchanged, although an advance is predicted as possible before the week is over. We quote: Government standard, $4.75 to $5; No. 1, $4.50; No. 2, $4.25; No. 3, $4; No. 4, $3.75; dry white lead, 4 3-4c.; red lead, pure, 4 1-4c.; No. 1, 4c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, 60c. for raw, 63c. for boiled, for round lots.

NAVAL STORES.—Business is moving fairly well at quotations. We quote: Turpentine, 49c. to 50c.; resins, $2.50 to $5.00, as to brand; coal tar, $3.75 to $4; cotton waste, 5 1-2c. for colored and 7c. to 10c. for white; oakum, 5 1-2 to 7 1-2c., and cotton oakum, 10 to 12c. Cordage, sisal, at 9 3-4c. for 7-16 and upwards, and 15c. for deep sea line. Pure manilla, 12c. for 7-16 and upwards, and 13c. for smaller sizes.

BINDER TWINE.—Demand for binder twine on Western account has continued good, while prices remain as before, viz., 8 3-4c. for Red Cap and 9 3-4c. for Blue

Refrigerators



Hardwood, Lined Galvanized Iron,

These are highly finished and each season has shown an increasing demand. This year we are also making a cheaper line in above style, so as to meet all requirements.

Galvanized Iron Eave Trough, 8 foot lengths.
Lithographed Tea Caddies and Signs.
Water Filters and Coolers.

We are getting out a very Handsome line of **Lithographed Stove Boards.**

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

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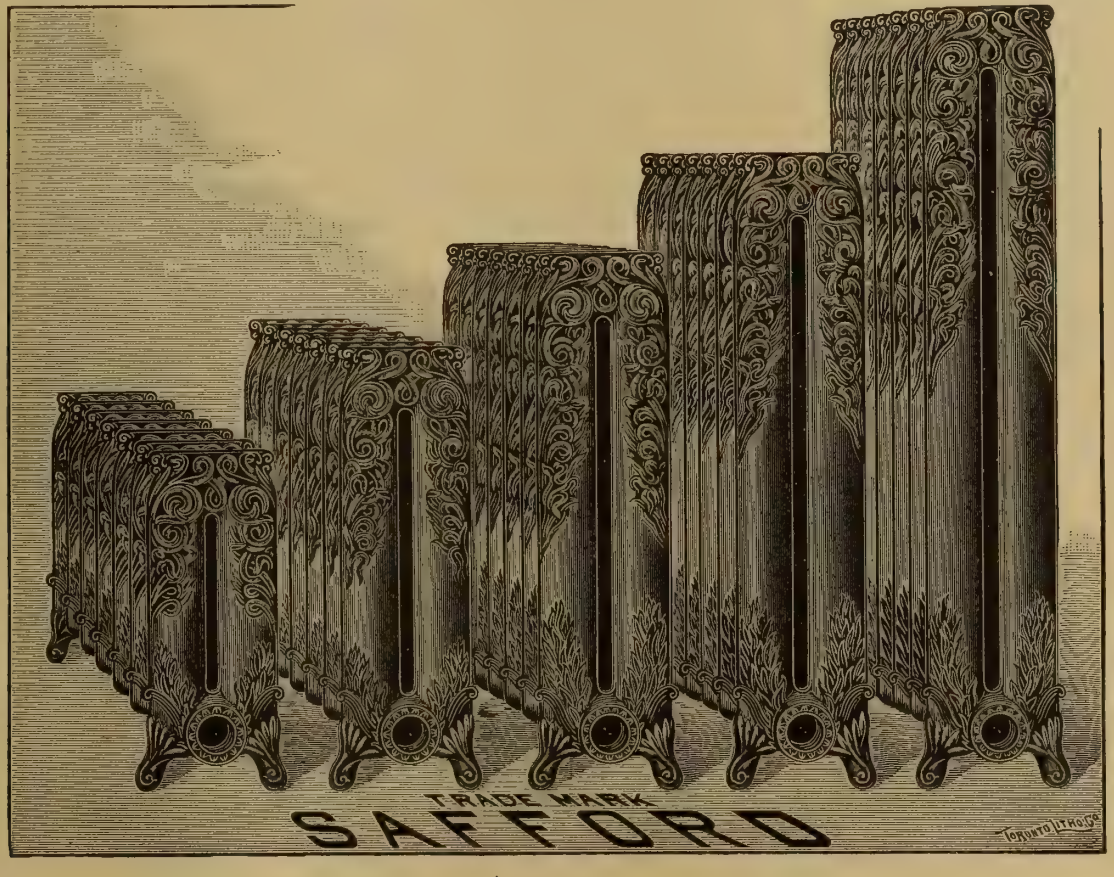
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TORONTO, ONT.

MONTREAL. QUEBEC. ST. JOHN, N.B. HAMILTON. WINNIPEG. VICTORIA, B.C.

Ribbon, with the usual trade discounts on these prices for round lots.

CEMENT.—This article moves out with considerable freedom under a good demand, both on Western and local account. Prices are not quotably changed, English brands being held at $1.95 to $2.15, and Belgian, $1.85 to $1.95. Firebricks are in good demand at $15 to $19 as to brand, ex ship.

PETROLEUM.—Refined is in fair demand, but the movement is not up to the average, and some cutting is reported on the part of refiners who are anxious to secure trade. We quote Canadian at 11 3-4c. in shed in Montreal for round lots, and 12 1-2c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c. in ten barrel lots, 19 1-2c. in five barrel lots, and 19 1-4c. for single barrels; 2 per cent. off for cash. American benzine 23 to 25c.; Canadian benzine, 10 3-4c. Petrolea; 12 3-4c. for Montreal.

MONTREAL TRADE NOTES.

A. Ramsay & Son report several sales of large size plate glass.

Painchaud, Squire & Co. report a good sorting demand for lines of sporting specialties.

Simpson, Hall, Miller & Co. have been filling some hotel orders for plated ware and cutlery.

Wm. McNally & Co. have taken several orders for round lots of cement on Western account during the week.

W. H. Cottingham & Co. are offering some fine lines of boat varnish at present which are having a good reception.

Canada plates promise to be scarce, as some of the Western sellers who were offering low prices have oversold themselves.

There have been negotiations in connection with some round lots of pig iron, several of which have come from Western buyers.

Francis Hyde & Co. have orders for quite a quantity of their lines of Scotch drain pipes on hand which they are sending forward.

T. W. Ness has been placing large numbers of electric fans in the city in consequence of the hot weather. The contrivance is got up in a number of styles and at various prices.

TORONTO MARKETS.

TORONTO, July 7, 1893.

HARDWARE.

There is still a fair trade doing, although less activity is exhibited than a week ago. This however is usual at this season. Prospects however continue to brighten, and country merchants who have been in the city during the week speak hopefully of a good trade from this out. No really marked features have developed during the week. Business has been larger of a sorting up character and principally in light hardware. The demand for harvest tools keeps up surprisingly well, although the wants seem to be about supplied in garden tools. A good many ice cream freezers are still going out, and preserving utensils continue in good request. Reports regarding payments continue to improve.

WIRE—Demand continues to slacken off and does not now amount to much.

ROPE—Business in this line is confined almost wholly to certain sizes, particularly ¾ to ⅞ inch, suitable for hay forks.

NAILS—There is still a fair trade doing in cut and wire nails, but moderate only is the demand for horse-shoe nails, it yet being too early for much movement in this line. The wire nail manufacturers met in Toronto Thursday, but made no change in prices, those existing being merely confirmed.

CHAIN—The season is over for this line, and there is practically nothing now doing.

WARE—There is a good trade doing in tinware, the change in the terms seemingly not having retarded business. Demand continues active for preserving kettles of the three grades, brass, enamelled and peerless. There is a firmer feeling in the enamelled article in sympathy with the advance on the other side.

PLUMBERS' AND BUILDERS' SUPPLIES—Being between the seasons there is nothing of note to mention.

SCREENS—The season is about over for screen doors and windows, and trade is now confined to a small order here and there.

GREEN WIRE CLOTH—Although the time is past when this article is in season, there is still a brisk trade doing at $1.90.

TOOLS—Demand keeps exceptionally good for harvest tools, and jobbers are still experiencing a good deal of difficulty in getting some lines from the manufacturers.

FIRE PROOF
ROOFING
ILLUSTRATED CATALOGUE FREE
METALLIC ROOFING Co
MANUFACTURERS, TORONTO

METALS.

There has been a good movement during the week in bar iron, tin plates, ingot tin, but outside these the trade has been only fair. Ingot tin is a little lower, while pig lead shows an advancing tendency.

PIG IRON—The mills are quiet and there is consequently little or no enquiry for pig iron. Trade in this line is quieter than is usual at this time. Southern is nominal at $21 and Nova Scotia at $19.

BAR IRON—Several orders are reported for carload lots on the basis of $1.95, but there does not appear to be as much doing as a week ago.

TIN PLATES—There is a good trade doing in this line at unchanged prices. Supplies are ample.

CANADA PLATES—Orders are coming in freely for delivery later on, but for immediate wants there is not much doing. Prices are unchanged, all dull being quoted at $2.65, half-half at $2 75, and all bright at $2.80 to $3 per box.

GALVANIZED IRON—There is a fair movement in case lots at 5 to 5¾c. for Queen's Head and Gordon brands.

IRON PIPE—Demand is moderate at unchanged brices.

CORRUGATED IRON—There is a demand for small lots at $5.50 per square.

INGOT TIN—Prices are lower, 23 to 23½c. now being the idea. There is the usual trade doing in this line.

INGOT COPPER—Not much doing; 12½ to 13c. is price generally quoted, but large lots can be obtained at lower figures.

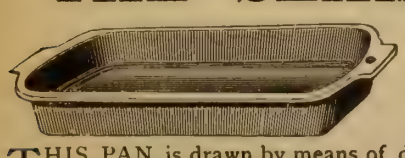
SHEET IRON—There is not much doing, and prices as before range from 2⅝c. up.

ZINC SHEET — Business dull and unchanged at 5¾ to 6c for 5-cwt. casks and 6 to 6¼c. for part casks.

ZINC SPELTER—Inactive and quoted as before at 3¾ to 5¾c.

LEAD—A number of orders are being booked for pig lead. Owtng to the shutting down of the silver mines in the United States

"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

MARKETS—Continued.

prices show an advancing tendency. Present quotation are 3¼c. for large lots and 3⅝ to 3¾c. for small lots.

ANTIMONY—Some small lots are going out at 12 to 13c. for Cookson's and 11 to 12c. for other makes, but these prices would be shaded for large lots.

GLASS.

Import orders are now nearly all filled, which, to a certain extent, has stopped the sale from stocks on hand. There is a little doing in small lots, but trade on the whole does not seem to be up to the standard. Prices remain unchauged on the basis of $1.25 to $1.30.

PAINTS AND OILS.

Trade is less active than a week ago, although for this time of the year there is a good business doing. The feature of the market is the firmness in linseed oil. In England prices are from 2 to 3c. higher, while the Canadian manufacturers have put the price up 1c. a gallon. A meeting of the Ontario Association was called for yesterday (Friday) for the purpose of making the advance general, but at the time of going to press the result was not known. Turpentine is in good demand and unchanged at 45 to 47c., the latter figure being for outside points, freight allowed. Supplies are ample. Castor oil is rather more active at 8½ to 9c. Glue is selling well at unchanged prices. White lead is in fair demand at the 4¾c. basis, while prepared paints are quiet and quoted as before. Demand for Paris green has fallen off, although a fair business is still being done with the northern section of the province. There is not much doing in varnishes. Payments are improving, although there is still room for an improvement, particularly in the city.

OLD MATERIAL.

Supplies are still liberal, but there is practically no demand. Prices are unchanged. We quote: Agricultural scrap, 55c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40 to 50c.; No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper, 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.: heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings and turnings, 10 to 15c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—The market is still in a demoralized condition and prices are lower, the wholesale quotations for buffs being 4¾c.

SKINS—Calfskins are easier, though select skins are still selling at 7c. Lambskins are higher at 40c. and pelts at 25c.

TALLOW—Is weaker, jobbers paying 5c. and selling at 5¼ to 5¾c. according to quality. Rough is unchanged at 2c.

WOOL—Is coming in freely, people in the country being anxious to sell, and the price for straight lots is 17c. Some of the mills are beginning to buy.

PETROLEUM.

No change have yet been made in prices, consequent upon the new tariff which went into force Saturday last, but it is expected that there will be in a few days. We quote in bbl. lots, Toronto: Canada, 13 to 13½c.; carbon safety, 17¼ to 18c.; Canada water white, 19c.; American water white, 21 to 22c.; photogene, 25c.

MARKET NOTES.

Stewart & Wood report a largely increased trade in double diamond glass.

H. S. Howland, Sons & Co. report that they are receiving orders for binder twine by every mail.

M. & L. Samuel, Benjamin & Co. have difficulty in filling orders for scythes, forks and hoes owing to the slowness of the makers in furnishing supplies.

John White, Rapid City, Manitoba, in a letter to HARDWARE MERCHANT says: "Trade is brightening up here a little and the prospects at present are very good for a fine crop."

HARDWARE last week inadvertently credited the Kemp Manufacturing Co. with the issuing of the new terms on tinware, enamelled goods, etc., whereas they were jointly issued by the several manufacturers of the country.

M. & L. Samuel, Benjamin & Co. have got a fresh supply of "Gem" freezers from two to fourteen quart sizes. As they are going out fast they promise to be soon disposed of. To those who contemplate purchasing the hint is obvious.

Mr. Robert Sanderson, of Macpherson avenue, Toronto, has just completed a large contract with the Toronto Street Railway for the iron guard placed on the trailers, and he is now engaged in filling a contract for the Toronto Exhibition for iron fences in connection with the cattle sheds there. The work is giving satisfaction.

The Toronto Radiator M'fg. Co. have just received the contract to supply the radiation for the Huron county buildings in Goderich, and the same firm have also contracted for all the radiators for the Waterloo county buildings in the city of Berlin. These are the two largest contracts for heating apparatus that have been let in Ontario this year. The same firm have just recently booked the order for the "Safford" radiators for the Toronto Athletic Club's new building on College St. in this city. This is another very elaborate addition to Toronto's architecture, and the Toronto Radiator Co. are to be congratulated on being able to consider these buildings amongst their already very long list.

The Toronto Radiator Mfg. Co., who manufacture the "Safford" Patent Radiators, are kept running night and day to fill the many large orders that they have on hand for their radiators. They are preparing a very large shipment for Tientsin, North China, and that they export very largely to Great Britain, France and Germany. Another matter that may be of interest to our readers about this firm is that they also ship to the United States (in certain parts their goods are preferred to those manufactured there), and the consumers are satisfied to pay the additional 45 per cent. duty and use the goods manufactured in Canada, which speaks well for Canadian industry.

"The Owl," whose eyes are never closed, reports that the Toronto Radiator Manufacturing Co. have now in the printer's hands a most elaborate piece of work in the shape of of a catalogue, and if we can believe our friend, the Owl, it will be the most elaborate and expensive production in printer's art that has been executed in Toronto for a number of years. The volume is to contain some 200 steel plate views of Canada's best buildings in addition to the usual illustrations of the Safford Patent Radiators, and last but not least, a carefully prepared work on hot water and steam heating. The Toronto Radiator Co. are given credit for being the first in the field in a work of this kind, and if they stick to their work as closely as they have since the inception of their Company, they should have unprecedented success.

AMERICAN MARKETS.

New York, July 7.

PIG TIN.—London and New York markets acted independently. From the former centre there were advices by cable of somewhat higher average prices on a very moderate volume of business, but in the local market, while there was hardly enough interest to afford an intelligent idea of probable value of the metal, sales could not have been made here at any advance over the lowest figures reached on Friday or Saturday of last week, or, say, about 18.85 to 18.90c net cash for round lots, prompt or current month delivery.

The comparative statistics of total visible supply for Europe and America afford some idea of the ante-McKinley duty accumulation of stock. The figures relating to shipments from the Straits to England last month suggest that operators on the other side of the Atlantic are preparing to send more tin this way in the event of prices being moved up to a profitable point.

COPPER.—During the latter part of last week several fair-sized parcels of Lake Superior ingot were quietly placed at 10 1-2c. Since that time, however, the market has been lifeless, despite the report that nearly all producers in this country, outside of those represented by the Lewisohn interest, agreed to continue in force for the balance of the year the agreement to restrict production and exports that was in force during the first six months. Other varieties of crude material were also in limited demand and could doubtless have been secured at prices as low as any that were accepted last week. The extremes at present are 10 1-4 to 10 1-2c. for electrolytic, and 9 7-8 to 10 1-8c. for casting stock, with the inside figures apparently purely exceptional for other

MARKETS—Continued

than small quantities. Early London cables quoted an advance of 5s. on merchant bars in London, which, however, was subsequently lost. London sales were 150 tons spots and 325 tons futures.

PIG LEAD.—The offering was extremely reserved, and not with indication that, owing to the uncertain condition of affairs prevailing at the primary sources of supply, holders are very indifferent about selling, and smelters disinclined to book orders for prompt or near future delivery, except at a sharp advance on late selling prices. A few sales of common domestic were made at 3.55c. That price was subsequently refused, however, and there was no great quantity on the market at 3.60c. at the close. St. Louis wire to the Metal Exchange advanced the nominal price at that point to 3.35 to 3.60c., and London cable quoted an advance to £9 12s. 6d. for soft Spanish.

SPELTER.—Prime Western was on offer at 4.20c. delivered here or at common point, but that price fails as yet to stimulate purchases perceptibly, and the market remains in a flat condition, enquiries nearly or quite as few as actual transactions. St. Louis quotation was 3.92 1-2c., with the market dull. London cabled £17 15s. for good merchant brands.

ANTIMONY.—Dealings were very light and prices are still soft at about 9 1-2c. for Hallett's, 10 1-2c. for Cookson's, and 10 1-8 to 10 1-4c. for LX and similar brands.

TIN PLATE.—Several dealers closed their stores and brokers made no effort in the direction of business aside from filling a few small orders. There was virtually no market.

The Pittsburg Commercial Gazette of July 1st, reports as follows: This has been the dullest week of the season in the pig iron trade. It has been the policy of consumers generally to close this month with as little pig iron as possible, hence they have been buying only as their immediate wants required. There has been no quotable change in prices as compared with those of a week ago, although buyers still have the advantage. Bessemer iron may be quoted at $13.35 to $13.50 cash, at which last sales were reported; forge iron, $12.10 to $12.25; No. 1 foundry, $13.75 to $14; and No. 2 do., $12.75 to $14. The muck market continues in a demoralized condition; offers have been made to sell at $22.50 to $22.75 cash. It is estimated that probably sellers who are on the market at prices quoted are pressed for money. Ferro-manganese is lower, with sales of 80 per cent. domestic at $58.50 cash. The situation in regard to finished iron remains much the same as noted a week ago. It is thought that a shut down for a couple of months would be productive of good results, as it would cause a depletion of stocks both in first and second hands, and bring about better prices. A good many firms are pressed for money. They have plenty of good paper which for a time their banks are refusing to discount, and very little ready money. Herein lies the trouble just now. Manufacturers are expected to take paper for everything they have to sell and pay cash for everything they have to buy, hence it is not strange that some of them are cramped.

The wrought iron pipe trade continues in an exceedingly unsatisfactory condition, so far, at least, as relates to manufacturers. There is a fair volume of business, but no improvement in prices, which, it is claimed, do not yield the manufacturer a new dollar for an old one.

Wire rods continue very dull, owing to the depressed condition of the wire, as well as the wire nail trade, and prices show no improvement. The last sales we are advised of, made some weeks ago, were at $28 cash at maker's mill.

Bessemer steel billets continue quiet, with but little change in prices as compared with those of a week ago; may be quoted at $21.50 to $22 cash, according to specifications, as well as delivery.

Old rails continue quiet and prices are weak, although there has been no material change during the past few weeks. The movement in old material continues exceedingly light, and the prospect is not favorable for any immediate improvement. Prices are weak. Some dealers have contracts, but they cannot make deliveries, having been ordered by their buyers to hold until wanted.

HOW GRINDSTONES ARE MADE.

The quarrying and the manufacturing of grindstones, says Mechanical News, is one of the most important industries connected with general manufacture. Nearly all manufacturers use, and all hardware dealers sell, grindstones. The first operation is, of course, in the quarry, where the blocks of stone are quarried almost, if not altogether, of even thickness and width. These blocks are then split by the aid of wedges into thicknesses suitable for various sizes of grindstones. The next operation is marking upon the surface of the slab the desired circle of as large a size as the piece will admit. The rough slab of stone, with the circle outlined, is then placed inclined upon another stone, and with an ordinary stone hammer is broken round or as nearly so as possible. The partly finished stones are then loaded on the cars and shipped to the grindstone factory. The grindstone patterns after arriving at the factory, are centered, and the eye or square hole made in them by means of a pick. They are then placed upon a special lathe, the mandril of which is square, fitting the hole in the centre of the stone. While being revolved they are turned into exact shape by means of a soft iron bar held against the face and edge. The bar which is used in this operation is 1 1-2 inches wide, and from 5-8 to 3-4 of an inch in thickness, with the points turned up in order to take a better hold upon the stone. The sand and dust is carried off by means of a blower.

Berea rock can, if desired, be split much thinner. It is not unusual to split flagging from this rock, 6 x 4 feet and 3 inches thick. The Berea rock splits so easily that in furnishing curbing the blocks are loaded upon the cars before being split and are split up quite frequently while being switched out of the quarry.

After the grindstones have been turned perfectly round and flat, the iron hub is passed through the centre of the stone and fastened on one side by a flange, and on the other by a flange nipple. Stones are then mounted upon frames or shipped without frames, as desired. Most of the frames are so made as to be shipped knocked down, to save freight charges.

Scythe stones are made from a little finer stones than are grindstones. The stones are first sawed into slabs by gang saws, the slabs being about 1 or 1 1-4 inches thick. These are then broken in widths 10 to 12 inches, according to the length that the scythe stones are to be made when finished, and are broken into proper sizes by means of a drop knife, or, in grindstone vernacular, a "guillotine." The rubbing bed on which the scythe stones are to be made when finished, is usually made from bass wood and hollowed to the centre, sloping toward the inside. The face of the wood is driven full of scraps of iron, the wood working away faster than the iron; the latter with the aid of sand and water does the cutting. The rougher work is finished on the outside of the wheel, and the finishing on the inside where the speed is not so great. After the scythe stones have been examined they are finally labelled and boxed in boxes, containing one-quarter of a gross, and are then ready for shipment. Besides the usual shapes of grindstones which are known to the trade, there are also manufactured special shapes and designs for performing special grinding. What is known as the wood-pulp grindstones are produced from the stone known as "Peninsula" grit, which has long had an excellent reputation. For the purpose of grinding wood pulp the grit is hard and coarse, the particles are well set and of rectangular form, presenting sharp cutting points, giving the stone a constituency that enables it to wear well and produce a large quantity of pulp. Stone made for this purpose is hollowed out in the centre for nearly three-quarters of an inch in diameter.

Turned well covers are also made at the factory, where they are turned true in the lathe and the upper side convex, the highest point being in the centre, thereby leaving a chance for the waste water to run off, leaving the cover perfectly dry and clean. These are made with square or round holes as desired, and in any size from three to five inches in diameter. A very important factor, both in the selection of the grit and the proper working of the grindstone, is the speed at which it is operated. One grindstone will work well at a high rate of speed, while another stone will reach its maximum work at a speed of several feet per minute slower. The average speed of the Ohio grindstones should be about 2,500 feet per minute, but in no instance should they be run at a speed exceeding 3,000 feet per minute, and even this rate is straining the limit of safety. The Huron stone will stand a higher average of speed, 4,000 feet per minute being the outside limit for safety. The speed of a grindstone is calculated by the number of feet per minute which the periphery travels. To ascertain the rate of speed multiply the diameter in inches by 3.1416 and divide by 12; then multiply by the number of revolutions, and the product is the number of feet per minute which the stone is travelling. It is essential in order to have the grindstone perform satisfactory work, that it be kept entirely free from dirty water, grease and oil. There is no tool about a workshop that is more useful or necessary than the grindstone, and none which is more generally neglected.

H. D. SIMMONS & CO.

Manufacturers' Agents,

85 York St., TORONTO

REPRESENTING

PECK, BENNY & CO., MONTREAL.
J. L. GOODHUE & CO., Leather Belting, etc., DANVILLE, QUE.
ALEX. McARTHUR & CO., Tarred Felt Building Paper, etc, MONTREAL.
BELGIAN SYNDICATE, Cement, Iron Beams, etc.

WIRE

Coppered Steel Spring. Tinned Mattress Wire. Broom and Brush Wire. Hay Baleing Wire. Flat Wires. Soft Coppered Wire.

Write for Catalogue. We guarantee the quality of all our Wire.

Manufactured by

The B. GREENING WIRE CO., Ltd.,

HAMILTON, ONTARIO.



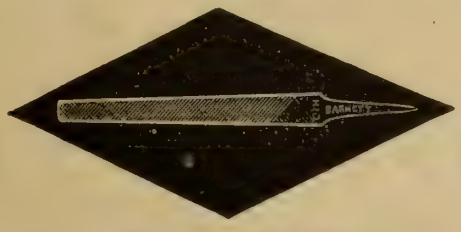
A. B. JARDINE & CO.

HESPLER, ONT.

- Blacksmiths' Tools
- AND
- Tube Expanders

Send for Catalogue and Price List

BLACK DIAMOND FILE WORKS,



21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

—MANUFACTURERS OF—

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES.
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
CLIMAX SAWFILES. LIGHTNING SAWFILES.

—AND—

EVERY OTHER DESCRIPTION OF SAW FILES.

STRENGTH

Is what a Hardware Merchant requires in his paper. He gets it when he buys . . .

THE E. B. EDDY CO.'S

Hardware - - -
Heavy Manilla -
Brown Wrapping

PAPER

THE HIGHEST QUALITY. THE LOWEST PRICE.

TORONTO BRANCH : 29 Front St. West.
MONTREAL BRANCH : 318 St. James St.

MAMMOTH WORKS : HULL, CANADA

MAKING AND SELLING IRON.

Mr. Andrew Carnegie, of the Homestead Mills, figures out, says Stoves and Hardware Reporter, that the four and one-half pounds of raw material entering into the manufacture of steel now cost as much if not more than the selling price of the finished product, or one cent a pound. In other words, the mills have ceased to yield a profit, if, indeed, they are not run at an actual loss. This may be a plea for a lower scale from the workmen or it may be a statement of actual conditions, but, in whatever way it is taken, the fact remains that the steel trade is in anything but a satisfactory condition, despite the enormous production and demand. Nor is the iron trade any better off, so far as prices are concerned.

The Thomas Iron Company, of Pennsylvania, has recently had compiled from its books a mass of figures showing the manufacturing cost of pig iron from 1855 to 1892, both years being inclusive. In the year first given, the total cost at the mills, including labor and material, is placed at $20.57 a ton, while the selling price at tidewater was $27.75; here is a profit of about 25 per cent., less freight charges, commissions, and the cost of handling, or an approximate increase over the cost of 20 or 21 per cent. In 1864, when gold was selling at $2.80, the cost of pig iron at the furnace was $36,07, and the price at Philadelphia $59.25, thus insuring a profit in manufacture of at least 55 per cent., with an allowance of 5 per cent. for expenses, etc. During August of that year, pig was sold at $73.62, or at a profit of 100 per cent. The lowest average for any year was that for 1892, when the cost of production was reduced to $12.94 and the selling price to $15.75. A profit of 8.3 per cent. was averaged, but from this is to be deducted the cost of transportation, with the other necessary expenses, and if these are estimated at 5 per cent., as in the other years, the net profit is only 3.3 per cent, and this without allowing for interest and other incidental charges. The cost prices are not obtainable for this year, but in March last pig averaged $14.69 at Philadelphia, and it is to be presumed that the cost of manufacture was correspondingly lowered from that of 1892. The Thomas Iron Company is the largest concern of the kind in the country and its prices determine the market.

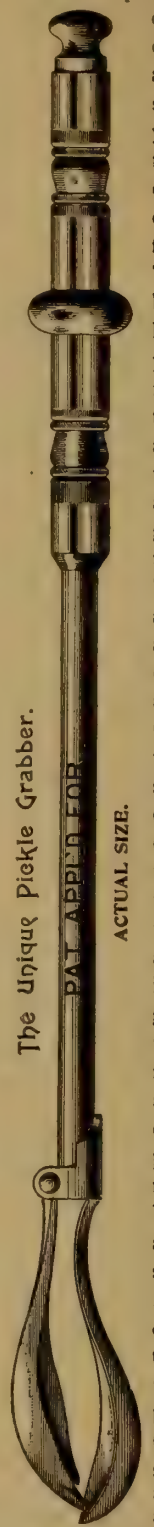
Those dealers who bought stoves and hardware from the manufacturer or jobber in 1864—when pig iron was selling at the highest notch in its history—and who are now in the same line of business will find abundant opportunity for study in the comparative figures here presented, as will also those who are interested in the changing course of prices and the causes leading thereto. With a staple article such as iron, it is an admitted fact that the profits of manufacture and sale advance proportionately from the raw material to the finished article. Thus the iron from which a steel axe originally came produced a profit of but little more than 3 per cent., although, if Carnegie is right, steel ingots yielded nothing, but the maker of the completed tool required a larger percentage of profit in order to maintain his plant, and the jobber and retailer must also increase their comparative share of the gain or else cease handling the goods. The company named can afford to accept three cents as an increase on each dollar used in its business—can afford it now because of its enormous capital, and the necessity for keeping it active—but the retailer, with an average capital of $5,000, would not keep his financial head very long above water if obliged to accept and live upon the $150 a year which the 3 per cent. rate would give him. So it is that the advancing ratio of increased profits as the goods pass from the first manufacturer to the ultimate consumer or user is justified by a trade necessity, and, this being so, it would doubtless advance the interests of all those handling iron goods of any character whatever if pig should be marked up to a point where it would afford a wider margin of profit between the cost and the selling price. In its different forms, iron is the leading manufacturing industry of the United States, and the community at large is naturally and directly concerned in its welfare, since it is the most practical basis of our wealth, and any depreciation of its value as a money producing power is reflected in the general commercial conditions. If pig would produce a better profit to the mill owner, there would be an attendant and increasing gain in the handling of all articles manufactured therefrom, in whole or in part, nor would there be any lessening in trade because of the advance in price. A dollar or so added to the selling price of a ton of pig makes but little difference to the user of 8-ounce tacks, or of the hammer used to drive them, while this illustration can be extended to those heavier articles manufactured which require a greater amount of the metal and a consequent expenditure of more money.

AN HONEST DEBTOR.

As some counterpoise to the instances of commercial rascality which form part of the daily fare of a newspaper-reading public, it is pleasant to notice from time to time cases of gentlemen who, after passing through bankruptcy, have successfully laboured to refund the deficiency. P. Tordoff, of Bradford, who has just been presented with an address by his creditors of fifteen years ago on his completion of such a task, read to them a little account of his struggles. "I gradually," he told his creditors, "retrieved and improved my former position. It has grown clearer and clearer to mind, as each of these last fifteen years has passed over my head, that the loss of the first £10 I saved when a lad and my complete wreck in June, 1876, were blessings in disguise. . . . I may say that in June, 1876, I formed the resolution that until I had discharged my obligations to my creditors no one should ever see me taking rest at any watering-place, nor would I allow a piano to come into my house. But when I had accomplished the above object one of the first and most pleasant acts I performed was the purchasing of a piano for my daughter . . and the second was giving my body five days' rest at Morecambe."—Ironmonger.

A UNIQUE PICKLE GRABBER.

Whoever has undertaken—and who hasn't—to pull a pickle up out of the bottle by aid of the ordinary fork knows the difficulty often experienced in accomplishing the feat. To spear the identical pickle that you desire is a chance out of fifty, while to even get the one out of the bottle that has accidentally got caught on your fork is by no means assured. The mouth of the bottle may be too small or the pickle too large, and just as you think your patience is to meet its reward, away goes the pickle to the bottom of the bottle again. Even if there is ample room to pull the pickle out after spearing it, there is a good chance of its touching the sides and dropping off. The accompanying cut shows a unique little piece of mechanism, by using which all these difficulties are obviated. It is aptly named the Unique Pickle Grabber. By simply pressing the knob on the top one of the spoon-shaped pieces on the end of the grabber opens and closes with a spring over the pickle, from which there is not the slightest possibility of its dropping until the knob is again pressed and the pickle is released on the plate. The grabber is silver-plated, and while it is primarily intended for pickles, it can be utilized as sugar tongs, for serving canned fish, or in fact for any purpose where grabbers are required. M. M. Vardon, of 67 Yonge street, Toronto, is sole agent, and the trade can be supplied by either Gowans, Kent & Co. or James Skinner & Co. Mr. Vardon is also introducing a sardine grabber, which works on the same principle as the Unique Pickle Grabber. The grabbers are shaped like the talons of a bird and are silver-plated. It will also be on the market shortly.



Speaking of the accumulation of scale in a boiler, remarks an exchange, engineers seem to differ as to where it is most to be found. It has been given as an evidence of the rapid steam making over the fire that the accumulation of scale is greatest over the bridge wall, or near it, and that signifies the circulation to be from the back of the boiler along the bottom to the bridge wall. An inspector called our attention to this matter, and said that in the boilers he had been into, the scale was invariably thickest at the rear end of the boiler.

ADVERTISING A HARDWARE STOCK

No business man, no matter what line he is in, can afford in this day and time to ignore the power and agency of advertising, writes W. H. Maher in N. Y. Hardware.

There never was a time when making one's self and goods known to buyers was not helpful to one's trade. There are numerous and various ways of doing this, and the dealer who uses the most art, with the greatest courage and perseverance, will not only make the largest possible sales for an article of merit, but through the agency of advertising many a worthless thing is made popular, and its promoters crowned with wealth.

In our day the belief in the efficacy of advertising is general. Advertising is so much a recognised part of every business, that he who ignores its aid is punished for his neglect by seeing his more progressive competitors outstrip him in the race for success.

There is much misapprehension as to what "advertising" is. We have come to limit the meaning to an announcement in the business columns of the public press. But there are shrewd and successful advertisers who never appear in the pages of a journal or magazine. The dictionary tells us that advertising is :

"The act or practice of bringing anything into public notice."

It will be seen at once with this interpretation in mind, that there are numberless ways of advertising a business, other than through the medium of the public press, but it can safely be said that the majority of business lines cannot afford to ignore the newspaper. The people of the United States are a reading people, and in the matter of advertising they have learned to look upon the business announcements of the journals they read as containing matter in which they are interested. We are a bargain-hunting people, because the commercial instinct pervades all classes. We are constantly looking out for a chance to do better in our buying, not because we are so anxious to add to our savings, but so that we can have more to spend in other ways upon ourselves and our households.

The shrewd dealer will use every means in his power to make his business known to the public. It may be that some lines require more advertising than others, and it is certain that good advertising for one line might be very ineffective in another. Every person who is qualified by observation and experience to judge will quickly admit that a very large share of the money spent for advertising is wasted, is utterly thrown away.

In judging of advertising there is but one criterion—its trade-producing power ; its effectiveness. The best ad. may be faulty to the practiced eye, and rough to the educated ear; it may be commonplace in its construction, and the first to be thrown out as valueless by a committee, of advertising "experts," yet if it impresses its readers so that it produces the best business results, it is the best ad. There can be no other standard than this. We do not judge a salesman by his clothes. nor by his grammer, nor by his hair, but by his sales; and the best salesman is he who brings the most dollar and cents of net profit to his house. The ad. is a silent salesman, but is to be judged by exactly the same measure and standard.

To make suggestions as to advertising that will be of the greatest value for Hardware readers, let us confine our attention to this branch of trade, and to be still more effective we will take the case of John Spokeshave, who has opened a store in Bowling Green, the county seat of Wood county.

How can he both economically and effectively advertise his business? Shall he copy the ads. of Jones & Co., in the adjoining county seat, or those of Star & Co., in the daily papers of the nearest city? These two firms are large advertisers, have a prosperous business, and seem to be enterprising and original; would it not be wise to follow in their footsteps, and copy their methods and style?

The chances always are that it is not wise to copy any one, no matter how successful that one may appear to be. His present advertizing may be built upon foundations that were several years in being laid. Those foundations are what make his present work effective. To pick out his ad. of today, ignoring all those that preceded it, would be to commit a blunder.

Every community has a way of its own in looking at things. The closer the advertiser "catches on" to that way the greater his success will be, and the more of originality and of his own personality he puts into his various announcements, the more effective they become.

It is generally believed that it is very difficult to get people to read a circular. This opinion is quite industriously cultivated by the newspapers, whose interest it is that all business men should believe it. But I think the truth of it depends very largely upon the circular itself and upon the locality. In the larger cities where circulars are thrown in at the door almost every hour of the day, or come in quantities in every mail, they receive but scant attention. But in the country the family is rather pleased than otherwise at receiving a circular by mail. It is not thrown away unread, no matter how common it is, while, if properly prepared, it is read carefully and kept for awhile.

With very many goods in the hardware trade the manufacturers are glad to give all the circulars that the dealer desires, if they are assured that they will be used to advantage ; and in buying his stock our friend Spokeshave bore this in mind. These circulars were laid aside carefully until he had time to prepare a special circular letter of his own. In preparing this he left a blank line at the top, in which he afterwards wrote the name of the person to whom it would be sent. This was a good deal of work, but it will always pay, and this is what Spokeshave is in business for—for the pay !

His circular was simply a little talk about his new store and new stock ; the way he proposed to do business and treat his customers ; the high quality of the goods he intended to sell, and his promises as to prices and things, both generally and particularly. He has secured the agency and exclusive sale for Bowling Green of several lines of goods and special machines, and of some well known brands of tools. Of course he emphasizes this fact. He puts all the cordiality possible into his invitation to visit his store, and tries to impress the reader that his trade is desired and will be gratefully appreciated.

My theory is that men like to be asked for their trade, and are more likely, when they have purchases to make, to go to a place where they think their trade will be appreciated. The average man rather enjoys the feeling that he is a patron of something or other. In buying his supplies it is in his power to give the preference to one out of several stores in the same line. When he makes a choice he likes to know that the man who received his patronage appreciates it, and is thankful for it. And very often the fact that he believes a certain man will be thankful leads him to that man's store.

With this circular-letter, which is tastefully printed, the circulars received from the various manufacturers are enclosed, each one of them having been stamped with Spokeshave's name and address. He also thought it a good investment to enclose a rather fancy card that he bought in the city, having a puzzle on it, and the words "With the compliments of John Spokeshave" printed in modest type in one corner. He knew this would be saved and probably placed upon the table or mantel.

The advertising is direct and personal. It is the most effective advertising possible. The circulars are placed in the hands of the family for whom they are intended. The head of the house is addressed by name, which makes it a personal matter with him. If he is busy when the envelope is handed him, the contents are laid aside until he has leisure to emamine them.

I believe such a circular as this, sent through the mails, is not only good advertising when one begins business, but is a paying investment at proper seasons to the man who has been in business for years.

Those who have not found such work profitable are they who compose a circular upon the plan given in some "Model Letter Writer" of half a century ago ; a circular that is dry, lifeless, and stereotyped. A man with brains sufficient to buy a stock of goods ought to be ashamed to send out such a circulars as this. Any man

who can sell goods over a counter can prepare a good circular, if he will but write as he talks.

Most of us have a stilted form of language for use in letter writing. Some of us are of the old school where this form was taught, others adopt it because they suppose it the proper thing, but the best letter writer is the person who simply talks upon paper. And the best business circular is the one that wears an air of honest chat between the sender and the receiver.

If John Spokeshave were to meet Jim Jones upon the street he would not say: Mr. Jones, the undersigned expects to open a hardware store in Kimball's Block, Bowling Green, and respectfully asks a share of your patronage." He would say: "Mr. Jones, I'm starting in the hardware business, in Kimball's Block, Bowling Green, and when you need anything in that line, come and see me."

Spokeshave's circular is written upon these lines: There is an air of frankness and honesty about it that impresses the reader, and if it does not lead him to trade at the store, it leaves his mind in a kindly frame to read the next thing he sees from Spokeshave.

But a circular is very soon simply a thing that was. Spokeshave wants to follow it up with something else. There is one advertising medium that may be made ever fresh and new—the county paper. Through this he can gossip with the people of Wood County every week. He will be in good company; he will be in a medium that costs its receiver some money, and that will be carefully preserved until all the family have been through it, and even then is not seldom carefully laid away for future reference. He cannot have its influence for his own exclusive use and benefit; he can only expect to share its advantages with others; he must accept a little share, but the extent of that will largely depend upon himself and the way he presents his case.

This advertising is expensive; if it is not successful in increasing trade it is lost; it is an expensive account. On the other hand, if it is effective, it is an investment paying good dividends.

SUMMER CARE OF HEATERS.

It is a well recognized fact in the heating trade that use does not wear out steam and hot-water heating apparatus so much as disuse, remarks Metal Worker. Not the winter months, when heating is actively maintained, but the summer season, when the apparatus lies dormant, is the time when the metal of heating plants suffers the most. Contact of hot water or steam with the inner surfaces of heating boilers, pipes and radiators affects them very little, and when the pipes are hot exterior surfaces are scarcely ever attacked with rust. But let the apparatus stand in a humid atmosphere in summer, and rust will eat into all unprotected parts. Hence, to preserve a heating apparatus requires some special attention at or soon after the time it goes out of use in late spring or early summer.

All exposed pipes or metal surfaces should be covered with a suitable protective coating. For pipes, a good quality of black japan varnish should be used. Coils or radiators should be painted or bronzed, and pipes wrapped with non-conducting material ought also to be painted with black japan varnish, because both air and moisture will penetrate the porous insulating material and get in their fine work upon the metal surfaces if the latter are left unpainted When heat is no longer wanted, the furnaces, flue spaces and the smoke pipe should all be thoroughly cleaned. The accumulations of soot from fuel draw moisture, and, when moist, these are corrosive in their action upon iron, especially when the repellant effect of heat does not counteract this tendency. The cleaner the metal can be kept when out of use, the longer it will last. As to whether it is better to leave water in or out of pipes and boiler, there are conflicting views. Pipes filled with cold water are not much attacked by rust if air be excluded; but in hot-water system valves may get to leaking, or other leaks may take place, and many prefer to draw all the water off when the apparatus goes out of use. A good way with either steam or hot-water apparatus is to heat up the plant and then draw out the water while hot, leaving open the air valves and blow-off cock till the whole system has had time to dry out, which, when the surfaces are hot, will be not more than an hour or so after the water has been drawn out. Then everything should be closed to exclude any interchange of air to and from the interior. If these precautions are strictly observed each season, an apparatus may be made to last some years longer than it would if neglected.

ELECTRIC COOKING AND HEATING.

The controversy on this matter, which is at present going the rounds of the press, has developed into a form which is neither useful nor instructive, and has no bearing on the actual question involved. Mr. Dowsing, in Lightning, May 18th, tries to compare the cost of electrical heating with that of coal, a comparison which is impossible, as the conditions required are totally different.

Mr Dowsing gives no exact figures to calculate from as to the total available heat per ampere hour, and it is possible that the heating apparatus at present used may be greatly improved; the first apparatus designed can hardly be considered as final, although Messrs. Crompton may be fairly credited with the first practically successful attempt to utilize electricity for domestic heating purposes. Taking Mr. Dowsing's own figures, with electricity at 5d. per unit, it requires about 3 1-2 amperes for ten minutes to boil one quart of water, the cost being one-third of one penny. With the water at an initial temperature of 62 degrees F. this gives an expenditure of 375 units of heat in useful work, a cost rate of 1,125 units for one penny.

The only fuel which can compare with electricity is ordinary coal gas, which can be used under the same conditions and with the same regard to economy in small and irregular work. One cubic foot of coal gas, as supplied in London, has a total heating power of 660 units, and of this over 600 units are obtained in actual work in many commercial forms of bath heaters; in boiling a small kettle, over an atmospheric burner, the average duty in practice will not exceed about 400 units, that is, less than two-thirds the total theoretical work. If we allow a further margin, and reduce this to 375, one cubic foot of London gas will give at least the work of 3 1-2 amperes for ten minutes, and three cubic feet, costing one-tenth of a penny, will do the work specified by Mr. Dowsing as costing one penny for the electricity used. No doubt, each will have its own place, and will fill certain special requirements; but it is certainly a mistake to attempt to prove that electricity is at present a cheap source of heat.

No doubt the duty obtained from coal gas is very much higher than it was at first, and electricity has the very great advantage that its practical application is in the hands of trained experts, and has been so from the first; possibly no industry in the world has so large a proportion of competent manufacturers and first-class workmen who understand both the theory and practice of their work.

The application of coal gas as a fuel, on the contrary, has been under a cloud for years, discouraged by the old proprietary companies, and hampered as it has been, and still is, by want of knowledge of the simplest natural laws on the part of most of the men who have to make and fix the apparatus. It is only now beginning to emerge from a state of chaos, but when it has been thoroughly established on a proper scientific basis, the manufacturers of coal gas will have no more to fear for its future than they have now from the beautiful old moderator lamps, which are so charming and so expensive, in our drawing rooms and picture galleries. All are not fortunate enough or rich enough to have electric lighting, or to put in special ventilators for the removal of the products of combustion. When the purveyors of either gas, electricity, or moderator lamps assume the possession of perfection and infallibility, then they lay themselves open to attacks, which are not always tempered with justice or discretion, and which cause a very unnecessary ill-feeling.—Thomas Fletcher in Ironmongery.

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,
Agents.
MONTREAL AND TORONTO.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.
Keene's Coarse, Parian and Superfine Cements.
SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.
FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,
CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.
Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

FIRE!

McCAUSLAND & SON

Beg to inform their customers and friends that they are in a position to fill all orders with promptness and dispatch, notwithstanding the recent fire in their premises. . . .

72 to 76 King St. W.

READY
MIXED PAINTS

TRADE 

MARK

Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

Manufactured by **A. RAMSAY & SON**
MONTREAL

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA



ASK FOR THE GRAHAM NAILS.

THE

Oxford Gas Range

The latest production of the great Schneider Frenkamp Co., of Cleveland, the largest and most successful manufacturers in the world of Gas Stoves and Ranges.

See this Range before Spending your money

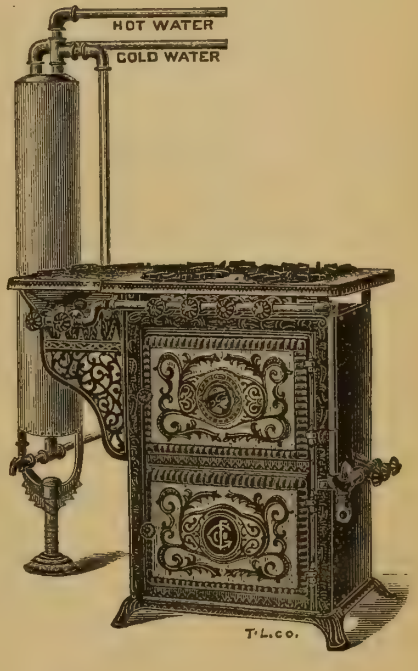
The only perfect Water Heater, will heat water faster than a coal range.

All burners are operated with Steel Needle Valves which produce sharp blue flames. The body is made of heavy Cold Rolled Sheet Steel Asbestos lined. The front and top are beautifully carved, heavy smooth castings with nickel-plated medallions and Tile panels.

Send for Price List and get our record of Water Heaters

Manufactured by

The Gurney Foundry Co., Ltd., TORONTO



THE WHITMAN & BARNES MFG. CO.

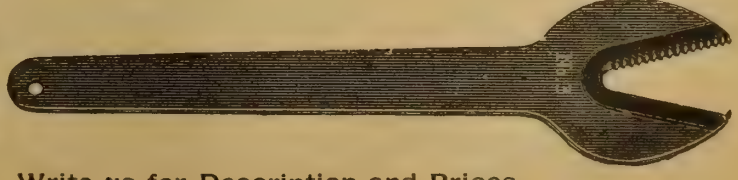
Canadian Branch: St. Catharines, Ont.



This new **Swivel Clevis** can be attached to any Plow Clevis, used in place of Shackle or End Clevis.

MADE OF MALLEABLE IRON.

ALLIGATOR WRENCHES



Write us for Description and Prices

SITUATION VACANT.

TINSMITH—WITH ABOUT $1,000 TO $1,500 capital, to take an interest in a hardware store and tinware business in a rising Ontario village on the C. P. R. Apply Box 26, Shelburne.

BUSINESS CHANGES.

SALES MADE AND PENDING.

The stock of Mrs. E. A. Hardy, general store, Bridgewater, Ont., has been sold.

John N. Robertson, general merchant, Vankleek Hill, is advertising business for sale.

The furniture stock of David Fawcett, Alliston, is advertised for sale to-day by auction.

The stock of Wm. Darling & Co., wholesale hardware merchants, Montreal, has been sold to Lewis Bros. & Co.

PARTNERSHIPS FORMED AND DISSOLVED.

Campbell & Ferguson, lumber, Carman, Man., have dissolved.

The Brockville Light & Power Co. (Ltd.), is applying for incorporation.

The Toronto Aqueduct Co. (Ltd.) is applying for charter of incorporation.

The Vale Barrel Machine Co., of Hamilton, is applying for charter of incorporation.

The W. A. Fraser Mfg. Co. (Ltd.), of Thorold, is applying for charter of incorporation.

The Wood Manufacturing Co., manufacturers and contractors, Londonderry Station, have dissolved.

James Wilson, general merchant of Kinmount has admitted his son, G. F. Wilson, as partner. Wilson & Son is the style of the new firm.

The Montreal Lime Co., Cote St. Louis, Que., has dissolved. Chas. W. Trenholme will continue the business under the old style.

Charles E. Thibault and Joseph Perrault, have been registered to carry on business in Montreal as plumbers under the firm name of Thibault & Perrault.

Robert K. Holland and Caldwell Harman have registered to carry on business in Montreal as wholesale dealers in small wares under the firm name of R. K. Holland & Co.

Miller & Co., bankers, Stouffville, have dissolved, G. B. Miller retiring. A new firm, composed of Walter Miller and W. J. Stark, has been formed under the style of Miller & Stark.

Letters patent have been issued incorporating "The Consolidated Plate Glass Company of Canada, Limited," with a total capital stock of $250,000, and authorising an increase in the capital stock of "The Weather and Waterprof Paint Company of Canada, Limited," to $25,000.

CHANGES.

A. Griffin, hardware merchant, Elora, has sold out to E. R. Patmore.

Gray & Cochrane, general merchants, Oak River, Man., have been succeeded by W. T. Cochrane.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

Noe Forget, general merchant, St. Lucie de Doncaster, Que., has assigned.

Gosnell Bros., coal and wood, etc., Toronto have assigned to M. F. Brown.

Alex. Dubriuil, lumber jobber, Matawatchan Tp., has assigned to F. M. Devine.

A demand of assignment has been made on the Keegans, Milne Co., electricians, Montreal.

J. W. Thurston, general merchant, Yorktown, Man., has compromised at 70c. on the dollar.

Alex. Menard, trader, Montreal, is absent and a meeting of creditors has been called for July 7.

Ormiston & Harrison, coal and wood merchants, Toronto, have compromised with their creditors.

Margaret Hayes, general store, Nelson, N. B., is offering to compromise at 75c. on the dollar, cash.

Baurrett & Co., general merchants, Louiseville, Que., have assigned to Bilodeau & Renaud of Montreal.

R. J. Bowes & Co., general merchants, etc., Kingston, Marlbank, Collin's Bay and Carleton Place, have assigned to Chas. B. Langley, Toronto.

The Commercial Bank of Manitoba has suspended. At a meeting of the directors held in Winnipeg Monday Duncan McArthur, president, resigned, his resignation being accepted. An approximate statement was submitted, showing liabilities $1,370,000 and assets $1,981,000 The liabilities are: Notes in circulation, $400,000; deposits, $800,000; loans from Merchants' Bank, $170,000. Merchants' Bank claim is fully secured. The solicitors of the Merchants' Bank of Canada and of the Provincial Government, two of the largest creditors, Monday last made application before judges for the appointment of liquidators, and Mr. Ferguson, assistant manager Merchants' Bank, Winnipeg, and J. M. Ross, one of the directors of the defunct institution, were appointed.

FIRES.

W. A. Bradley, blacksmith, Gibson, N.B., has been burned out.

The North American Mill Building Co., of Stratford, has been burned out.

Bishop & Co., general merchants, Rat Portage, have been burned out.

L. S. Belyea, general merchant, and John Kyle, boots and shoes, both of Gibson, N. B., have been burned out.

The lumber mill of the estate of W. H. & J. Rouke, general store and lumber, St. Martins, N. B., has been burned.

The store and dwelling of W. H. Jackson, on the Brock rood, about three miles north of Pickering, was totally destroyed by fire on Saturday. Mr. Jackson succeeded in getting part of his household effects and some store goods removed from the burning building. The total loss is estimated at $1,600, with $600 insurance; $400 on the building and $200 on stock. The fire originated from the pipe of the cooking stove.

The second serious fire within the last few weeks visited Beeton Tuesday. The loss will foot up in the neighborhood of from $20,000 to $25.000, as follows: Andrews' dry goods store, $10,000; J. C. Richardson, household effects, $1,000; Beeton World, $5,000; Mrs. Patterson, millinery, $1,000; B. Bucknam, bakery, $500; Beeton World building, $4,500; Queen's Hotel, $500; W. C. Law & Co., $50c.

DEAD.

James Jeffrey, of Jeffrey Bros., waggon makers, Cote Visitation, Que., is dead.



FORTUNATELY DISGRACED.

MRS. MCGARRAGH (to her youngest)—"That's th' lasht camel on th' shtraw's back. Lave th' table!"

FLANNERY (who is dining with the family and can't cut his corned-beef)—"That kid's in dead luck!"

TORONTO CUTLERY CO.,

65 and 67 Yonge Street, Toronto

M. MAYER, Propr.

NON-XLL

Cutlery

WARRANTED

And the Most Complete Lines of Cutlery of all descriptions.



S.S. SMOKELESS POWDER is the best Made by the Smokeless Powder Co., of London, Eng. A stock kept in Montreal. 25 lb. Drums, 2lb. Cannisters, ½lb. Cannisters. Send for Prices, WILLIAM DARLING & CO., Wholesale Hardware Merchants, 30 St. Sulpice Street, Montreal.

A FEW REASONS WHY

You should Keep your Stock fully Assorted With

Boeckh's Superior Brushes

They are always reliable and as represented.
They are guaranteed in every particular by the manufacturers.
They are made of the very best material and workmanship
They are sold at closest possible prices.
They are finished and put up in neat and attractive shape.
They are well known throughout the Dominion and are popular with all classes of consumers.
They are handled by all leading Hardware and Paint and Oil trade.

See that the name "BOECKH" Is on every brush.

Boeckh's Flexible Bridled Brushes.

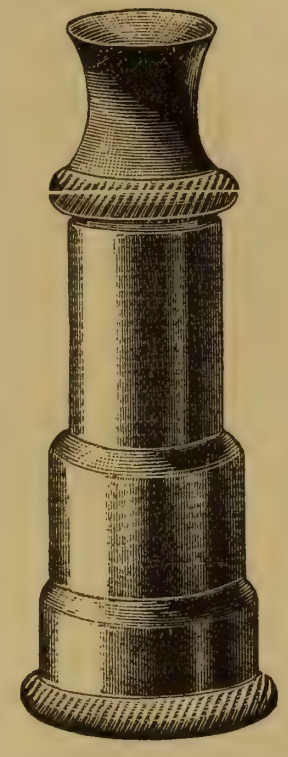
Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

TORONTO, - CANADA.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it

It is impossible for this pipe to get out of order

Give it a trial and you will use no other.

Hamilton Brass Manufacturing Co.

HAMILTON, ONT.

"Favorite"

Stoves and Ranges

Announcement . . .

WE beg to advise the Stove Trade of Canada that we have purchased the entire line of patterns and the stock-in-trade of the Chown & Cunningham Co., Limited, of Kingston, Ont. Orders and inquiries for the above mentioned line of Stoves and Ranges, and for repairs for same, as well as for the miscellaneous goods hitherto supplied by the C. & C. Co., should now be addressed to us at Brockville, Ont., and will have prompt and careful attention. Respectfully,

The James Smart Manfg. Co.

Limited

Brockville, June 27, 1893.

BROCKVILLE.

LIFE OF INCANDESCENT LAMPS.

A recent paragraph in the Digest, referring to one of the theories of the blackening of lamp bulbs, namely, that it is due to the evaporation of carbon, recalls a paper by Prof. Elihu Thomson, published in a recent number of the Lehigh Quarterly, which shows that he has held this view for many years, his experience since then having tended to confirm his views. The paper is entitled "The Life of Incandescent Lamps," and contains a number of points of interest, some of which may not be generally known.

In answer to the question, Can a filament be made which will not deteriorate and therefore not blacken the interior of the bulb? he is inclined to think that it cannot, if carbon is adhered to, and carbon as yet seems to be the best material in existence; it is so on account of its infusibility and its apparent volatility. It actually does soften at extremely high temperatures, and will bend readily when so softened. It does not melt at the highest known temperature, but it readily vaporizes in the arc lamp. It is very probable that carbon, infusible as it seems, could be fused at arc temperatures while under pressure. Thus, an electric arc in an inert gas at high pressure would probably drip melted carbon, which would form graphite in masses or crystals.

The deterioration of incandescent lamps has often been laid to the bombardment of gas molecules, but Prof Thomson has long been convinced that in a well exhausted lamp it is due almost entirely to evaporation by high temperature. Just as ice evaporates in vacuo so carbon acquires in vacuo a certain volatility at an increasing rate of the temperature. He assumes, of course, that the vacuum is so good that none of the bluing or visible discharge of current takes place, which of course wears the filment by actual carriage of carbon. He thinks that it would be very strange if carbon maintained at so high a temperature in vacuum did not evaporate at all, as it is well known that almost all substances raised to a sufficiently high temperature do give off insensible vapors, and that metals frequently behave as mercury does at the ordinary temperature; the presence of foreign substances and gases will in some instances accelerate the action or perhaps in other cases retard it. In a lamp a certain evaporation takes place which is independent of the size of the bulb, from which it follows that the age coating will become much less as the bulb is greater in size, for the same deposit will yield a much thinner coating of carbon over a large surface than over a small one. If one lamp were made with the smallest possible bulb and another with a large bulb, the former might be rendered opaque, while the latter would only be slightly darkened, other conditions being the same. He puts great stress on the uniformity of the filament and gives the reasons. It appears to be true, he says, that the limit of practical improvement in the efficiency of incandescent lamps is to be found in the properties of the element carbon, and particularly its volatility. It is fairly safe to say that no other less volatile substance has yet been found, and that carbon, as pure and perfect in structure as possible, is likely to hold its place, at least for some time to come, as the material for incandescent lamp filaments.—Ex.

LEAKS IN THE STOVE TRADE.

There is probably no stove house where the system of superintendence is so perfect that destruction, waste and loss do not take place more than they should, owing to the laxness of those in an overseeing capacity, and which cannot be stopped by increased vigilance, writes "Economy" in Metal Worker.

In the selling department of the stove business alone there is always room for saving money without inflicting penalties or extra labor upon men or reducing their wages. Stoves while in transit from foundries to warehouse are bound to suffer more or less breakage, and, while it may be the duty of the boss carman or other person to look out for broken castings and duly file claims with the transportation company, he is quite apt to grow lax occasionally, especially when but one stove is found broken in a carload. Neglect in this instance to report the breakage or lay the claim seems of little account, and the smallness of the amount is sufficient to warrant him in letting it slide. It means a loss of $1 probably to the firm, however, and though small, 50 such cases a year make $50. The truckmen once in a while drift into carelessness, encouraged by the lack of proper inspection of goods when unloading at the store, and, as a consequence, two or more stoves in excess of the average are broken in hauling the contents of a car to the warehouse, and in a business of a carload a day it makes say 600 more broken stoves a year, or $600.

Now, if the same inattention exist on the part of the foreman having charge of porters, who pile up the stoves, $100 more may be safely added for extra breakage during the year in that department, and another $100 due to the carelessness in trucking out again for shipping.

The shipper may be a good servant, and, on the whole, make comparatively few mistakes, but he has become so familiar with his duties that he ticks off a delivery or shipping load with a dash inconsistent with absolute correctness, and has learned, too, to rely on certain of his draymen to detect at the shipping wharf an over or under shipment and bring back what was over, or after the receipt if one or more are short, but he loses sight of the fact that extra trips to straighten out such innocent omissions increase the expense account. It may seldom or never happen that a stove is ever lost in that way, but haste should never be held at a premium above correctness, and one should never excuse himself in making petty errors on the ground that they are not gross or vital.

Let us say that the shipper could save the house by simply curing these small omissions $150, and altogether we find that $1000 per year is being wasted—not wantonly or recklessly, but simply through a little relaxation of the ordinary watchfulness of employees. It does not appear prominently, nor would it be noticed against the profit and loss account in prosperous times. but would, if saved, be very acceptable in a bad year, and could easily be saved without subjecting anybody around to hardship. One thousand dollars saved by simply stopping a few small leaks! to say nothing about those in the repair department, credit and other departments of the house, which, in a business of the size indicated by the foregoing, would raise the amount to probably $5,000, enough to turn loss to profit and save the business of a year, when others may be deploring the fact that they have worked a year for nothing and drawn on their surplus besides.

This may be such a year that a general survey of one's business now, and a few suggestions to clerks and employees in a pleasant way to give a little extra attention to the small things with a view to stopping the leaks, will prove to have been wise, and furnish those who adopt the plain reason to be very well satisfied with themselves, and inclined to remember your correspondent for his timely reminder.

TO DRILL BY ELECTRICITY.

There is a brass cylinder, twenty-two feet long and about five inches in diameter, suspended vertically from the ceiling of the new power-house of the Broadway surface road, at Fiteenth street and Sixth avenue. At each end of the cylinder is a peculiar mechanism. The whole is a new electric drill recently invented by Wesley Weber, of Pittsburg. He proposes testing it within a few days by boring an artesian well, 1,500 feet deep, in the boiler room of the power house.

The mechanism at the lower end of the cylinder is the drill head, which is made to revolve by electricity. There are five powerful little motors in the cylinder above the drill head, which is armed with twenty-two black diamonds, cast in solid steel plates. The motors can develope a force of 50 horsepower and cause the drill to revolve 2,500 times a minute.

A current was turned on yesterday for the benefit of a World reporter. The drill head went round so fast that it could not be seen. There is mechanism at the upper end of the drill by which it can be steered in any direction desired.

The inventor says that by a cable attachment he can bore into the earth to any distance.—N. Y. World.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

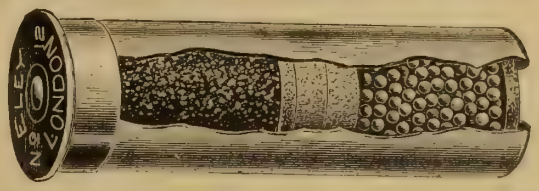
WESTERN BRANCH:

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

. . ELEY'S . .

CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING





Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. **Wholesale Only.**

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

. . THE . .

"ETNA"



. . HOT
. . WATER

BOILER

We claim is perfect. It is the original Round Boiler, patented by U. Beaupre, Dec. 1st, 1880 and May 2nd, 1889. Each year improvements have been added; and to-day it stands at the head.

We are willing to give any guarantee necessary to protect Architects or Contractors, that the Boiler will do all we claim for it.

The Boiler costs less than those of our competitors, and we will assume all risks.

We are in the field to stay and are bound to push this Boiler to the top rung of the ladder.

The Boiler previous to our purchasing it, had never been properly advertised or pushed, consequently, is to-day not as well known as some other makes.

Since buying out the former maker the sales have increased over 200 per cent.

If you have not a cut of same, drop us a card and we will be happy to forward one with full particulars.

As we said before, the Boiler is perfect, the price less, and we will guarantee it in every particular.

We have also bought most of the Grand Universal line of Patterns from the Estate of J. M. Williams & Co., of Hamilton.

We can supply all Repairs at the Regular trade price.

We still make the old reliable line of "Leader" Stoves.

Kindly remember us when any thing we manufacture is needed by you.

Wm. Clendinneng & Son, 145 to 171 WILLIAM STREET MONTREAL QUE.

Cutlery

SPECIAL VALUE IN

Dickinson's "Damascus Blade" Carvers.
Dickinson's Improved Ivoride Tables, warranted not to shrink or discolor.
Joseph Rodgers & Co.'s best quality Pen, Pocket, and Butcher Knives.

. . . SAMPLES now ready for Fall Trade.

STEEL. Full stock of Jessop's warranted Tool Steel, at lowest prices. . .

A. C. Leslie & Co., Agents
MONTREAL and TORONTO.

You can lose more than we do by not subscribing for this paper.

MUNN'S LIQUID GLUE
IS THE BEST.

THE ART METROPOLE, Agents.
131 Yonge Street, TORONTO.

Clarkson & Cross
ACCOUNTANTS . . .
Established 1864.
26 Wellington St. East, TORONTO

Excellent Quality! Reasonable Price!



ADAMS-MARS BEST.
GALVANIZED SHEET IRON. SP



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucpan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS.

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	23½ 24
trip "	25, 25½

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
M.L.S. equal to Bradley		
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 25	4 50
I.X., "	5 25	5 50
I.X.X., "	6 25	6 50
I.XXX., "	7 25	7 50
D.C., 12½ x 17•	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded v 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.		13 00
" " I.X.		16 0(

Charcoal Tin Boiler Plates.

	Per lb.
C okley Grade—	
.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65.	

Tinned Plates

72x30 up to 24 gauge	6½	6¾
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¾ " nd thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2⅝, 2¾
26 "	2⅞, 3
28 "	3 , 3½

Canada Plates.

Blaina	½ bright 2 75 ....
Abercarne	2 75 ....
Lion	....

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4½ 4⅝
" ⅜ " "	4⅜ 4½
" 7-16 " "	4¼ 4⅜
" ½ " "	3⅞ 4
" ⅝ " "	3⅝ 3⅞
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 12½ 0 13
Lake Superior	0 13 0 13½

Bolt or Bar.

Cut lengths, round, ½ to ⅞ in. $0 22 $0 25
" round & square
1 to 2 in 0 20 0 23
Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 19½ 0 21
" 35 to 45 " "	0 17½ 0 18
" 50 lb and above per lb	0 16½ 0 17

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 05 0 05½
Domestic "	0 04½ 0 05

Zinc Sheet.

5 cwt casks	0 05½ 0 06
Part casks	0 06 0 06½

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04⅜ 0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)	0 17	0 19
Standard	0 16	0 18
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 13
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	4 75
No. 1 Do "	4 50
No. 2 Do "	4 25
No. 3 Do "	4 00

Prepared Paints.

(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red " "	1 50
Venetian Red, (best) "	1 80 1 90
English Oxides per cwt	3 25
American " " "	2 25
Canadian " "	1 75
Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure,	
8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 70
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	2 00 2 25
Hard Oil Finish	1 30
Oil Shellac	1 40

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 45 0 47

Castor Oil.

Best, per lb	0 08½ 0 09

Cod Oil.

Cod Oil, per gal.	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet makers	0 17 0 18
White	0 16 0 17
London Town	0 7½ 0 08½
Gelatine	0 22 0 27
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads. in ½ lb. bags	0 70
Best thick white card wads. in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz, ... 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Per 100 ft.	Double Diamond Per 50 ft.	Per 100 ft
United inches				
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb . 0 25 0 30

Handles.

Axe per doz 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

Philadelphia 1892 Improved

7½ inch Wheel. 4 Blades.

12 in.	14 in.	16 in.	18 in.
$4.40	$4.65	$4.90	$5.40 list

LAWN . . MOWERS

. The Woodyatt 1893 .

10½ in. Wheel. 4 Blades.

12 in.	14 in.	16 in.	18 in.
$6.75	$7.00	$7.50	$8.25 list

Liberal Discounts to Trade, and Prompt Shipments Guaranteed.

BOWMAN, KENNEDY & CO., London, Ont.

Wrought Hooks and Staples, Amer- dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 6 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy	2 30
40dy	2 35
30 dy	2 40
20, 16 & 12 dy	2 45
10 dy	2 50
8 & 9 dy	2 55
6 & 7 dy	2 70

2. American Pattern Only

from 4 to 5 dy	2 90
3 dy. (lath)	3 30

3. Canada Pattern Only

from 4 to 5 dy	2 80
3 dy. (lath)	3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

	per gross
Square, round and octagon	3 38 4 00
Diamond	12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.

Oil.

Canada Refined Oil (Toronto)	14	15
Carbon Safety "	0 17	0 18
Canada W.W. "	0 20	0 22
American W.W. "	....	0 25
S. R. Seal ..... per gal	0 63	0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross 1 00 4 25
" Carpenter 2 25 3 60

Picks

Per doz 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz 1 35 2 00

Pruning Shears.

Per doz 4 00 5 50

Pulleys

Hothouse, per doz 55 1 00
Axle. 22 33
Screw 27 1 00
Awning 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, 1bs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3½

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33½ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9½ 9¾	10¾ 11
¼, 5-16, ⅜ in.....	10 10½	11½ 11½
Cotton, per lb.....	18	20
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis. 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen 1 25

Soldering Irons.

Per lb 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4½ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb	0 25	50
Hindostan, per lb.....	0 06	07
" Slips, per lb		9
Labrador, per lb	....	0 13
" Axe, "	....	0 15
Turkey "	....	0 50
Arkansas "	....	1 50
Water-of-Ayr "	....	0 10
Scythe, per gross.....	3 50	5 00
Grind, per ton	15 00	18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 51½ per cent.
Channel nails 5c. lb. off list.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75 p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33½ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c.

Tinware.

Stamped, dis. Assn list, 70, and 12½ per cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33½ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9 00

Twines.

Bag, per lb	0 12½ 0 20
Wrapp'g, mottl'd, pr. pack.	0 50 0 60
" cotton, per lb ..	0 18 0 20
Mattress, per lb	0 33 0 45
Staging "	0 27 0 35
Broom "	0 30 0 55
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" Blue ribbon	..... 0 12½
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Bench, parallel, each	2 00 4 50½
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Peter Wright's, per lb	0 12 0 13
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Per doz 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

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Amer., per doz. 8, 10 & 12 in. 3 38 6 00

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Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
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Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " } 4½ 4¾
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Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
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Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90

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Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
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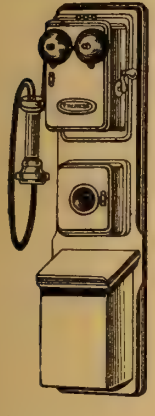
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Nails, Hinges AND Buts

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As much light from one lamp as you get from the half-dozen you now have. Such will be the case if you use **The "PITTSBURGH"**

Made in ◦ HANGING ◦



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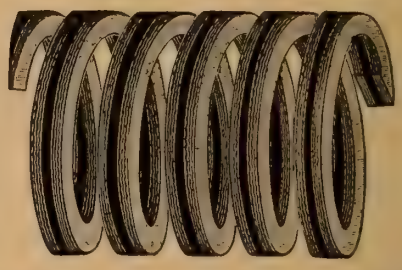
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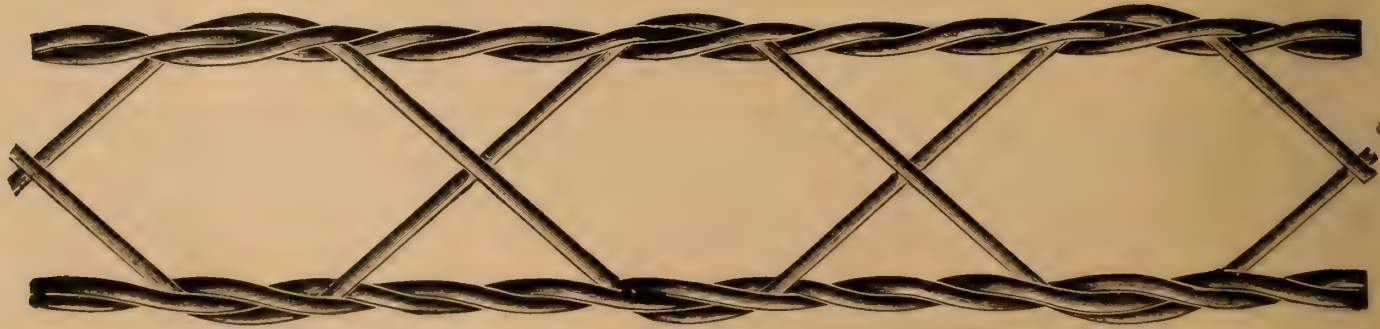
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CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, JULY 15, 1893. No. 28.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

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We have a few tons left which we offer at reduced prices to save carrying over to next year.

Our Green is Guaranteed

STRICTLY PURE

Sold in 1 lb. Boxes, 25 lb., 50 lb., and 100 lb. Irons. . .

WE ARE THE LARGEST JOBBERS OF PARIS GREEN IN CANADA.

Write or telegraph us for Prices at once.

Walter H. Cottingham & Co., MONTREAL

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ANCHORS = CHAINS

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Galvanized Tackle of all Kinds

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. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, JULY 15, 1893 No. 28

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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Results are often different from anticipations. Sometimes they are worse; at others they are better. As a rule, however, the mountain is found not to be so difficult to ascend as was fancied from a distant view. When the McKinley tariff went into force in the United States one of the industries it was expected that it would wipe out of existence was that of English tin plate. Instead of the industry waning, however, it exhibits a good deal of life, for not only is there an enlarged trade to report with the United States, but other countries as well have been taking more British tin plates. Out of 37,470 tons, valued at £494,650, exported during May, no less than 26,000 tons were sent to the United States. The next largest consumers were Russia and British North America in the order named. The strangest feature in connection with the matter, especially with the previous pessimistic outlook in mind, is the fact that the recovery in the British tin plate trade is due in part to an increased demand from the United States. As a producer of tin plates Britain stands head and shoulders above all others, but competition is gradually becoming keener, and she will have to work harder and harder as time goes on to retain this advantage. Some of the journals over there recognize this, and urge the devising of methods whereby she may do so. One paper, for instance, suggests that "it is worth the consideration of the makers whether it would not be more profitable to carry the tin to the iron than the present method of carrying the iron—a 'monstrous heap of sack,' to that tin which in quantity would scarcely represent the Shakespearian 'pennyworth of bread.'" The tin plate trade is of "vital national importance" to Great Britain, as one paper puts it, and its a good sign to see interest in its welfare being aroused.

*

Attempt to keep a person in the dark regarding anything that he has a desire or a right to get enlightenment upon, and he will strive all the harder to satisfy his curiosity. When the U. S. Treasury Department refused to make public the report of the special agent regarding the production of tin plate in the first quarter of the present year, pending its revision, there was a strong desire to know what the production aggregated. The object of the Government in referring the report back to the special agent for revision, was, it will be remembered, to allow him to specify what proportion of the black plates was foreign and what was domestic, the department contending that tin plates made of the former cannot be designated as of American manufacture. When the desired official report would be ready was a query, as governmental reports usually are, so two or three of the most enterprising trade papers over there set about collecting the information for themselves. Circulars were sent out to the manufacturers, and although responses were not received from all enough was furnished to enable an approximate idea to be formed of the quantity produced during the quarter. To the circulars sent out by a Pittsburg paper 24 firms replied, and the figures adduced by them indicates, compared with the three months ending Dec. 31, 1892, an increase of 36 per cent. As the makers who reported numbered only two-thirds of the whole engaged in the industry there is good ground for believing that the increase is still larger. As far as the data went it was shown that 8,950,826 pounds were made from American black sheet and 12,310,165 from imported. It is scarcely likely that the figures gleaned by private enterprise will satisfy the appetite for information on this question, and the desire to see the official document is as pronounced as ever. Half a bite does not usually satisfy an hungry man.

* * *

The trade outlook at the moment is of an assuring character. From far and near over the Dominion comes promises of a good harvest both in cereals and fruits, while the hay crop, good as it has been during the last year or so, is better this. The value of the hay crop is all the greater in view of the failure of the crop in Great Britain and on the Continent, and the subsequent demand which has arisen in those parts of the world for the Canadian product. In all branches of trade a fair and a healthy business is being done, and the prospects for fall trade are better than they have been for some years. Merchants everywhere are catching the inspiration and hopefully they all speak of the future. A rush, however, they do not, as a rule, anticipate. What they look for is a good steady trade. And wisely they continue to buy with much the same degree of caution that has characterized them for some time. This, of course, entails frequent purchases, and in this way the aggregate volume of trade is well maintained. In fact, it is larger so far this year if we can accept the testimony of the wholesale trade.

* * *

Some idea of the financial condition of the United States may be gleaned from a perusal of the reports issued by the mercantile agencies regarding business failures in that country since the beginning of the year. The total number, as shown by Bradstreet's, was 6,239, the largest ever reported, while the liabilities were nearly 171 millions, compared with a little over 56 1-2 millions in 1892. The percentage of assets to liabilities was 61, a gain of 10 per cent.

over the previous year. Of the total liabilities, however, $121,582,539 were for the second quarter of this year, a decidedly alarming revelation. Something about equally as startling is the fact that during the six months no less than 175 banks failed, owing $43,200,000, compared with 32 banks with liabilities of $5,955,000 for the same time last year.

• • •

The great trouble with the United States banking system is its want of elasticity at times when expansion is urgently required. It was at first merely an expedient of war finance, but notwithstanding this it has obtained all these years, much to the detriment of the trade and commerce of the country. The disadvantages of the system has long been recognized, and many have been the signs that have gone up for such a system as that in vogue in Canada. Lately the agitation has become more pronounced, and an effort will probably be made to induce Congress to undertake the revision of the system at its forthcoming special session called to repeal the Sherman Silver Act. A radical change is what some are calling for, and so high an authority as the N. Y. Commercial Bulletin asserts that "the wants of the situation can be properly met only by a total abandonment of the principal of bond guarantee, and its substitution by constituting the entire assets of the banks and the duplicate liability of their stockholders subject to a first lien in behalf of the notes." This is practically what we have in Canada to-day. Here the amount of a bank's notes in circulation is governed by the amount of its paid-up capital, while in the United States the bank that finds it necessary to expand its circulation is compelled to go the round-about way of purchasing Government bonds to the value of something like ten per cent. in excess of the issue.

• • •

The importance of saving the discounts has long been recognized, and the live and energetic business man will strain every nerve to secure them; but it is only recently that we have heard of an organized effort being made for the attainment of the object. It was no less than the formation the other day of a company in New York to be known as The New York Merchants' Discount Company. The object is to advance money to retail merchants to enable them to pay their bills on time and secure the discounts. A charge of 2 per cent. is to be made for the accommodation. The wholesaler, in addition to the benefit of receiving prompter payments, will be released from the possibility of loss, the company assuming all responsibility for the payment of its clients' debts on orders issued by it. The company protects itself by requiring the retailer to turn to it his cash capital and his daily or weekly receipts, and in return supplies him on demand with orders upon his jobber for whatever goods he may require. Any movement that will tend to help the retailer in the saving of his discounts or assist him in any other way is worthy of support, but we have not much faith in the scheme as promulgated by the New York Discount Co. In the first place such discounts are usually not liberal enough to alow the retailer to pay 2 per cent. for his accommodation. In fact, in some instances, that percentage would eat up the discount and a fraction besides. Another objection, it seems to us, in the scheme is that it would place the retailer somewhat in the position of a child. Self reliance is a characteristic that every business man should possess. In what direction this would be cultivated by the Discount Company is obvious.

• • •

There are some things a knowledge of which a merchant desires, and rightly so, to keep from his customers. For instance he studiously tries to keep them in the dark regarding the cost of his goods; and for more reasons than one. The acquirement of light in this particular by the consumer would increase the difficulty of the retailer to make a living profit; and that is hard enough now, goodness knows. Then it would be safe to wager that the customer who acquired the ability to read the mystic signs would reveal it to his friend and the latter would whisper it in the ear of someone else. In this way on it would go, until the cost mark, particularly if it happened to be in a country town, would be known and read of all men. And of course the merchant's strongest competitor would also be let into the secret by some one. There are some people whose curiosity leads them to undertake the deciphering of cost marks, and the sharpest of them frequently succeed too. Only the other day an instance of this—and one which caused the firm a great deal of annoyance—was brought to our notice. The firm in question is now racking its brain to devise a mark which will defy the ingenuity of its prying customers. And this is what every business man should do who finds himself in a similar position.

KEEP OUT OF A RUT.

Keep out of a rut. Don't be erratic or unstable. Keep your eyes and ears ever open for new ideas. Set your own thinking faculties at work, and what good ideas you can get from others appropriate, couple them with your own, and put to practical use. The trouble with some business men is not that they lack ideas, or that they do not see in the methods of others something that would be helpful to them, but that they lack the purpose to practically experiment with them. "Yes, it's a good scheme and would prove helpful, and some of these days I'll give it a trial," is the sum and substance of what they say. And there the matter often ends. "Procrastination is the thief of time" in business life as well as in any other sphere of life. In order to keep out of a rut men must be watchful, thoughtful, and quick to act. Ruts lead directly to the door of dry rot, to enter which means eventual failure unless somebody comes along and leads you out. Many of the methods which brought success and perhaps fortunes to our forefathers are too antiquated for to-day, for evolution is ever at work in the commercial as well as in the natural world. Some of the methods and practices of the generations that have gone are still good. Their honesty, industry, and integrity particularly should be copied, for there are a good many to-day who hold that honesty is not compatible with success. "It's no use talking, if you want to succeed you have got to do a little sharp practice now and then," is the way some of them put it. Never was there a greater mistake made. "Sharp practices" may bring grist to the mill for perhaps years but eventually they will eat away the props of public confidence and then over will topple your business and out will leak all the "grist" that you may have gathered. There never was and there never will be a time in the history of the world when dishonesty was a premium on success.

In this day and generation there is more demand than ever before for the man of bright and original ideas, and

who is fortified with the perseverance and patience necessary to carry them out to a successful issue in spite of opposition. Competition is so keen that success in any pursuit cannot be acquired without hard and persistent hammering. Success does not come to the genius who sleeps, no matter how great his ability. It has to be gone after like gold in the bowels of the earth, and it is oftenest, too, the hard worker that attains it.

Wrapping one's self up within one's self does not tend to help one out of a groove. On the contrary it tends to lead one deeper and deeper into it. By mingling with our fellows, not only do the views we hold become broader, but we acquire others, while petty jealousies and prejudices melt as acquaintanceships become extended. And this suggests the utility of business men's associations. They are undoubtedly, at present at any rate, the best existing mediums for propagating good fellowship and better business methods, and this can be best accomplished by the meetings partaking more of a social than of a cut and dried nature, as is too often the case.

BRITISH MANUFACTURES.

Our London, Eng., correspondent sends the following :

Ever since the Merchandise Marks Act of 1887 came into force in the United Kingdom there have been attempts made to amend it, or to so alter it as to confer the same advantages on British manufacturers as were enjoyed by foreign makers. While it has been necessary for all imported merchandise to bear the name of the country in which it was made, the goods turned out of our English factories and workshops have often been sent abroad without any indication as to where they were produced. It is time that they bore the brand of the manufacturer ; but in many cases that conveyed but little meaning to the ordinary buyer.

It is contended by several of our English manufacturers that the words, "Made in Germany," (to take an example) have very often done good to the cause of trade in the Fatherland, particularly where the goods were really good and had made a name for themselves. Reasoning from these premises our manufacturers naturally came to to the conclusion that a similar process would be equally beneficial to English trade. Acting on this assumption, the British Iron Trade Association, prompted by Mr. F. Bolling, has decided to ask the members of the association to consent to a proposal that, where deemed advisable, manufactured iron and steel produced in England should be regularly stamped as of "British Manufacture." It is proposed that these words should be in addition to the brand or trade mark affixed by the maker. It is not now suggested to embody this proposal in a legislative measure, but it will probably become a trade custom in the manufactured iron and steel trades to so mark goods of this descriptin. A large number of the members of the association have already signified their willingness to fall in with the suggestion, and there is no doubt that it will be readily taken up and adhered to by the great majority of the trade.

It will be interesting if I give in a condensed form the principal items of exported iron and steel manufactures from this country to British North America. During the five months ending May last they were as follows :

Iron and steel—Bar, angle, bolt and rod 31,787 tons, £128,459 ; hoops, sheets and boiler, and armor plates, 2,248 tons, £16,685 ; galvanized sheets, 1,374 tons, £21,665 ; tin plates and sheets, 4,095 tons, £60,681 ; cast and wrought, and all other manufactures unenumerated, 3,826 tons, £45,764 ; old iron for remanufacture, 13,331 tons, £37,438.

A bill has been introduced into the House of Commons by Mr. Charles Fenwick amending the Merchandise Act of 1887. One of his amendments proposes, amongst other things, that all goods made abroad and imported into England shall be marked with the name of the county of production, and that, similarly goods manufactured in Great Britain and Ireland shall be marked with the name of the manufacturer and the town in which they are made. Such a clause will be met with the very strongest opposition by an influential section of the commercial men of this country, because it embodies all the points which were objected to in the Merchandise Marks bill when introduced. The merchants and commission agents will do all they can to defeat such clauses ; but the British Iron Trade Association's movement is quite separate from Mr. Fenwick's bill, which will assuredly not be discussed during this session of Parliament.

VIEWS AND INTERVIEWS.

Mr. Lewis Firth, a member of the well-known iron and steel firm of Thomas Firth & Son, Sheffield, England, was in Toronto for a few days this week. He came to this continent ostensibly to see the World's Fair, but he is combining business with pleasure. In pursuance of this he is visiting some of the manufacturing centres in the United States and Canada. In his tour of this country he is accompanied by Mr. Crowdey, of James Hutton & Co., the Canadian representative of the firm. On Wednesday evening I had a chat with him in the Queen's hotel. In appearance Mr. Firth is more like an American than an Englishman. He is of medium height, well and compactly built, and neither beard nor moustache is allowed to adorn his face. In age he is about at the meridian. He carries himself with a jaunty air, speaks quickly, and we had not exchanged a dozen words before I put him down as a sharp, shrewd, business man and—a gentleman.

"I have," he said, in reply to a query of mine, "made three or four trips to this continent, but mostly to the United States. Yes, I have been in Toronto before—about ten years ago. I have been here two days, but have not had an opportunity to observe what progress your city has made, nearly the whole of my time having been spent in visiting the warehouses. I stopped at the Queen's when I was here and I notice that they have been filling up in front," he added as he pointed out through the window to the luxuriant growth of foliage on the trees in front of the hotel. "Of course I have not been long enough in the country to make much observation, but from what I have seen I should judge the people are pretty well employed."

"I understand," I ventured, "that during your tour in the United States and Canada you have discovered that some manufacturers are claiming to be using Firth's steel when in reality they are not ?"

That was evidently a subject upon which he did not wish to talk, for he immediately sat up in his chair, threw his right leg over his left, stroked his chin, while the look he assumed was of a "where-did-you-learn-that" character.

"Well," he continued after a pause as he rested an elbow on either knee, "I don't know that I could say anything about that. It's something we cannot say anything about at the moment."

"Yes, but you are practically certain that such is the case, are you not ?" I persisted.

"Well, it has been done before, and it is not unlikely that it will be done again."

"Well, supposing you had proof positive that some manufacturers were advertising that they were using Firth's steel when they were not could you take steps to prosecute them ?" I further queried.

"Well," he replied, with a determined air, "we shall take some pretty vigorous measures to put a stop to it. Manufacturers are not supposed to tell us what steel they use any more than we are to reveal what bar we use. Nor do we ask them to use our steel if they do not desire to do so. But at the same time it is not right that after a manufacturer has built up a reputation by using our steel that he should drop ours, take some other, and still claim to be using Firth's steel. That is what we object to, and I think it is but proper that we should protect those who are handling the goods turned out by these factories on the assumption that they are made from Firth steel, by acquainting them with the fact that they are not." Then Mr. Firth arose, straightened himself out, and I took my departure.

To a friend of mine Mr. Firth stated that in spite of the McKinley tariff his firm last year sent £5,000 worth more goods to the United States than the preceding year, while its trade with Canada also exhibited an increase.

• • •

"A new departure in business these days," said the representative of a paint and oil house to me Wednesday, "is that we have some enquiries from border cities in the States for glass and other materials. What the cause of such a strange thing is I cannot say, unless it is owing," he added on second thought as he scratched his head, "to the influx of Canadian painters to these cities. You know a good many painters have within the last year or so crossed the border, and I think, you know, that they fancy that they can profitably import Canadian goods. One man told me that even if the American duty was fifty per cent. on some things, it would pay to import them. As an instance, there was an article he bought from us at $4 which would cost him $12 in Buffalo."

BYSTANDER.

TO BE ENTERPRISING.

Stop. First let us see what this much-used word really means. Webster defines it as, "Bold, or forward to undertake; resolute, active or prompt to attempt; as, enterprising men often succeed beyond all human probability."

Almost every man engaged in business is called enterprising by his admiring friends, whether he is really so or not. The word has been thus lowered and betrayed from its true meaning. If a business man spends one-half of one per cent. of his year's turnover in advertising, plenty of people will call him enterprising. In reality he is not at all so; at least, such a scanty outlay as that is no proof of it. A new sign or an enlargement of floor space imperatively needed, each and every such mark of improvement is hailed as a mark of enterprise.

A man demonstrates possession of the business quality when he undertakes some task, which the ordinary mind regards as utterly impracticable, and makes a success of it. It is foolish and misleading to prate about luck. There are plenty of what are, humanly speaking, happy accidents, as well as those of the other kind, but the true business man is not so much in the dark as some suppose. He may not include a statement of his mental possessions in his announcements through the press, but there has been a heap of calculating and foreseeing done before his building was erected or leased, or his goods purchased.

Still, man is a fallible being, and is destitute of all information on certain matters of great importance in business. He cannot foresee the weather or just what notions his competitors may entertain next season. He may not know just how many competitors he will have a few months ahead, or what reckless ideas may be projected into the arena of trade. His undertaking, therefore, is largely founded on faith, faith in the soundness of his apprehension of the present situation and in the accuracy of his forecast. The starting of a new business under such circumstances, or the considerable enlargement of even a well-established one, may require a great deal of courage. This is enterprise, a bold attempt.

Enterprise is not to be measured by the amount of money invested, or the breadth of the undertaking; these are relative. A man with a few hundreds of hard earned capital may be enterprising as truly as his mighty brother, the universal provider. He sees, or thinks he sees, a chance to serve the public acceptably with accruing profits. To other eyes the ground appears to be fully covered, and all wants supplied, perhaps over-supplied. He, however, has looked the field over and has formed a definite opinion. He may not be able to put his conviction, in its entirety, into grammatical speech, but it is clear to him. He is conscious of superiority in some way to those whose competitor he proposes to become. He will make more fascinating exhibits of goods, keep a cleaner store, be more attentive to customers, study their wants more keenly, buy cheaper and sell lower, or make his offerings better known. In some or all of these particulars he reposes confidence and risks his tiny capital on that wide and uncertain sea whose shores are littered with the wrecks of every size and fashion of mercantile craft, from the least to the greatest. That is enterprise, and its judicious execution brings, sometimes, a reward that proves to be out of all proportion to its modest beginning.

Enterprise is not the promoter of wild-cat schemes; it is a happy union of mathematics and courage, a good understanding and a steady nerve. It can cipher out victories where others prophecy only defeat. It is the quality of the great general who possesses himself of sound information, has definite aims, comprehends the danger, but knows also the weight of his own battalions and what he intends to do with them.—Commercial Enquirer.

HOT WATER HEATING.

As a matter of information to those interested in the subject of water heating and who may desire a better understanding of the principal requisites of a good hot water boiler, they are here stated:

1. The boiler should be constructed with flues of ample area, so that a chimney of ordinary or average power will be sufficient to create a good draft and maintain a clear, bright fire with any kind of good fuel.

2. Its grate should be of a size ample to burn, without any forcing and with a very moderate amount of attendance, all the fuel necessary to supply warmth to the building the boiler is intended to heat.

3. The surface exposed to direct radiation of the fire, together with that which is heated by contact with the hot gases of combustion, should be sufficient in extent to abstract all the heat which can be generated on the grate, except what is needed to be retained in the gases, in order that an effective draft may be insured. A boiler so working reaches the limit of fuel economy when doing full service, and no further increase of its heating surface will benefit it. Hence, any surface put into it beyond what is demanded by the grate to attain the results above stated is a waste of material. The carrying out of this principle necessitates a proper ratio between the area of the grate and that of the boiler heating surface, but only a general approximation to this ratio can be determined by calculation in advance of construction. It must be ascertained from experiment with the boiler itself. Once so determined it holds good for the same construction in future boilers. The reason for this is that the effectiveness of the surface, that is, its power to take heat from the heated gases and transmit it to the cooler water in the boiler, depends but partly upon the extent exposed to, or brought into contact with, the gases, and is influenced by the direction in which the gases impinge against it, by eddies formed in the gases, by accumulation of thin layers of ashes or soot upon it, and by other conditions, the combined effect of which is not determinable in advance. It is, therefore, absurd to claim for any hot water boiler that it is better than another solely because its ratio to heating surface to grate is larger. The true proofs of efficiency are the amount of heating work it will do in proportion to fuel burned and temperature at which the smoke enters the flue. It should be distinctly understood by purchasers and users of boilers that there may be an excess as well as a deficiency of heating surface in proportion to the grate.

4. It should be made of good quality of cast iron, this material possessing ample strength when made in the sectional form, as hereinafter explained, being a good transmitter of heat and cheaper and more durable than any other available material known. It will for years outlast wrought iron or steel plate in a boiler, or in any situation where rusting is the chief factor in deterioration.

5. It should be cast in sections which stand vertically and are bolted together in that position.

It is now fully agreed by the majority of engineers that sectional boilers are the safest for any purpose, and they offer the advantages that they are easy to handle, that they can be taken into any building through ordinary doors or stairways, that their capacity can at any time be increased or diminished by addition or subtraction of sections. If the sections are vertical their grates can be increased in exact proportion to the number of sections. This cannot be done with boilers made up of horizontal sections laid upon each other and bolted together, as in many boilers now on the market, and in which the same size of grate must do duty for several different capacities of the boiler. The capacities of such boilers are dependent, through a certain range of power, upon increase of the number of sections without increase of size of sections, the latter limiting the size of the grate. This is a radical defect peculiar to hot water boilers of the horizontal sectional type, and it can only be overcome by making special patterns for each size of boiler, and sacrificing the advantage of changing the

capacity of the boiler by the addition or subtraction of one or more sections.

6. The boiler should, for domestic heating, be adapted to burn hard or soft coal or wood.

7. In order that it may fulfill the last named requirements, and to the end that its efficiency with any kind of fuel may be maintained at a maximum, every part of its heating surface must be conveniently accessible for cleaning.

8. It must be well made. All its water joints should be easily packed with a good, permanent packing that will last the lifetime of the boiler, and this cannot be done with ill-made, badly-fitted sections. Good workmanship is essential. —From Catalogue Boynton Furnace Co.

PRECIPITATION OF TIN BY ZINC.

A substance known as argentine has been introduced in Germany for making the so-called silver paper which is used instead of tin-foil as a packing material. It is a finely divided form of metallic tin, also known as tin dust, of such a texture as to become an extremely fine powder, which must be perfectly uniform in grain, of a bright metallic grey tint, and entirely free from crystalline particles. The author was for some time in charge of a manufactory of this article, and introduced some modifications in the process, which are described. The raw materials of the manufacture are tin, hydro-chloric acid, and zinc. The first may be used in the form of block or grain tin, but generally waste materials, such as bearing metal turnings, which are obtained from railway repairing shops in large quantity, are preferred. These are very variable in composition, including both white and red metal, with the proportion of tin varying from 27.6 to 74.5 per cent. The solution is effected by boiling the alloys with hydrochloric acid in large copper vessels, taking care to keep the stanniferous material in large excess, under which condition the copper is not attacked, while the greater part of the tin dissolves, lead, copper and antimony remaining wholly or partially undissolved. The solution is filtered through a layer of sand in a hard-wood tub with a double bottom, where the lead chloride contained in the hot liquor crystalizes out on cooling. The residues are passed on to another establishment to be used in making copper and antimony preparations. The purified solution, consisting essentially of stannus chloride, with traces of antimony, lead and iron, having an average density of 40 deg. Beaume, corresponding to about 23.5 per cent. of tin, is diluted from one to two hundred times its volume in water, and transferred to large vats in which plates of zinc are suspended, when, if all conditions are right, the tin precipitates as a uniform grey mass, rendered spongy by the simultaneous evolution of hydrogen, falling, when dried and rubbed through a sieve, to a fine dust. The precipitate is removed every day, fresh liquor is added, and the process is renewed until the zinc chloride solution remaining has reached a strength of 20 deg. to 25 deg. Beaume, when it is removed and concentrated to 50 degrees, corresponding to a strength of 52 per cent. of chloride of zinc. This is readily sold, as it is extensively used for preserving railway sleepers. The finished product should be as nearly as possible pure tin. An average sample analyzed by the author contained: Hygroscopic water, 0.83 per cent.; lead, 0.60 per cent.; zinc, 0.83 per cent., the remainder being tin, with small traces of iron, chlorine and antimony.

As the silver paper is used in wrapping up provisions, the tin dust used in its preparation must not, according to the sanitary laws of the German Empire, contain more than 1 per cent. of lead.

In the year 1890 the price realized varied from £7 to £7 10s. per cwt.

Formerly silver paper was made by covering ordinary white paper with a priming of white lead and size, upon which either silver leaf or tin foil was cemented. At present this has been almost entirely displaced by argentine, which is made to adhere to the paper by the use of so-called wax solutions, prepared by methods which are kept secret. According to the author, the method is as follows:

In the first, 4 kilograms of wax, and 3-4 kilogram of potash are boiled with 50 kilograms of water, and the melted fluid thus produced is stiffened to a thick paste by stirring the tin precipitate into it.

In the second, 75 litres of freshly made 4 per cent. starch solution is mixed 750 grams of a wax solution prepared from 5 lbs. of wax and 1 1-2 lbs. of potash dissolved in hot water, and 25 kilograms of argentine are added.

The paste so obtained is printed by rolls on the paper, which dries to a dull grey tone, but becomes bright when burnished by passing through hot calendar rolls, when it exactly resembles tin foil. Although the process described above is a very simple one, some difficulty was experienced in obtaining a precipitate of uniform structure, even when at the right degree of dilution, the fine sponge being sometimes mixed with needle-shaped crystals which rendered it unfit for use. This was traced by the author to the use of waste zinc which was melted down and cast into plates for the precipitating vats, but often contained solder joints and fragments of tin plate. It was observed that whenever a zinc plate containing enclosures of tin or solder was placed in the vat the deposit on the latter was invariably crystalline, while that on the clean zinc was of the proper texture. A further trial with a couple formed by a zinc and tin plate united by an external conducting wire gave a similar result, a spongy mass which was floated up to the surface by the entangled hydrogen being separated by the zinc, while long needle-shaped growths formed on the tin plate extending toward the zinc. Fimally, a lead and zinc couple, separated by a diaphragm, was tried, and succeeded perfectly in separating the two deposits. When examined these were not found to differ in any sensible degree in composition, both being tin with small traces of antimony of lead, and the physical difference was also very slight, the spongy deposit being made up of minute but perfectly distinct crystals. The reason for the separation of the same substance at both electrodes is attributed by the author to a joint electrolytic and chemical action. By the former the electro positive constituent, tin, is deposited on the lead kathode, while the chlorine goes to the zinc anode and attacks it, but there is a simultaneous action of the latter metal upon the ine, metallic tin, and hydrogen, which solution in its vicinity, producing chlor- interferes with the growth of the metallic deposit, giving only a micro-crystalline powder. The deposit on the lead, on the other hand, being slowly formed, and from a weaker solution, is denser, and more generally resembles that produced in the ordinary electrolytic deposition of metals.

As a result of these experiments the galvanic method of precipitation was introduced by the author and found to be perfectly well suited, and its use has been continued by the present proprietors of the works.—Foreign Abstracts of the Institution of Civil Engineers.

THERMO-ELECTRIC STOVE.

Dr. Paul Giraud, a French savant, has, according to an exchange, perfected a thermo-electric stove by which the purposes of both heating and lighting are subserved. A portion of the heat is utilized in producing the current, while the remainder serves for heating purposes. This stove consists of an inner chamber, which constitutes the stove proper, and in which the fuel is burned under the slow combustion principle. This chamber is cylindrical, and around it, are arranged the elements of a series of rings forming the battery, and connected up from the bottom to the top of the stove. Outside of all is the stove casing, which is of iron, the whole resembling an ordinary closed heating stove. The stove is about three feet high and twenty inches in diameter. The fuel consumption is stated to be only forty pounds of a mixture of anthracite coal and coke per twenty-four hours, the cost of which is about 10 cents.

A STEEL AND GLASS HOUSE.

Ralph Brisbane Nonesuch, who is reputed to have made a fortune of $25,000,000 in South Africa diamond mines, has purchased a 500 acre tract in the Temescal district, near San Francisco, where he will erect a novel residence, a palace, in fact, upon which $1,500,000 will be expended aside from the furnishing. This is to be a structure built almost entirely of steel and glass. The building, says the American Contractor, is to be about 230 feet long by about 100 feet wide. At one end it will be surmounted by a tower 115 feet high, at the other end by a similar tower, but of lesser size and height. A striking feature will be the sides below the cornice, which slope to the ground with a curve at an angle of about 45 degrees. In the sloping sides are set huge oval windows twelve feet long, and made to conform to the line of the sides or walls. The roof will be a huge gable extending the entire length of the building and terminating in another gable at right angles in which are placed immense stained glass windows, one of which will be 50 feet long and 30 feet wide. Not a foot of lumber or wood in any shape is to be used in the building. The materials will be iron, steel, aluminum, brass, bronze, platinum, silver, concrete, cement and stone. And the only stone used will be sculptured marble in the stairways and the main frieze, and onyx and decorative marbles in the bath rooms, the stairs, and a few other places. Even the foundations will be of steel and concrete.

STEEL IN LOCOMOTIVE MAKING.

William Forsyth, mechanical engineer of the C. B. & Q. R. R., in a press contribution on the growing use of steel in railroad work, says:

For locomotive driving axles open-hearth steel of proper grade is superior to iron, and is now extensively used. It is entirely free from seams, and the journal surface takes a fine polish and runs with a low co-efficient of friction. The other large use of steel on locomotives is for crank pins, piston rods, and main and side rods. A suitable steel for such purposes has the following chemical composition: Carbon, .50 to .60; manganese, .60 to .80; phosphorus, .04; silicon, .10. For driving axles the carbon is made as low as .40.

There are very few of the wrought parts of a locomotive which cannot be made of steel to advantage. The tubes and rivets are the principal exceptions, and though excellent tubes are made of steel, the severe service they get in a locomotive is such that so far manufacturers have not learned how to make such a perfect weld with steel tubes as to render them satisfactory for locomotive purposes. It is quite probable that the objections to steel tubes and rivets will soon be overcome, and they will be generally used. In England several of the large railroad companies have extensive steel foundries where they make many of the pieces usually made of cast iron or forged wrought iron. All the wheel centers for drivers and trucks are made of cast steel, and indeed there are few parts of locomotives on some English roads which are made of iron.

AIR BRAKES FOR STREET CARS.

The Age of Steel has at various times in the past few years called attention to the inadequacy of the hand brake in stopping street cars, especially those operated by electric power, and has insisted that the increased speed at which these modern conveyances were run made it absolutely necessary to adopt such a brake and take such precautions as would better protect the travelling public against the dangers of collisions and their probable fatality.

The following paragraphs from a St. Louis daily paper, the statements in which were verified by an Age of Steel representative, are certainly indicative of a desire on the part of street railway officials to do all in their power to render travel over their lines safe and at the same time pleasant and secure: "For the past month the St. Louis and Suburban road have been testing air brakes upon six of their cars, with a view to ascertaining their feasibility for street cars. The experiments have proven highly successful, and the company have ordered equipment for thirty more cars. The tests being made on the Suburban have been watched with great interest by street car magnates throughout the country, and now that it has been shown that air brakes can be successfully applied to street cars it is believed that the old hand brake will soon be but a memory. The Missouri Railway Company have decided to equip their cars at once with air brakes, and one of the St. Paul companies will place them on forty cars.

"The brake used on the Suburban line is the same in principle as that in operation upon steam railways. In fact, the only difference in construction is in the method of supplying the vacuum with air. On steam railways the vacuum is supplied with air by pump attachment to the locomotive. On the Surburban line the vacuum is supplied by an air pump placed above one of the axles. As the axle revolves, by means of cogs it operates the pump, which forces the air into the vacuum. The maximum pressure is 40 pounds to the inch. By experiment it has been found that the vacuum is filled with air to the maximum pressure after the car has traversed 200 feet. Experiments also show that ten stops can be made within one block without exhausting the air from the vacuum. The motormen are enthusiastic admirers of the air brake, as with the old hand brake they find stopping the big cars a hard task, whereas with the air brake they have but to move a lever about an inch."

CONDITIONS, NOT THEORIES.

When the duty on tin plate was one cent per pound the lowest price at which a box of IC coke tin plates, 108 pounds per box, was ever sold by the importers was $4.60, and the average for 10 years was $5.60 per box. This was supposed to include a tax of $1.08 per box. At present we can buy from importers the same kind of plates at $5.20, and that is supposed to include a tax of $2.37 per box. Now let us figure: $4.60 less $1.08, equals net proceeds to the foreigner $3.52; again, $5.20, less $2.37, equals net proceeds to the foreigner $2.83.

Formerly the government received $1.08 for every box of tin plate which was imported; at present the government received $2.37 for each box, a difference of $1.29 per box. We now pay as a tax 60 cents per box more than we paid when tin plates were at their lowest price, because we must maintain our government. The foreigner sells us a box of tin plates at 69 cents less than he ever sold to us before, because our government must be maintained, and because he wants to keep up his customers. We pay 60 cents and the foreigner 69 cents to make up the $1.29.

That the tin plate industry needs something to secure its existence in this country is certain, but this something we need is equity; that is, an equitable import duty which is equal to the difference between the wages paid for producing tin plates in this country and the wages paid for producing tin plates in foreign countries; or a duty which is equitable as compared with duties on other products of iron and steel, especially on those from which tin plates are made.

For instance, tin plates are made from steel billets. Pig iron sells at about $13. The duty is $6.72 per ton, or 51 per cent.; steel billets sell in this country at present for about $22 per ton, with an import duty of $9 per ton, or about 40 per cent. Black sheet iron, No. 30 guage, brings in this country about 3.3 cents per pound. The duty is 1.4 cents, or 42 1-2 per cent. of the selling price. The cheapest kind of tin plate is selling in this country at about $5.20 per box. The import duty is $2.37 per box, or 41 per cent. Keep up this ratio throughout the metal industries and the rest will take care of itself; disturb the ratio and you seriously disturb the present rate of wages.

If the American people will see the question from this standpoint, and they are beginning to see it, they will stand by tin plates.—W. C. Cronemeyer, President American Tin Plate Manufacturers' Association.

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SOME INTERESTIRG EXPERIMENTS.

The statement that radiant heat passes directly through air without heating it, and that the latter is heated by stoves, furnaces, and other heating apparatus only through its contact with the heating surface, says Metal Worker, has been difficult for many persons to comprehend, and, consequently, there is still to be found in the heating business those who either flatly deny the truth of the proposition, or, if they do not venture to deny it, secretly discredit it. The statement is, however, not only true, but it is important in its practical applications in the art of heating buildings, in greenhouse heating, and in other industrial arts. Some interesting experiments bearing upon this subject have recently been performed in France. Though these experiments were carried out for an entirely different purpose they afford very striking proofs that air is not warmed by radiant heat.

The experiments referred to consisted in taking the temperatures, both in and out of the direct rays of the sun, at heights of 9, and even 10 miles and upwards, by means of self-registering thermometers, carried to these heights by small balloons; the heights reached by the balloons being determined the indications of self-registering barometers. Ingenious devices for protecting the instruments when they descend from these great elevations were provided, and in the instruments employed, where metal work was required, aluminum was much used on account of its lightness. Now, by these experiments it was found that while the direct heat radiated from the sun at the height of ten miles is much more intense than it ever is upon the earth's surface, the temperature of the air is intensely cold, often reaching 58 deg. below the Fahrenheit zero. This proves that the air is not warmed by the direct heat of the sun, and that the air near the earth's surface is warmed by coming in contact with the surface itself and the objects upon it, these all being heated by the sun's direct radiant heat, that passes through the intensely cold stratum of air above till it reaches and is partially intercepted by clouds and vapor of water at much lower heights. It has been asserted that were it not for the constant presence, even in the clearest atmosphere, of the vapor of water, the direct radiant heat of the sun would be unbearable by man, while the temperature of the air might at the same time be below the freezing point of water.

There is a rumor that the Sarnia oil refinery has passed into the hands of a syndicate of capitalists, some of whom reside in Halifax, some in Montreal and some in Toronto.

Those who are the best informed look for no improvement in the coal trade at present, for although the output of the Pennsylvania anthracite mines for the month has been restricted to 3,000,000 tons it is pointed out that the production for the half year has been 20,951,870 tons, against 19,403,235 tons in 1892 and 17,965,090 in 1891, an increase, the continuance of which is unwarranted in face of the exististing commercial depression.

PETROLEUM IN MARINE LOCOMOTION.

The use of oil as fuel both on sea and land is not altogether a novelty, says Age of Steel. It has been used by one or more railroads in Great Britain to a limited extent, but with results in service that have justified the experiments. Railroads in Peru have, in some instances, been familiar with the use of petroleum for several years, the Oroya and the Moliendo, Areguipa and Puno roads adopting residuum or petroleum refuse for fuel. From tests made in Peru with locomotives in which coal or oil was the exclusive fuel, it is stated that in the oil-burning locomotive the steam gauge recorded from 135 to 140 pounds, never falling below 135 and rarely rising above 140. The average consumption of fuel oil per train mile was 38.55 pounds, as compared with 79.3 pounds of coal per train mile in the coal-fired locomotive.

The advantages of oil fuel, whether in locomotives or stationary engines, are manifest in economy of labor, cleanliness, absence of smoke and handiness of operation. These factors, if counting for anything in steam plants on land, have a double significance in marine service. As indicating the spirit of enterprise in this direction, the largest tank steamship in the world recently arriving at Philadelphia from Dartmouth, made use of petroleum for three days when crossing the Atlantic, an accident to the machinery of the vessel compelling a resort to coal after that time. This is presumably the first instance of petroleum being used in a trans-Atlantic voyage, and so far as the experiment went demonstrated its feasibility.

The steamship Ewo, of the London and Pacific Company's line, was fitted up to use petroleum in marine boilers, and as a result a speed of 8½ knots on seven tons of coal per day was increased to 9 knots on less than a consumption of four tons. In a lecture on this example given by the ship's captain to the Shipmasters' Society of London, he emphasised the fact that the "fires are completely under the control of the engineer on watch, who can secure any pressure of steam he wants without being dependent on his firemen; that he can control this steam as well in heavy as in fine weather; that, with proper burners and the use of feed water, the apparatus will run for days on an almost even pressure of steam without requiring unusual attention. In his first voyage on the Ewo, from Talara Bay to Valparaiso, the boiler pressure was steady at 158 pounds for seven days, although it was their first ocean trip with oil fuel, and the ship was driven all the time at full speed into a heavy sea. The use of the steam jet and the ordinary leakage required compensations of fresh water, of which the boilers used ten tons. The engines developed 450 horse power. The contraction and expansion of the boilers by using oil fuel is reduced to a minimum, as in getting up steam you can do so as gradually as you wish. There are no fire doors to open every time yon coal your furnaces; your fires never need cleaning; consequently that fruitful cause of loss of steam and contraction of the boiler is done away with, and not having to force your fires to regain what was lost in that operation, you avoid the consequent expansion of the boiler; thus the life of a boiler fired with liquid fuel must, from these circumstances alone, be longer than a boiler fired with wood or coal. Liquid fuel, if applied with steam, does no injury to the crown sheets, back connections or combustion chambers of a boiler; tubes do not need sweeping often, as with coal, for instance: the tubes in the steamer I mentioned were only swept once in six months, and even then were not dirty; there is no dust or grit, as there are no ashes; therefore, the saving of labor and paint are considerable items in the engineers' department."

There can be no no doubt as to the advantages that would be consequent to the use of oil as fuel, where its supply was economically available and the question of safety definitely established. A fixed weight of oil will generate nearly double the amount of steam as the same weight in coal, this saving of weight being in itself a factor, both in rate of speed or in storage of additional freight. There can be no reasonable doubt but that so far as the use of petroleum for fuel can be economically developed in the generating of steam, it will sooner or later be done. The element of danger, however, will always be a drawback to its universal use, but even this may be minimized by science or simply added to the hazards of commercial enterprise."

CARRYING SIDE LINES.

If you take the trouble to glance over the want columns of any daily newspaper you will find an advertisement something like this: "A traveling salesman to carry a side line on commission. Big profits to the right party, Address in confidence, Fake, 4-11-44, this office." Such an advertisement means that some specialty manufacturing establishment wishes to obtain the services on the road of a more or less competent salesman already working for and paid by another house, and who will devote a portion of his spare time to selling the advertiser's goods. The advertiser probably cannot afford to engage the salesman outright, or else finds it more profitable to use a part of the other employer's time, and accordingly he resorts to a method of selling his wares that practically places a premium on dishonesty. Many lines of goods are sold on commission entirely and it often happens that a salesman goes on the road as the representative of several different houses. He thus makes of himself a sort of traveling commission house and his business methods are understood by those whom he represents. His time is his own and he may carry as many side lines as he chooses. But there are other cases where, although the traveler sells on commission, it is understood between the parties to the contract that he shall represent the one house only, and shall not devote any portion of his time to other lines. Yet, notwithstanding this implied contract, the salesman is often tempted to accept the offer of a fat commission from other parties and to sell goods which, in many cases, are not in the same line with those which give him his principal employment. Here is a case of serving two masters, with mammon getting the better of the work. A still more flagrant case of wrong-doing is when a salesman travels for a house which pays his expenses and gives him a stated salary in return for his services and who nevertheless accepts and carries a side line for the sake of the little pocket money afforded him by its sale. This is nothing less than practical robbery and we are glad to note that not many instances have come to our knowledge. But such cases do exist, as the average dealer has ample reasons for knowing. It is a practice that should be stopped. The time and the services of the salesman are the property of the employing house and not of Fake, 4-11-44. Any diversion of either time or work is at the expense of the employer, and what is taken from the latter is measureably taken from the dealer whose trade he has been sent to solicit and who has a right, established by custom, to all the attention which his trade may warrant or he himself may care to give. The dealers have a direct interest in the matter and with them lies the remedy.—Stoves and Hardware Reporter.

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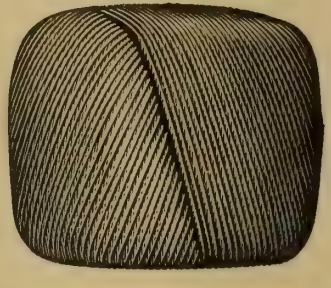

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HOW TO SELL GOODS.

First of all comes the question, What goods shall I buy? To answer this requires a knowledge on these points: The general and even the special wants of the trade with which one has to deal, the required averaging up a stock sufficient to meet these wants, and what is a nice discrimination between ready selling goods and those which may prove to be slow sellers. Many a dealer has failed because he did not size up the wants of the community where his capital is invested. He did not or could not catch on to what his neighbors needed, or else was so backward in introducing new goods that his one-time customers were compelled to go to his more progressive competitor and deprive him of a profitable trade.

When these questions are rightly answered, the question of how to sell follows in natural order. In the first place comes the matter of arrangement or display. There need not be any attempt at artistic effect, save perhaps in the show windows or cases, or wherever a full showing of the goods may be useful in convincing a possible customer that the dealer's acquaintance with his requirements is equal if not better than his own, providing, of course, that this supposedly superior knowledge is not made unnecessarily evident. Staple goods do not require any display, since they sell as called for if their quality and variety are of the right kind, but novelties and new styles of makes should be so placed that people will see them when they come in or else the dealer might as well not have bought them. They are dead stock if kept in the background. there should be a magnet in every store or shop, with the goods at one end of the pole and the dealer at the other. The best of goods will find a slow market when in the hands of a poor or indifferent salesman and there is little use in attempting to attract custom if the salesman, whether he be owner or clerk, does not put himself in touch with the customer, finds out what he wishes or wants, and make an honest effort to meet him on his own ground. If he fails, it is either because he does not have the goods in stock or else because he is unable to comprehend the inquirer's whims or fancies. Sometimes these are beyond comprehension, but that is one of the disagreeable things with which a dealer is obliged to contend. He can't avoid it, but he learns a lesson to be followed with the next customer, and is often enabled to bring a profit from a supposed loss. A little courtesy goes a long way toward lubricating the wheels of trade, and the more friction there is, the greater the need for its use. The best of it is that it doesn't cost anything.—Stoves and Hardware Reporter.

GERMAN SHEET IRON TRUST.

In what are known as trusts, or combinations for protective purposes as against possibly ruinous forms of competition, our European brethren, if not so familiar with the method, are equally susceptible of its influences, says Age of Steel. We are not yet the premiers of the world in shrewdness, nor do we constitute the only chapter in the commercial or industrial history of modern times in which practical economies have the gift of smartness at the expense of business morality. With other industrial nations as with ourselves, the question is not one of being behind demand in the production, but of providing more Jonahs than the whale can swallow.

The immediate remedy for this, from the producer's point of view, is to restrict production by mutual consent, each and every party in the agreement being under the control of a responsible and authoritative executive. Of course, these expedients can be but temporary, but for the time being have a certain kind of force and favor. Fixing prices is about as easy a matter as staking tides which ebb and flow by natural laws, and if silent to-day are revolutionary to-morrow, with artificial restrictions.

The German enamelled sheet iron trust is a result of the conditions of productions we have named, and of course when pay day comes will have to settle the bill in the usual style. The object of the combine is to prevent over-production, by regulating the output upon the home market. Incidentally a scale of prices, rebates, and other charges are agreed upon. No attempt is to be made for the present to control the sale of exported wares, even when sold to German buyers. The trust is made up of manufacturers in Rhenish Westphalia; Saxony; Southern, Northern, Eastern and Central Germany. About thirty works are included in the compact, which is dated to expire December 31, 1895. Members are bound not to erect new works, or to interest themselves in firms outside the trust. The exact quantity of product is to be apportioned in general meeting. Each firm, according to the report furnished to the United States consular department, is required to forward semimonthly to a central office a statement of actual shipments. Statistical summaries, based on these reports are to be published every two weeks for the information of members of the association. After a more complete organization has been effected, the directors of the various groups making up the trust are to hold quarterly sessions to fix, with the aid of the published statistics, the production for the succeeding quarter. In this manner every firm will be enabled according to programme, to estimate with some exactness the quantity it is entitled to put upon the market. Other conditions are insisted upon in this trust that are characteristic of the systematic and thorough-going methods of the Teutonic manufacturer. If anything is to be made out of elaborated and systematized methods of restriction it would seem to be possible to the German tactician, but, as before stated, no scheme to control prices or output can be but of temporary advantage. It is easier for a time to restrict product than to bridle the producer, while the ever multiplying influences outside of corporate control and beyond its reach are so many dropped or added threads in the loom that made the fabric too much or too little for the purely selfish or protective purposes of any self-elected corporative body.

BUSINESS CO-OPERATION.

The following paper was read before the National Stove Manufacturers' Association by G. D. Gibbons:

The channels of thought, and of legislation as well, at present seem to ignore all claims of capital to recognition, and yet, while this might be well, I am unable to see how the business of the country is to be conducted without the co-operation of capital, business methods and labor. It seems to me that the rights of each should be equally recognized and protected. In all this spasmodic rush of sympathy for the toiling millions, let us not forget that business men have some claim to recognition also. Their activities transform the face of the earth. They whiten the seas of every clime with the sails of commerce, explore the hills and valleys in remote quarters of the globe to find products to meet the wants of man. They delve into the earth to bring forth its mineral wealth. Capital, which blesses the world, is a result of their applied energy. The money of the world has been created to meet the exigencies of business. The enterprise of untiring business men in every department of human activity gives employment to the toiling thousands, and makes possible the prevailing comfort.

Experience and observation have confirmed me in the opinion then expressed, and I am fully confirmed that the only plan by which our business can be placed upon a paying basis is full and complete co-operation. The stove founders of America have within their control a business which, if wisely managed, may be made remunerative to themselves and largely beneficial to the country generally. Any industry, of whatsoever character, which is not on a paying basis, is necessarily detrimental to the general prosperity, and must sooner or later bring disaster in proportion to its importance to the community in which it is located. All experience has shown that the best way to build up a town

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or city is for its manufacturers or business men to build up their own business and the prosperity of the town or city is assured. So in a state or nation—it is the individual prosperity of its citizens that makes the state or nation prosperous,

In order, therefore, that we, controlling one of the most important products of the nation, may contribute our share to the general prosperity, we should see to it that our business is so conducted as to yield a reasonable revenue. Whatever may be the cause of the present condition of the stove trade, it should be removed. The difficulty, no doubt, is competition among ourselves. This cannot be remedied or regulated except by the co-operation of all those engaged in the business. It will not do to say that because many of us had a fair business comparatively, last year, business is improving, and we may expect success in the future. Last year was a phenomenal business year, brought about by a combination of circumstances which may not, and probably will not, occur again in many years to come. Some of us were enabled last year to dispose of some of our surplus stock and thereby humiliate the tax field; but these goods were generally sold at unremunerative prices. Even now we are realizing the effects of an anticipated change of national policy, in the timidity of capitalists to invest in manufacturing or other enterprises. This condition must continue and increase until it permeates the entire business of the country; and harmony and prosperity will be restored only when a settled policy is arrived at and confidence is restored.

During all this time consumption will be curtailed, competition will become fiercer, and profits will be out of the question, unless an agreement can be made by which we can act together in the matter of prices. With increased production and lower prices it is not difficult to foresee the consequences. There is scarcely a manufacturing business of importance in the country that does not have some co-operation excepting ours. It remains for us to devise some means, to adopt some plan, by which our business may be placed on a more secure basis.

Many different plans have been suggested to bring the stove manufacturers into closer relation to each other, none of which, so far, have been successful.

I would suggest that at this meeting a committee be appointed for the purpose of formulating a plan looking to a general co-operation of the stove manufacturers of the country, and that said committee be authorized to call a special meeting of the association when ready to report, if they deem it necessary; otherwise to report at the next regular meeting.

Let us take hold of this question with an earnestness and determination which will ensure success. We owe this to our employees as well as to ourselves. Let us put our business in such shape that we will be enabled to pay our operatives fair, liberal compensation for their services. There is no class of workmen who deserve better pay, because none perform more laborious service; none are more faithful, none bring a higher degree of skill and intelligence into their work, and none are more deserving of the confidence of their employers.

MANUFACTURE OF IRON IN INDIA.

In a paper recently read before the Society of Arts on the "Manufactures of India; Their State and Prospects," Sir Juland Danvers, K.C.S.I., referred to iron as being one of the most important manufactures from which great future benefit to the country may be expected. That the ore exists in many parts of India (the author continued) has been abundantly proved, and evidence exists that for ages past iron has been made by means of small charcoal furnaces and worked up in various metal industies. The pillar at Kootub, near Delhi, is an example of an iron structure erected 1,000 or 1,200 years ago. Attempts have, from time to time, been made by enterprising Englishmen to start iron works. But in all these cases the works, after considerable expenditure, ended in financial failure and were abandoned. The cost of production was too great and the high charge for conveyance by imperfect communications made it impossible to supply the material at such prices as would satisfy the market. Railways are now, however, opening up the mineral resources of the country, and the prospect of coal, as well as iron, becoming large industries is yearly improving.

TRADE CHAT

[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Tuesday.]

The Polson Iron Works and Shipbuilding Company are removing their heavy machinery at Owen Sound to Toronto. Six carloads have already been shipped, and three more are to follow.

A Peterboro' despatch says that the contract for the new iron Narrows bridge was awarded last week to Messrs. Weddell & Co., of Trenton. The structure will cost between $12,000 and $13,000, and will be one of the finest of its kind in the country.

The aggregate value of the iron, steel, foundry and machine shop products of Paterson, N. J., last year was a little over $6,000,000, or nearly three times as great as that of the silk and textile industries for which the city is principally famous in popular estimation.

An execution for $1,400 has been secured against the New Toronto Natural Gas Co., of which Alexander Manning and S. F. McKinnon are chief owners. The execution is on a judgment secured by W. A. Fraser, the contractor who bored the wells for the company.

The ingenuity of the hardware man is never at a loss when it comes to the sale of goods. The latest practical exponent of this fact does business at Albion, N.Y. To every one purchasing from him the one-wheeled vehicle known as a wheelbarrow, he gives the purchaser a free ride home in it.—Hardware.

A man in Philadelphia once invented a heater that was to require no fuel; he had so good a thing that he has since kept it wholly to himself. Another man, "out West," got up another, that was to require but a quart of bituminous coal per day; he has evidently been bought off by the coal trust, for his heater isn't on the market any more.—From Catalogue Weir Furnace Co.

A new electrical submarine boat has been built which is 28 feet long and 8 feet wide, having the depth of 11 feet. The total weight is 40 tons. The special advantages claimed for this boat over all others of its kind is that if need be, it can remain under water for 48 hours, besides being able to descend to a depth of 130 feet. It is reported that the trials recently made with this vessel are favorably regarded by the Italian Government.—Inventor.

A ladies' journal informs us that a cloth saturated in kerosene and dipped in whitening, will clean tinware much better than anything else used. This the latest for cleaning tinware. We think that if this recipe is used to any great extent, there will be an increased amount of business done in the divorce courts. Imagine a fellow eating a rice pudding baked in a tin that had been scoured with kerosene oil.—House Furnishing Review.

The new officers of the Owen Sound Portland Cement Company, elected at the annual meeting, are as follows: Ex-Ald. John Lucas, of Toronto, president; William Manders, Owen Sound, vice-president; S. Lloyd and R. Wylie, of Owen Sound, and W. P. Pearson, Toronto, directors. Mr. R. P. Butchart retains the position of manager, and Mr. John Corbet that of secretary-treasurer.

A process of enameling sheet metal work has been patented by Victor Dubois and Wm. C. Stewart, of Harvey, Ill. The special feature of the process relates to the means of producing a mottled effect. The first coating of enamel is applied in the ordinary way, and to the porous unglazed enamel coating a suitable volatile liquid is applied in spots or mottles, after which the article is placed in an oven and dried, so that the volatile liquid will be evaporated. When this has been done and the article placed in the furnace the spots or mottles are developed, producing the desired variegated appearance.

A contemporary gives these rules to be observed when selling stoves: Never sell a small stove to do the work of a large one. Never allow a stove to be put up with a pipe smaller in area than the collar on the stove. Never send a stove to be put up without a careful examination, to determine that no plates have been broked or misplaced in shipping. Never attach a stove to a chimney without knowing that all unnecessary openings in the chimney have been properly closed. Never send a stove to be put up without giving full instructions as to the use of dampers and cleaning of flues.

One hardware dealer, says a London exchange, has hit upon the following plan for keeping his stock of rope out of the way and out of sight, and yet convenient for inspection and making sales. The stock is kept in the cellar in rolls or on drums, and one end of each size is drawn up through a hole in the floor and fastened to the front of a counter. Thus a customer can easily make his selection without going down stairs, and the rope selected is easily drawn up, measured off as it comes and cut at the desired length.

E. R. Faribault, of the Geological Survey, has begun operations in this province, and is going over the work from Halifax to Guysboro County, correcting and verifying the surveys for the maps which, in response to the demands of the mining community, are now to be issued on the scale of one mile to the inch. At present Mr. Faribault has pitched his well-appointed camp at the head of Bedford Basin and is conducting operations from there. He is accompanied by Mrs. Faribault and her sister, and the ladies seem to thoroughly enjoy the camping out. —Critic, Halifax.

The time for the regular summer stoppage of the glass factories has again come around. The plate glass factories in various parts of the country have already shut down. It is stated on good authority that these factories will remain closed until the present large stocks of glass are disposed of. The consumption of plate glass during the past year is put at 15,000,000 feet, while the combined capacity of the American factories is 22,000,000 feet. The majority of the window glass factories have already closed down for the summer vacation.—American Manufacturer.

A Farmington, Mo., despatch of July 7 says: Work at Iron Mountain, which has been going continuously for nearly 50 years, has been virtually suspended. Hundreds of men have been discharged, and only 40 or 50 have been retained to clean up the works. In a few weeks all will be discharged. For a long time it was generally supposed that the deposit of ore was practically inexhaustible, but the vein is now worked out. When the expectations of the owners were at the highest point the property was valued at $8,000,000, and the owners at one time refused to sell at that figure. The final wind-up, coming at a time of general depression, will cause much loss and suffering.

Partial returns from the blast furnaces for the month of June show that a number of changes have occurred in the status of the furnaces, among which we may note the following: Belfont furnace, at Ironton, Ohio, banked on the 3rd inst., and will remain banked during the remainder of July. Philadelphia furnace, of the Florence Cotton and Iron Co., Florence, Ala., blew out June 22. Bloom, at Bloomsburg, Pa., was preparing to suspend by the 4th. One of the Lebanon furnaces of Coleman & Brock, at Lebanon, Pa., went out of blast on June 30 indefinitely. No. 2 stack continues in blast. The furnace of the London Iron Company, at Chapinville, Conn., blew in June 15. No. 3 furnace of the Andover Iron Co., at Phillipsburg, N.J., is now out for repairs. The two other stacks are also idle.—Iron Age.

The Secretary of State is in receipt of a despatch from the United States Minister at La Paz, Bolivia, in which he speaks of a curious reform in the currency of Bolivia, only just accomplished. It appears that when bank notes were first issued in Bolivia there was a great dearth of fractional currency. It consequently became the custom to make change by tearing the bank notes into fractions. The banks received these fractional pieces of paper money, and the custom then inaugurated has continued to the present time. An entite bank note is therefore a rarity in Bolivia, almost the entire issue circulating in the shape of frac-

tions. By a decree recently issued the banks were instructed to redeem these fractions of bank notes until June 30th, after which they will not be received by the Government or by the banks, and will therefore rapidly disappear from circulation. The substitution of a new and entire bank note for the odd fractional notes is now in progress, and holders of torn bills were warned by legal advertisements in the newspapers to present them for redemption before June 30th.

The cottonseed-oil production of this country is worth about $16,000,000 a year, the oilcake brings in about $8,000,000 more, and the lint and hulls produce about $1,000,000, says an exchange. Thirty years ago the whole seed crop was thrown away as refuse.

Two letters have been received at Ottawa by Prof. Saunders, director of the experimental farms, from large hay dealers in Europe asking to be put in communication with large shippers of hay in this country. One letter is from J. Latrasse, Rive de Gier Loire, France, who wants to buy 1,500 to 2,000 tons; the other is from George Rogers, 101 Leadenhall street, London, Eng., who wiches to contract for 1,000 to 2,500 tons. Some of our large Canadian dealers should correspond with these parties.

Reports coming in from most of the farm districts state that, consequent on the improved condition of the weather, the crops will be very much better than was until very recently anticipated. Those ofthe Kamloops District will be evenbetter than usual, as the heavier rainfall actualy benefits that dry region. —News-Advertiser, Vancouver, B.C.

The United States produces 2,220 lbs. of grain to each inhabitant; Denmark, 2,005; Canada. 1,500; Russia, 1,200; Roumania, 1,150; Spain, 1,100; France, 990; Sweden, 980; Argentine Republic, 850; Australia, 760; Germany, 700; Belgium, 600; Portugal, 550; Ireland, 600; Scotland, 490; England, 360.

SITUATION VACANT.

TINSMITH—WITH ABOUT $1,000 TO $1,500 capital, to take an interest in a hardware store and tinware business, in a rising Ontario village on the C. P R. Apply Box 26, Shelburne.



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LIFE OF THE HARDWARE JOBBER.

Extract from a speech made by J. C. Oglesby, President of the Atlanta Commercial Club, at the recent banquet of the Southern Hardware Jobbers' Association, and published in a contemporary: From the contented faces I see before me this evening I am impressed with the thought that the life and experience of the hardware jobber is one of ease and satisfaction. I imagine that the unscrupulous competitor who annoys his neighbor and robs his customer by selling him a leader at cost, and a less known article at an outrageous profit, has not found his way into your line. I hope, too, you are not imposed upon by the short-sighted and greedy manufacturer, who, after taking your order, slips around the corner and sells your trade. I imagine the various delusive prize schemes have not struck you, and that you do not give away a barrel of crockery to sell a keg of nails, being careful all the while to secure in the price of the nails good pay for the cups and saucers; that you collect your bills when due, and none of your customers are like the one who bought the bill from my friend Bain. Trade was dull. The fellow had gone through the entire stock and bought something of nearly everything in it, the bill amounting to about $1,400. He was a genial, innocent sort of a countryman, and, although Bain is very ugly as you can all readily see, a more generous man with a bigger or better heart never lived. He hated to embarrass or hurt the feelings of his new customer, but as nothing had been said about pay, he felt a little nervous, so, approaching the subject gently, he said: "Mr. Smith, I suppose you want the usual sixty days' time on this bill?"

"Yes," said Smith.

"Well, being a stranger to us, I presume you will not object to making us a statement," said Bain, in a mild fatherly tone.

"Not at all," said Smith, all the time not seeming to exactly understand what Bain was driving at.

Donald got out his pen and paper. "Now, Mr. Smith, we will put down in this column your assets. How much capital will you put in your business?"

"None at all," said Smith.

"You have some real estate?"

"Not an acre."

"Well, what other property?"

"None."

"Worth nothing at all?"

"Not a cent."

With a deep sigh at the fast fading profits on an unshipped bill, Donald looking sadly at his customer, said to him, "Why, my friend, you can't make any money without having some to begin with."

"Well, by jingo. I can't lose any, can I?"

A PREHISTORIC BLAST FURNACE.

Prof. Flinders Petrie, in 1890, convinced himself that in a remarkable mound, called Tel-el-Hesy, in Southern Palestine, would be found the remains of what was one of the strongest places in the country down to the invasions of Sennacherib and Nebuchadnezzar. The explorations, said Mr. Bliss, at the Palestine Exploration Fund meeting on Tuesday, have fully verified this forecast; the mound of Tel-el-Hesy being composed of no fewer than eight successive towns, formed on the ruins of one another, the uppermost dating about 500 B.C., and the lowest, or earliest, going back to 1,500 B.C., the time of the great Egyptian conquests of the land. The most important find of all is a cuneiform tablet, the first record of pre-Israelitish Canaan yet yielded up by the soil of Palestine, and Professor Sayce holds that it is but the forerunner of the library of the Governor of Lachish in days when the Israelitish invasion was still distant. Prof. Sayce believes that this find heralds a discovery which will amount to "digging up the sources of the Book of Genesis." Amid all the evidence discovered by Mr. Bliss of the civilization of that remote age—wine presses, treacle presses, alkali burnings, and innumerable others—by far the most curious is the disclosure of an iron blast furnace, so arranged as to give strong evidence of being intended to heat in its descent, a blast of outside air forced through passages, before entering the chamber at the level where tuyeres are usually found. "If this theory be correct," says Mr. Bliss, "we find 1,400 years before Christ the use of the hot-air blast instead of cold air, which is called a modern improvement in iron manufacture due to Neilson, and patented in 1828."

BRITISH SHIPUILDING DULL.

Returns from the Scotch shipbuilding yards show that the number of vessels launched during June was 32, having an aggregate capacity of 27,914 tons. On the Clyde alone the launchings were 29 vessels and 24,366 tons. Altogether the Scotch production in the first half of the present year reaches only 132,691 tons, against 210,884 tons in the corresponding portion of 1892, 190,989 tons in 1891, and 208,675 tons in 1890. The tonnage put into the water during the first half of this year is, therefore, much smaller than that recorded in the like period in any of the preceding three years. This fact is due to the very scanty orders which have been given for new shipping within the last twelve months, and simple want of new work has recently induced shipbuilders to accept extremely low prices. The result is a considerable increase in contracts, which, however, would presumably not have been entered into by shipowners but for an encouraging though not very important improvement in the rates of freight and a reduction in the number of idle ships at the ports. Shipowners have, however, shown a much stronger disposition than before to avail themselves of the opportunity of buying new vessels, and one firm in Glasgow has placed orders for four large steamers of 5,000 tons each. Shipbuilders in Scotland look hopefully upon their prospects, and are now asking higher prices. For the moment this upward movement has checked the demand, with the result that some pending negotiations for further business have been postponed.

PARIS GREEN IS SCARCE.

Just now is a season of overproduction, and the price of many articles are low, and in some cases less than recorded for half a century. But the world forgets occasionally to provide enough of some articles, and this year it has been wire, cloth, mess pork and Paris green. The last named cannot be manufactured in hot weather on account of the chemical action of it, poisoning the workmen engaged in its production when they perspire, and so a short supply has lodged in a few hands who are contemplating a corner in the market. Its use in agricultural sections is almost imperative, and it will be instructive to students of markets as to the outcome. But as surely as day follows night there will be an over-production next year, and it will then be the turn of the potatoe bug to reflect upon the changes in the affairs of the world.—N. Y. Hardware.

DULLNESS COMPELLED IT.

A despatch to N. Y. Bulletin, under date of July 9, says:—The Troy Steel and Iron Company's blast furnace on Breaker Island will shut down to-morrow. Superintendent Charles McCrery, when asked about the causes leading to the action of the company, said: "We cannot run our plant here without orders and without the money from orders. We have kept up as long as possible, but on Monday we will have to close down until trade brightens up enough to let us run the works on a paying basis. We have three stacks on Breaker Island, but one of them we have not used for some time. On Monday we will entirely draw the fires of one of the furnaces and bank the fire of the other." The superintendent went on to explain that the Troy Steel aad Iron Company had within its control the works on Breaker Island, the Albany Iron Works, the Bessemer Steel Works, the Rensselaer rail mill and the Merchant mill. "This," he said, "is the first time we have ever had to shut down for the reason of depression in business. In 1888 we shut down, but that was to make a number of necessary repairs." Mr. McCrery said that business had been getting worse and worse for a month or two and within the past few weeks orders had been a rarity. The output of the Breaker Island works is 10,000 tons of pig iron per month, and the works across the river work up this iron in turning out over that amount of steel.

BUSINESS MAXIMS.

The proof of the pudding is in the eating of it, and the power of a maxim is in its practice, says Stoves and Hardware Reporter. These oracular expressions of practical experience in an early day carried almost as much weight, in their sphere, as the words of sacred writ, and to speak lightly of them was to lose standing with the solid men of the times. Poor Richard's almanac took rank next to the bible and Bunyan's Pilgrim's Progress, and its precepts were embodied in many a man's profession of business faith. That they have since lost much of this power upon the business world, is not to be attributed to the unsoundness of their doctrine, but to the changed habits of commercial life in the new world.

They were the outgrowth of years of experience in the old world, and were transferred to America with the other belongings of the colonists. Here conditions wholly unlike anything they had met before confronted the newly planted commercial interest. New measures and ever changing expedients rapidly rendered old forms obsolete. Successes were achieved under circumstances that made the men trained under the settled conditions of their former homes marvel, and an impression very soon became prominent that all old things had passed away, and that all things had become new.

The wide divergence which has taken place in the commercial habits of the new and old systems is readily observed, when those of England and America of to-day are compared. There has been a notable progress in the mother country but it has been along the lines that were firmly established when the commercial foundations of this country were laid. Here new surroundings and new opportunities made a divergence from old lines inevitable. The element of eager haste is found in every department of life, and scarcely any form of commercial activity is entirely free from a tendency to some form of speculation.

Under such conditions it was natural that the form of the early business precepts should gradually lose their charm and fall into disuse. But the wisdom they contained have unfortunately been too much laid aside with the casket in which it was enshrined. The fundamental principles of prosperity are as old as the earth, and cannot become old-fashioned.

Of recent years there has been observed a tendency to revive these nuggets of commercial wisdom, which the old truths expressed in modern phrases. They are never destined to play the prominent part they once did, but in their brief pointed form they are likely to gain a lodgment in the mind of the young and the less thoughtful of maturer business men, when more extended treatises would fail. But to be the most useful they must be shorn of that oracular form in which too many of them are cast. Plain, brief statements of an everyday fact, expressed in such a form as to be attractive, are the only ones that will be remembered.

But after all, the crying demand of the present is not so much for business maxims as for a better observance of the truths they express. Men escape failure so often when they neglect this observance that they begin to believe that it is not necessary. The failures of to-day, however, are teaching a salutary, though expensive lesson. There is no proper place for sentiment in business. Mutual advantage is the only basis of legitimate commercial transactions, and a strict regard for the amount of capital in hand must determine the basis of credit to be extended to customers, as well as the degree of expansion which any merchant can safely give to his enterprise. There is a disposition to think this view unduly harsh, but the lesson of the day is that "business is business," and should not be confused with anything else.

At a meeting of the Consolidated Plate Glass Co. of Canada, limited, held at the Queen's hotel, the following gentlemen were elected directors: Frank J. Phillips, William Ferguson, Edwin Hill, William C. Phillips and Joseph McCausland of Toronto; William R. Hobbs and Thos. H. Hobbs of London, Ont.; Alex. Ramsay and L. I. Boivin of Montreal, and George Howe of Ottawa; and at a subsequent meeting of directors Frank J. Phillips was elected president and Wm. R. Hobbs and Alex. Ramsay vice-presidents.

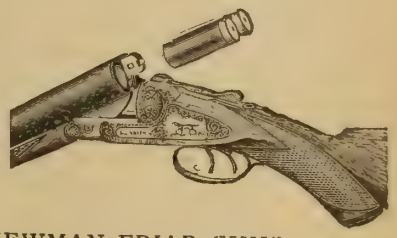
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. . THE TRADE SUPPLIED . .

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Illustrated Catalogue :--



Of GREENER, CLABROUGH, and NEWMAN FRIAR GUNS. WINCHESTER, MARLIN, COLT, and REMMINGTON RIFLES, also REVOLVERS, POWDER, SHOT, WADS, ARTIFICIAL BIRDS, Etc. . . . . .

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Bowman Hardware and Sporting Goods Co. ✻ HAMILTON, ONT.



Write for THE

Toronto Silver Plate Co's

Illustrated Price List of

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It illustrates many lines that are seasonable and that you can handle to advantage. . . .

FACTORIES and SALESROOMS: TORONTO, CANADA.

E. G. GOODERHAM, Manager. -:- JNO. C. COPP, Sec.-Treas

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, July 14, 1893.

HARDWARE.

The week has witnessed the development of a little more activity in the hardware business. Practically all lines of general hardware have furnished a fair trade, while in heavy material the better tone noted last week is more apparent, and this naturally has a sympathetic effect. The demand for harvesting tools keeps up, and quite a fair movement has been to note in cutlery as well. In chain some good sized lots have been sent to the Pacific coast, and the movemovement for other sections is fairly good also. Wire has shown fair activity, and there has been a better demand for cut and wire nails. In fact on the whole the record is rather more satisfactory than for the previous week.

WIRE—There have been quite a few round lots of wire moved during the week, as buyers who held back until after the quarterly meeting of the manufacturers have been making freer calls on jobbers. Makers also report better orders on the same account.

NAILS—The demand both for cut and wire nails has been good, and a much larger business is to note in the former on orders for nearby points in Quebec and Ontario. Quite a few lots of wire nails have been sent west along the line of the C.P.R.

TACKS—Small goods rule quiet, and there is nothing special to note in their case.

CHAIN—Several good-sized orders for log and cow chains have been filled in the last six days for shipment west and to British Columbia.

TOOLS—Demand for harvesting tools continues fair, and there has been an improvement in the movement in other lines of this kind also, as compared with the trade of the last fortnight.

CUTLERY—Cutlery has been more active in a jobbing way, several good city and country orders coming in.

WARE—The only movement in this line is for preserving kettles, etc., and it is not quite so active as it was, immediate wants having been filled no doubt.

BUILDERS' SUPPLIES—Builders' supplies are quiet on the whole. There has been some demand for roofing and carpeting felt paper, but it is nothing special.

BINDER TWINE—Demand has ruled fair for binder twine, and some small orders are being received from the more eastern sections, as well as those already noted from the west. We quote as before on the basis of 8¾c. for red cap and 9¾c. for blue ribbon, these being list prices, the usual discounts being allowed according to quantity.

METALS.

The better tone noted in metals and heavy iron last week has become more marked during the present week, and an increase of the volume of business is already noted. Values which have shown a general tendency to easiness manifest a steadier tendency.

PIG IRON—There is no change in price but buyers show more disposition to trade. Stocks here are smaller than is usually the case at the season. We note sales of round quantities of Siemen's and Scotch pig at inside figures. For business in an ordinary way however quotations rule as follows :—Summerlee, $18 to $18 25 ; Eglinton, $17 to $17.25 ; Carnbroe, $16.75 to $17 ; Siemen's No. 1, $18 and Langloan, $18.50.

BAR IRON—There has been a rather better demand for bar iron, both makers and jobbers being more active, the former especially so. Prices remain the same as decided upon at the Toronto meeting.

SCRAP IRON—There is nothing doing in scrap iron and we quote No. 1 wrought $15 to $16.

TIN PLATES—There has been more doing in tin plate during the week, several good jobbing lots changing hands. We quote : Coke, $3.15 to $3 20, and charcoal, $3.75 to $4 25.

CANADA PLATES—There are complaints about slow deliveries of Canada plate, but recent arrivals have been freer. Talk of inside prices continue, and the trade generally look upon the actions of one house in the west as unprofitable. We quote $2.45 as the best figure here, and it must be a good sized lot to command the price.

TERNE PLATES—No special business is reported in terne plates, which continue as before, $7 to $7.50.

GALVANIZED IRON—There has been no change in this, which rules at 4¼ to 5c. for No. 28 guage.

SHEET IRON—There have been some small lots of sheet iron moved at $2 40, and prices generally remain as before.

HOOPS AND BANDS—A fair jobbing trade is doing in hoops and bands on the basis of $2.35.

COPPER—There is no change in this article, but although 11¾c. is quoted for ton lots, etc., the price runs up to 12½c. for smaller quantities.

TIN—The tone is steady and some fair quantities have been moved at 22 to 22½c.

LEAD—There is no change in lead, which rules at $2.90 to $3 00.

ANTIMONY—Prices remain as before 10½ to 12c.

CEMENT—There is no great improvement in this line of business, although a somewhat better enquiry is noted. Prices are not quotably changed, English brands being held at $1.95 to $2.15, and Belgian, $1.85 to $1 95. Firebricks are in good demand at $15 to $19 as to brand, ex ship.

SPELTER—Demand is moderate at former prices $4.75 to $5.

ZINC SHEETS—Former prices are maintained and we quote $5 to $5.50.

NAVAL STORES—Trade has been slow but prices are unchanged except turpentine which is again lower. We quote :—Turpentine, 47 to 48c. ; resins, $2.50 to $5.00, as to brand ; coal tar, $3.75 to $4; cotton waste, colored, 5½ ; do. white, 7 to 10c. ; oakum, 5½ to 7½c.; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep-sea line ; pure Manilla, 12c. for 7-16 and upwards and 13c. for smaller sizes.

PAINTS AND OILS.

The volume of business in leads, paints and varnishes has been moderate. Dry lead is still being sold at unprofitable prices. Linseed oil continues strong. We quote :—Choice brands white lead, Government standard, $4.75 to $5 ; No. 1, $4.50 ; No. 2, $4.25 ; No. 3, $4 ; No. 4, $3.75 ; dry white lead, 4¾c. ; red lead, pure, 4¼c. ; No. 1, 4c.; zinc white, pure, $7; No. 1, $6 ; No. 2, $5; linseed oil, round lots, raw, 60c., boiled 63c.

OILS.

Fish oils are easy in tone, Gaspe cod in round lots being offered at 40c., Newfoundland at 42½c., and steam refined seal at 47½c.

Refrigerators



Hardwood, Lined Galvanized Iron,

These are highly finished and each season has shown an increasing demand. This year we are also making a cheaper line in above style, so as to meet all requirements.

Galvanized Iron Eave Trough, 8 foot lengths.
In O. G., and Half Round Patterns.
Lithographed Tea Caddies and Signs.
Water Filters and Coolers.

We are getting out a very Handsome line of **Lithographed Stove Boards.**

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

Communications to be addressed to
HEAD OFFICE, MONTREAL.

Cable Address, "ELEPHANT," Montreal.
A B C CODE USED.

EMBRACING THE BUSINESSES OF { FERGUSSON, ALEXANDER & CO.
THE WILLIAM JOHNSON COMPANY.
THE A. G. PEUCHEN COMPANY.

The Canada Paint Co., Ltd.,

MONTREAL, TORONTO AND VICTORIA, B.C.

MONTREAL, June 7th, 1893.

COLOR CARDS.

We take the earliest opportunity of intimating to our constituents that the very great pressure upon us during Spring for Color Cards and advertising matter has now been met; that our printing room is level with orders; and that any of our friends who may have been overlooked, or who require a further supply, will be promptly served on communicating with us.

SHIPMENTS.

We must not delay to explain that partly from pressure on some of our departments, and partly from serious interruption of railway traffic, some of our Spring orders were late in reaching their destination. We venture to ask our friends to consider the circumstances and treat the delay as exceptional.

With this month we have broadened our shipping arrangements, both for town and country, and as the railway blockade has been raised, we venture to assure our friends that deliveries will be equal to our best record.

We desire to acknowledge the hearty support we are enjoying, and hope to merit its continuance.

THE CANADA PAINT CO., LIMITED.

MONTREAL Markets continued

GLASS.

There is no change in glass, which moves rather slowly on the basis of $1.35 for first break. Putty in bulk is quoted at $1.85.

PETROLEUM.

The movement in refined petroleum is very slow at present, and while refiners are offering lower prices to induce business. No change can be made in quotations, which are nominal. We quote as follows:—Canadian at 11¼c. in shed in Montreal for round lots, and 12½c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c in 10-barrel lots, 19½c. in 5 barrel lots, and 19¼c. for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c.; Canadian benzine, 10¾c.; Petrolea, 12¾c. for Montreal.

MONTREAL TRADE NOTES.

Painchaud, Squire & Co. have been making some good sales of their Fox cutlery.

Orders for over 1,000 boxes Canada plates have been placed for importation this week.

The Canada Paint Co. report a brisk business. Mr. Gylling, the secretary of the company, is away at present taking a well-deserved holiday.

H. C. Maclaren report a rapidly growing demand for Magnolia metal for bearings, etc. They have just filled a large order for the Street Railway Company here.

Advices state that the linseed oil crushers at Hull are off work, and that stocks are getting down to a low ebb. Latest c.i.f. quotations are at an advance of 1s. 3d.

President A. W. Morris, of the Consumers' Cordage Company, in his steam yacht did heroic work as one of the rescuers at the recent yachting fatality on Lake St. Louis.

Mr. Gray, of the Canada Plating Co., is at present away on a business tour through the New England plating and manufacturing works selecting new patterns for his company.

An agent of the big English firm here protests that Canada plates have been sold f.o.b. by a Canadian house to buyers on this side at less than he could buy them from his principals.

TORONTO MARKETS.

TORONTO, July 14, 1893.

HARDWARE.

Trade exhibits more activity this week than last week. It is not confined to any one or two lines, but is general. A feature of the trade is the receipt of some large and urgent orders from the Northwest, some of them being accompanied with the request that part of the order be sent on promptly, the carlots to be shipped as soon as possible. Bolts, nails, cross-cut saws, barn door hinges and tracks, churns, guns and amunition are all going out briskly. Demand keeps up well for freezers. The season is about over for fencing wire, but a good deal is being sold for haying. About the only thing to note in ware is an advance of 10 per cent. on enamelled. Quite a demand is springing up for copper baths. Payments are good.

WIRE—Demand for fencing wire has dropped off almost completely but there is a good deal of hay wire moving.

ROPE—There is a brisk demand for sizes running from ½ up to ¾ inch.

BINDER TWINE—A brisk trade is being done in this line. Prinne's Eureka and 3-ply flax has been reduced 1½c. a pound, the present price being 9½c. and 15½c. respectively.

NAILS—Demand for cut and wire nails continue unusually brisk for the season at unchanged prices.

CHAIN—There is nothing doing and prices remain as before.

SPORTING GOODS—Winchester and Marline rifles and breach loading guns are moving briskly. The same applies to ammunition.

WARE—Enamelled ware is dearer, the discount having been reduced 10 per cent., it now being 60 per cent. There is still a good trade being done in preserving kettles but complaints are heard regarding the cutting of prices on peerless ware, something the trade consider unwarrantable in view of the brisk demand these goods are experiencing this season.

PLUMBERS' AND BUILDERS' SUPPLIES—Trade remains much as before in both these lines—quiet and uninteresting.

TOOLS—Season is about over for garden and harvest tools, and from this out demand will be confined to odd country orders for forks, rakes, etc.

CUTLERY—Stocks are arriving and travellers have been supplied with samples. Styles, finish, quality and value are good, and a fairly brisk trade is anticipated.

FREEZERS—The season is about over, but there is still an occasional one going out.

METALS.

Trade in metals is good, enquiries being heard for large lots. Prices, however, are not satisfactory. Pig iron is a little more active, and a fair business is being done in bar iron. Business in zinc sheet is beginning to pick up. Some large sales of lead are reported, and the tendency of prices in this article is upward.

PIG IRON—Trade shows some improvement, and we hear of the turnover of an assorted lot of 100 tons at prices ranging from $18 to $22.

Rogers, Brown & Co., Buffalo, report the Toronto pig iron market as follows: The market has reached a more lifeless period than at any time we remember. Very little iron is being shipped on old orders and new ones are few and small. No attempts are being made to force sales as all recognise the futility of crowding a market that won't take. Furnaces are accepting the situation, taking such orders as they can get at market rates, and dropping out of the active list as their stick piles become too large to carry comfortably. We quote for cash f. o. b. cars, Toronto, in bond: IX Foundry Strong Coke Iron, Lake Superior ore, $15.20; 2X Foundry Strong Coke Iron Lake Superior ore, $14.45; 2 Foundry Strong Coke Iron Lake Superior ore, $14.20; Jackson County Silvery 1, $18.00 to $18.30; Jackson County Silvery 2, $17.30 to $17.80; Lake Superior Charcoal, $17 70; Southern Soft 1, $14.10 to $14.35.; Southern Soft 2, $13.85.

BAR IRON—Trade has fallen off, it now being between the seasons. Prices are unchanged on the basis of $1.95.

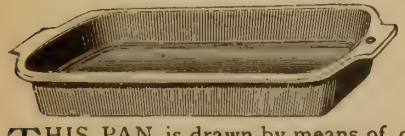
TIN PLATES—There is a good demand in this at unchanged prices, and the supply remains plentiful.

TERNE PLATES—The supply of terne plates, which was scarce, is now ample.

CANADA PLATES—They are now being delivered for the fall. Demand in this line is quite equal to that of a year ago at this

CORRUGATED IRON
ILLUSTRATED CATALOGUE FREE
METALLIC ROOFING Co.
MANUFACTURERS TORONTO

"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

MARKETS—Continued.

time, and prices are unchanged, all dull being quoted at $2.65, half-half at $2.75, and all bright at $2.80 to $3 per box.

GALVANIZED IRON—There is a good deal of this going out in case lots at from 5 to 5¾c. for Queen's Head and Gordon brands.

IRON PIPE—Is going out freely, and some large orders are being placed for import.

CORRUGATED IRON—Some fair sales for roofing purposes have been made during the week; $5.50 per square is about the idea for small lots.

INGOT TIN—There is the usual demand for this article, and although 23 to 23½c. is quoted ordinarily, these figures would be shaded for large lots.

INGOT COPPER—There have some sales been made during the week at old prices, but it is thought that these will satisfy the demand for some time to come; ordinarily 12½ to 13c. is quoted, but for large lots there would be no difficulty to shade these prices.

SHEET IRON—Several small lots have been sold at $2.75 to $3, but generally speaking there is not much doing in this line.

ZINC SHEET — Trade is beginning to pick up, but prices are unchanged at 5¾ to 6c. for 5-cwt. casks and 6 to 6¼c. for part casks.

ZINC SPELTER—Trade in this line continues as dull as ever at 3¾ to 5¾c.

LEAD—Large sales are reported in this line at 3¼c. for large lots and 3⅝ to 3¾c. for small lots. The tendency of prices is upward in consequence of the expected repeal of the Silver law. This is also causing the booking of many orders.

ANTIMONY—This article has met with some small sales at 12 to 13c. for Cookson's and 11 to 12c for common.

GLASS.

There is not much doing. Nearly all import orders are in, but the trade complain that they are not as a rule full, and in consequence of this they are compelled to break into stock to complete them. Prices are unchanged at $1.25 to $1.30 for first break.

OLD MATERIAL.

The supply in old material is liberal, but the demand for such remains quiet. Agricultural scrap is quoted 5c. higher. We quote as follows: Agricultural scrap, 60c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40 to 50c.; No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper, 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings and turnings, 10 to 15c.

PAINTS AND OILS.

Trade usually exhibits some falling off in July, but it is not yet so marked as is usual. Consequently business may be said to be above the average for the season. White lead is quiet and unchanged at the 4¾c. basis. Prepared paints show some life, but the demand is of course small in comparison with stock orders in the spring. Dealers are merely buying to replenish their stocks or to fill special orders. Orders for large quantities are few and far between. Country merchants report that the demand for Paris green is larger than it has been for some years, and not a few have had to buy second and third lots. Linseed oil is in good demand and firm, at 60 to 62c. for raw and 63 to 65c. for boiled. The Association met here last week, but the anticipated advance did not take place. Turpentine is quieter, although fair quantities are still going out. Prices are unchanged here, at 45 to 47c., but the outside market is easier. The demand for castor oil has been satisfied and prices are lower at 8 to 8½c. As the decline is not due to any material decrease in the cost, it is thought that an improved demand would tend to appreciate prices again. Payments seem fairly satisfactory.

HIDES, SKINS, TALLOW, WOOL.

HIDES—Market is weak. Carlots of cured are being sold at 4¾c. Green have dropped ½c., dealers now paying butchers 4c. for No. 1 and 3c. for No. 2.

SKINS—Calfskins are lower in sympathy with the decline in the United States market. For selected No. 1 veals dealers are paying 7c.; cured are slow of sale. Lamb skins remain unchanged at the recent advance, 40c. and pelts are still quoted at 25c.

TALLOW—Weak. Quality offering is generally not good and sales are difficult to make. Dealers are paying 5c. for rendered and selling at 5¼c. Rough is unchanged at 2c.

WOOL—A few round lots are changing hands at prices ranging from 17 to 18c. for selected combing. Generally however the views of buyers and sellers are apart. Recent advices from the States are not encouraging and dealers are disposed to wait advances. For pulled and foreign wools there is only a moderate demand from the factories.

PETROLEUM.

Trade is improving in both burning and lubricating oils. Of course for lubricating oils the season is just opening. Wholesalers are now importing oil in tanks, but they have as yet made no change in prices, the cost not having been actually determined. We quote in barrel lots, Toronto: Canada, 13 to 13½c.; carbon safety, 17½ to 18c.; Canada water white, 19c.; American water white, 21 to 22c.; photogene, 25c.

MARKET NOTES.

The price of lead has an upward tendency.

The demand for churns is keeping exceptionally good.

Harvest gloves are reported to be moving off rapidly this week.

The discount on enamelled ware has been reduced 10 per cent.

Quite a demand is springing up on this market for copper baths.

Large sales of new English oxide are reported by Stewart & Wood.

M. & L. Samuel, Benjamin & Co. are in receipt of a nice line of carvers in cases.

A good trade in Lane's barn door hangers is reported by M. & L. Samuel, Benjamin & Co.

Walter H. Cottingham & Co. of Montreal are held to be the largest jobbers of Paris green in Canada.

Another consignment of "C X C" razors has just been received by H. S. Howland, Sons & Co.

H. S. Howland, Sons & Co. report a decline in Prime's Eureka and 3-ply binder twine, the present prices being 9½c. and 15½c. respectively. This is a decline of 1½c. per pound.

James A. Skinner & Co. must have struck a good thing when they secured the sole control of the Clark Bros. Lamp Co. That is, if one is to judge by the extremely low prices they are offering elegant lamps at. The display they make in their spacious sample rooms is simply immense and every dealer should see it before placing his orders. Skinner & Co. are issuing a very complete catalogue of fine vases, bouquet and hanging lamps, which is a credit to the art of lithography. Besides fine lamps, they have a complete stock of all kinds of lower-priced glass and fancy lamps, American lanterns, burners, wicks, plain and decorated shades, etc.; in fact it would be hard to find anything pertaining to the lamp trade that this firm cannot supply from their stock.

Sportsmen are beginning to ask for smokeless powder in small lots, but Rice Lewis & Son report that the sales in the aggregate are large. This firm is testing it thoroughly before the regular shooting season opens.

The Shepard Hardware Co. of Buffalo, manufacturers of the "Lightning" Freezers, whose factory was destroyed by fire some weeks ago, are issuing a circular to the trade. On the top of the circular is a photogravure showing how the fire completely licked up everything except the smokestacks, while beneath are the words: "Above cut explains why we cannot execute orders." Continuing the circular reads: We are declining, with thanks, orders of every kind at present, as owing to the recent destruction of our works and office by fire (not only our stock being burned, but machinery, patterns, follow-boards, etc.,) we will probably be unable to make shipments before November or December next. Our pattern makers are now at work, so that our customers can rely on getting "Lightning" Ice Cream Freezers and other leading goods of our manufacture for the spring season of 1894. No repairs of any kind on hand. In the course of a few months, however, we expect to have patterns finished, so as to be able to furnish repairs for our latest patterns of "Lightning" freezers, i.e., those manufactured in 1892 or 1893, and the castings of which are all marked with either the letter L or N. Patterns for old-style freezers have been destroyed, and we will, therefore, not be able to furnish repairs for freezers manufactured before 1892. We are still undecided as to when and where we will rebuild, but will advise the trade as soon as possible.

AMERICAN MARKETS.

New York, July 14.

PIG TIN.—Prices were given a vigorous upward twist, and the surface appearances were that, after permitting the enemy to have their own way for a time, the bull interest came to their own rescue through convenient agencies. Not only did they maintain their position, but assumed the aggressive in no uncertain way, and carried prices rapidly upward without adding a great deal to their holdings. For example, bids on July delivery were raised to 19.35c., as against offers to sell on Monday at 18.50c.

COPPER.—There was no visible change in the character of the demand. Some sales agents maintain that, at about 1-4c. below ruling prices Europe would take considerable quantities of Lake Superior ingot and electrolytic copper, but home consumers buy as indifferently as though there was no possible chance of export business on any such terms, and attach some importance to the fact that more copper than they have use for at present can be purchased just now at

prices as low as any that have been reached during the past six weeks. On other than small jobbing quantities the top figures at present are 10 1-2c. for Lake Superior ingot, 10 1-4c. for electrolytic, and 9 7-8 to 10c. for common casting brands.

PIG LEAD.—The market was quieter and showed somewhat uncertain tone. Bids of 3.62 1-2c. were refused for fair-sized lots of common domestic, and smelters offered very little, if anything, at less than 3.70c. Still Metal Exchange contracts offered at 3.65c. for July delivery found no takers. St. Louis quotation to the Exchange was reduced to 3.40, but the market there was represented as having been firm. London cable quoted £10 5s. for soft Spanish. The impression obtained by the fright occasioned by the money market has subsided, and that values are more likely to improve than to move in the opposite direction unless some new complications arise.

SPELTER.—Sales of ordinary Western brands in this market are so few that the question of value is more or less in doubt. The demand is exceedingly slow as well, with hardly any call for other than single carload lots, and not much of that. There were offers to sell at 4.20c., and some indications that bids of 4.15 on near future shipments would have been accepted. St. Louis again wired 3.90c. the price there. London cables repeated the former quotation of £17 12s. 6d. for good merchant brands.

ANTIMONY.—Of jobbing parcels there is about the usual movement, and prices stand at about 9 7-8c. for Hallett's, 10 1-2c. for Cookson's, and 10 1-8 to 10 1-4 for LX and similar brands.

TIN PLATE.—The market was spiritless and wholly devoid of new and interesting feature. Spot stock is taken in moderate quantities only, futures are exceptionally slow, drawing the line at exceptional contracts for special sizes, and prices continue rather soft all along the line, although showing no radical change.

PIG IRON.—Eastern consumers are making only routine purchases in this market, and the demand continues spiritless. Former prices are generally quoted but concessions are the rule in nearly all cases where other than particularly favored brands or jobbing quantities are involved.

Spiegeleisen and ferro-manganese are virtually neglected, and prices remain quite nominal. Sellers offer 80 per cent. ferro-manganese at $57, 20 per cent. spiegel at $25.50 and 10 to 12 per cent. ditto at $22.50 landed here.

Scotch pig iron is selling only in moderate quantities for early shipment from abroad, and the demand continues slow. The cost laid down here is about $21.50 to $22 for Coltness, $20.50 to $21 for Summerlee and $19.50 to $20 for Eglinton.

MANUFACTURED IRON AND STEEL.—There is no improvement in orders for rails or track material. Contracts for structural material continue moderate also, and prices for the same are easy. Standard section rails are quoted at $29 f.o.b. mill, but light sections continue relatively lower. In ordinary merchant iron and steel a fair business is pasing at barely steady prices.

OLD MATERIAL.—There is no improvement in sales and the demand continues very moderate. Iron tee rails are quoted at $16, steel rails at $13 to $14, and No. 1 wrought scrap at $15 f.o.b. Jersey City.

EFFECT OF THE TIN DUTY.

The effort to get as much block tin into the United States as possible before the duty of four cents a pound took effect on July 1 increased the value of the importation for eleven months of the fiscal year, according to the Washington correspondent of N. Y. Bulletin, by 40 per cent. The imports for May last were 9,922,298 pounds, valued at $2,033,463, against imports in May, 1892, of 5,106,307 pounds, valued at $1,023,889. The figures for the eleven months ending May 31 were 51,755,679 pounds, valued at $10,499,177 for 1893, against 38,089.085 pounds, valued at $7,493,802 for 1893. The imports for June have not yet been compiled, but will carry the total importations for the year to over 60,000,000 pounds and nearly $13,000,000. The total imports for the fiscal year 1892 were 43,908,653 pounds, valued at $8,667,870. The imports of tin plate in the meantime show few of the effects of increased American production and diminished demand for the foreign product. The imports for eleven months ending May 31, 1893, were 568,204,946 pounds, valued at $15,903,913, against imports for eleven months ending May 31, 1892, of 363,907,331 pounds, valued at $10,671,660.

The changes in the law have made the figures vary greatly during the past four years, but the present imports are below those of the normal year 1889.

RECLAIMING OLD RUBBER.

Crude rubber is worth from 40 to 75c. per pound, and yet a pound of hose or packing costs much less. This would be hardly practical if it were not for the advances that have been made in the art of reclaiming or recovering rubber, which can be done at the total cost of about 3c. per pound. There are several large factories in the country devoted solely to this purpose, and a great many manufacturers do recovering on a small scale at the seat of the production of new goods. The rag picker, with his hook, pulls out of the ash barrel an old shoe, or a piece of hose, or in roaming around a railway yard picks up a discarded car spring, and this finds its way to the junkman. A great deal of this waste material is collected, and the demand for it is also very large, old shoes being brought occasionally from so distant a point as Russia, and consignments frequently coming from San Francisco by the Pacific Mail steamers. Those rags are placed in large tanks at the place of reclaiming. A solution of muriatic or sulphuric acid and water is poured upon the waste, and the whole set to boiling by a system of steam pipes passing through the tank. After ten or twelve hours' boiling, the cotton fibre which is found in all rubber manufactures, and which is the serious drawback in the reclaiming process, disintegrates and falls into a powder, and there is no difficulty then in the use of the waste. There are other processes of reclamation, all of which are covered by patents and over which there is at present a great deal of litigation.—N. Y. Hardware.

PHILLIPS' AERIAL MACHINE.

The London Times gives the following description of the new ariel machine of Horatio Phillips, with which some successful experiments have been made recently near Harrow. The machine is on an entirely new principle, being sustained in its flight by means of induced currents acting upon slats or laths of wood arranged similiarly to those of a Venetian blind, instead of the unwieldly plane to which designers of flying machines have usually had recourse. Not but what Mr. Phillips has used inclined planes, but he has reduced their dimensions step by step, until the transverse sectional area of one of his present sustainers measures only an inch and a half in breadth by an eight of an inch in thickness at the front, tapering to nothing at the back. Broadly stated, the cross section of the slat is that of a knife blade, with a thick edge at back and a thin one at front, and with the upper and under side of the slat curved, but both differently. The form, in fact, is such that when the machine is in motion the convex upper surface near the front or thick edge deflects the air upwards, thus creating a partial vacuum on the upper surface of the slat.

The under or concave surface of the slat is formed to a parabolic curve, which gradually puts the particles of air into motion downwards, thus producing an excess of pressure on the under side of the slat. It thus follows that upon a forward motion being given to the machine, the horizontal air-pressure which is brought upon the slats becomes converted, by reason of the form of the slats, into an upward vertical pressure which acts as a lifting power and raises the machine into the air. There are fifty of these sustainers or slats, each 1½ inches wide and 22 feet long. They are fitted 2 inches apart, and with their edges horizontal, in a frame 22 feet wide and 9 feet 6 inches high. They have a combined area of lifting surface of 136 square feet, and they are carried in their frame upon a carriage resembling a canoe 25 feet long and 1 foot 6 inches wide at the rear, but tapering to a point at the front.

Upon the carriage and near the sustainers are placed the engine and boiler and the air-propeller. The engine is compound, having cylinders 1¾ inches and 3⅜ inches in diameter, respectively, with a 6-inch stroke, and fitted with ordinary slide valves. The boiler is a cylindrical vessel of phosphor bronze 12 inches in diameter and 16 inches long. The propeller is two-bladed, 6 feet in diameter and of 8 feet pitch, and is driven at the rate of about 400 revolutions per minute. The total weight of the machine in working order is 330 pounds.

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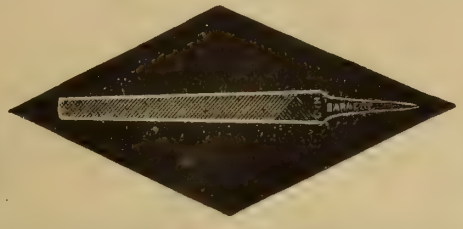
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PERSONAL MENTION.

Lewis Firth, oft he firm of Thomas Firth & Son, Sheffield, Eng., was in Toronto this week. He visited the World's Fair previous to arriving here, and left Thursday for Montreal.

J. W. Shoenen, of Virden, Man., was in Toronto this week and left some nice orders. He was on his way home from the World's Fair. A big crop, he said, is expected in Manitoba this season, and he spoke hopefully of prospects.

Among country merchants in town this week were noticed : Mr. Meharry, of Laing & Meharry, Port Perry ; Mr. Hawkins, of Emerson & Hawkins, Oshawa ; J. W. Franks, Woodbridge ; W. J. Morrish, Highland Creek.

EVOLUTION OF STEAM HEATING.

The steam heating industry, although essentially modern, has already grown into national importance. Its inception was modest and unpretentious and its progress characterized by persistent industry, mechanical skill, and a sagacious forecast of a national need. It is not always nor even often that the pedigree of so important a branch of industry can be historically traced, but in this instance the original factors have been definitely located. In a paper read at the fifth annual convention of the National Association of Steam and Hot-Water fitters held recently at Chicago, the history and development of the steam-heating industry was interestingly and historically detailed. We summarize from the facts collated in this valuable contribution to the history of American industries.

A small store in Ann street, New York, was the birthplace of the steam fitting business on this side of the Atlantic. An Englishman having a small stock of butt welded pipe for sale which he had shipped among other personal goods to this country ; the stock was purchased with the idea of using it for steam-heating purposes in New York. This was as low down the calendar as 1841, there being at that time no like pipe manufactured in this country. Business was carried on under the firm name of Walworth & Nason. In 1844 all the pipe then in New York city was kept in a space about 15 feet long. The industry was in a crude condition. Experienced workmanship was not to be had for wages, it had to develop. Tools adapted to a new and special form of work had to be designed and manufactured. The industry was literally without any American precedents and was consequently handicapped in many directions. The business was in a formative condition, and in this critical and embryonic stage depended more on energy, skill, foresight and genius, than on either capital or public encouragement. There was a continual struggle against adverse conditions for nearly a decade, but the opening years of the next series saw a change in the situation. Special tools had been made, workmen had been trained ; cast and malleable iron fittings were available ; the horizontal tubular boiler had been designed and brought into use ; the fan-blower for ventilation had been introduced ; tube works had taken their place in national industries, and what was essential to the commercial success of all public patronage and recognition had been gained. From 1841 to 1851 was really the probationary period of our steam-heating industries. In speaking of this period, and the original work of Mr. Nason, the late Robert Briggs, C.E., in one of his reports says graphically and truly :

The steam-heating apparatus in all its details, as used in America, especially the apparatus of small wrought iron tubes, which had its origin at the hands of the late Joseph Nason, between 1840 and 1850, has now become one of the established industries of the land, employing a whole class of workmen known as steam fitters, and supporting large establishments devoted entirely to the manufacture of and trade in tubes and fittings. The little step in mechanism which is the foundation of this art is found in the use of tapering thread on the end of the pipes wherewith a perfectly staunch joint is provided and made. It was not only in this particular but in many others of detail that Mr. Nason's ability as an inventor and adapter was shown in the apparatus ; while super-eminent above this he was at once the best informed man of his day on the theory and the most able in the practice of steam-heating. Under his tuition the whole trade originated ; not many years since it was possible to trace the descent or pedigree of any concern in the business to the original source. At this time the growth of the business going to a third or fourth race of firms or of workmen, precludes the following out of the continuity, although it certainly exists. The business, however, has been and is dependent upon the development of mechanical ingenuity, mainly from Joseph Nason, who gave form to the globe valve and derived or adapted from the practice of hot water heating apparatus in England all the essential details which now form parts of usual everyday construction in the United States. Curiously, steam heating as practiced here is not yet fully known or used in England or France, and but little more known in Germany.

As illustrating the business success consequent to the development by Walworth & Nason, the pioneers of the American steam heating industry, we quote the following from the historical paper of which we have made use in this article :

Before 1852 Walworth & Nason had invented and placed on the market the steam trap, the globe and angle valve, the check valve, the back-pressure valve, the scroll die plate ; aso the use first of cast iron and later of malleable iron fittings instead of forgings, and the horizontal tubular boiler with small tubes. Beginning with almost no capital in 1841, and working without appreciable profit for several years, after 1846 the business had increased as to show annual profits of $25,000 for several years, the sale of pipe alone being $100,000 per annum, while before 1850 they were running fifteen lathes on cocks and valves, five on valves alone, which they had been making since 1845, although one gentleman thought last year that he saw Mr. Barrett "shaping" the first one. Before 1850 Walworth & Nason had completed contracts aggregating hundreds of thousands of dollars, sold millions of feet of pipe and many tons of fittings, both cast iron and malleable, and placed the whole business of steam fitting on a standard basis,so that their employees were able to go out and start in the business for themselves, with all the necessary devices, valves, fittings, pipe and tools ready at hand for purchase.

As illustrative of enterprise, energy and wisely directed business and mechanical skill, the history of steam heating is an added honor to American industries.—Age of Steel.

PERFORATED BELTING.

One of the most unreasonable and unscientific fads, says a writer in the Mechanical Journal, is perforated belts. The advantage claimed for them is preventing air from accumulating between the belt and the face or the pulley, thereby decreasing its frictional power. This point is particularly urged in cases where a belt is run over a small pulley at high speed.

This theory is not only nonsensical but contrary to all the laws which govern belt friction. The power of a belt, under any circumstances, depends entirely upon three conditions, viz.: speed, tension, and the amount of surface in contact. Belts running over small pulleys at high speed, under ordinary conditions, must necessarily work to a certain disadvantage as compared with those running at comparatively slow speed.

In the first place, in order to obtain the best results, a belt should embrace at least one-half the circumference of the smaller pulley, but it is most frequently the case where high speed is necessary, the driving pulley is four times or more the diameter of the driven, and unless the conditions are such as to admit of considerable distance between the centres, and the slack side of the belt running towards the top of the driven pulley so as to utilize the sag of the belt, the speed will be such that not more than one-third the circumference of the small pulley is embraced; under such conditions it

is highly essential that every atom of the surface of the belt as well as the pulley should be utilized.

It is a fact well known to belt users that the smoother and more perfect the face of a pulley is, the greater will be the friction power of the belt. There is no class of manufacturers who are more fully aware of this fact than the manufacturers of wood pulleys, and one of the greatest secrets of their success is in the careful manner in which their pulleys are finished. Why do the belt manufacturers always recommend running the grain side of a belt next to the pulley and claim an increase in power by that method? Simply because the grain side of leather, especially when new, is smoother than the flesh side, consequently presents a greater amount of frictional surface in contact with the pulley.

Now if the compressed-air theory is correct, and by perforating the belt and thereby depriving it of a part of its frictional surface, adds to its power, why not then, upon the same principle, perforate the face of the pulleys also by drilling holes in the rim?

The fact is plain to a close observer that the reason why fast running belts over small pulleys are more inclined to slip than those running at less speed, is not due to atmospheric influence, but entirely due to centrifugal force. A belt at high speed, passing over the face of a small pulley, is subject to the same laws which govern the pulley itself. The natural tendency of all revolving bodies subjected to speed beyond the tensile strength of the material of which they are composed, is to separate, and the several pieces to fly off at a tangent from the centre. Anyone who will observe the cylinder belts of a planing machine when running at its regular speed, will observe that the top or leading side of the belt, as it approaches the pulley, instead of hugging the pulley at the moment of approach is thrown upward and outward; in some cases, especially where the belt is slack, it will not come into intimate contact with the pulley until it has passed a considerable distance beyond the top of it. This decrease beyond the arc of contact fully explains why such belts are more liable to slip over the face of the pulley. Wherever this decrease in the arc of contact and consequent decrease in friction becomes such that is not equal to the resistance offered, the belt will run off, and the perforating of such belts can not possibly have any other effect than to decrease its frictional surface and consequently decrease its frictional power.

Where both edges of the belt are free and nothing prevents the air that may be carried along from escaping at each side of the pulley, how is it possible for sufficient air to accumulate under the belt to force it away from the face of the pulley? For this reason there can be no possible advantage in perforating a belt for either fast or slow speed, and the sooner that theory is abandoned the better. There are other claims for belting that are equally absurd.—Canadian Lumberman.

DEODORIZIHG SEWAGE.

A telegram from Brewsters, New York, on July 3rd, says: "The sewage disposal apparatus here began operations on Thursday. The plant comprises a 15 horse-power engine, a 20-horse power boiler, a dynamo and two vats, one holding 1,000 gallons and the other 3,000 gallons. The frame structure on which the concern is placed covers an area of 23 x 30 feet. An iron cistern outside the building stores the water demanded for the steam boiler and other purposes. The vats in that building are used for the electro-chemical treatment of the sewage. One receptacle serves for the mixing of the chemicals with the deposit, from which a pipe conveys the compound to the other, in which there is a combination of electrodes that agitates the mass, and also conducts a current through the solution with the immediate effect of deodorizing, disinfecting and vaporizing the offensive accumulation. The action in the vat is similar to a violently effervescing spring. Mr. Wollf, the inventor, is enthusiastic respecting his method of germ destruction and deodorization of foul substances. He has been assured by prominent physicians that his discovery is destined to work a revolution in the treatment of parasitical diseases. He promises that Brewsters shall have immunity to a marked degree from malaria, diphtheria and kindred afflictions. The mayor of New York is expected to visit Brewsters this week and inspect the working of the affair."

OXYGEN IN STEEL.

In a written discussion of a paper presented by W. R. Webster before the American Institute of Mining Engineers, Henry J. Hibbard, of High Bridge, N. J., says:

There is one chemical factor which has not been considered in the author's tabulation of tests, but which is none the less important because it cannot be practically estimated, and that is the element oxygen. This element has been, and probably will continue for some time to be, one of the great causes of the continual discrepancies between the chemical and physical properties of steel.

Probably oxygen occurs, in important proportions only in soft steel, such as that which we are now considering. In this steel its physical effect is to diminish tensile strength and elongation. The percentage of oxygen in the steel, under working conditions that are as uniform as possible, is likely to vary inversely as that of the manganese, or perhaps, and more probably, it may bear even an inverse geometrical ratio to the manganese content. Due allowance for the effect of oxygen, therefore, would modify two features of the paper. It would increase the figure for the strength of pure iron from 38,000 to about 45,000 pounds per square inch, and it would straighten out the manganese curve.

The manganese line in the paper is curved between 0.50 and 0.20 per cent. Above 0.50 per cent. it is straight, which may be ascribed to the probability that with more than half of 1 per cent. of manganese in the steel not much oxygen can be present, or in any event not sufficient to produce a noteworthy effect. Below 0.20 per cent. manganese, the line again is straight, for the reason, as we suspect, that there were either too few examples, or none at all, to determine points of that part of the curve. If continued below 0.20 per cent. by the method employed to work out the rest of the line, the curvature would be so great that apparently a subtraction from the strength would have to be made for the presence of a small amount of manganese. This paradox would be due to oxygen.

On the second page of his paper the author says: "The effect per unit of manganese seems to decrease as the percentage of this element increases. For instance, steels of 0.20 to 0.30 per cent. manganese show greater difference in ultimate strength than steels of 0.50 to 0.60 per cent. manganese, all other elements being the same." This behavior of the metal may be explained as the effect of oxygen, though if that should vary "all other elements" would, of course, no longer be the same.

The increase of strength due to manganese is apparently greatest between 0.20 to 0.30 per cent. because between those limits the removal of the oxygen is the fastest; that is to say, in following along a series of tests of heats of steel, running from 0.50 to 0.20 per cent. of manganese, the percentages of oxygen would be found to increase faster between 0.30 and 0.20 per cent. than elsewhere in the series. A furnace practice that with the same final additions of manganese gives proportions of manganese in the finished steel varying from 0.20 to 0.50 per cent. is almost certain to yield a product in which the oxygen will also vary greatly.—Iron Age.

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ALL SORTS OF DOZENS.

The child is taught at school that a dozen means twelve every time, but when the child grows into a man he finds that a dozen is a very elastic term. A baker's dozen is thirteen, and so is a publisher's or news agent's in many parts of the world. In some sections a dozen fish means 26, and there are other anomalies of this kind. But, to find a dozen indicating from two to 50 it is necessary to go to the earthenware trade. Here the size and weight of articles decide how many make a dozen, and in jugs, bowls, plates, and so on there are two, four, six, eight, or more to a dozen. A dozen composed of twelve articles is a very unusual thing in the wholesale pottery trade, and as a result there are few clerkships more difficult to hold than in this line. To have to find the cost of 500 articles at so much a dozen when that dozen may mean anything, is a very difficult task until a man gets thoroughly used to it.—China, Glass and Lamps.

OFFICE AND SHOP MANAGEMENT.

The following paper was prepared by A. Hopkins, of Bridgeport, Conn., and read at the Milwaukee convention of the National Association of Master Plumbers:

What I have to say regarding the management of the workshop, salesroom and office will be only a brief outline of suggestions. Some of these suggestions will be reiterations of time-worn remarks, but as "keeping everlastingly at it" has done wonders in the past, I believe it to be a potent factor in the elimination of evils of the present.

To contrast order and chaos, well-lighted premises and dingy apartments, cleanliness and dirt-encumbered floors and counters, is not my intent. If there are any in our craft who cannot see the advantages possessed by the first named of each of the conditions contrasted it would be far from my desire to effect a change. Nothing short of the millenium itself would be capable of doing anything like that.

Of the treatment of workmen in one's employ, the less said the better, since the individual peculiarities of persons are so dissimilar that no set rules can be laid down for general guidance. A quiet determination gives by far the best results. It is to be borne in mind, however, that politeness on the part of both the employer and the employee is to be encouraged, but beyond that politeness, all which tends to make undue familiarity is to be avoided. While it is well, of course, to have the good opinion of all those in one's employ, it is also desirable to remember that a master who is too easy in his methods of discipline is likely to have as little work done as the hard task master who is unnecessarily harsh. Like all things else, there is a medium between the extremes.

Where a foreman is employed he should be given entire charge of the work over which he is placed, and should be held strictly accountable for the quality of that work. If not, what is the use of having a foreman? Would his salary not be a dead loss?

The slip-charge method, which consists in the employee writing on a slip and giving it to the man at the office for the materials used on each job he works upon, is the best known method of preventing troublesome differences between the customer and one's self. Where more than one day is put upon a job, all material used the second or subsequent days is to be entered upon another slip and properly dated and signed with the initials of the workman, when the job is completed, all material returned to the shop is to be credited upon a similar slip (but of different color), and the result of the slips figured and added in a book for the purpose, is the easiest mode of proving material used which has ever come to my notice.

The time is to be disposed of in the same way, except that one day each week, preferably Friday, the workmen wait after hours a few moments and give in the time spent on the different jobs for the previous week, and this is entered upon a time book, which keeps a separate account with each man, and besides saving delay on pay day, it is a certain preventative of paying for time not given by the workman, for only what time he accounts for is credited to the account of the man on the time book and no danger is experienced of being unfair.

The forgetfulness of workmen in failing to ask for material needed until the very moment it is required is annoying in the extreme. It can be avoided by compelling each man to write out a list of stock required for his next day's work which is not in the shop. The failure of the workman to do this results in his being laid off until the stock arrives. Once doing this is usually enough to sharpen his memory.

The importance—particularly with new and prospective customers—of a clean salesroom and neatly dressed salesmen cannot be over estimated, and their importance toward the general summary of business prosperity the merchant cannot afford to overlook.

Another point is the having in sight and in form for operation the various devices to be sold. Illustrated catalogues are for old timers. The device itself and in operation is the modern way of doing business. The device may be on hand, but if dust covered and generally unattractive the sale drops thorugh.

Our travelling salesmen will bear witness that a clean office is a certain sign of commercial prosperity; 50 years ago one would not mind a little dirt in a corner of a shop where the books were "kept," but to-day, the customer may be stylishly dressed and in light fabrics, and wants a clean office floor and unobstructed chair while he talks business. A file of latest catalogues and price-lists in order and at a convenient place adds wonderfully to the force of an argument with a customer.

The longer the interval between the completion of work and the sending of a statement of the same, the more likelihood of differences and consequent loss of custom. By sending a statement at once, alleged errors can be straightened out and general harmony prevail. The sending of such a statement should not be taken to mean a "dun," but merely for the purpose which is attained when a manufacturer sends a shipping statement. Attention to this detail may mean hundreds or even thousands of dollars in one's pocketbook.

I might go on indefinitely giving these little suggestions, but with one more I shall close. What I wish to impress upon the minds of the craft is that the lavish use of a letter copying press never did any harm, and yearly does untold good. A copy of a letter takes no room in a letter book; a contract is easily copied, and if even in ten years after it is brought into question, the law has decided that a letter copy made by sympathetic ink to be "original evidence" when the latter itself is missing. Great pecuniary loss often results from failure to use a copying press.

A CREDIT SOLILOQUY.

I was handed a little slip of paper by one of the leading stationers on which was printed "Credit Man's Soliloquy," which I thought was one of the best things in its way that I have seen. It read as follows:

CREDIT MAN'S SOLILOQUY.

"To sell or not to sell?" that is the question
Whether it is better to send the goods
And take the risk of doubtful payment,
Or to make sure of what is in possession
And, by declining, hold them.
To sell; to ship; perchance to lose—
Aye, there's the rub.
For when the goods are gone,
What charms can win them back
From slippery debtors?
Will the bills be paid when due?
Or will the time stretch out till the crack of doom?
What of assignment? What of relatives?
What of uncles, aunts and mother-in-law,
With claims for borrowed money?
What of exemptions, bills of sales and compromise,
That cooly offers a shilling a pound?
And of lawyer's fees
That even eat up this poor pittance.
"Yes, sell we must
And some we'll trust,
We seek the just,
For wealth we lust;
By some we're cussed;
And stocks will rust;
But we skin the wust,
Or we'd surely bust."

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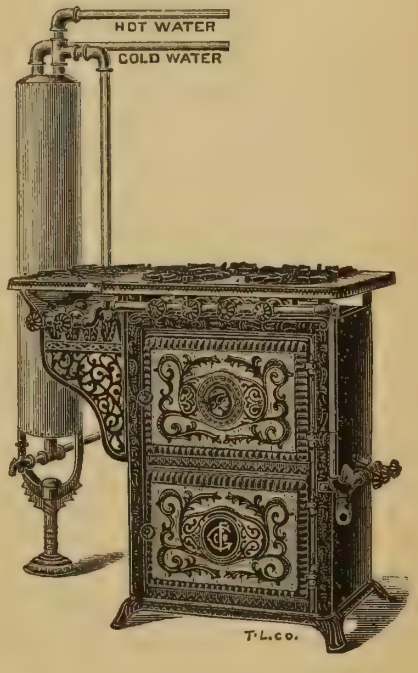
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The Gurney Foundry Co., Ltd., TORONTO



THE WHITMAN & BARNES MFG. CO.

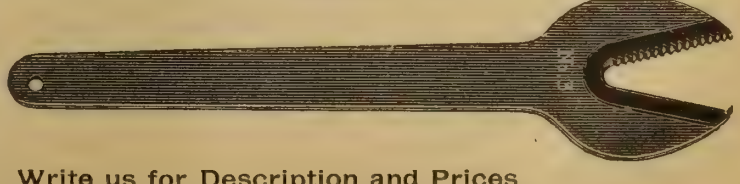
Canadian Branch: St. Catharines, Ont.



This new **Swivel Clevis** can be attached to any Plow Clevis, used in place of Shackle or End Clevis.

MADE OF MALLEABLE IRON.

ALLIGATOR WRENCHES



Write us for Description and Prices

BUSINESS CHANGES.

CHANGES.

Despars & Blean, hardware, Winnipeg, have sold out to E. Guilbault.

James Jamieson, carriage maker, Crown Hill, has removed to Barrie.

The Premier Oil Co. (Ltd), of Petrolea, has sold out to C. M. Garvey.

W. Leggatt, general merchant, Richwood, has sold out to Fred. Hamilton.

A. E. Peters, hardware and tinware, Sundridge, has been succeeded by J. G. Hayes.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

The Bishop Furniture Co., of Winnipeg, has assigned.

R. N. Leblanc, general store and sawmill, Bonaventure River, has assigned.

Margaret Hayes, general merchant, Nelson, Man., is offering to compromise.

The bailiff is in possession of the second-hand furniture and stove business of H. M. Rannie, Toronto.

S. J. McCudden has assigned his interest in the firm of Pelissier & McCudden, machinists, Montreal.

A. J. Mitchell, manufacturer of spring beds, etc., Ingersoll, has assigned to William Ewart, of the same place.

A meeting of the creditors of Joseph A. Chicoine, door manufacturer, Ste. Helene, Que., has been called for July 15.

The creditors of Thomas Coulter, coal and wood merchant, will meet again on the 18th of this month, when they will decide whether the business will be carried on or not. The liabilities are $32,050, and assets show a nominal surplus of $1,000.

PARTNERSHIPS FORMED AND DISSOLVED.

Ritchal & Fils, carriage makers, St. Henri de Montreal, has dissolved.

The Ottawa Car Co. (Ltd.), is applying for a charater of incorporation.

A. Asselin & Co., general merchants Coteau Landing, Que., has dissolved.

A charater of incorporation has been granted the Peterboro Hardware Co. Ltd.

The Toronto Furnace and Crematory Co. (Ltd.), have been granted a charter of incorporation.

Millett & Sargeant, general merchants, Bancroft, have dissolved. W. J. Sargeant retires.

Martin & Gouette, sash and door manufacturers, Montreal, have dissolved. Martin & Binette, in the same line at the same place, have also dissolved.

The Dominion Manufacturing Co. of Montreal has dissolved and a new partnership has been registered composed of Dame le Amoite, wife of Ludger Segrim ; style unchanged.

Letters patent have been issued incorporating Francis John Phillips, William Charles Phillips, William Ferguson, Edwin Hill, Joseph McCausland, Robert McCausland, Toronto ; William Richards Hobbs, Thomas Saunders Hobbs, London, for the following purposes, viz.:—To acquire from the applicants so much of their stock in trade as consists of clear plate-glass and the fixtures, plant, assets and good-will of the applicants' business in connection therewith, and for importing, buying, selling, trading and dealing in all kinds of plate-glass, sheet-glass and ornamental glass, and painters' and glaziers' supplies of every description, the operations of the said company to be carried on throughout the Dominion of Canada, by the name of "The Consolidated Plate Glass Company of Canada" (Limited), with a total capital stock of two hundred and fifty thousand dollars, dividend into two thousand five hundred shares of one hundred dollars each.

SALES MADE OR PENDING.

The general stock of W. S. Given, Paisley, has been sold.

Thomas Lawson, general merchant, Waterville, N.S., has sold out.

The $318 stock of J. M. Patterson was sold to W. Radcliffe Tuesday at 25c. on the dollar.

The stock of J. B. Archambault, wholesale furniture, Montreal, is advertised by the bailiff for sale.

The $1,873 stock of Garland, Elliott & Co., general merchant, Port Arthur, was sold to L. H. Johnston of Toronto Tuesday at 42c. on the dollar.

Lewis Bros. & Co. have bought the stock of the late firm of Wm. Darling & Co., Montreal. They have also taken a lease of the premises, and will remove there shortly.

FIRES.

M. O'Corman, boat builder, Sarnia, has been burned out.

Joseph Brown's shingle mill, Coldwater, has been burned.

The stave and heading mill of H. D. Taylor, Dutton, was burned the other night.

C. W. Taylor, sash and door factory, Cookshire, has been burued out ; no insurance.

The saw mill of John Whitesides, general merchant and saw mill, Huntsville, has been burned out.

F. T. Andrews, general merchant, Beeton and Toronto, has had his store in the former place burned out.

D. H. Taylor & Sons' stave mill and lumber yard, Dutton, has been destroyed by fire. The loss on the machinery is probably $3,000 ; on mill, $2,000, and on stock, $7,000.

The factory of Taylor, Scott & Co., Bay street, Toronto, was visited by fire Thursday of last week. The loss to stock and machinery was $2,500, divided as follows : Eastern, $500; Guardian, $1,500; and Norwich Union, $1,000. The building, which is owned by George Proctor, of the Bay Tree hotel, is damaged to the extent of $2,000 ; fully covered by insurance in the North British.

DEATHS.

H. H. Laing, Hamilton House Furnishing Co., is dead.

D. McDonald, proprietor of the Winnipeg Plumbing Co., Winnipeg, and a well-known business man, is dead. McDona'd was knocked down by a bicycle rider a few days before his death and had one of his ribs broken.

Simeo R. Sleep, tinsmith, Wolfeville, N.S., is dead.

Joseph Dagenais, painter, Montreal, is dead.

LEAD AND THE SILVER CRISIS.

One branch of the metal trade is deeply concerned in the outcome of the present crisis, and that is the lead trade. The total production of lead in the United States in 1892 was 213,262 net tons, according to the statistics of the United States Geological Survey. Of this quantity 31,678 tons was soft lead produced in Missouri, Kansas and Wisconsin, which will not be affected sensibly by any fluctuations in silver.

The balance of 181,584 net tons is desilverized lead, the product almost exclusively of silver-lead ores. Of this 12,874 tons was Mexican base bullion, refined in bond and exported, leaving 168,710 net tons obtained by refining and desilverizing metal obtained from smelting argentiferous lead ores in the United States. Of this, 26,734 tons was lead derived from the treatment of Mexican and Canadian ores imported, leaving 141,976 tons as the product from silver-lead ores mined in the Rocky Mountain States and Territories.

During the last few years there has always been a relative scarcity of lead ores. The smelters must have a certain percentage of lead in their smelting mixtures in order to cover the silver. If there is not enough the losses of the precious metal become too heavy. The large offerings of "dry" ores—that is, ores which contain little or no lead, but only gold and silver, have forced smelters to compete eagerly for plumbiferous material. A redundant production of silver ore has encouraged the mining of lead ores often very low in silver. It naturally follows that a cutting down of the mining of dry silver ores must lower relatively the prices offered for lead ores and thus put pressure upon the Rocky Mountain lead mines. In some districts, notably the Coeur d'Alene, the ores carry also notable quantities of silver, and then, too, the production will be adversely affected.

It looks as though the heavy fall in silver must have an important effect in reducing the quantity of lead produced in the United States and in lessening the quantities imported from Mexico. To some extent this may be counteracted by the receipts of ore from the Slocan and Kootenai districts in Canada. But if the consumption should at all rally from the present depressed condition, a scarcity of lead would probably develop reflected in higher prices, and the retention in this country of the increasing quantities of lead obtained from desilverizing Mexican base bullion. It seems likely that the supply of lead will be very considerably affected during the balance of the year.—Iron Age.

TORONTO CUTLERY CO.,

65 and 67 Yonge Street, Toronto

M. MAYER, Propr.

NON-XLL

Cutlery

WARRANTED

And the Most Complete Lines of Cutlery of all descriptions.



S.S. SMOKELESS POWDER is the best Made by the Smokeless Powder Co., of London, Eng. A stock kept in Montreal. 25 lb. Drums, 2 lb. Cannisters, ½ lb. Cannisters. Send for Prices. **WILLIAM DARLING & CO.**, Wholesale Hardware Merchants, 30 St. Sulpice Street, Montreal.

A FEW REASONS WHY

You should Keep your Stock fully Assorted With

Boeckh's Superior Brushes

They are always reliable and as represented.
They are guaranteed in every particular by the manufacturers.
They are made of the very best material and workmanship
They are sold at closest possible prices.
They are finished and put up in neat and attractive shape.
They are well known throughout the Dominion and are popular with all classes of consumers.
They are handled by all leading Hardware and Paint and Oil trade.

See that the name "BOECKH" Is on every brush.

Boeckh's Flexible Bridled Brushes.

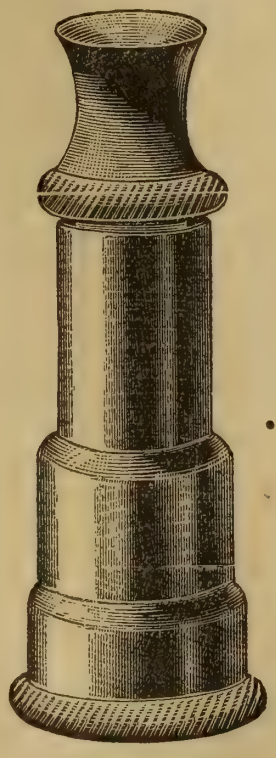
Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

TORONTO, - CANADA.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it.

It is impossible for this pipe to get out of order

Give it a trial and you will use no other.

Hamilton Brass Manufacturing Co.
HAMILTON, ONT.

"Favorite"

Stoves and Ranges

Announcement . . .

WE beg to advise the Stove Trade of Canada that we have purchased the entire line of patterns and the stock-in-trade of the Chown & Cunningham Co., Limited, of Kingston, Ont. Orders and inquiries for the above mentioned line of Stoves and Ranges, and for repairs for same, as well as for the miscellaneous goods hitherto supplied by the C. & C. Co., should now be addressed to us at Brockville, Ont., and will have prompt and careful attention. Respectfully,

The James Smart Manfg. Co. Limited

Brockville, June 27, 1893. BROCKVILLE.

SOMETHING BIG IN SCALES.

Something rather unique in the matter of scales has just been turned out of the Gurney Scale Company's works on James street north. The corner grocer who weighs his sugar on a small 10-pound, even balanced scale, can have but little idea of the enormousness of a scale with a balance beam that registers 100,000 pounds without the use of a single loose weight. The scale just completed by the Gurney concern does this, and it does it with an accurateness that is surprising. The big piece of weighing machinery was constructed for the Alberta Railway and Coal Company, of Lethbridge, N.W.T. It is a track scale. The uniqueness of its construction consists in the length of the platform upon which the cars will be run. This is 66 feet long, almost double the length of the longest ordinary track scale.

The scale is constructed in six sections, with the huge beam at the centre. The system of leverage is so accurate that at any point from end to end of the track the balance is uniformly the same, and 10 pounds turns the beam with the full load. Of the levers 22 are used, the longest measuring 13 feet 6 inches. There are 74 of first quality bearings, and over 6,000 feet of timber will find a place in the platform and frame. The platform rests upon chairs framed together with heavy angle iron, the whole resting upon a solid stone and cement foundation.

The largest beam records weights by 1,000 pound notches. Attached to this is a baby beam, which is notched from 10 pounds up to 1,000. The third beam completes the 50 tons, or 100,000 pounds.

Building large scales is a difficult business, but judging from this monster the Gurney concern knows how to do it and do it well. The whole affair was packed and shipped in sections this week to Lethbridge.—Herald, Hamilton.

AN ABSENT-MINDED MAN.

Stranger (in train)—"A man in your business can't get home very often, I presume?"

Commercial—"Home? I should say not. Why, sir, I get home so seldom that I can't remember half the time where I live. Have to telegraph to the firm to send me my address."

Stranger—"You don't say so!"

Commercial—"That's straight. Why one time I was away so long that I forgot I'd ever been married, and I took such a fancy to a pretty woman I met in a strange town that I eloped with her."

Stranger—"My! My!"

Commercial—"Yes, it would have been a terrible thing, but when I called on the firm during my honeymoon and introduced her the old man told me she was my wife before!"

MORE ABOUT ADVERTISING.

"But words are things, and a small drop of ink,
Falling like dew upon a thought, produces
That which makes thousands, perhaps millions, think."

When to advertise; How to advertise; Where to advertise;—these are the perplexing questions which meet the average merchant more than half way, when he starts out to reach with printers' ink that part of the buying public to whom he is unknown, and whom he desires to convert into customers.

When to advertise? The time to advertise is when the styles of goods you carry are changing for a new season's trade. No use to advertise hammocks in January, or snow shovels in July; yet it is a fact that casual perusal of local papers anywhere will reveal the deplorable absence of thrift shown by many, otherwise keen business men, in the manner in which they use a newspaper space for which they are paying out good money.

Local advertising is mostly for the moment, and therefore the offer which a dealer makes should relate to goods actually, or soon to be, in demand, that a sale may be effected directly and on the spot. Dry goods stores appreciate this fact, and their notices are even arranged for "To-day's Bargains," and they never allow them to become "moss grown" for want of timely attention.

Better not to advertise at all, unless the impression you create is liable to cause a favorable opinion of your business methods in the public mind.

Hundreds may visit your store, but thousands will notice your advertisement, and it is to this large, and ever increasing, outside constituency you are appealing; either favorably or otherwise—no middle ground in advertising.

In hard times, advertise for customers; and in brisk times, advertise for more customers; to be successful advertise persistently, seasonably, and honestly.

How to advertise? The whole principle of advertising lies in the simple statement, impress your name, location and goods firmly in the public mind. This is the gaol toward which all advertising must direct its efforts to be successful.

State the truth. Deception may succeed, if under cover, and for a time, but it is the poorest kind of policy, to state it mildly, to make printed statements which will not bear investigation. A temporary customer, secured by such means, is an injury rather than a benefit to your trade, and his opinion, when he has discovered the deception, will more than overbalance the price you paid to secure him.

State the whole truth; it is the thinnest kind of humbug to advertise your regular goods at "$1.00, formerly $2.50," etc., for the public long ago made up its mind to ignore this, so-called, business jest.

Many an advertisement has owed its real value, in dollars and cents, mainly to the fact that it stated plainly and honestly the quality of the goods it related to, and thereby created an impression of sincerity which inspired the confidence of the public.

Use concise language, and avoid flowery expressions, or words of doubtful meaning. Do not over crowd your space or attempt to do one month's advertising in one day's space. Make a specialty of some particular article and refer to your regular stock incidentally. Leave something for the reader's imagination and curiosity to feed upon.

Avoid personal allusions, but if the personal pronoun is necessary, say "We," rather than "I."

Keep the tone of your wording always pure and respectable. Jokes are proper, if they are jokes, but many of the feeble attempts at forced humor are better by their absence.

Manners are as necessary in advertising as in society, and, like the latter, to be of real value must be genuine—not assumed. Be original (if you can), and aim not to copy, but be copied. Imitation is well termed the sincerest flattery. Never advertise your competitors by adverse criticisms, as it is a boomerang-like weapon which often hurts most its user. Back up your regular space with local reading notices, and interest the editor of the paper to the extent that he will take pains to see that proper styles of type are used in your displayed space. Study advertising as you would any other detail of your business—from business necessity.

Use papers which have enough character to give a color of value to your advertisement besides its own. Aim to secure space which is valuable, rather than cheap; it is poor economy to save on price at the expense of quality.

After you have secured a good position (and opinions greatly differ as to what is a good position), make your contract for the year, and set apart a certain day, or hour, for attending to it.

Always have your best idea open to ideas which may aid you in preparing novel advertisements. Use your business judgment to the same extent in advertising as you do in the other duties of your occupation, and you will find no reason or occasion to regret your advertising bill, but will consider it as an investment which pays dividends in increased trade.

"He lived a life of calm content;
Unnoticed quite he came and went;
At morn he opened up his store,
At night with care he locked the door.
Sometimes he dropped a little sigh
Because nobody came to buy.
'And yet,' he thought, 'this quiet ease
Has much about it that should please.'
His bank account he'd most gone through,
And then he said, 'This will not do;
I'll have to work to swell its size—
I guess I'd better advertise.'"

—From Ideas for Hardware Merchants.

The total circulation of the United States on July 1, the beginning of the new fiscal year, is placed at $1,593,726,411, a per capita of $23.86, or $9,346,927 less than on July 1 of last year.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

WESTERN BRANCH:

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

. . ELEY'S . .

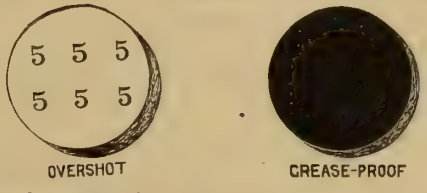
CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING





Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. Wholesale Only.

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

The "ETNA" . . .

. . HOT WATER BOILER

We claim is perfect. It is the original Round Boiler, patented by U. Beaupre, Dec. 1st, 1880 and May 2nd, 1889. Each year improvements have been added; and to-day it stands at the head.

We are willing to give any guarantee necessary to protect Architects or Contractors, that the Boiler will do all we claim for it.

The Boiler costs less than those of our competitors, and we will assume all risks.

We are in the field to stay and are bound to push this Boiler to the top rung of the ladder.

The Boiler previous to our purchasing it, had never been properly advertised or pushed, consequently, is to-day not as well known as some other makes.

Since buying out the former maker the sales have increased over 200 per cent.

If you have not a cut of same, drop us a card and we will be happy to forward one with full particulars.

As we said before, the Boiler is perfect, the price less, and we will guarantee it in every particular.

We have also bought most of the Grand Universal line of Patterns from the Estate of J. M. Williams & Co., of Hamilton.

We can supply all Repairs at the Regular trade price.

We still make the old reliable line of "Leader" Stoves.

Kindly remember us when any thing we manufacture is needed by you.

Wm. Clendinneng & Son, 145 to 171 WILLIAM STREET MONTREAL QUE.

Cutlery

SPECIAL VALUE IN

Dickinson's "Damascus Blade" Carvers.
Dickinson's Improved Ivoride Tables, warranted not to shrink or discolor.
Joseph Rodgers & Co.'s best quality Pen, Pocket, and Butcher Knives.

. . . SAMPLES now ready for Fall Trade.

STEEL. Full stock of Jessop's warranted Tool Steel, at lowest prices. . .

A. C. Leslie & Co., Agents
MONTREAL and TORONTO.

You can lose more than we do by not subscribing for this paper.

MUNN'S LIQUID GLUE
IS THE BEST.

THE ART METROPOLE, Agents.
131 Yonge Street, TORONTO.

Clarkson & Cross
ACCOUNTANTS . . .

Established 1864.
26 Wellington St. East, TORONTO

OUR SALES OF
"BURHAM" Portland Cement
For the past 8 months have been
25,499 CASKS.
"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,
McRAE & CO., OTTAWA



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS.

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	23½ 24
trip "	25, 25½
Tin Plates—*Charcoal Plates, Bright.*	
M.L.S. equal to Bradley	Per box
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 25 4 50
I.X., "	5 25 5 50
I.X.X., "	6 25 6 50
I.XXX., "	7 25 7 50
D.C., 12½ x 17	3 75 4 00
D.X.,	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be purchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

Oakley Grade—	Per lb.
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6½ 6½
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
5/16 "	2 35
⅜ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2⅞, 2⅞
26 "	2⅞, 3
28 "	3 , 3¼

Canada Plates.

Blaina	½ bright	2 75 ....
Abercarne		2 75 ....
Lion		....

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4½ 4¾
" ⅜ " "	4⅛ 4⅜
" 7-16 " "	4¼ 4½
" ½ " "	3¾ 4
" ⅝ " "	3⅜ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 12½ 0 13
Lake Superior	0 13 0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22 $0 25
" round & square	
1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 19½ 0 21
" 35 to 45 " " "	0 17½ 0 18
" 50 lb and above per lb	0 16½ 0 17

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 05 0 05½
Domestic "	0 04¾ 0 05

Zinc Sheet.

5 cwt casks	0 05½ 0 06
Part casks	0 06 0 06½

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04⅜ 0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 17 0 19
Standard	0 16 0 18
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 13
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	4 75
No. 1 Do "	4 50
No. 2 Do "	4 25
No. 3 Do "	4 00

Prepared Paints.
(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.
(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red, (best) " "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " " "	1 25 1 90
Canadian "	

Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure,	
8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 45 0 47

Castor Oil.

Best, per lb	0 08 0 08½

Cod Oil.

Cod Oil, per gal.	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.
Munn's, dis. 25 to 30 per cent. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis.40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per 1 lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Shearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.25	....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]

Ordinary.

st break		$3 65
2nd "		3 90
3rd "		4 60
4th "		4 95
5th "		5 40
6th "		5 90
7th "		0 50

Picture Glass.

Pilkington's ordinary.

1st break		4 0
2nd "		4 70
3rd "		5 40
4th "		5 90
5th "		6 50
6th "		6 90
7th "		7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

Standard Keystone
TARGETS
THE BEST -:- -:-
-:- TARGET MADE.



Standard Keystone
TRAPS
THE NEW '93 MODEL -:-
-:- EXCELS ALL OTHERS.

AGENTS: BOWMAN, KENNEDY & Co., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 6 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Finsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   Basis—50 to 60 dy 2 30
   40dy 2 35
   30 dy 2 40
   20, 16 & 12 dy 2 45
   10 dy 2 50
   8 & 9 dy 2 55
   6 & 7 dy 2 70
2. American Pattern Only
   from 4 to 5 dy 2 90
   3 dy. (lath) 3 30
3. Canada Pattern Only
   from 4 to 5 dy 2 80
   3 dy. (lath) 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 25 per c.t.

Pails.

alvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross 1 00 4 25
" Carpenter 2 25 3 60

Picks

Per doz 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Star. R & L.Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p. c.
Button's Imitation, per doz 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz 4 00 5 50

Pulleys

Hothouse, per doz 55 1 00
Axle 22 33
Screw 27 1 00
Awning 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, 1 bs 2 50 2 75

Rail.

Barn Door, per foot 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33½ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9½ 9¾	10¾ 11
¼, 5-16, ⅜ in.....	10 10½	11½ 11½
Cotton, per lb.....	18	20
New Zealand.....	9	9½
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.
Hack, complete, each 75 2 75
" frame only 75

Saw Sets.

Per doz 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz 3 25 4 00
Bench iron per doz 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 60 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen 1 25

Soldering Irons.

Per lb 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4½ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 3 00
" 2 " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 51½ per cent.
Channel nails 5c. lb. off list.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75 p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9 00

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart	4½ 4¾
" 4 " 4 & 6 "	
" Plain twist, 2&3 wires	
" Steel thorn and ribbon	4¾ 5
"Lock Barb," 4 point	.... 0 04½
Ditto Glidden 2 point	.... 0 04½
Galvanized Barb, "Lyman," 2 to 4 points.....	.... 0 04½
Steel staples	0 04½ 0 04½

Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p.100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

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REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS.

MANUFACTURERS OF THE

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WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

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INVERT BLOCKS

Canadian, Scotch or American

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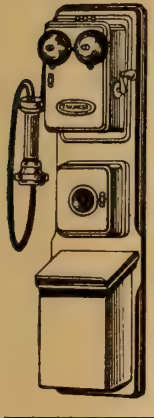
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Private Line Installed and sold outright.



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Jan. 9, 1895.

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"Pleased to say that both the Switch Board and Telephones bought from you have given entire satisfaction."

WALKER, SONS & CO.

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Manufacturer of Telephones and Electrical Supplies. . .

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Large Fire Proof Safe Wanted at once. State dimensions and price. Address H. M., HARDWARE Office, Toronto.

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Nails, Hinges AND Buts

Manufacturers of every description of these goods.

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Pat. Nov. 19, 1889.



Above Cut Is One-half Actual Size.

The Hatheway Patent Fence Wire, the most popular fence wire throughout the United States, and fast gaining that position in the Dominion of Canada, as it contains all the requisite qualities of a fence wire, being handsome, strong, visible—seen at a long distance; will not sag or get out of shape; allowance for contraction and expansion, heat and cold; being broad, requires less strands to make a complete fence; easily put up, splices itself; will not injure stock. Put up in spools of 120 lbs. each. For sale by all the leading hardware stores in the Dominion.

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LONDON, ONT.

Manufacturers of all kinds of

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Eclipse Horse Poke
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OF ALL DESCRIPTIONS

Special Lines Made to Order
Write for Prices

Dominion Wire Mnfg. Co., (Limited)

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2 x 4 Barb
Plain Twist and
Strip Fencing

And Staples for same.

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ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.



Our Lamps were all right last year, but . . .

LAST YEAR'S

- LAMPS -

Are no good for :-:

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WE HAVE

OUR NEW LINES

NOW READY

Wait for Travellers, or Write for Prices and Cuts.

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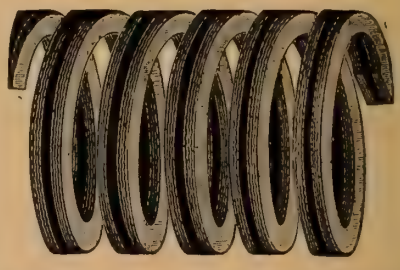
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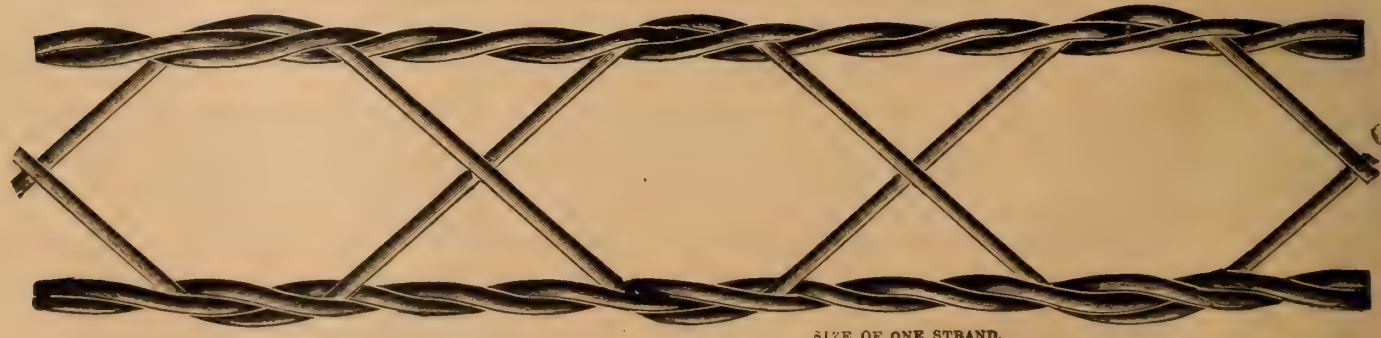
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TRUSS AND CABLE FENCE WIRE.



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Is Stronger and Costs Less per rod than any other Strand of equal width in the Market.

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CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, JULY 22, 1893. No. 29.

MAGNOLIA METAL

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EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

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BLUNDELL'S ART.. ENAMEL PAINTS:

WHY?

Because they are ready sellers. Every tin sold, sell several more tins. Every one who uses them, speaks of them, so delighted are they with the result. This is not surprising when the reputation of BLUNDELL, SPENCE & CO., the manufacturers, is considered. They are recognized as the largest Paint Manufacturers in the World, and the quality of their goods is well known in every quarter of the globe as the highest.

BLUNDELL'S ENAMEL IS

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Easily Applied, Surface Resembling Porcelain.

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.Rope.

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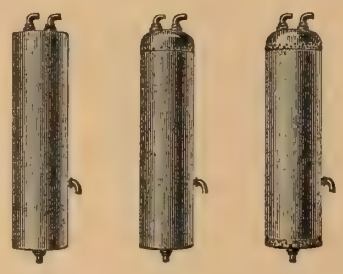
Galvanized Tackle of all Kinds

RICE LEWIS & SON, LTD.

TORONTO.

BOOTH'S COPPER RANGE BOILERS

Best Workmanship.



Test Guaranteed.

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IMPORTANT NOTICE.

Consequent upon the ordinary Range Boiler failing to fill the demands of the Trade, we are making a special Copper Range Boiler, Extra Heavy, of the best Lake Superior Copper, flat bottom, top and bottom Double Riveted, with a guaranteed Hydraulic Test of 200 pounds.

This Boiler is known as

"Booth's 27½ Copper Range Boiler,"

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Correspondence solicited and Price Lists on application.

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GEO. BOOTH, Proprietor, formerly Booth & Son.

"Perfection" Inside Seam

ELBOWS.



STRONGEST, HANDSOMEST, BEST.

16

DIFFERENT KINDS

Standard Patent Stove Pipe,
Stove Boards, Coal Hods.

ORDER ALL FALL LINES EARLY.

Kemp Manufacturing Co.

TORONTO, ONT.

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, JULY 22, 1893 No. 29

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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In the evolution of quick Atlantic service Canada is destined to occupy the premier position. Her geographical position decrees it. The shores of Nova Scotia are something like a day's journey nearer to the United Kingdom than is the port of New York. But now the possibilities of bringing the shores of British North America nearer to the mother land are made all the greater, at least as far as passenger travel is concerned, by the construction of the line of railway across Newfoundland from Exploits Valley to Port-au-Basque. St. John's, the capital of the colony, is only about 1,640 miles from Valentia, Ireland, and this distance could be accomplished in three days by the Campania or some of the other swift steamers now running out from New York. This would mean a shortening of the sea portion of the journey by about two days, quite a consideration to the average passenger. The scheme had the endorsation a dozen years ago of such an eminent authority as Sandford Fleming. A passenger taking this proposed route could leave Montreal by train and in thirty hours could reach the shores of Cape Breton, from whence to Newfoundland he could be ferried in six hours. At Port-au-Basque he would take the train, and, after a twenty hours' ride through a beautiful and picturesque part of the country, would arrive at St. John's, from whence he would take a steamer, which, if it was anything like the boats running out of New York, would land him on the other side of the Atlantic in three days, or less than six days for the whole journey. Aside altogether from the saving of time which such a route would entail there are other advantages to be gained. The first of these would be a break in the journey and then instead of the monotony of gazing for a week or more on vast ocean wastes the passenger would have a couple of days' feast on some of the most delightful and varied scenery on the continent of America.

* * *

No hardware merchant can afford to be careless regarding his window display. A well-dressed window is not only of value because of its attractive properties, but, like a perpetual salesman, it is ever offering goods to passers-by or suggesting something to them that they need or that would be serviceable in the household. A window, however, to which no attention is paid is rather a deterrant than otherwise to business. People do not like to see a dirty window, even if it is in a hardware store, and where they have a dislike they do not as a rule patronize. Cob-webs and dust in the window means cob-webs and dust on the brain, and disorder in the window means disorder and mismanagement in the store. People admire wide-awake men. If you have fallen asleep wake up, rub your eyes, and one of the ways in which you can show the people that you are awake is in the matter of window dressing.

Two Hamilton newspapers, the Times and the Herald, have been discussing the cash and credit question. The other day the latter in replying to the former said: "The thing is to do away with the law by which small debts can be collected, for the fact is notorious that dealers often grant credit when they should not and when they would not if the law did not stand behind them to enforce their claims. The debt-collecting laws are barbarous because they are unfair, not only to those who have contracted debts which they find they are unable to pay, but to those who pay their bills promptly. * * * Creditors act solely on their own judgment when they allow debts to be incurred, and it is manifestly an imposition for them to rely on the rest of us to see that they get their money, which is practically what they do. The wiping out of Division Courts would be a heavy blow at the whole credit system, would enable storekeepers to sell more cheaply, and would give them a good excuse for refusing credit. Everybody would be much better off if the credit system, more especially as applied to the running of small debts, were done away with. The reform might cause some little inconvenience for a time, but in a short while matter would adjust themselves smoothly enough to the new order of things, and we should all be money in pocket at the end of the year. The merchants themselves would be great gainers by the change, for then they would not be pestered to death to hand over goods to people who they are morally certain will never pay for them if they can find any way to get out of it." The Herald's argument is based on a wrong premise. The credit system is a legitimate part and parcel of the trade and commerce of not only this country, but the world, and is here to stay. Used as it should be, it is an adjunct to trade; but, like many other good things, it has been abused, and it is this that has resulted in the breeding of evils which are a hinderance instead of a help to trade. Dating ahead, long credit, and indiscriminate giving of credit are among these evils.

* * *

As a concomitant of the trade and commerce of the country, the credit system is entitled to the protection of the law. The country is over run with people who will pay no more of their way through life than they can possibly help, and every merchant, no matter how careful he may be, will in turn get duped by them. It is against this class of customers particularly that the merchant needs protection. About the honest man there is no need for concern. Instead of talk-

ing about "wiping out the Division Court" and the law regarding the collection of small debts it is the simplifying and strengthing of these laws that should be urged. As at present constituted and enforced the law relating to debts and the collection of the same is a farce. Even if the plaintiff does obtain judgment it is of little or no benefit to him, for should he succeed in securing the amount in dispute the chances are ten to one that the cost will more than wallow it up.

* * *

The customer who obtains goods which he does not intend to pay for gets them under false pretences, difficult as it may be to prove it. To get at him through the Division Court, if the amount be small, is the only alternative, and to close up this only avenue would be, to our mind, as unreasonable as to ask that the law against larceny be not applied to the pilfering of goods exposed for sale at store fronts. In fact we do not know but that it would be more so, for the tempation to be dishonest is often greater in the careless way that goods are exposed than in the matter of giving credit. But at any rate, why deprive only the retailer of the right to use the machinery for the collection of accounts? Why make the class that have the hardest row to hoe perspire all the more by erecting new obstacles? But would it not be well before the one is repealed to enact a law making it illegal to give credit except above a certain value? That would be only reasonable. But how then would the poor but honest mechanic fare in the spring, whose surplus earnings were exhausted after a long winter's inactivity? The experience of the past spring is sufficient answer.

* * *

To talk of the merchant being better off if the Division Courts were removed, is all moonshine. He would be nothing of the kind, any more than would a house be stronger were one of its foundation stones removed. If a debtor has any self-respect at all he will not let his name appear as defendant in the Division Court proceedings if he can help it, and as the last resort to prevent this is the payment of the account he will often do this when a lawyer's letter announces that it is the only alternative to escape legal proceedings. No, what is wanted is revision not removal of the law regarding collections. And the sooner it takes place the better.

* * *

A good many interesting and valuable books are issued by the Dominion Government every year, but none are more so than the "Statistical Year Book of Canada." The eighth volume has just been issued by the Department of Agriculture. Sydney D. F. Roper, who compiled the work, is evidently profiting well by each year's experience for the present volume is the best issued Compressed within its 659 pages is a digest of practically all the blue books and much besides, but it is presented in a more attractive form. A feature of the book is a statistical summary of the Dominion since Confederation up to June 30, 1892, giving comparisons of population, revenue, expenditure, imports, shipping, etc., and while all the figures are not as favorable as one would wish, they at least show one thing, and that is that in most of the essentials the country is growing. On the figures adduced by the census of 1891 regarding population so much has been already said that they may be dismissed with the remark that out of the total population of 4,833,239 the males numbered 2,466,573 and the females 2,366,666. The revenue in 1892 was $36,921,872 and the expenditure $36,765,894, against $13,687,928 and $13,486,092 respectively in 1867, the year of Confederation. In 1867 the imports were valued at $73,459,644 and the exports at $57,567,888, while last year the respective totals were $127,406,068 and $113,963,375. In 1867, 8,028 vessels of 2,104,009 tons passed inwards and 7,978 vessels of 2,215,312 tons passed outwards, while last year 15,672 vessels of 5,475,999 tons passed inwards and 15,289 vessels of 5,276,975 tons passed outwards. The figures relating to 1892 have only been exceeded on two or three occasions, and that only slightly. In regard to vessels built the showing is anything but satisfactory. In 1867 there were 355 vessels of a total of 87,230 tons burthen constructed, while in 1885 the aggregate tonnage was 188,098 and the number of vessels 489, but last year the totals were only 44,321 tons and 278 vessels. In 1867 the vessels registered were 539 with a total tonnage of 113,692, while last year the respective totals were down to 331 and 61,457. In 1881 there were in operation 7,260 miles of railway, with working expenses of $20,121,418 and earnings of $27,897,509, while in 1892 the miles of railway in operation were 14,588, working expenses $36,488,228 and earnings $51,685,768. At Confederation the paid up capital of the banks was $30,289,048, the assets $77,872,257, and the liabilities $43,722,647, while last year the paid up capital was $61,512,630, the assets $292,054,017, and the liabilities $209,362,011. In 1867 there were 3,638 postoffices, through which there passed 18,100,000 letters and 18,860,000 newspapers, while last year the postoffices were 8,288, the letters 102,850,00, and the newspapers, including books, samples, etc., 98,152,651. The net public debt at Confederation was $75,757,135, while to-day it is $241,131,434.

DRUMMERS AT THE FALLS.

When the drummer drops his grip and turns his attention to pleasure dull care is banished and fun and frolic hold sway. In him are combined to a higher degree than in any other man the shrewdness and perserverence of the business man and the joviality of the man whose brow is unfurrowed by care.

When the drummer works he works and when he plays he plays. Wednesday last was one of his play days. That is, it was for the city Knight of the Grip. It was on that day that was held the annual excursion of the City Travellers' Association of Toronto. It took place at Niagara Falls and Buffalo, although the former was, of course, the greater rendezvous. The route taken was via the Niagara River and Lake Ontario Navigation Co.'s line of steamers to Queenston and Lewiston, from the former of which those destined for the Falls took the electric cars, while those booked for Buffalo took the cars at the latter place.

And benignly did the gods smile. Had it been possible for the excursionists to have ordered the weather for the occasion it could not have been more favorable. The lake breezes were just strong enough to be felt and cool enough to be invigorating. In any way you take it—both in point of numbers and in amount of unalloyed pleasure—the excursion was a success. Everybody praised it. Several grocers were noticed with the party, the Retail Grocers' Association being represented, among others, by President Clark, Robert Mills, A. G. Booth, John Butcher, — Sinclair, A. G. Marmion, E. Dewey.

The trip up the Canadian side on the new electric railway was delightful. The ejaculations of surprise and of admiration evidenced that. And it will be remembered as one of the most pleasant features of the outing.

The arrangements that the managing committee had previously made for sightseeing at reduced rates was taken advantage of, the six or seven hours at the Falls being spent in visiting the many points of interest or in picnicking in the shadey groves that abound in Queen Victoria Park or in mingling with the retail grocers of Hamilton, who were also spending the day at the famous resort.

Nearly every member of the Association lent a helping hand to make the excursion a success, but the honors are of course due to the labors of the gentlemen who composed the managing committee. They were: Robert Maxwell, chairman; F. Gallow, treasurer; J. A. McGuane, secretary; J. Owen, Ben. Dack, A. M. Piper, R. C. Morrison, W. Soper, E. N. Tyrrell, S. G. Martin, J. F. Smyth, C. F. B. Spencer, W. F. Daniels, W. Bremner, A. G. Fleming, J. Mortimer.

Some of the excursionists reached home at 8.30 p.m., while others came over on the later boat. Ghioni's brass and string band accompanied the excursionists and materially assisted to enliven the outing.

IRON TRADE IN GREAT BRITAIN.

The Age of Steel says : The iron industries of Great Britain have for some time been in a depressive condition. In fact the downward trend was the precursor of a corresponding movement this side the Atlantic. It was the case of the same tune being set to a lower octave. The cause of depression on both sides were of a similar or relative character. So closely has international trade interwoven the industries of all leading commercial and industrial nations, that their sensitive assimilation is becoming increasingly vital, and as a rule stagnation in trade is diffusive if not always arbitrary. As regards the iron and steel trade it may be said that where or when this staple industry is depressed every other staple industry obeys the touch of the same button, and conversely, where the great metals are in active demand business prosperity is approximately universal. This condition understood, it is by no means out of reason that commercial men as well as manufacturers watch the movements of the hands on the iron clock with eager and continuous interest. It would seem that our British cousins, with their thumb on the pulse of sick Vulcan, are being encouraged by some signs of revival. They may be weak, but as indicative of a change, however small, for the better, may not be without an all-round-the-world significance. From several centres of the trade, notably where ship-building materials and iron and steel rails are the specialties, reports show a considerable increase in orders, while the exports of pig iron and manufactured iron and steel have increased. This expansion has been most marked in shipments to the United States, South America, Canada, Germany and Holland. We qaote from the Iron Trade Circular :

"What leads us to expect that the improved demand, which now appears to have commenced in earnest, will be followed more or less rapidly by an appreciation in the market values of various descriptions is the favorable statistical position of the iron trade. In Connal's stores at Glasgow stocks amount to about 300,000 tons, or fully 100,000 less than at the corresponding date last year, and compare with 350,000 tons as recently as the beginning of March last ; and yet the price of warrants shows only a fractional advance. The shipments from Glasgow this year have reached something like 150,000 tons, or about 7,000 tons more than those for the corresponding period a year ago, though the number of furnaces in blast (seventy-one) is five less than it was in June, 1892. In Cleveland there are now eighty-six furnaces in blast, or ten more than a year ago."

From such manufacturing districts as Birmingham and Wolverhampton, and from Sheffield and Glasgow, the reports are said to be of a more encouraging nature than for some time past ; these, with ship-building contracts, both home and foreign, that have been stimulated by present low prices, are indications of a change for the better. The backbone, however, of the iron and steel trades in Great Britain is in foreign demand.

A NOTED NEEDLE SUIT.

Mr. Justice Robertson has given judgment in the now noted needle case of Woodfield vs. Croft, tried at Osgoode Hall some months ago, deciding in favor of the defendants, W. Croft & Son, Colborne street, Toronto, and sons and grandsons of the famous needle manufacturer, John Croft, of Redditch, England. The plaintiff, Wm. Woodfield, also an English needle manufacturer, sought to prevent the defendants from using the name of "John Croft & Sons" in their needle sales, claiming that he had purchased the use of the same in 1890 from the assignees of the firm in question, which, after the death of Anthony Croft, son of John Croft, and brother of the defendant, William Croft, of this city, made an assignment. The learned judge decides against the plaintiff mainly on the ground that they were using the name of a firm for the sale of "their needles," which firm did not exist. Woodfield will undoubtedly appeal the case to a higher court.

THE SILVER QUESTION.

The "Cologne Gazette" quotes, as an illustration of "the far-reaching consequences" of the action of the Indian Government in suspending the coinage of silver, a statement by a Hamburg correspondent that it is expected in that port that the decline in the gold price of silver which has resulted will cause a severe contraction of the large consignments of South American silver-holding lead and copper ores which have hitherto been made thither for smelting in the Prussian State and private furnaces. The Hamburg steamship companies carrying ore from South America hitherto as an important part of their cargo will be amongst the interests which will suffer. A Milan correspondent of the same German paper writes that the action of the Indian Government has very adversely affected Italian stocks in consequence of apprehensions that a continued decline in the price of silver will endanger the Latin Union, of which Italy is a member. The amount of silver 5 franc pieces which Italy, in the event of a dissolution of the Union, would be called upon to withdraw from France is estimated at 350,000,000 francs, in addition to which small silver token coins to the amount of 100,000,000 francs are also held in the Latin Union outside Italy, making a total of 450,000,000 francs, or say the equivalent of £18,000,000 sterling at the par value. It is not apparent how Italy could take back this sum, for which she would have to pay gold, without raising a new loan and further increasing the premium on the yellow metal.

TUBE WELL DRIVER WANTED.

A subscriber to HARDWARE MERCHANT wants to know where he can get a tube well driver. Manufacturers should send their name, address and any particulars to this office.

THE PEPPERMINT TEST.

The position that the peppermint test holds is a peculiar one. It is most advantageously applied to ascertain the working conditions before it is in use. It can often be used for the accurate determination of the defects of operation, and for this it is equally invaluable, but its use is limited. If it is applied to new work, a dash of putty, of wax, or of gasfitters' cement will stop the leak as perfectly as a lead caulked joint. A person wishing to make a plumbing system stand a good test can often do so by the expenditure of comparatively little labor, in the application of white lead, putty, paint, or wax, and this is often done to deceive inspectors as to the condition of the plumbing of old houses. Changes of temperature, gusts of wind, and a thousand other things often interfere to render one of these tests uncertain. A window in the shaft may be opened by some person at the wrong moment, and the house be flooded with peppermint ; or a louvre may be found in such a position as to render its closure out of the question. Another drawback is the fact that at least two persons are necessary in making a perfect test. To handle peppermint and then enter a building for the purpose of discovering whether there are leaks, is a feat which very few men are skillful enough to undertake successfully. It often happens that the pipes of a building do not extend through the roof, or are inaccessible. Of course peppermint tests are possible under these conditions but they are so extremely difficult as to make it almost prohibitory. Finally, to make a satisfactory peppermint test, one needs to have most trustworthy assistants, and even with these the intentional interference of some outsider may render the test entirely abortive, and a repetition becomes necessary. The last, but not least objection to peppermint, is the cost of the material. For an ordinary four inch line, not less than two ounces of peppermint is necessary. The retail cost of this is from twenty-five to fifty cents an ounce, according to the conscience of the druggist from whom it is purchased. A two-inch line in a dwelling house can be more easily tested with one ounce than a five-inch line in a five-storey tenement house can be with four or six ounces. As a test for the workmanship of a new building it is entirely untrustworthy, and ought not to be used for such a purpose.—N.Y. Metal.

SILVERING IRON.

A new Austrian patented process for silvering articles of iron is thus described in an English exchange: "The article is first plunged into a pickle of hot hydrochloric acid, whence it is removed to a solution of mercury nitrate, and connected with the zinc pole of a Bunsen element, gas carbon or platinum serving as the other pole. It is rapidly covered with a layer of quicksilver, when it is removed, washed and transferred to a silver bath and silvered. By heating to 300 deg. C. (572 deg. F.) the mercury is driven off, and the silver firmly fixed on the iron. To save silver the ware can be first covered with a layer of tin. One part of cream tartar is dissolved in eight parts of boiling water, and one or more tin or anodes are joined with the carbon pole of a Bunsen element. The zinc pole communicates with a well-cleaned piece of copper and the battery is made to act till enough tin has deposited on the copper, when this is taken out and the ironware put in its place. The ware thus covered with tin chemically pure, and silvered, is much cheaper than any other silvered metals."

SELLING FROM TRADE LISTS.

Quoting hardware by discount from established lists is a correct practice in my opinion, writes J. E. J. in N. Y. Metal. It is not a method, that has crept into use by accident (to become rooted out like abuses will at times), but it is rather the outgrowth of an idea, sound in principal and correct in practice; it is a short cut to a given result. Who would go around a square when he could cut across?

Because in many instances this is the simplest, it does not follow that all lines of hardware should be sold by discount. The first manufacturers established certain prices or lists on certain lines of goods; those that followed wisely adhered to these, until gradually uniform lists on many lines became permanently fixed to the great convenience of the trade. Where exceptions have occurred in this rule, they have in most cases been withdrawn in response to a general demand from the trade. The same rule of uniformity has been allowed as to trade numbers, by which certain goods are designated to indicate size, style, etc. Exceptions are: Rules, cabinets, locks, etc. Is there any one who has escaped the annoyance resulting? Uniformity in these matters has been an important consideration.

The New York jobber selling New England manufactured goods can give closer prices than the jobber in Chicago, and he, in turn, can do better than the jobber on the Pacific Coast. Without the discount system each would have to establish separate lists, even assuming that the profit was figured alike in each case. In this way the value of catalogues would be greatly diminished. If net prices were given, some of them would probably change before the book was out of press, and so keep on changing. A force of men would have to be employed to keep customers advised, and the retailer would have a nice time keeping track of it all. As it is, every change on whole lines of articles is noted by a single quotation.

Some manufacturers have, I believe, advocated net prices, but generally the matter was viewed from their standpoint exclusively; they did not consider it in its wider application to the hardware trade, with its immense variety, and the detail connected with the business.

Somehow the opinion seems to have prevailed, that under a net system better prices could be obtained by the manufacturer or jobber, or both. I don't see why. If the net price were, say, $5 on a given article, and that were understood, the large retailer would pay, we will say, that figure, but the big jobber would come along with an order for 50 doz., and get 5 per cent. off; thus the first step would lead back to discounts. Where competition existed, the price would be forced down just as much under one plan as another; and as to actual changes in value, either up or down, they could no less be ignored. It is one of its advantages, that the discount system lends itself to every gradation of price, besides the convenience of expressing one's self. If 21 cents is list, and 10 per cent. the discount, this would be expressed net; 18 90-100ths cents—very awkward, is it not?

Some claim there would be a saving in the effort to figure down the net prices. But is any figuring necessary as far as quotations are concerned? If 40 per cent. is quoted on jack chain, that conveys a distinct meaning, readily understood. A consumer would undoubtedly be puzzled, if 40 per cent. were the answer given him, because he wants to know the actual outlay required; but that is not so with the dealer. As for the greater convenience to the jobber of figuring bills at net prices, I think that percentages are easier than fractioning: 12 doz. at 18 90-100 cts., or 12 doz. at 21 cts.—10 per cent. off, which is easier?

On such articles as screws, bolts, rules, cabinet locks, butts, chisels, bits, and scores of others, having dozens and even hundreds of sizes or styles, how can the list and discount plan be improved on? There are other goods which do not offer this objection, as cutlery, locks, shovels, axes, crosscut saws, many hardware specialties, and the single production of various factories. But in this day of catalogues (embracing all the branches of manufactured goods in hardware), used so extensively by the retailer, and frequently consulted by him with the customer, it appears from other reasons that an extensive use of the net prices would prove annoying. On some lines of specialties, guns, new tools, etc., the selling agents frequently seek the consumer for introductory or other purposes; their advertised prices should conform to the list prices, and usually they do. The dealer then steps in to claim a discount, to which he is entitled.

The conclusion I reach is, that while there may be something to claim in favor of net prices on certain articles now being sold at list and discount, I fail to see that an innovation contemplating the abandonment of the plan could be seriously proposed from the standpoint of the hardware trade.

'Tis confusing and confounding,
This computing and compounding,
Eighty, ten, and ten and two;
Can't we make one figure do?
If to count that which is taken,
Or to find how much is left,
With the effort I am shaken,
Of my wits am nigh bereft.

I heard of a man the other day (he is dead now, poor fellow), who quoted a general dealer screws at 75 per cent. "I do better than that, I get 70 and 10," was the reply. This man had my sympathy, but argument becomes fruitless, if the quoting of hardware is to be brought to the level of Mr. "General Dealer's" intelligence.

CUT NAILS VS. WIRE NAILS.

By actual experiments here, as well as in America, writes D. Bennie & Sons, of Glasgow, in an English paper, the superior holding power of cut nails over wire has been proved several times. What gave the wire nail the favoable introduction into this country was the superior holding power in the case of brandy and wine casks from the Continent; but the fact was overlooked that these cases are made from hard woods, in which any kind of nails hold ever so much better than in the soft woods used in this country for similar purposes. The writer took some specially-made cut nails to a box maker who was using wire nails, and asked him to try the cut against the wire and report. A few days after he called again to learn the results, and was very much astonished to be told by a very practical man that the cut nails were no use, as the workmen, who were paid by piece-work, could not drive the cut nails as fast as the wire, on account of their holding on to the wood more than the wire. The writer saw the point at once, and asked the man if this did not prove the better holding power of the cut over the wire, and he admitted such to be the fact; but, nevertheless, he would not use them because the men could not put as many boxes together in a given time. So much for the difficulty of overcoming bad notions.

Another thing that tended very much to favor the introduction of wire nails was the indifferent quality of a large proportion of the cut nails formerly made in this country. Since the introduction of steel in the making of cut nails this has been entirely altered, and the cut nail of to-day is far superior in every respect to what it used to be. Any

person using nails, and looking for the ultimate profit of himself and his customers, would gain this undoubtedly by using cut steel nails. Another advantage the cut steel nail has over the old cut iron nail is, it is lighter by 25 per cent. and still stronger. We look to your report of the holding tests which have been gone into in the United States as a strong argument in favor of cut nails, and trust the trade will bring this before their customers.

IRON AT THE WEST.

The "Iron Trade Review" this week says: "The past seven days have brought no developments promising an early termination of the mill shut downs, and the market conditions have strengthened the manufacturer's resolution to make no concessions to secure early resumption. The June record of the blast furnaces shows that the checking up process was already under way in mills and foundries, and that furnace men did not respond to the situation as they have done in the vigorous curtailment movement that has been going on in July. From a stock of 308,000 tons, June 1, the unsold coke iron supply jumped to 345,000 tons July 1. The Mahoning Valley leads in the increase, but the Pittsburg district and Alabama and Georgia contribute a considerable share, other districts also participating, showing that the influence was general. It is estimated that nearly all the ore sold this season has either been brought down or is covered by charters running to the latter part of the season, so that the demand for tonnage by ore shippers from this time out will depend almost entirely upon sales of ore that may be made hereafter.

BENDING PIPE.

One of the mentors of the aged and instructors of youth and general fountain of knowledge and advice has recently made some astonishing and awe-inspiring remarks in regard to the proper way of bending tin pipe. After suggesting how to make a pitch by mixing tar and rosin, and stating that the pitch for filling the pipe should be as hard as possible, he suggests that it is probable that the tin pipe could be bent by "filling with lead," or pitch, providing the metal was of sufficient thickness to allow for the stretching of the outer part of the bend. He further says that the objection to filling tin pipe with lead would probably be the removal of the lead by melting, which might "injure the appearance" of the pipe, and it occurs to us that this might be the case. But how the tin pipe is to be filled with melted lead in the hands of an ordinary workman is something that strikes us as marvelous, as lead melts in the neighborhood of 600 degrees Fahrenheit; and, since tin melts at 420 degrees (using Haswell's figures), the task of filling the tin pipe with lead would certainly be a curious one. But the more curious thing which certainly might "injure the appearance" of the tin would be trying to melt that lead with its 600 degree melting point out of the tin which melts at 420; but then, perhaps we are mistaken. It may be that this all-sufficient wisdom intended to put the lead in cold by a hydraulic press, and then naturally there would be some difficulty in pulling the bent plug out of the bent pipe; really we should be glad to be there and see the operation performed in any ordinary shop. The quantity of misinformation contained in the technical press to-day is something wonderful to see; fortunately, the practical man usually looks before he leaps, and thinks over a suggestion a little before he attempts to work it out in metal, so it is supposed that no harm will be done in this case. But it would be amusing to stand by and see an apprentice make his first experiment with filling a tin pipe with lead. We fancy his remarks would be more forcible than euphonious, and probably their religious tendency would be more pleasing to Colonel Ingersoll than to the Rev. Sam Jones.—N. Y. Bulletin.

SHE DIDN'T CATCH ON.

After the return of the drummer from his travels his young wife explored his grip, with an expectant face. Failing to find that for which she was apparently in search, she turned to him and said:

"Where is the jag?"

"The what?" he asked in astonishment.

"The jag. Mrs. Laces says her husband saw you in Chicago with a lovely jag on. Whatever it is, you are not wearing it, and it isn't in your grip."

"Oh, that's all right I left it at the office, By the way, I saw a handsome spring hat in a milliner's shop down town. If you care, we will go down town and you can look at it, and if you like it you can have it."—New York Press.

THE BEAR'S TAIL AND NAILS.

"Yes," said Joe Blackburn (the truthful Joe), "that was about the funniest experience I ever had on the road."

"'Nuther ghost story?" questioned one of the crowd in rather a disgusted way.

"No, siree; this occurred; this did!"

"Well! that is remarkable," said the questioner with pretended astonishment; "actually going to tell the truth. Well! the profession is going to the dogs, sure nuff."

"I tell you this is all straight," said Joe.

"All right; go on."

"Well, I was travelling for a hardware firm, trying to introduce a new line of goods into New England, and was meeting, of course, with immense success ——."

"Oh, of course!" came the sarcastic chorus from the crowd.

"With immense success, as I was saying," he continued, not minding the chaff. "Well, it so happened, that in working through Maine I had to call at a small town, which was not much out of my way, in order to see an old fellow from whom we bought our axe handles. There was no trade in the place—regular woods, you know—and I did not expect to stay more than a few hours at the most, especially as it was in the middle of winter, and with no decent hotel in the place. I found the old fellow's place all right—queer old shop—and after we had settled the business on hand I started to go, intending to catch the one afternoon train; but he stopped me and invited me to stay overnight and join with him in a bear hunt on the morrow. Of course I stopped, for if there is one thing that I like more than another (and there is), it is skating across the snow, hot on the trail for bears. I ——"

One of the party interrupted: "Sure it was not a cow or chipmunck, or something of that kind you were after?"

"It was bear, straight bear; suppose you will say next that I never saw one.

"Well, the next morning we started out with a rifle and an old breechloader. We were not an hour's distance from the town when we struck a fresh trail, which must have been made that morning, as it had snowed lightly during the night. We kept on for about an hour longer, following the trail, which led us to a steep cliff, and we had a slippery time climbing up. The old man was carrying the rifle and he also had the shot for the breechloader which I carried. We had just reached the top when by some mishap he slipped and down went the rifle and shot to the bottom of the cliff into a deep brook. Almost at the same moment we spied bruin making for us. There was no time to lose, so I drew the old breech-loader to my shoulder and fired. The shot missed, and on came the bear.

"'There is no more shot. We'd better run,' shouted the old man.

"Suddenly I bethought myself I had plenty of powder and in my pocket was a package of our justly celebrated wire nails. I hastily loaded the gun with them, and as the bear was passing a large tree I took aim and fired. The bear came to a sudden stop; but he did not seem hurt, and I prepared to load up again, when the old man burst out laughing.

"'Confound it,' he said. 'Blamed if his tail ain't nailed to the tree.'"

"I looked, and was astonished to see the bear tugging away endeavoring to free himself. The nails had struck him as he was passing the tree and his tail was firmly nailed to the bark. Well, we went up and dispatched him with a knife; but it took us nearly an hour to extract the nails, and I have them yet, which proves the truth of my——"

"Joe," interrupted one of the crowd, "Joe, did you ever read the story about George Washington and the cherry tree?"

"Yes."

"Well, read it again."—Theodore in Iron Age.

ADVERTISING SAWS.

Don't think that because you put your money into print you're bound to get it back. Much depends on the print and where it is printed.

"What may words say, and what may words not say." In advertising it's not so much what they say as how they're said.

Everybody's willing to give a prospective advertiser some good advice, but will ever any of them take their own medicine when it comes to spending their own money?

Catching the eye in the show window doesn't always sell the goods. A smart talker is wanted inside to clinch the sale. Apply this to an advertisement.—Business.

UNEXPECTED IN THE FOUNDRY.

The subjoined paper was read at the U. S. Western Foundrymen's Association by Thomas D. West:

In a sense the whole day's routine of a foundry manager may be said to be a battle with emergencies or the unexpected; for from the moment he steps into the shop until he leaves, the unexpected is constantly rising to keep him perplexed and at his wits' ends to devise ways and means to overcome difficulties and get rid of obstacles. Of course, every tradesman thinks his trade the worst business going, and for one I do not desire to pursuade him differently, for to have to labor for a living at anything is acknowledged to be generally disliked. And there follow, by more truth than poetry, the comments of the foreman, who, when asked for a job by a man who said he was willing to work, replied, "No, my man, you are laboring under a delusion; it is not your willingness but necessity that compels you to work." And from my experience in the foundry I feel safe in saying that it is not love for labor that holds the founder in harness. I wish to be charitable to all trades, but I do feel justified in saying that the founder's lot is one of the worst, and I have often heard the heads of manufacturing plants, embracing a dozen trades, intimate that the foundryman's lot in life was the most perplexing and arduous of any trade they knew. Whether such be true or not, foundry managers know they are annoyed and worried so often that life seems little worth living for, mostly on account of the different emergencies constantly ensuing in their daily labors. To lessen the burden of such we can be of much assistance to each other by a recital of our trials and the way they are overcome. I believe there is not a founder living but has had some exceptional experience with the unexpected, which, if related, would be sure to benefit some of our benighted tradesmen. For these monthly meetings there is no member but could cite some experience with the unexpected and assist in making the meetings a success. As a starter for myself, I will offer for discussion a little of the unexpected in cupola practice, and will condense the matter as much as practicable; for with these class meeting chats, as they might be called, I think it well they be limited so as to give all members a chance and have ample time left for discussion. It is through the interchange of ideas and experience that the greatest benefit should be derived from such a meeting of practical men. My little chat upon the cupola I will present in the form of a query for discussion, hoping others will follow with their ideas and experience, stating what they would advise in the case of a bunged up cupola at bottom drop. The following is the course practiced by the writer:

Often through carelessness or ignorant management, and through use of poor fuel and undesirable irons, as well as by running a cupola beyond its capacity, it will become "bunged up" so as to stop melting. When the bottom is dropped the cupola may be left holding half its charging height in fuel and iron, and if it cannot be got to drop by poking at the tuyeres, the tendency is for air, which could not get through the bunged tuyeres to get up after the bottom drops, through the porous centre, and cause combustion of fuel sufficient to bring on melting of the iron for awhile. The droppings of this tends to form a cake or bridge of iron, fuel and slag mixed, which can so completely bung up a cupola as to cause a shutdown for a day to clean the cupola out. to prevent such occurrences there must be active work from the moment it is seen that the cupola will not drop. In my practice, we first try to see what can be accomplished by poking the tuyeres with iron and steel bars, sometimes using a sledge on the same, if in five minutes after bottom drop the same course is found to not be effective. Water is then thrown into the cupola to stop as soon as possible all melting of the iron, and cool off the cupola. This is, of course, a little destructive to the brick lining and is used only as a last resort, but with care in throwing it in, little need be splashed against the lining. A few pailfuls of water soon stops all melting and cools the top of the hanging stock sufficient to admit of men inserting a long heavy bar from the charging door into the centre of the bunged stock; and by pounding upon the top of the bar with a heavy sledge the chances are very favorable of driving it through the stock and thereby getting a hole started, which, if followed up, or enlarged by another bar or pulling it up by means of a light chain or rope tied to it, a hole large enough to admit a man is soon made. This, when accomplished, is all that is necessary to further labor for, until the cupola is cool enough for a man to enter and complete the work.

By the above practice I have seen some very badly "bunged up" cupolas cleaned without shutting down for a day, retarding the next day's heat, or making that night one of torture and worry for the foundry management.

MANGANESE STEEL.

Manganese steel, an invention of R. A. Hadfield, Sheffield, says Vulcan in Ironmonger, is likely to be put to many useful purposes in the near future. The alloy contains about 87 per cent. of iron, and is only slightly magnetic. Dredger-pins are now being largely made of this material. I was shown this week two of these articles, one manufactured from ordinary carbon steel, the other being composed of manganese steel. The first named, after three months' wear, was reduced over one inch in diameter, whereas the manganese steel pin, after nine months' wear, was not worn more than 1-8 inch. For other parts of dredgers, and for parts of crushing machinery, manganese steel has been found very serviceable. The Hadfield Company are showing a pair of edge-rings, which, after crushing 400 tons, do not exhibit so much wear as a pair of cast-iron rings that have crushed about 100 tons of the same material. The material has been used by some electricians for resistance coils, as it offers nearly twice as much resistance to the electric current as platinoid or German silver.

NOT THE STOVE'S FAULT.

There is an abundance of room for improvement in the entire field of combustion when coal is the material to consume, and, when once this problem is fully solved, it will follow that the trouble was, where it nearly always is, in an ignorance of first principles. Where fires are used only in a small way, and where the consumption of fuel is small much may be accomplished by good, sharp observation, and that observation then reduced to good common sense practice. This will never be done by the careless and indifferent servant. It will never be done by the lazy fireman, whose only calculation consists in figuring how few times he can contrive to open his furnace door and shovel in a smothering pile of fresh fuel, which action is always attested by a volcano of smoke. A reform in this matter of smoke production will then not come at once, as if it were the putting on of a new garment, but it will only come with a higher intelligence on the nature of fire and a general recognition of the fact that smoke-making is an indication of ignorance, of inexcusable waste and of disregard of the rights of the community in general. When the cost resulting from smoke is fully considered in all its various bearings, it will become clear that the clumsy methods of burning coal which are now in vogue, are not as cheap as they are supposed to be. Here, also, as everywhere, it will be found that ignorance is expensive, and that knowledge only is real power.—Exchange.

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REGULATOR FOR GAS STOVES.

A new regulator for gas stoves has lately been invented by Herr Porges of Vienna, and has been made by the firm of Robert Kutscher, of Leipzig. According to an issue of the Journal fur Gasbeleuchtung, it depends upon the differing pressures of saturated vapor (that is, vapor in contact with its liquid) at different temperatures. A little closed metalic vessel contains a liquid which boils at a predetermined temperature, say 54 deg. F. If the temperature of the room exceeds this the liquid begins to boil, the vessel dilates and works certain mechanism which shuts of the gas. The flames burn low until the temperature falls below 54 deg. F.; then the liquid in the vessel condenses, the vessel itself returns to its former dimensions, and the gas again flows freely. But by the use of a regulating screw the tension upon the vessel can be modified, or pressure put upon it, so that the contained fluid will now boil at some other predetermined temperature. Then the room will have to attain the new temperature before the gas is shut off. In practice the flame comes to a size at which it is just able to keep the liquid in the vessel at the boil, and no more; so the flame remains a constant size (this size being larger in cold weather than in warm), and the temperature of the room is maintained uniform.

THE USE OF VISE CLAMPS.

Vise clamps are, under certain conditions, an unavoidable and regretable necessity, writes a correspondent of the American Machinist, as in the case of a great deal of vise work where a workman is always vibrating between chipping and draw filing. I can only say get the best, and the best I have used up to date are copper. The great objection I have found with clamps of every description is the fact that if they are hard enough to stand the pressure they are soft enough to allow filings of all kinds to inbed themselves in them, and in a short time are almost as bad as the vise itself to deface finished work. So, for the last five or six years, I have made a practice of grinding the teeth out of every vise that I have used. It can be done by hand on an ordinary emery wheel by using proper care. I grind the jaw faces as near correct as possible (they are often not so when new); let them come together first at the upper edge if any advantage is given. You will then have two hard flat surfaces that no work will injure, and that will not injure the work, no matter what the character or how tight it is held, within reason. Since I have adopted this method clamps are a reminiscence with me and only serve to show me how little I knew about handling tool work to advantage. The toothless vise is a never ending source of satisfaction to me, and I think the manufacturers of vises would do well to make them both ways and advertise them as such, for there is nothing else in it for the tool maker or any mechanic who values his time and his work.

THE COLLECTION OF ACCOUNTS.

The question, "What would be the best method of getting in accounts," is one that I am sure has troubled the mind of every business man at some time or another, and I do not doubt many have found it a very difficult one to answer. However, I hope that, through your kindness in offering prizes for the best essays, and allowing these to appear in your journal, some may be assisted to a better method of getting in money. For without it little can be done in business. I will take, in the first place, journey accounts. They, as a rule, are not easily got in between journeys. Unless the customer pays on journey it is difficult to get him to remit before the traveller is round again. If you are not continually sending on his account, it seems to escape his memory. A good traveller is an important factor in the collection of journey accounts. He requires a good deal of tact, for he will scarcely find two customers alike; some are so precise, others exactly the opposite. With one the account is the first thing asked for, and must be settled before he thinks of ordering; another orders first, then looks after the account; while some do not seem to think of asking for their account at all. Now, the traveller must be able to adapt himself to all classes, as the chances are that the next time he calls he wil not have any account to collect from the customer. Although a good traveller is an important factor in the collection of accounts, all does not rest on his shoulders. The clerk who writes out the accounts can assist greatly in getting them in, by being careful that all returns of empty boxes are properly credited; for to the customer who is ready with his cash it is often a source of annoyance to find when his account is presented that some empty case has not been credited, or some small article he returned has not been deducted. Of course, the traveller knows nothing about this matter; perhaps he cannot allow it to be kept off the account without writing home, and having it explained to him; and even if he has the power and offers to deduct it at once, the customer is apt to have a dissatisfied feeling, the depth of which greatly depends on the temperament of the party who is settling the account. Then, on the other hand, it makes a splendid excuse for a customer who wishes his account to stand over. Do what the traveller may, a man of this sort must see the whole matter made right by "the house," and as likely as not when the traveller calls again the account is still standing and he has the whole matter again rehearsed to him.

I have already mentioned that it is difficult in getting in accounts between the journeys, but I think the best results are obtained by having a regular system of rendering back-standing accounts at stated intervals. If the journeys are half-yearly, send out a note of the accounts that are not paid two months after the traveller has called, merely drawing customers' attention to the same. This generally brings in a few. Then render those still outstanding after other two months have elapsed, and this time remind them that their last journey account is still unpaid, and ask for a remittance, as the time is coming round for the traveller calling, when they will have two accounts to pay. Of course, one has to use his own judgment as to what he may write to certain customers. Here, again, the benefit of a good clerk comes in. I think it is advisable that the clerk who makes up the journey accounts should send on these statements. There are some firms, having a large staff of clerks, where the writing of these accounts is given to some of the younger members of the staff. It certainly is not difficult to write them out, but the customers get to know the handwriting, and may fancy that their accounts are not so carefully looked after as when they find them always written by the same hand.

If you find you are obliged to hand any of your accounts to an agent for collection, and threaten your customer with the same if the account is not paid within a certain time, stand to your word. Should he send you an excuse be sure it is a very good one before you allow him more time. I believe many tradesmen have lost accounts through not being firm after they have threatened.

I will now take town accounts with private customers. Half-yearly accounts seem to take best, and I find the majority of these are paid before the year is out. Some there are who will allow one account to meet the other, and very often it is those who keep up most style and whom one feels least inclined to push for their account. If they make a regular practice of taking 12 months credit, you can put a little extra profit on your goods. But if they take longer credit than that, it will pay you to be firm with them, even though they should take offence. You are better without their custom than to be kept waiting so long for your money. Profits cannot stand it now.

Then there are the joiners, blacksmiths, etc. They, as a rule, are easier looked after, for if they allow their account to become overdue, you are almost sure to miss them coming into the shop. They are often in for odds and ends, and you soon notice if they are away for a day or two. Of course, this is a warning that it is time you were on their track, for you may be sure they are buying from some of your neighbors and paying cash, while if you call regularly on them till you get your account, they are not long in coming back. In the last place, there is a class of customers from whom it is doubtful whether you can ever get your money if you give credit. This class you are best to be candid with. Tell them at once that you will give them your best terms for cash, but that you really cannot see your way to give them credit. I know this is easier said than done, but I also know cases where it has been tried, and proved to be the best policy. I do not deny that you may have to listen to a good deal of impertinence in such cases, but so long as you are convinced that you are doing what is just to your customer and yourself, you do not need to mind anything he may say. You may not see him for some time, but if you sell at fair profits and are always honest and obliging, he will find his way back, paying cash for what he purchases. The fact of your refusing him credit may influence him to trust your honesty more than ever for having been so straightforward. A business man requries at all times to be civil and courteous to his customers. I do not think any man, be he ever so unwilling to pay, will ever be forced to do so by getting impertinent letters. It is a true saying, "Civility is worth much and costs little."—Sarah H. Alexander in London Ironmonger.

The steamer Bonavista, of the Black Diamond line, sailed from Montreal on Friday last for St. John's, Nfld., with 21 head of cattle and 20 sheep, which are being shipped as an experiment. This is the first shipment of Canadian cattle to Newfoundland, and the result will be watched with interest by cattle shippers. The cattle were butchers' stock, weighing on the average 1,150 pounds each, and the sheep averaged 150 pounds each. It will take the Bonavista about six days to reach St. John's, as she will call at several intermediate ports.

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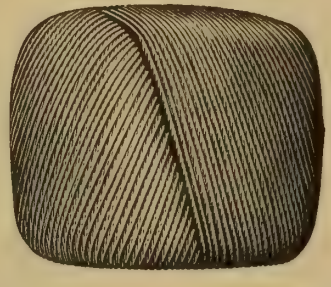

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SPECIAL IRON AND STEEL REPORT.

A Philadelphia despatch to the N. Y. Bulletin says: The foundry and general manufacturing requirements for iron and steel have not declined, but production is very largely curtailed. Pig iron is held in all markets at June prices. Finished products are moving from store as usual and at steady prices. Very few mills are running throughout the country. Southern iron production is falling off. Merchant steel, sheet iron nails and rods are active in Western markets, while throughout the East there is very little movement. Signs of greater autumn activity are numerous. Conditions are favorable for enlarging demand, but financial uncertainties check enterprise. Locomotive, car, ship and boat builders are very busy and machine shop work is abundant. There is nothing to indicate a lower range of iron and steel prices. The wages question has been practically adjusted.

PIG IRON PRODUCTION.

The Pittsburg American Manufacturer estimates that "the production of pig iron in the United States in the first half of 1893 was 4,582,708 tons, as compared with 4,769,683 tons in the first half of 1892, and with 4,387,317 tons in the second half of 1892. As will be seen this is a considerable falling off in the production as compared with a year ago, almost 4 per cent. Our production now is about equal to the production of the first half of 1890, when we made 4,560,513 tons. As make has fallen off very materially in the last month it is not probable that the production of the second half of 1893 will equal that of the second half of 1890. The production of pig iron in each half of 1890, 1891 and 1892 has been as follows:

Year.	First half.	Second Half.	Total.
1890..	4,560,513	4 643,190	9,202,703
1891..	3,368,107	4,911,763	8,279,870
1892..	3,769,683	4.387,317	9,157,000
1893..	4,583,708	.....	.....

NOVELTY FOR MOULDERS.

The Great Western Stove Works, Leavenworth, Kan., have, according to a contemporary, adopted a novel system of operations for moulders. The floors are a little larger than common. They have a gang of men who stake out the flasks, trim the castings and cut the sand for the moulders. One man does the work for about an average of seven floors. The moulders pay these men themselves, and the expense runs from 75 cents to $1.50 a week for each floor. The work takes the men about seven and a half hours. The blower is started about 3 p.m., and by 5.15 the heat is poured off, while the moulders have all quit work by 5.30. As soon as the pouring off begins, the shaking out starts in, and by 10 in the evening the work is all done, ready to cut the sand. The moulders can put in about one hour more work in moulding each day by this plan, and the extra work pays the cost of a man to fix up the floor for them. The moulder is usually tired out by the time the pouring off is finished, and he is in no condition to get at the hard and hot work of shaking out and trimming up his day's work. It was an innovation when started, but the moulders now would be almost induced to strike if an attempt was made to return to the old "time method."

COLLECTING PLUMBING BILLS.

The young plumber, when first starting in business usually has a strong feeling that the important part of his work is to get business and do his work in a mechanical way, says N. Y. Metal. In one sense this is all wrong, because it is overlooking the reason for a man's working. Young men usually love the business. They are fresh from their their trades or the trade school, and there is a pleasure in taking a contract and doing nice work. They have the inventor's satisfaction in carrying out ideas and producing something that will work. Now, the young man's object in life, or, rather, his object in business life, is to earn money. We say this advisedly —earn money, instead of make money. He learns his trade. He establishes his shop. He gets his customers. He does the work they bring in solely for the purpose of earning money. A thousand and one considerations are involved in this. When a man comes in to give a contract about whose character the young business man is doubtful, it is no use for him to be too eager to close the bargain. It is, of course, vastly easier to assume that his customer is all right in every particular, and will pay promptly when the time comes, than it is to collect a debt from a man whose interest is in fleecing all to whom he is indebted. Before taking a contract, it will pay, and pay well, to investigate your customer's antecedents; to find out who is the responsible man, who is furnishing the money; to find out from other people who have done work for him how promptly they received their pay on the work.

Just at this moment a case comes to mind where a young man took a contract for a very nice and a very big house in the suburbs of New York City. He knew nothing in regard to his customer except that he was the reputed owner of a lot of land with 200 feet frontage on a corner, and was intending to put up a fine house. The contract was made in the usual way, and when time came for the first payment, in the sweetest manner imaginable, the gentleman explained that he had been delayed in the receipt of certain funds, and that it was impossible for him to pay promptly. Could he have a few days' extension of time? By the middle of the week following he would send a check. But the week following brought no check, nor the week after. Then, with some difficulty, another interview was secured, and profuse apologies for not having the money on time and a detailed account was given of the delay, and the reason why certain other collections which were expected could not be made. On the strength of this the young man went on until the second payment became due, and then was put off with a very small proportion of the whole—perhaps $25 or $50.

About this time carpenters, masons and some other workmen about the place began to see that there was much work and little money in sight. After consultation it was found that the only way to obtain any money for any of the work which had been performed on the building was to complete it at their own expense, and then file liens to cover the outlay. The young man, illy able to carry on the work, advanced some $300 and completed his plumbing work. While he was doing this he found that the reputed owner's equity in the building amounted to a mere nothing; that the owner of the land was the only man who was at all responsible. The plumber's contracts were not worth the paper on which they were written. After waiting till the time limit for filing the lien had nearly expired, a very sharp conference with the man who claimed to be the owner produced the required amount of money to settle the plumbing bill. The others, however, were obliged to file liens in order to save themselves. In this case, a day's investigation of the ownership of the property, the character of the man who was making the contracts, and the general probability of getting paid, would have settled the question, and the young man would have saved his interest, many days' time, and have had a reasonable return for his investigation, instead of which he came out of a contract with little more than a day's wages.

Sometimes a notorious "skin" builder will come to a beginner and ask him to estimate on a new piece of work. It is large. There is a little flattery in being selected and asked to do the thing, instead of having to run after it, and the young man (in spite of what he knows) will take a contract from a sharper to do a large quantity of work. This is all wrong. The young man starting in business cannot afford to pit his imperfect knowledge of business practices and mercantile law against that of the man whose reputation is bad, and who is, according to general knowledge, not only dishonest but unscrupulously so. A man cannot deal with this class of contractors with safety. He may be glad to have the work, but it will be cheaper to be idle than to collect money by means of a law suit.

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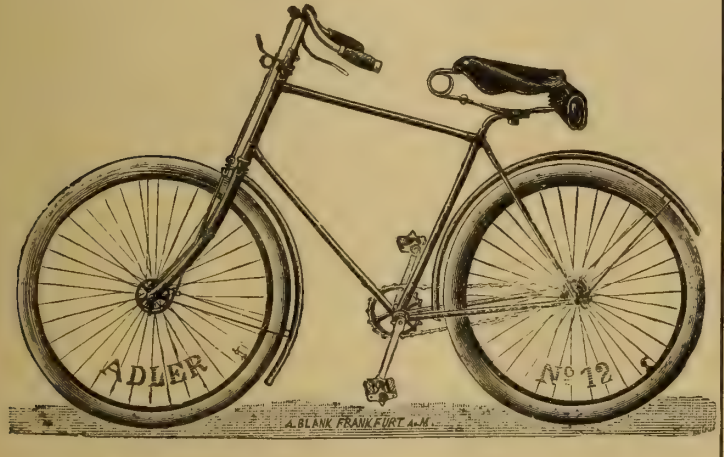
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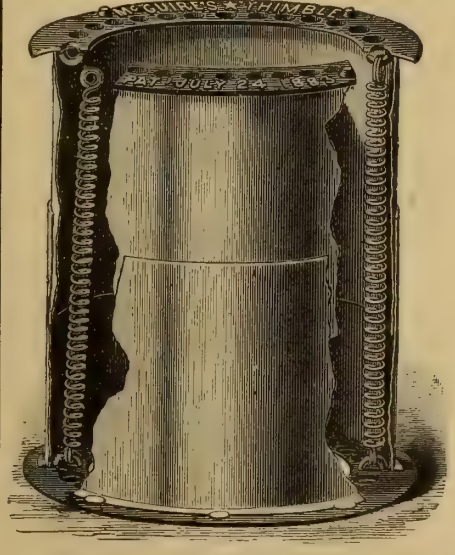
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TRADE CHAT

[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Tuesday.]

The G.T.R. car boat, Great Western, at Windsor, is to be rebuilt. The work will take four months and cost $35,000.

A rich find of an iron capped galena ledge is reported from Screiber Creek, in the Slocan district, British Columbia.

The Sawyer-Massey Company is being sued by Robert Haggart for the alleged infringement of a traction engine patent.

During last month France imported from Great Britain cutlery to the value of £7,692, as compared with £5,414 in 1892.

The Muskoka and Georgian Bay Navition Co.'s new steamer Madora made her initial trip from Gravenhurst wharf on Monday week last.

Incorporation is granted to the Port Dalhousie, St. Catharines and Thorold Electric Street Railway Company, limited, the capital stock being $100,000.

The Trogan Coupler Company, Limited, with a capital stock of $300,000, has been incorporated by letters patent. Most of the incorporators are Montrealers.

The Carter Motor Co., of Stratford, limited, is incorporated, with a capital stock of $300,000, to manufacture the Carter motor and the Carter rotary engine.

The Ontario Coal Company, which failed with big liabilities, owing half a million dollars to banks, some time ago, is offering a compromise at 45 cents on the dollar.

H. Robinson, general merchant, Markham, has sold out to J. W. Selby. He has been in business about 25 years, and his successor was at one time with Sloan & Crowther.

Bert Saunders, a young Englishman, employed by Drummond, McCall & Co., car wheel manufacturers, Lachine, has been missing since July 1, and his accounts are short $150.

A Tilsonburg despatch says a member of the McClary Stove Manufacturing Co. of London, was in town Friday making enquiries in regard to the securing of the stove works there.

The city of Stratford has sold $125,000 consolidated debt debentures, bearing interest at 4 1-4 per cent., to G. A. Stinson, of Toronto, at a premium of 1 1-4 per cent and accrued interest.

The losses by fires in Canada and the United States during June aggregated $16,344,950, according to statistics compiled by N. Y. Bulletin. For the same month a year ago the figures were $9,265,550.

The following new post offices were established in Ontario on July 1: Augsburg, North Renfrew; Bronson, North Hastings; Gilead, East Hastings; Rapid River, Algoma; Renwick, Kent; Rosenthan, South Renfrew.

Crop reports collected by wire from all the leading points in Manitoba and the Territories show that wheat is mostly all headed out, and in an excellent state of advancement. There is plenty of rain and the farmers are in good humor over the excellent prospects.

It is pleasant in these times of contraction of business and commercial disaster to meet facts like that which follows: The sales of Magnolia Metal have been so enormous, and the business so prosperous in the last year that the Magnolia Metal Co.'s stock has been recently made $1,000,000.

Kent Bros., of Kingston, have refused a price for 5,000 tons of talc which can be got on their property in the county of Hastings. A capitalist of Gouverneur, N.Y., who has had a great deal of experience in the talc business, will operate a mill in Hastings county and grind talc for the New York market if he can get a suitable site.

The authorities of the Canadian Pacific Railway have been considering ways of utilizing the natural gas discovered at Medicine Hat, and tests will be made of its uses in lighting, fires, etc., of locomotives in the round-house there. The supply appears to be inexhaustible, as the pressure is equally as strong to-day as when the gas was first discovered.

State employment of convicts in road making, which has been tried in New York State, is very generally approved and recommended for adoption as a step towards obtaining better country roads, and also because this occupation will not compete with free labor, as in the case with other prison industries.

The receipts of cattle at Toronto continue heavy, notwithstanding the unsatisfactory state of the markets. For the first six months of this year the cattle entered at the Western Cattle Market were 42,314, against 39,613 for the corresponding period last year. There were 9,286 sheep and 32,732 hogs received up to the end of June.

The Brown segmental wire gun was tested at Sandy Hook the other day with a charge of 41 pounds of powder. The muzzle velocity was over 2,460 feet per second, and the pressure 43,000 pounds. This is the best result ever obtained with brown powder from any gun in the world.

Oakley & Holmes, of Toronto, have secured the brick and stonework contract for the General Electric Company's power house on York Street west, and Tambling & Jones the carpentry. The London bricklayers were almost $1,000 ahead of the Toronto firm for the work. —Advertiser, London.

A new form of fish hook has been patented in England. It consists in having a barb on the outside, exactly opposite to the usual position. Superior penetration and equal holding—i.e., retaining power is claimed for it, but, a contemporary says, it is doubtful if it will become popular.

The China Creek gold mine at Alberni is now being worked and stated to show a maximum of $190 to the ton and a minimum of $40. Mr. J. Dunsmuir and other Victoria capitalists are to inspect the mine, doubtless with a view to the possibility of taking stock in the venture.—News-Advertiser, Vancouver.

A correspondent of the Engineering and Mining Journal states that the method of separating copper from nickel, lately discovered by the Orford Company, viz., fusion of the mixed sulphides with salt cake and carbon, has been in use at the Haford Isha Works of H. H. Vivian & Co., Swansea, Wales, for the last 30 or 40 years, and is still in daily use there.

Whether the cement manufacturers of this country are not paying sufficient attention to the requirements of their foreign customers, or whether the productive capacity of foreign countries is being largely increased, it has unfortunately to be recorded that the export trade in cement has shown a serious falling off during the past few years.—Industries and Iron.

Camels are coming into use in large numbers in connection with the mining industries of South Africa, as they are found to be impervious to the insects and diseases which prove fatal to horses and bullocks in that country. In Australia, too, the camel is fast superseding other draft animals in the barren deserts of the interior.

A law has been passed in Ohio which declares that "all persons before entering into a contract with contractors to repair or erect buildings, shall require them to give bond equal to one half the contract price, to insure payment for labor and material." The law also makes any persons failing to require such bond liable for one-half of the debts incurred by the contractors and not paid by them.

Victoria's free imports last month were valued at $68,000, those dutiable at $158,558, or together $226,558, as compared with $240,144 of the same period last year. Duties collected amounted to to $66,112.57, as against $69,895.14 of June, 1892, showing a decrease of $2,782.57. The exports amounted to $161,005, as against $111,525 of June, 1892, thus showing a modest increase of $4,-



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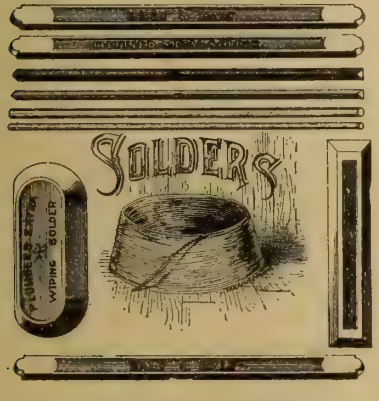


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480. Of these last month's exports from Victoria, $43,795 consisted of Canadian produce. As Chinese immigration (produced last month a revenue of $8,017, it is evident that large numbers of Celestials are now entering the Province.—News-Advertiser, Vancouver.

According to the Moniteur Industriel, the engineers of the principal coal mines of the Nord, in France, are studying the application of aluminum to the manufacture of cages, cables, etc. The difference in weight between aluminum and iron or steel is considerable, and consequently the use of the former would increase the load capacity; on the other hand, the continuous lowering of the price of the metal renders its use possible.

The nature and quantity of the water used are of influence on the setting of cement. Sea water retards the setting. Neat cement, gauged with sea water is, at first, stronger than when fresh water is used, but retrogrades after some months, Cement, made into mortar with sand admixture, shows no such tendency. The use of the sea water may delay its reaching its full strength, but this is attained after the lapse of about a year.

A despatch from Duluth says: Lake freights from this section are still dropping and have reached the lowest prices known. Wheat is being carried from Duluth to Buffalo at 1 1-4 cents a bushel, or the equivalent of 4 cents a ton on iron ore. Ore has actually been chartered from here at 60 cents to Lake Erie, which nets the vessels only 44. Only the very largest vessels can come out even on these freights, either for ore or wheat, and the smaller vessels are laid up.

The wages of glass workers on the Continent must be of a most beggarly description, or it would not be possible to retail the articles manufactured there at such low prices. A Birmingham firm was recently asked for an estimate for glass jars for confectioners' shops, and when this was made out it was found that the bare cost of labor was 30 per cent. more than a German house asked for the articles delivered free in London, with 5 per cent. discount for cash. The consequence of this state of things is such that some firms find it much more profitable to buy certain goods abroad than manufacture them.—Ironmonger.

The general financial disturbance and the low prices of iron ore have proved embarrassing to many of those who were attracted last year to the new Mesaba iron range in Minnesota by the fact that its deposits could be made available with but little and inexpensive preliminary work. Where marketable iron ore could be stripped and excavated with a steam shovel, the opportunities for explorers with small capital seemed good, and induced these to pay exorbitant royalties to the landowner. A single prosperous season would have established many of these miners and enabled them to go on; but the hard times came too soon and are driving them out and concentrating the ownership of the range in stronger hands. The capitalists who have taken up large tracts are, it is said, increasing their holdings and preparing to ship on an extensive scale when the ore market revives.—Engineering and Mining Journal.

A Board of Trade was successfully organized in Arnprior Friday evening. The following officers were elected: President, Claude McLachlin; vice-president, A. T. Hughton; secretary-treasurer, John A. Macdonald. Council—Mayor John Harvey, John Gillies (Braeside), John Gillies (Malloch's Mill), M. Galvin, John Tierney, Wm. Russell, Alex. Menzies, R. J. Tough, A. J. Campbell, Dr. A. Armstrong, Wm. C. McKay, B. V. Stafford and J. D. Lee.

Complaints have been made by merchants and others throughout Ontario of the alleged inability of their post offices to furnish the new large sized postal cards has elicited the information from the post office department at Ottawa that the Government contractor was turning out the new cards with all possible despatch, but the enormous demand all over the Dominion was still ahead of his ability to meet it, while the public refused to purchase the old cards. —Acton Free Press.

The Department of Finance has issued an interim statement of revenue and expenditure for the 12 months ending June 30 last. The revenue for the period in question is given as $37,183,255, as against $35,902,028 last year, or an increase of $1,281,000. The expenditure for the past year is placed at $30,652,653, as against $31,267,221, or a decrease of about $600,000. The nominal surplus at the present time is $6,530,603 as against$4,634,807, the amount recorded when the departmental statement was issued 12 months ago.

The output of logs from the Ottawa river and its tributaries is expected to be fully up to, if not over, the average this year. The estimate of the number of logs which have either come down or are on their way down the Ottawa to the Chaudiere is over two millions and a half. The Kippewa river is almost one mass of logs for two miles from its mouth and they are passing down to the main stream at the rate of about thirty or forty thousand logs a day. The counting of these logs is all done by one man, who, it is said, can count 30,000 logs a day with perfect ease, and when put to it can go forty thousand. His manner of keeping tally is somewhat original. He carries a small bag of beans slung over his shoulder, and attached to his waist is a box with a hole in the top. Every time he counts one hundred logs he takes a bean out of the bag and drops it in the box, and starts on another hundred, and when his day's work is done he counts the beans.

A Brantford despatch says: The city is just now enjoying a great industrial boom. The new bicycle factory is just about completed; the enlargement to the woollen mills is being rapidly pushed ahead; the Massey-Harris people have let the contract for an $8,000 addition to their works. Mr. W. Patterson, M.P., is nearly doubling the capacity of his works; the Dominion Cotton Company has leased power for the wincey mill with the idea of starting it up again with 150 hands, and the Waterous Engine Works Company intend to rebuild and greatly increase the number of their hands.

They are considering in England a bill to prevent the use of barbed wire for fences in roads, streets, lanes, and other thoroughfares. The object of this bill is "to empower any local authority or any person to serve notice in writing upon the owner or occupier of such land requiring him within a given time to take down and remove such barbed wire; if the occupier fails to comply with such notice, the local authority may apply to a Court of Summary Jurisdiction, which may, by summary order, direct such wire to be removed. Cleft oak or other solid fences, on or over which barbed wire may be fixed for the protection of the property enclosed," are exempted from the operations of this act.

Tracklaying for the first six months of 1893, according to figures collected by the Railway Age and the Railway Gazette, shows a decrease from the similar period of 1892, though they vary considerably in their figures, the first named giving a total of 1,015 miles laid on 95 lines in 30 states, and the second 890 miles laid in 34 states, a difference of 119 miles. Taking the larger of the totals, and recalling that the ratio of the mileage of new railway built in the first half of the year, as the Engineering News says, "is to that built during the last half as one is to two, we have about 3,000 miles for the total probable tracklaying of the year. This will bring the mileage of new track laid in 1893 below that of any other year since 1878, with the possible exception of 1885, when 3,000 miles were laid."

During the month of May the smelter of the Montana Ore Purchasing Company, of Butte, Mont., with the labor of 43 men, produced 777 tons of copper matte, containing 851,361 lbs. of copper. This is a new smelter, having been erected last winter. It hires a concentrator from the Boston & Montana company, in which it concentrates

part of its ores, running two tons into one. It has two O'Harra calcining furnaces, each 95 ft. long and 8 ft. wide in the clear. The machinery for stirring the ore and carrying it through the furnace protrudes at each end, making the length over all about 125 ft. Only one man is required to take care of these furnaces and fire them. From 40 to 60 tons of ore and concentrates are calcined daily in each furnace. The amount of sulphur left in the ore is between 5 and 6 per cent. The smelter has one blast and two reverberatory furnaces for reducing the ores.

The Consett Iron Company (Limited) have issued a notice to their steel workers that there will be a further reduction of 4½ per cent. in wages for the months of July, August and September. It may be interesting to explain, says an English exchange, as showing the gradual depression in trade, that the scale rose to its highest point in the autumn of 1891, when the wages at Consett were 17½ per cent. above the standard rate. The first reduction (7½ per cent.) took place from January, 1892, and the scale has steadily gone down by 2½ per cent. instalments up to the present time; and the rate for the next three months is 2½ per cent. lower than ever prevailed under the scale. Had it not been for the fact that the scale was renewed four years ago on a basis of 2½ per cent. beyond the original scale, the current rate of wages would have been 5 per cent. lower than they ever were under the present arrangement. The millmen are greatly disappointed at having to submit to a further reduction; but as an improvement of trade has lately set in, it is confidently anticipated that the next return will show an increase of wages.

ALGOMA NICKEL MINES.

We have had more capitalists, experts and representative mining men visiting this district already this season than for the previous 12 months, writes a Sudbury correspondent of Engineering and Mining Journal. They were from England, France, New York, Philadelphia, Buffalo, Montreal, Duluth, Montana and other places. A local mining broker says that he has had several inquiries lately from some of the Western silver men, who may possibly turn their attention to nickel mining. Only for the financial troubles in the United States and England the sales of a number of nickel properties, which have been negotiated during the winter, would have been completed before now, and a good deal of new capital invested here. It is confidently expected, however, that these and other sales will be carried through, and also that the fine exhibits of the ores from this district at the World's Fair will induce a great many capitalists to come and see the mines.

The Copper Cliff, Evans, Blezard, Worthington and Murray mines are running full force, and the pay rolls for this month are the largest for a year. It is said that one of the companies has received more orders for matte recently than its present plant can turn out for the balance of the year.

VIEWS AND INTERVIEWS.

Well, the season is over for green wire cloth and it's a good thing," said a jobber Thursday as he heaved a sigh of relief, "because if it wasn't we should not be able to fill any more orders, although I suppose in another month or so, when we don't want it, we'll be able to get lots of it. This green wire cloth has been an interminable trouble all season, but now I hope there's an end to it."

* * *

"Well," remarked the representative of another firm, "if the manufacturers of green wire cloth in this country had stuck to those firms that had stucked to them in the past we would have got along pretty well, but you see when those mills were burned down on the other side they undertook to supply those who had hitherto been getting their stuff from the States. They had not the capacity to do this, and of course we had to go short with the rest of them. I tell you we feel pretty sore over it, and I know what I'll do next season even if I have to pay a few cents more," he concluded as he banged his hand on his desk and—on an upturned tack.

* * *

"We're having no end of trouble with these things," impatiently remarked a jobber to me as he touched a box of Mrs. Potts' sad irons with his toe. "Some time ago one of the manufacturers undertook to make a 14¼-lb. iron instead of the standard 16¼; and although he has stopped turning this weight out, there are still some of them on the market. Those houses who have them are naturally offering them at a lower figure than are we the 16¼-lb. one. Well, a good many retailers do not know that there are the two weights on the market. They know that they are offering lower and that is about all; and when our travelers quote prices they are not infrequently met with the remark: 'O, get away with you. Why, I can get them at such and such a price.' And this is what we're getting all the time. I'm about tired of it, and I think it is only right that the trade should just know exactly how matters stand."

* * *

"Yes, Paris green is ½c. dearer," said a jobber in reply to a query of mine, "and the market continues active. The demand has been enormous this spring, and I expect the total sales will be larger than they have been for years."

* * *

I had a brief chat with J. A. Milne of Eby, Blain & Co.'s the other day regarding his recent business trip up the lakes. "The crops on Manitoulin Island," he said in reply to a query of mine, "are looking well and the prospects for fall trade are favorable. You know Manitoulin Island is a great grazing country. Did I find many changes since my last trip? Well, in Gore Bay we found a number of changes. D. I. Miller has moved into a new store. John Mutchmor is occupying Miller's old stand. Jackson Bros. we found in Goodmurphy's old place. F. Jenning's, who was out of business for about a year, has again started up. Sandy Irving is also opening up in Gore Bay. On our return to Manitowaning we were sorry to hear of the death of a daughter of A. Nelson, a leading merchant there. She was about 19. There are two new stores and a hotel going up at Manitowaning. "Business at the Soo," added Mr. Milne as he again turned to his samples, "is good, and work on the canal is progressing rapidly." Mr. Milne refused to tell any fish stories. At least he said he hadn't any.

BYSTANDER.

PERSONAL MENTION.

Walter H. Cottingham, of Montreal, was in Toronto this week.

Among the country merchants who have been in the city the past week were: J. W. Fear, of J. W. Fear & Co., Waterloo; G. A. White, Trenton; Mr. Mcharry, of Lang & Mcharry, Port Perry; Mr. Hogg, of Hogg Bros., Oakwood; H. Keys, Weston; Mr. Paget, of Paget & Hays, Unionville; C. Mason, Richmond Hill.

HE RETURNED THE PACKAGE.

A representative of Hardware, in conversation some days since with Charles Morrill, whose saw sets are among the standard things the world over, learned something new about the details of business life. "There was brought back to me by express some days ago," said Mr. Morrill, "a package containing a saw set sold a western house in February, 1889. A letter came ahead of it, telling of its return. I was not long in deciding what to do. I declined the package, and wrote the house a letter, in which I said: 'For you to return it at this late date is a little questionable. I have refused to receive the package of the express company, and hope that it will be returned to you—a lesson of pure impudence, and as something unheard of in a commercial transaction.'"—N. Y. Hardware.

GET THE BEST – IT PAYS.

CENTRAL Business College

TORONTO AND STRATFORD.

$40 Was invested by Mr. D McGregor, of Clinton, Ont., in securing a commercial and shorthand education at our school three years ago. He is now employed in the Chicago and Rock Island Railway Offices, Chicago, at a salary of $1,000 per annum. Our graduates are always successful. Our schools are the largest, best equipped, most popular, and best business colleges in Canada. Catalogues Free. Location of Toronto School, Cor. Yonge and Gerrard.

SHAW & ELLIOTT, Principals.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, July 21, 1893.

HARDWARE.

There has been a fair volume of trade in iron and hardware during the past week, quite on a par with that of the previous week, in fact, and all the houses agree that business this season is fully up to the average. The demand for harvesting tools is falling off a little, but it has been on now for over a month, and some diminution in the demand was expected. On the other hand there is a better demand for heavy hardware, such as Canada plates, etc., while nails, horseshoes, etc., have received rather more attention, so that the one thing has offset the other. Payments are about the same, but the extreme tightness of money in speculative circles is causing some uneasiness, although it has not affected regular business circles at all as yet.

WIRE.—There have been quite a few lots of wire moved during the week, the Street Railway Company here, which is stringing a lot of new guard wires, etc., being a pretty heavy buyer recently in a wholesale way.

NAILS.—A fair demand is noted both for cut and wire nails on Western account, and a good aggregate lot of goods has gone up in that direction.

TACKS.—Small goods continue rather quiet as noted last week.

CHAIN.—We noted last week the shipment of some good lots of chain to the Pacific coast. No large sales have transpired this week.

TOOLS.—Demand for harvesting tools is falling off a trifle, but the volume of business in this connection is still of fair proportions.

CUTLERY.—Fair sorting orders for cutlery are noted again this week.

WARE.—Preserving kettles and utensils of a similar nature still attract attention with a good turnover of enamelled goods.

BUILDERS' SUPPLIES.—These rule quiet on the whole.

BINDER TWINE.—The demand for binder twine continues fair, and we quote prices as before on the basis of 8 3-4c. for Red Cap and 9 3-4c. for blue ribbon.

METALS.

The feeling in pig iron continues dull, but in other lines of heavy material business shows considerable improvement, as we have already noted last week. There have been sales of round lots of Canada plates, and the impression now prevails that bottom has been touched in prices at primary markets.

PIG IRON.—The market rules quiet, with prices much the same. We quote: Sommerlee, $18 to $18.25; Eglinton, $17 to $17.25; Carnbroe, $16.75 to $17; Siemen's No. 1, $18, and Langloam, $18.50.

BAR IRON.—This article has met with a fair enquiry at the mills at former values.

SCRAP IRON.—Business is quiet and prices are unchanged at $15 to $16 for No 1 wrought scrap.

TIN PLATES—Tin plates have furnished some good round transactions during the week on the basis of $3.15 to $3.20 for cokes. Charcoal is steady at $3.75 to $4.25.

CANADA PLATES.—These have been placed in round lots at $2.40 to $2.45.

TERNE PLATES.—Ternes continue as before at $7 to $7.50.

GALVANIZED IRON.—Without change at 4 3-4 to 5c. for No. 28 guage.

SHEET IRON.—Remains as quoted last week, $2.40.

HOOPS AND BANDS.—Business moderately active at $2.35.

COPPER.—Easy in tone, and, although 12 1-2c. is quoted, a round lot would get 11 3-4c.

TIN.—Steady and unchanged at 22 to 22 1-2c.

LEAD.—Featureless, with prices as before, $2.90 to $3.

ANTIMONY.—Dull and unchanged at 10 1-2 to 12c.

SPELTER.—Prices are unaltered at $4.75 to $5.

ZINC SHEETS.—Prices are as last quoted, at $5 to $5.50.

CEMENT.—The cement market is quiet and rather unprofitable to dealers at present. English brands are being offered at $1.95 to $2.05, and Belgium at $1.90 to $2 per cask ex ship. There is a fair demand for firebricks in medium sized lots, at prices ranging from $14 to $19 per 1,000 ex ship, according to brand and quality.

NAVAL STORES.—These rule dull and featureless. Turpentine is in fair demand at former prices. We quote: Turpentine, 47 to 48c.; resins, $2.50 to $5.00, according to brand; coal tar, $3.75 to $4; cotton waste, 5 1-2c. for colored and 7c. to 10c. for white; oakum, 5 1-2 to 7 1-2c., and cotton oakum, 10 to 12c.. Cordage, sisal, at 9 3-4c. for 7-16 and upwards, and 15c. for deep sea line. Pure manilla, 12c. for 7-16 and upwards, and 13c. for smaller sizes.

PAINTS AND OILS.—There has been a moderately fair business in dry leads, but the close price at which it is selling does not induce dealers to urge business very much. Linseed oil is rather firmer in tone owing to stronger advices from England. We quote: Choice brands white lead, Government standard, $4.75 to $5; No. 1, $4.50; No. 2, $4.25; No.3, $4; No. 4, $3.75; dry white lead, 4 3-4c.; red lead, pure, 4 1-4c.; No. 1, 4c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, round lots, raw, 60c., boiled, 63c.

GLASS.—Glass remains unchanged on the basis of $1.35 for first break, and putty in bulk continues at $1.85.

PETROLEUM.—The demand for petroleum is rather slow at the moment and prices on spot are not quotably changed, although refineries are still cutting. We quote Canadian at 11 1-2c. in shed in Montreal for round lots and 12 1-2c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c. in 10-barrel lots, 19 1-2c. in 5-barrel lots, and 19 1-4c. for single barrels, 2 per cent. off for cash; American benzine, 23c. to 25c.; Canadian benzine, 10 3-4c., Petrolea; 12 3-4c. Montreal.

MONTREAL TRADE NOTES.

Receipts of cement last week were light, only 9,000 casks, but stocks are ample.

Messrs. W. H. Cottingham & Co. are turning over large quantities of Paris green at present.

H. C. McLaren has filled another large order for Magnolia metal for bearings with the Royal Electric people.

Messrs. Wm. McNally & Co. sent out some round lots of English brands of

Refrigerators



Hardwood, Lined Galvanized Iron,

These are highly finished and each season has shown an increasing demand. This year we are also making a cheaper line in above style, so as to meet all requirements.

Galvanized Iron Eave Trough, 8 foot lengths.
In O. G., and Half Round Patterns.
Lithographed Tea Caddies and Signs.
Water Filters and Coolers.

We are getting out a very Handsome line of **Lithographed Stove Boards.**

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg and Vancouver.

1893 - HEATING SEASON - 1894

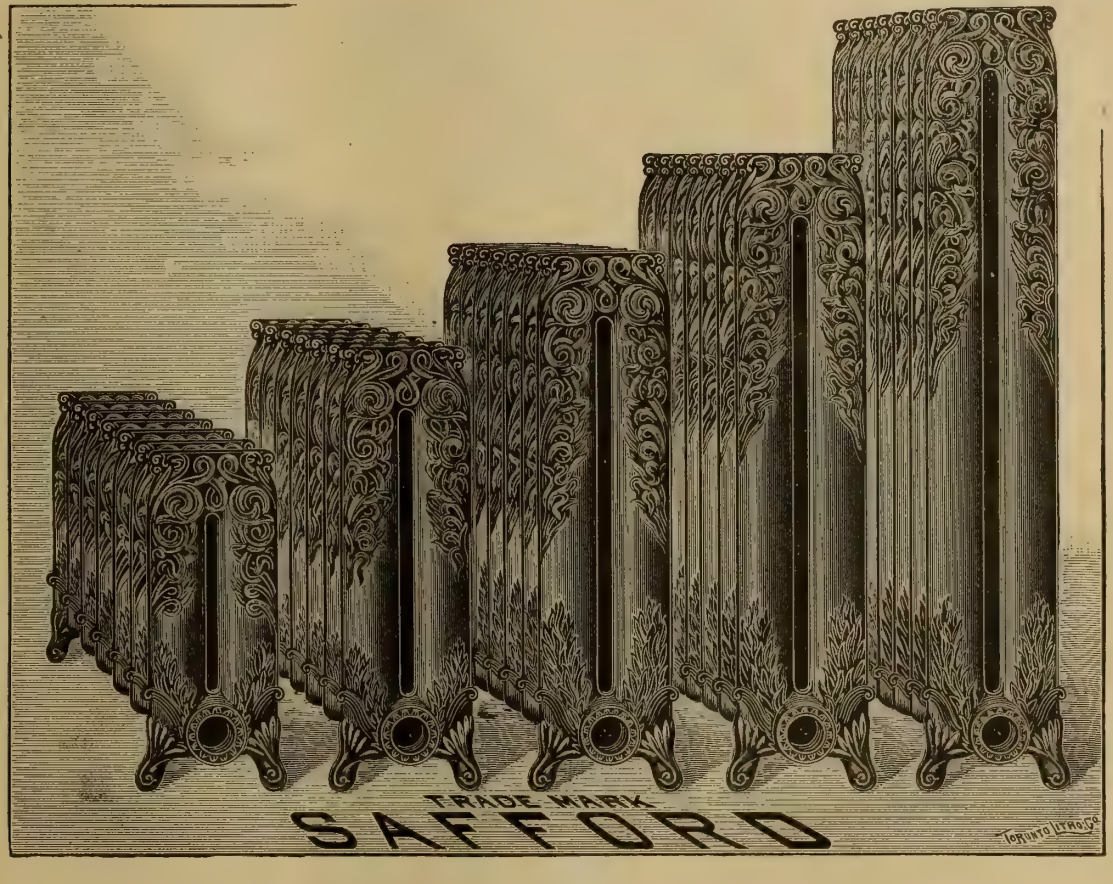
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TORONTO, ONT.

MONTREAL. QUEBEC. ST. JOHN, N.B. HAMILTON. WINNIPEG. VICTORIA, B.C.

MONTREAL Markets Continued.

cement to the west the other day. They go west of Hamilton.

Mr. MacMaster, of the Montreal Rolling Mills Co., reports improvement in the enquiry for bar iron.

The Canada Iron Furnace Co. have been shipping some good sized lots of pig iron west recently.

Painchaud, Squire & Co. have been filling some good sized orders on Western account this week.

There has been no further action in the big glass case yet. Mr. Thorpe expects it to come up in the course of a week or so.

Mr. Whimby, of Simpson, Hall, Miller & Co., who has just got back from a short trip, reports business in his line quiet.

TORONTO MARKETS.

TORONTO, July 21, 1893.

HARDWARE.

Trade this week is scarcely so brisk as last week, but this is of course to be expected at this season. At the same time the volume is larger than at the same time last year. But while business is brisker it is not so satisfactory from a monetary standpoint, prices being so much lower. Business at the moment is not confined to any two or three lines, but is general. A feature of the trade is an immense sorting up demand for rakes, hay forks, scythes, snaths and grain cradles. A good many freezers are also going out. Peerless and enamelled ware are still selling well, and much the same may be said of churns. There is a little doing in plumbers' and builders' supplies on country account, but there does not seem to be any improvement in the city. What is helping a good deal at the moment to keep up the volume of trade is a lively demand from British Columbia. Payments continue fair.

WIRE—Dull and without any interesting feature.

ROPE—Demand continues good for large sizes at unchanged prices.

BINDER TWINE—There is a good deal selling, and all made will probably find a market.

NAILS—A fair business is still being done, but trade in this line is without special feature to note.

CHAIN—Orders are being booked for cow chain, but business for immediate requirements in all lines is dull.

SPORTING GOODS — Business continues brisk in guns, rifles aud ammunition.

WARE—A great deal of peerless and enamelled ware is going out, but demand for brass kettles has fallen off.

PLUMBERS' AND BUILDERS' SUPPLIES—Trade is confined largely to country account, city wants still being light.

TOOLS—For garden tools the season is about over, but for such harvest tools as forks, rakes, scythes, snaths and grain cradles, the assorting up demand is enormous.

FREEZES—There are still a good many moving and it is likely that stocks will be pretty well cleaned up when the season closes.

GREEN WIRE CLOTH—Season is about over and the trade is no way sorry in view of the difficulty that has been experienced in getting supplies.

METALS.

The metal market remains about the same either in regard to prices or to volume of business. More enquiry is heard for hoops and a good many import orders are being taken for Canada plates. Some good sales are reported in iron pipe and good enquiries are heard for sheet iron. Zinc spelter is moving and lead is advancing.

PIG IRON—The market remains quiet, and we do not hear of any transactions.

Rogers, Brown & Co. report the Toronto pig iron market as follows : As is usual at this season of the year consumption is at the lowest ebb. Prices on Scotch and Canadian pig iron, as well as on that from the United States, are exceptionally low, in fact have beaten all records. Business is apparently up to the average in volume for the season. We quote for cash f. o. b. cars, Toronto, in bond: IX Foundry Strong Coke Iron, Lake Superior ore, $15.20; 2X Foundry Strong Coke Iron Lake Superior ore, $14.45; 2 Foundry Strong Coke Iron Lake Superior ore, $14.20; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17 45; Southern Soft 1, $13.60; Southern Soft 2, $13.10.

BAR IRON—A good business is still being done at the $1.95 basis.

HOOP IRON—Some large orders have been placed in this line during the week for import.

TIN PLATES—Dull and unchanged.

SHEET STEEL BRICK
ABSOLUTELY FIRE PROOF.
METALLIC ROOFING Co
CATALOGUE FREE M'F'RS TORONTO

TERNE PLATES—Demand is fair, and as quite a stock of them are coming in supplies are now ample.

CANADA PLATES—People are buying now in order to make up stocks before the busy season begins, but for immediate requirements there is nothing doing. Prices are unchanged, all dull being quoted at $2.65, half-half at $2.75, aad all bright at $2.80 to $3 per box.

GALVANIZED IRON—Trade is seasonable and prices unchanged at 5 to 5¾c. for Queen's Head and Cordon brands.

IRON PIPE—Some good sales are being made at unchanged prices.

CORRUGATED IRON—There is not much doing, and the idea as to price is 5 to 5½c.

INGOT TIN—There is not much of this line in the market, and demand is good ; 23 to 23½c. remains the idea for small lots, with large lots procurable at lower figures.

INGOT COPPER—There is not much doing and prices are unchanged, 12 to 12½c. being ordinarily quoted, but large lots would be shaded.

SHEET IRON—Quite a number of inquiries are heard for this article at 2¾ to 3c. for 20 to 28 guage.

ZINC SHEET—It continues to move more freely at 5¾c to 6c. for 5-cwt. casks and 6 to 6¼c. for part casks.

ZINC SHEETS—This article continues dull and unchanged at 3¾ to 5¾c.

LEAD—Is still advancing and orders are being placed for delivery later, presumably with the expectation that higher values will rule.

ANTIMONY—There is no change in prices and some small orders are going out at 12 to 12½c. for Cookson's and 11½ to 12c. for common.

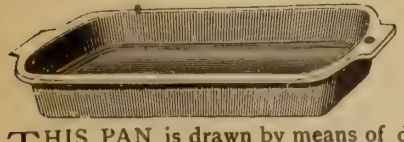
GLASS.

Trade is fair for the season in small orders. The time is approaching for the placing of orders for fall shipment, and if there is any change it will probably take place in a week or so ; $1.25 to $1.30 first break is still the idea as to price.

PAINTS AND OILS.

Trade still shows a disposition to smaller movement, but this is to be expected at this time of year. In white lead trade is quiet

"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

MARKETS—Continued.

and of a hand to mouth character, with prices unchanged at the 4¾c. basis. Prepared paints remain as before, quiet and featureless. Paris green is active and prices are ½c. higher at 13½ to 15½c. A fair business is being done in linseed oil. We quote as before at 60 to 62c. for raw and 63 to 65c. for boiled, although the makers still maintain the recent advance of 1c Turpentine is slightly easier in the South, but prices here have not as yet been affected, 45 to 57c. still being the range. Castor oil shows some renewed activity and prices are unchanged at 8 to 8½c. Glue is quiet and unchanged in price. Payments are fairly good.

OLD MATERIAL.

The market for old material is in a deplorable condition, and the existing monetary depression seem to bear with a greater weight upon the business each succeeding week. We quote as follows: Agricultural scrap, 60c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40 to 50c.; No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper, 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings and turnings, 10 to 15c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—The market in hides remains weak. Few car lots are being sold at 4¾c. Green is coming in at 4c. for No. 1 and 3c. for No. 2.

SKINS—Calfskins remain much the same. Veal dealers are paying 7c. for selected No. 1. No demand for cured. Lamb skins remain firm at 40c.; few full grown sheep skins are running at $1 to $1.50. Pelts are from 15 to 20c., having dropped 5c. during the week.

WOOL.—A few round lots are moving at 17 to 18c. for selected combing. Large dealers say these prices are too high, as they leave no margin of profit to the dealers of domestic wools. United States wools have dropped down to a point that is fairly out, and compares favorably with our domestic wools As the anticipated change of the United States tariff has already been discounted, farmers and dealers in wool in Canada need not expect any rise in the price of wool by a reduction of duties. Foreign wools are in moderate demand, but not equal to the demand, as factories are running on full time the consumption of wool is large.

TALLOW—The tallow that is being offered is of an inferior quality and difficult to sell, the soap manufasturers not caring to buy country summer-rendered tallow. Several factories have closed down, as they cannot find a market for their productions at prices that will pay, and if this goes on tallow will have to come down. Dealers are paying 5c. for rendered and selling at 5¾c; rough is unchanged at 2c.

PETROLEUM.

The Petroleum Advertiser, in its weekly report, says: We are pleased to note this week a stronger feeling in crude values, and the signs of the times can be seen on our Oil Exchange, for where a good deal of apathy has been displayed for a long time past, one sees now enquiries made for large blocks of oil, with holders displaying an amount of confidence that was not observable a few weeks ago. A continuation of this policy means a hastening of that day of $1.50 oil which is now dawning. Activity in refined continues very good for the time of year, although shipments have improved for illuminating oils the past week, it can hardly be said that the market has advanced beyond 10c. car lots. The market to-day may really be said to be very sympathetic, each refiner watching the other, and manifesting, as a rule, a desire to await the course of events, and does not launch out into the cutting business, and there seems to be a general desire on the part of manufacturers to decline quotations for future deliveries, except at advanced figures. The disposition among refiners, we are informed, is to hold oil for higher figures for the last half of September, in car lots, but the free offers to dealers of five and ten barrel lots at 10½c. has had the effect to disturb values.

MARKET NOTES.

Prices are said to be stiffening a little in England.

Paris green is ½c. higher at 13½ to 15½c.

H. S. Howland, Sons & Co. report increasing sales of Schultze smokeless gunpowder. This powder does not require to be tested, having long got beyond the experimental stage. It is proved by all who use it to be the best sporting powder used. They advise their customers to place orders in good time and avoid any chance of disappointment.

M. & L. Samuel, Benjamin & Co. report a good sorting-up demand for harvest tools.

The Starr Manufacturing Co. (Ltd.), of Halifax, N.S., have issued their catalogue for 1893. It is got up neat and in handy size, and is illustrated with the different styles of skates manufactured by this firm. Notwithstanding the general depression in trade the Starr Co. report that there skate business is good and far ahead of any thing for years. "The sales of the Starr skate," they write, "which we are this year introducing, are most gratifying, exceeding our anticipations. The trade have 'caught on' surprisingly."

One of the neatest and most attractive things in the way of sample cards of prepared paints has just been issued to the trade by Walter H. Cottingham & Co. of Montreal. It contains 54 different colors and tints of Blundel, Spence & Co's art enameled paints for which Cottingham & Co. are sole agents in Canada. Each tint is let into an indention in the card, presenting to the eye a pretty combination of what looks like many colored round enamelled chips.

BUSINESS CHANCES.

Advertisements inserted under this heading two cent per word each insertion.

WANTED—HARDWARE TRAVELLERS with responsible houses, to carry a small side line, not in Hardware line, but useful to hardware trade. Will probably increase trade in other lines and be a convenience to your customers. All communications confidential. Address, W. M. Titus, Box 1092, St. Thomas, Ont.

LAMPS LARGEST STOCK GREATEST VARIETY and Lowest Prices in Canada.

Every dealer should see our samples before placing their orders. If you cannot wait for our travellers, send for catalogue and price list. We are sole agents in Canada for the CLARK BROS. LAMP CO, of Trenton, who are the largest manufacturers of Vase, Banquet, and Hanging Lamps in the world.

ALL NEW LINES. NO OLD STOCK.

JAMES A. SKINNER & CO.
TORONTO -:- and -:- VANCOUVER

GAS, ELECTRIC, AND COMBINATION
Fixtures

Of English, Canadian, and American designs. . .

Globes and Shades

Staple Brackets and Gas Fittings. Select stock of above always on hand.

Jas. Barwell, 88 Bay St., Toronto

SHOWROOMS OF JAS. BARWELL, SONS & CO., Birmingham, Eng.

Drawings and Estimates on application.

CEMENT..

7,000 Barrels of

GENUINE WHITE'S

and other best London Brands in stock and to arrive.

ALSO

FIRE BRICK, DRAIN PIPES,

Best Quality and Lowest Prices.

F. HYDE & CO.

31 Wellington Street.
MONTREAL



"BUILD TO-DAY THEN, STRONG AND SURE, WITH A FIRM AND AMPLE BASE." —Longfellow.

DO YOU?

WISH THUS TO BUILD, an advertisement in the CONTRACT-RECORD, TORONTO will bring you tenders from the best contractors.

AMERICAN MARKETS.

New York, July 21, 1893.

PIG TIN.—Speculative operations were on a smaller scale, and negotiations were carried on in a very conservative way, suggestive of extra caution on the part of leading traders. In point of fact, there seemed to have been very little attempt in the direction of doing anything more than evening up on old deals and switching contracts from current month to later deliveries. On actual sales prices did not go below those touched Monday, but evidences of softness and some bear pressure were visible, and the market fails as yet to get into good form. Sales reported for the day included 100 tons July delivery, 19c.; 10 tons September delivery, 19 1-2c.

COPPER.—The market is still a very narrow one, and, judging from dealings between brokers and consumers, too slim to count as a factor. What there may be doing direct between leading producers and consumers is problematical, but the little information gained on that goes to show that the volume is by no means up to previous expectations. Along with the dullness there is something more than a faint suspicion of weakness in prices, and, altogether, a rather disappointing market. The quotations on Lake Superior ingot range between 10 1-4 and 10 1-2c., according to delivery and brand. Electrolytic may be secured at 10 1-4c., possibly at 1-8 or secured at 10 1-4c., possibly at 1-8 or 1-4c. less where particularly desirable orders are involved, and 9 7-8 to 10 1-8c. would seem to fairly cover the range on ordinary casting stock.

PIG LEAD.—There was fairly liberal offering of common domestic pig lead at 3.55c. landed here, immediate shipment, and a possibility that 3.50c. would have been accepted on net cash terms. In other words, the offering was sufficient to make a weak market for shipments this month and next, in the face of endeavors to establish a premium on shipments further ahead, and the demand failed to reflect any buying interest of sufficient volume to help the markets. Western advices were also exceedingly tame, quoting 3.25c. at St. Louis as top price. London cabled £10 for soft Spanish indicating a weaker market there also.

SPELTER.—Monday's reports of sales or offers of ordinary Western spelter at 4c were practically confirmed. As a matter of fact, some business was put through at that price, chiefly single car loads for early shipment. August and later shipments were held at a good premium, pending developments, but the lowest figures were given the preference, and the future apparently left to later consideration. St. Louis wire to the Metal Exchange quoted 3.87 1-2. The London cable was £17 12s. 6d. for good merchant brands.

ANTIMONY.—Jobbing distribution covers nearly the entire movement, and prices continue rather soft all along the line. Spot quotations are: 9 3-4 to 9 7-8c for Hallett's, 10 3-8 to 10 1-2c. for Cookson's, and 10 1-8 to 10 1-4c. for LX and similar brands.

TIN PLATE.—There is no improvement whatever in the demand for any class of plates, and business is not only confined chiefly to small lots, but hardly up to the average for this season of the year. Prices were not quoted lower, but continue rather weak.

PIG IRON.—The business passing in this quarter is still on a very moderate scale, and contrasts in no marked degree with the general run previously this week. Reduced output latterly serves to restrict selling pressure in some degree, but it is plain that supplies are more than sufficient to meet current needs of consumers, and that careful buyers can purchase as cheaply at the present time as they have previously this month. We quote: Northern brands at $14.50 to $15 for No. 1; $13.75 to $14.50 for No. 2; $12.25 to $12.50 for grey forge, at tidewater. Southern iron, same delivery, $13.75 to $14.50 for No. 1, $12.50 to $13.50 for No. 2; $12 to $12.25 for No. 3; $12.25 to $12.50 for No. 2 soft, and $12.75 to $13.25 for No. 1 soft. Grey forge remains at $11.75 to $12.50.

Spiegeleisen and ferro manganese are selling very slowly, and prices remain quite nominal. Sellers offer 80 per cent. ferro-manganese at $57; 20 per cent. spiegel at $25.50, and 10 and 12 per cent. ditto at $22.50 landed here.

Scotch pig iron is moving off in small quantities for early shipment from abroad, the demand continues slow, and there is no sign of wider outlet in theimmediate future. The cost laid down here is about $21.50 to $22 for Coltness, $20.50 to $21 for Summerlee and $19.50 to $20 for Eglinton.

MANUFACTURED IRON AND STEEL.—There has been no improvement in orders for rails or track material the past few days. Contracts for structural material continue moderate also, and prices for the same are still rather weak. Standard section rails are quoted at $29 f.o.b. mill, but light section rails are still relatively lower. In ordinary merchant iron and steel a moderate business is passing at barely steady prices.

OLD MATERIAL.—There is no improvement in the demand and sales are almost wholly of retail character. Iron tee rails are quoted at $16, steel rails at $13 to $14, and No. 1 wrought scrap at $15 f.o.b. Jersey City.

COST OF SPECIAL MACHINES.

A machine tool manufacturer whose product is known in every civilized country said recently that he had about decided that it did not pay to undertake to build a machine embodying new ideas, remarks Iron Age. Concerns having the requisite facilities are frequently requested to estimate on some large machine of special design, intended for a particular service. The machine is unlike anything in the market and the applicant desires to know, in advance,what it will cost. Long experience has proved to the satisfaction of the builder referred to that it was impossible to estimate the cost of that particular machine and be just to himself and his customer. There was always difficulties which could not be foreseen and provided for, and which appeared during the entire progress of the work.

Trouble begins in the drafting room. It is very seldom that the drawings presented are so complete and accurate as to admit of their being sent directly to the shop. In the vast majority of cases the prospective builder is expected to provide such drawings as he may need, and in some instances he is required to furnish a complete set. To tell in advance how much labor this may require is out of the question; it is only possible to form a rough estimate and charge accordingly. That this is a by no means insignificant factor of the problem may be judged by the fact that in some cases the bill for drafting amounts to more than 10 per cent. of the total cost of the machine. Sometimes the builder is only furnished a rough sketch of the principal features of the machine; he is expected to supply all the missing material, and, if necessary, to design such parts as proved to be beyond the ability of the purchaser. For this work he receives no pay.

When the drawings are presented in a fairly complete shape, so as to convey a clear idea of the design, there is comparatively little difficulty in forming an estimate of the cost of the patterns needed. In addition, there is very little danger of loss by reason of inaccuracy in this department. The same cannot be considered as holding good in the foundry, especially if some of the patterns are intricate and difficult to mould. The loss here may be considerable, and even the exercise of the utmost care will not insure perfect castings every time. In this, as in other work, the risk is greater if the pattern is radically different from the ordinary run of work done by the moulders. For his own protection the builder is compelled to recognize this and provide for it in his estimate, but he is at a loss to know exactly what to charge for what we may term contingencies.

In the machine shop there is less difficulty, and if the other departments could be calculated with the same degree of confidence the problem would be simpler of solution. But it may be that the machine under consideration will require the use of a tool not in the shop. Should this tool not be needed regularly the work must be done elsewhere, and the cost and profit of the outside builder must be taken into account.

Another phase of the question is this: Three manufacturers are requested to present bids for building an expensive machine of new design; they spend considerable time and perhaps some money in making their estimates. We will suppose this expenditure to be the same in each case. One man gets the contract—others suffer loss. Should the two who failed to get the work be recompensed for their trouble? We are well aware that this point has been freely discussed, but we do not know that any attempt has been made to obtain pay for this work which is practically thrown away.

H. D. SIMMONS & CO.

Manufacturers' Agents,

85 York St., TORONTO

REPRESENTING——

PECK, BENNY & CO., MONTREAL.
J. L. GOODHUE & CO., Leather Belting, etc., DANVILLE, QUE.
ALEX. McARTHUR & CO., Tarred Felt Building Paper, etc, MONTREAL.
BELGIAN SYNDICATE, Cement, Iron Beams, etc.



COW TIES.—Open Ring, Closed Ring and Walton. Our Cow Ties are made of Brown's steel chain, all fittings being of steel throughout. There is no other chain on the market that will compare with these chains for strength, lightness and handsome appearance. We confidently believe that our ties of a given number are fully equal in strength to a size larger of any other on the market. If you have not tried the Cow Ties, send for sample half dozen and discounts.

Manufactured by **THE B. GREENING WIRE CO., Ltd., Hamilton, Ont.**



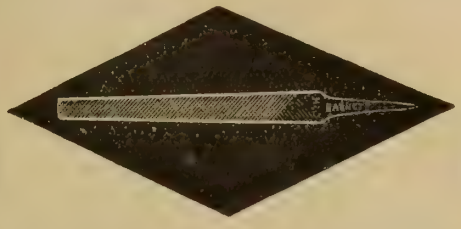
A. B. JARDINE & Co.

HESPLER, ONT.

- Blacksmiths' Tools
- AND
- Tube Expanders

Send for Catalogue and Price List

BLACK DIAMOND



FILE WORKS,

21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

——MANUFACTURERS OF——

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
CLIMAX SAWFILES. LIGHTNING SAWFILES.

——AND——

EVERY OTHER DESCRIPTION OF SAW FILES.

STRENGTH

Is what a Hardware Merchant requires in his paper. He gets it when he buys . . .

THE E. B. EDDY CO.'S

Hardware - - -
Heavy Manilla -
Brown Wrapping

PAPER

THE HIGHEST QUALITY. THE LOWEST PRICE.

TORONTO BRANCH : 29 Front St. West.
MONTREAL BRANCH : 318 St. James St.

MAMMOTH WORKS : HULL, CANADA

ELECTRICITY vs. GAS.

One of the most interesting contributions to the much vexed question of the competition between gas and electricity was continued in a paper read at the last annual meeting of the Ohio Gas Light Association by Joseph Gwynn, says the Metal Worker. Mr. Gwynn told his fellow gas men that from investigations he had made into the business of 200 gas and electric light companies he was satisfied that electricity was advancing with unparalleled rapidity in all directions. Gas men could not shut their eyes to the fact that it had grown more rapidly than the gas business in the past decade, and that a still greater advancement was to be expected in the immediate future, although, ultimately it might be somewhat checked as the novelty wears off. To demonstrate the growth of the arc lighting business, it was shown that in 1881 only about 1,000,000 carbons were manufactured, whereas to-day there are upwards of 145,000,000 carbons being made and sold annually, showing an average yearly increase of over 12 per cent. for the past twelve years. The effect of this growth of lighting by electricity on gas lighting is very noticeable. The following are Mr. Gwynn's words: "To-day, out of over 928 gas companies in the United States, we find of that number only 435 who have contracts for street lighting, and 493 have lost the street lighting business entirely, which has been displaced by arc and some few incandescent lights. While, on the other hand, a great many of the gas companies who still do street lighting, do only a limited business in this line, as street lighting by gas is being gradually displaced by electricity, and will eventually be a thing of the past." The incandescent lighting business has also advanced enormously, and it last year showed a net increase over gas business of 93 per cent. The use of electric motors for power purposes has also grown in much larger proportion than the use of gas engines in recent years, and the power supplied by this means is doubling itself each year. "The continued improvements," said Mr. Gwynn, "which are many and great in electrical appliances, will continue to make the electric business more simple and reliable, and will still hasten its progress rapidly on for some years to come." In concluding the speaker advised gas companies, for the salvtion of their business to stand firm and push their business with all the vitality they possess, and to strive to make as good quality of gas as possible, at a minimum cost, selling it at the lowest price possible to give a fair return on the capital invested. He also urged them to pay special attention to the gas heating and cooking business, this being an almost unlimited field for gas companies, and one that is not likely to be disturbed in the near future by their competitors —the electric light companies. Mr. Gwynn's conclusions have been dissented from by a number of gas authorities, who bring forward the question of cost to the public, one gas journal asserting that the electric light is more costly than gas to the consumer in nine cities out of ten in which it is used, while in the tenth it is probable that the electric light companies are run at a loss. There is at present no indication that the electric current can be more cheaply generated than is the case now; but that is among the possibilities of the future, and when this end is attained the gas companies will surely have to look more to the heating business than to lighting for return from their capital.

PROGRESS OF MAN AND METALS.

The New York Journal of Commerce and Commercial Bulletin says:

A few years ago all the American copper was produced near Lake Superior, and it sold at a pretty high price, though the mines were extremely rich. Enormous profits were made by the producers who were sufficiently limited in numbers to regulate their competition. The mines were perhaps a little too rich in copper, for the pure metal was often found in masses too large to handle without expensive cutting. At this time copper was not much used where sheet iron, with or without a tin coating, cast iron, earthenware or wood could be used in its place. Brass house ornaments were not often seen, and copper kitchen utensils were to be found only in the houses of the wealthy.

Then copper mines were discovered in Montana, Arizona, and other Territories, and the price of the metal slid down the scale. Bronze hardware began to be common, copper kettles became comparatively cheap. All sorts of house decorations in brass began to fill store windows. Glass lamps gave way to brass and copper lamps. Iron gas fixtures put on brass and copper coverings, and decorative art broke out with hammered goods, and amateurs proceeded to fill up their houses with home-made plaques. By reason of cheaper copper fire-places became ornamental, and a higher grade of kitchen ware came into use, and people of moderate means provided themselves with tea kettles and coffee pots that were fit to come to the table. The consumption of copper increased immensely, and a great many people were better off than they were before, because they had better things. The fact that tea kettles that had sold for $2.50, imported, were made in this country and sold for 75 cents meant a great deal to housekeepers. The mines provided employment for many men at $3 to $3.50 a day, and yet production was so cheap that the great copper corner of a few years ago was broken, by the sale of Montana copper in London at a cent a pound less than Spanish copper, mined by men who got but 70 cents a day. The extraordinary development of electrical invention would have been impossible but for the reduction in the cost of copper wire. It would take long to follow out all the ramifications of the good done by the reduced price of copper.

A century ago pewter appeared on the tables of the rich. A silver tea-pot or wine tankard made its owner conspicuous. Forks were of steel, and real silver spoons were a housekeeper's treasure. In the search for something more durable and more lustrous than pewter, the composition known as German silver came into use. To-day pewter has so long been out of use that the old porringer and beer mug are snapped up by collectors of bric-a-brac, and German silver is heavily plated with real silver. The silver plated ware which banished pewter and German silver, is now yielding to solid silver, the consumption of which in the arts is growing year by year. The reduction of the cost of producing silver due to the employment of steam drills and hoisting apparatus and Cornish pumping engines, and an increase of incomes, have together brought men and women and silver into an intimate acquaintance undreamed of when the constitution of the United States was framed.

The demand for manufactured articles of silver increases every day, said the representative of a firm of silversmiths the other day. We are constantly learning to what new and valuable uses it may be put. He added that the use of solid silver spoons and forks is daily becoming more common. "Most of the bridal gifts of this sort now-a-days are sterling, whereas for several years heavily plated goods were in demand. . . With tableware the price always fluctates with the market value of silver."

Much more important and more marked, of course, was the cheapening of steel by the inventions of Sir Henry Bessemer. Probably all the manufacturers of crucible steel were alarmed lest cheap steel should mean their ruin. But it did not It meant better bridges better railroads, better ships, and a greater rather than a less use of the finer grades of steel. Nearly coincident with the establishment of this nation was the cheapening of iron by the use of mineral coal instead of charcoal. Even with the vast forests of North America at their disposal, the American ironmasters were alarmed. Their abundant supply of charcoal had before the Revolution alarmed the English iron men, who got from Parliament legislation highly injurious to the iron industry of the colonies. But the American iron men were in turn alarmed by the English iron manufacturer's supply of mineral coal, and for their protection got Congress to levy duties more burdensome on the cheaper than on the finer iron. Yet the iron made from mineral coal never displaced that from charcoal, but it enabled industry of all sorts to advance with leaps and bounds; it made the world of to-day a possibility.

To the Roman "brass" or "copper" was the synonym of "money," as silver afterwards became in France, and gold now is in Germany, England and the United States. A line from Pope may be paraphrased, and we may say "man never is, but always is to be," ruined by the progress of the arts and the reduced cost of production. Somehow or other the man himself is not cheapened, and his day's work yields him more of the comforts of life than his grandfather was able to procure with the same exertion.

BEHIND THE DESK.

"With pen in hand and eye intent,
His weary, irksome life is spent."

Permit me to say at the beginning of this chapter that I do not propose to give a synopsis of bookkeeping or throw any light on this technical art. What little knowledge I possess on this subject was acquired from daily practice on my own books and not from a course at a business college. I understand bookkeeping to be the science by which a person can determine his liabilities and assets accurately and instantly. As to the method he employs to secure the result it little matters so that the end desired is secured.

A merchant who has two iron hooks on his desk on one of which he hangs unpaid bills, and on the other those which he has paid, may be old-fashioned in his methods, but if he is able, like the man who kept tally on a pine stick, to determine his exact standing, he has my hearty respect, and I would as soon sell him a bill of goods on credit, as his neighbor, who hires two half-employed book-keepers and a typewriter girl or two to keep things sociable.

Four books are the sum total needed in any store, and less would answer perhaps as well.

Order Book,—(keep this full). Day Book(—keep this posted). Cash book—(keep the balance on the left side), and the ledger. If your business is of such a nature that it warrants the employment of a bookkeeper—and it ought to, for the merchant's place is behind the counter, not the desk—obtain one who has good common sense, even if he don't know all the kinks and turns which are prevalent in "Advanced Bookkeeping." Ask him whether in case you desired to balance an account payable what would be the proper method to adopt. If he replies "Pay it," you may be sure he will answer your purpose.

Have your bookkeeper furnish you weekly with a list of bills payable, and thus afford you an opportunity to take advantage of the cash discounts allowed within the time limit. Have copies made of all orders you give for goods with the terms plainly stated, to avoid future dispute. Provide neat and suitable stationery, and use such printed forms for orders, remittances, receipts, acknowledgements, quotations, etc., as are of value to the business. Some merchants are very economical in the matter of stationery and neglect this opportunity of business advancement, which is unfortunate. A neatly printed or engraved letter head, on a good quality of paper, conveys to the recipients just the same impression as a neatly dressed salesman does to the customer—it inspires respect and confidence. These printed forms save time, cost little, are a source of satisfaction, and may be made the means of decided benefit, directly from their tendency to prevent clerical errors.

It may seem curious, but I believe it to be a fact, that more merchants cheat themselves, indirectly, than are imposed upon by others. They do it unconsciously and in a thousand little ways. I may venture to illustrate a few of these careless mistakes—very costly sometimes. First, there is the merchant who thinks it smart to charge a customer on his books a trifle more than the regular price and calls it "interest" in his mind. He cheats himself, because before long the customer finds it out and leaves him. Then there is the crafty merchant who deducts 5 per cent. from his bills payable when he knows that he bought the goods with the implicit understanding that 2 per cent. was to be the allowance for cash in ten days. He cheats himself, because if the manufacturer allows him the discount, under protest, he will pay for the deduction many times over on future purchases. Manufacturers and jobbers are not apt to favor this class of merchants who are blind to their own interests.

Then there is the merchant who is in the habit of claiming shortage and damage to goods which is unfounded. He gets found out in time; he pays for the shortage twice later. Then there is the merchant who cancels his orders, and twists out of his agreement on some flimsy pretext or another;—he also cheats himself. Then some merchants think it economical to underpay employees and chuckle to themselves over their saving—they will find the saving in the clerk's pocket quite often. Other merchants think it business sagacity to substitute inferior goods and palm them off upon unsuspecting customers as the real article—they grasp a dime and let slip a dollar.

Then some merchants consider it financial wisdom to swap checks with a next door neighbor and thus secure a fictitious balance at the bank—they are gathered in by the sheriff "by and by."

Most self-cheated merchants, however, are not included in any of the above specimens. The majority are hard working individuals who labor from early morn to sleepy eve, and are glad if at the end of the year they are no worse off than at the beginning—they cheat themselves because they keep in a rut of habit which holds them backward.

But to return to the "desk" part of the store. Every merchant should know, if he does not practice, at least the rudimentary elements of correct bookkeeping. He should understand also the State laws in regard to notes, mortgages, liens, replevins, drafts, checks, etc., and be able to take advantage of all the privileges which the law properly allows him. He should know, for instance, that if he purchases a draft at a bank and endorses it on the back with his name only, and sends it to his creditor and it is returned to him marked "paid" by the bank on which it was drawn, it is no indication that the party to whom he sent it ever received the money, or of value as a receipt for the bill.

He must know that if the teller of a bank pays a forged check or draft that the loss is the bank's, not his.

He should know that if the bank fails on which he holds a check or draft that he will lose unless it is presented for payment before the failure takes place.

He should know that in case he has to sue for an account due, the original entry must be produced in court to prove his claim.

He should know that in case a check signed by him, the amount of which has been raised to a larger amount, that the loss will fall on him unless he took all the precautions to prevent its being tampered with which are afforded by modern check protectors.

He should know whether a lien on property is of value, and what circumstances make it worthless. He should know that an agreement without consideration is of no value in law.

He should know that a contract with a person under 21 years of age is void at the option of the party who signed it, but that he is held liable in any case. He should know that an agreement which works fraud upon a third party is void in law.

He should know that a contract is made at the moment a lawful proposal is accepted whether verbally or in writing—when mailed, if by letter.

He should know than an acceptance of a contract, if by mail, must, to be binding, be expressed in the same terms as the tender.

He should know that a verbal agreement which is to take effect a year or more after date is void in law.

He should know that a guarantee of one person for another, as regards a debt or performance of certain acts, cannot be enforced in court, if verbal, unless it can be shown that the second was the agent of the first.

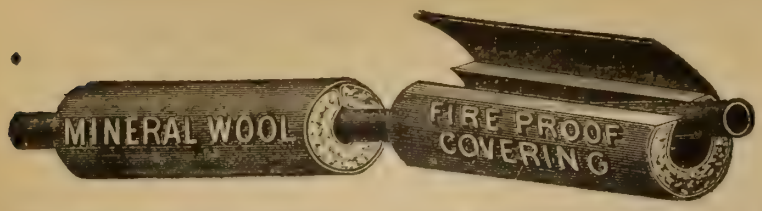
He should know that each partner's property is liable for the entire debt of the firm.

He should know that he cannot hold the endorser of a note or other negotiable paper, unless he makes prompt and legal notice of the failure of the maker.

He should know that a contract or agreement made by one partner in the name of the firm renders all the partners equally and separably liable for its fulfillment.

He should know that one partner may sign the firm name to a note for a firm debt without the consent of the others and it will bind all in law for its payment.

He should know that to delay present-



A GREAT LOSS?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss. The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

ing a check for deposit or collection is often a serious risk.

He should know that to draw a check on a bank greater than the amount on deposit, is in law a fraud, and a dangerous practice.

He should know that a partnership which does not distinctly state the manner of the division of profits, gives each party an equal share.

He should know that any person who participates in the profits of a business under any circumstance, is liable for the debts of the firm however contracted.

He should know that a fraud committed by one partner in the business transactions, makes all the partners equally fraudulent under the law, even if they were in utter ignorance of the offense.

He should know that ignorance of business law is no valid excuse in court, or commerce.

He should know that a "limited partnership" renders the partners only liable for the actual money investment.

He should know that in the case of the death of a partner that all the property of the deceased partner belongs to the firm as assets with which to settle accounts due, if necessary.

He should know that a party who makes a business of transporting or shipping goods for others, is liable for the delivery of the goods in proper condition under any circumstances.

He should in short educate himself by observation and reading upon all subjects which affect his interests, and be ever on the outlook for new ideas or methods which can be of practical use. He should keep his papers of value, such as contracts, insurance policies, leases, etc., ready for instant reference, and secured from theft or fire by the protection of a suitable safe.

The hardware merchant who expects to succeed, should be particularly careful about the management of his cash sales. A cash register is now considered a modern necessity, and is certainly a valuable improvement upon the old way of throwing money into a common drawer without any evidence of the amount or nature of the sale. When possible an account should be kept of the daily sales in the different lines of goods, to determine which are unprofitable and need weeding out. I have known merchants who had a system whereby they were able each night to tell almost to a cent what the gross or net profits had been for the day, but this entails considerable useless labor, and is not necessary under ordinary circumstances.

A good way to spur on clerks to effect sales is to provide each with a numbered check pad and keep a record of the sales separately, and announce the result from time to time, but care should be taken not to reflect unjustly upon a clerk whose sales are small at times, for he may be of great value in other ways.

Often the clerks who sell the most goods are the least profitable, from a lack of judgment. If your business is of a nature that requires considerable correspondence with customers, be particular to reply promptly, and have copies taken of all letters of the least importance. When you are obliged to give different prices on the books to various persons, for certain good reasons, have an indexed book containing the price of each article so arranged that no discrepancy will occur in the bills. Never hesitate to insist upon your customers complying with your reasonable terms as to time and condition of payment of accounts, and allow no "soft-heartedness" to interfere with the conduct of your business affairs unless you wish yourself to become the object of charity. It is the poorest kind of business policy to allow a customer to put you off repeatedly with promises to pay. It is much the wiser plan, if the matter hangs fire, to commence legal proceedings at once and thus protect your interests. Self-preservation is the first law of business, as of life, and while a merchant should not be overbearing in his demands, he should not be so easy-going in his collections as to make it possible for his neglect to cause his creditors a loss. Incapacity, and neglect of this principle of prompt collection has caused more failures than all other causes combined. A typewriter, of some reliable make, is a great modern convenience, and the progressive merchant will avail himself of this recognized business aid where possible.

He should also learn to rapidly use it himself and thus appreciate its value, and be able to dictate letters with ease and freedom.

Postal cards, except for cheap advertising houses, are not often used in successful business houses, and are not to be recommended either on the score of economy or appearance.

Every hardware office should contain a systematized arrangement of catalogues and price lists. The bound volumes are disposed of by arranging alphabetically in an upright rack. The smaller catalogues and pamphlets can be readily arranged by obtaining of a stationer a number of heavy mailing envelopes, about 10 x 12 inches, and put one catalogue in each envelope. Number the envelopes from one up, as high as necessary, and then mark a similar number on the catalogue enclosed. Have an index, in which write the name of the catalogue and its number. Arrange the envelopes in a rack in an upright position numerically. When you wish to find a certain catalogue all you have to do is to turn to your index, find its number, and you know which envelope it is in at once without disturbing the others, or mixing them up. If desired they can be further classified into various lines of goods under the same method.

File all your invoices in one of the many modern conveniences now on the market, and so arrange them that you can put your hand on them, in any year, day, or month desired, without delay. All letters and business papers should be arranged in similar manner. Don't be afraid of a good share of system, provided the system produces some practical results, if it fails to do that abandon it, as a useless system is a waste of time and energy.

Have a supply of rubber dating and receipt stamps, and employ all the many convenient office devices which are of practical use—some are not. Don't be too particular about the red lines in your ledger; aim first to have the figures correct and mean something. Beauty of penmanship, and nicety of ruling, are the flower of bookkeeping, the fruit is correctness and rapidity.

If you read or hear of a method in office routine, which may be of value, investigate its merits,—be on the constant outlook for improvement. The world moves—move with it.

> "What's new to-day, is old to-morrow,
> A fast world, my masters!"

—From Ideas for Hardware Merchants.

"How is it," said a gentleman to a good old Scotch woman, "that your son John, who had so fair a chance when you set him up in business, should have broken down, while you began with nothing at all, and are now well off?" "I will tell ye," she answered. "When we began, my auld man and me, we lived on oat meal and haver bread, and a' things of that sort, but when we began to be weel-to-do we would noo and then have a chicken; but the trouble wi' John and his wife is, that they began wi' the chickens, and now they can hardly get the oatmeal."

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,
Agents.
MONTREAL AND TORONTO.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.
Keene's Coarse, Parian and Superfine Cements.
SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.
FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,
CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.
Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

FIRE!

McCAUSLAND & SON

Beg to inform their customers and friends that they are in a position to fill all orders with promptness and dispatch, notwithstanding the recent fire in their premises. . . .

72 to 76 King St. W.

READY MIXED PAINTS

TRADE 

MARK

Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

Manufactured by **A. RAMSAY & SON**
MONTREAL

Canada Iron Furnace Co., Ltd.

Manufacturers of
CHARCOAL PIG IRON
MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

WE CAN SELL YOU

Solder and Babbitt

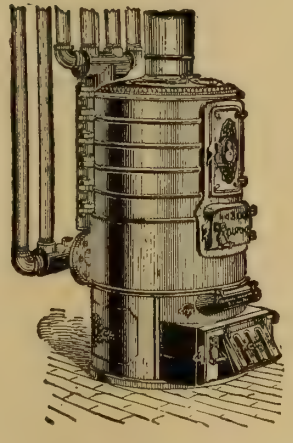
Cheaper than You can Make It

TORONTO SMELTING and REFINING WORKS

FRANKEL BROS., Props.
92 and 94 Queen St. East, TORONTO.
Daily Capacity 10,000 Pounds.

OXFORD HOT WATER BOILERS

Rugley & Rugby Quintette Radiators.

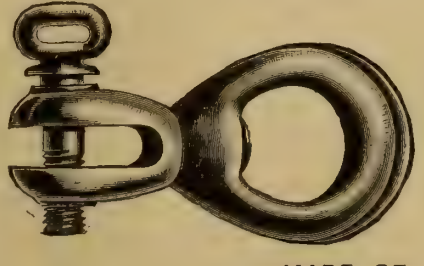


ACKNOWLEDGED TO BE —
The Most Powerful Heaters in the Market.
Send for Testimonial Sheet and Illustrated Catalogues.
OUR SALES this year attest the merit of our goods.
We defy competition for Quality, Capacity and Price.
INSPECTION INVITED—SATISFACTION GUARANTEED.
SEE OUR
Hot Air and Combination Hot Air and Hot Water Heaters.
SOLD BY THE TRADE GENERALLY.
Manufactured by —

GURNEY FOUNDRY CO., Toronto.
Show Room—500 King St. West.

THE WHITMAN & BARNES MFG. CO.

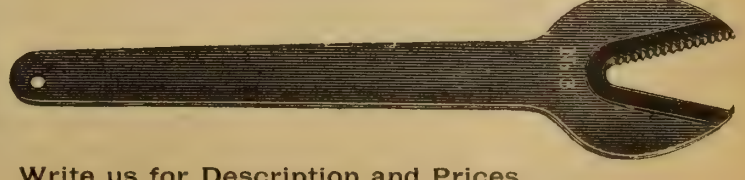
Canadian Branch: St. Catharines, Ont.



This new **Swivel Clevis** can be attached to any Plow Clevis, used in place of Shackle or End Clevis.

MADE OF MALLEABLE IRON.

ALLIGATOR WRENCHES



Write us for Description and Prices

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

J. Frechette & Co., machinists, Montreal, have assigned.

J. M. Burk & Co., bankers, Kaslo, B.C., have suspended.

Henry Reimer, general merchant, Langenburg, has assigned.

George Webster, general merchant, Lion's Head, has assigned.

Ben. Ruthwell, boots and shoes, Toronto, is offering to compromise.

G. H. Bissonette, general merchant, Sharbot Lake and Arden, has assigned.

J. C. Richardson & Co., general dealers, Beeton, have assigned to J. B. Laing.

The sheriff is in possession of the saw mill of the Buse Mill Co., of Vancouver, B.C.

Mrs. J. C. Beatty, general store, Moncton, N.B., has assigned to Clifford Robinson.

A demand of assignment has been made on Albert Bryce, type-writer, etc., Montreal.

A. Baurdon, of Reopel & Baurdon, lumber, Montreal, has filed consent of assignment.

Andrew Lindsay, general storekeeper, Southampton, has assigned to Henry Barber & Co., of Toronto.

Napoleon Boyer, tinsmith, Ottawa, has assigned, and the business is advertised to be sold under chattel mortgage on 26th inst.

SALES MADE OR PENDING.

The boot and shoe business of W. Kelley, Port Hope, is advertised for sale.

W. E. Hambly, general merchant, Rockwood, is advertising business for sale.

The stock of James Hay & Co., wholesale and retail furniture, Winnipeg, has been sold at 60c. on the dollar.

The stock of E. Bourret & Co., general merchants, Louiseville, Que., has been sold at 60c. on the dollar.

The estate of John E. Fortune, general merchant, River Bourgeis, N. S., has been conveyed to him by assignee.

PARTNERSHIPS FORMED AND DISSOLVED.

Mark Bros. are commencing business as furniture dealers, Park Hill.

The partnership existing between A. J. Andrews and John Walker, plumbers, Quebec, has been dissolved.

John S. Prince and Hermas Monette have been registered partners to carry on business as dealers in house furnishings, etc., Montreal, under the firm name of Prince & Monette.

CHANGES.

W. Beatty, general merchant, Atha, has removed to Stouffville.

Samuel Dorley, blacksmith, Ballantroe, has removed to Gormley.

W. F. Diceman, general merchant, Trenton, has sold out to Walker Bros.

Hogg Bros., of Oakwood, have bought out McCracken & McDonald, of Sonya.

Thos. Dobbie, general merchant, of Dobbington, has been succeeded by E. J. Brown.

B. Freedman, general merchant, St. Palycarpe, Que., has sold out to D. J. Jamieson.

FIRES.

D. R. McGarvin, saw mill and lumber, Chatham, has been burned out.

D. Roy & Frere, saw mill, Levis, Que. burned out; no insurance.

A. P. McLaurin & Co., lumber and planing mills, Lachine, have had their mill partly burned.

DEATHS.

R. S. Montgomery, of R. S. Montgomery & Son, harness makers, Ottawa, is dead.

SELLING STOVES.

The new heating stoves designed for the season of 1893-94 are nearly ready for the market, and most of them have been shown to the trade, either in catalogues, trade journals, or photographs. Intending purchasers in the trade now have the opportunity, therefore, for selecting their stocks and deciding upon their leaders and specialties. The forehanded dealer will not procrastinate and allow his competitors to secure first choice in exclusive agencies, nor get ahead of him in promptly laying in a general assortment of heaters and cooks. To be sure, the multiplication of artistic heaters of perfect working construction gives the dealer choice from a number of first-class stoves, so that in any event he need not be without goods of imperative excellence. But the enterprising and discriminating dealer will have a first choice, even among stoves of the best class. If he is a good tradesman, he is kept posted on the progress made in the production of artistic stoves and improvements in construction to secure the highest efficiency, convenience, cleanliness and economy. He has ideas of what would best please himself, and what would take best with the trade which he commands. Out of the numerous candidates for favor he will be able to select particular stoves in first-class heaters, ranges and cooks, and also particular stoves in classes which sell at prices less than the very highest grades. Having satisfied himself as to what particular stoves are best suited to his trade he can conscientiously and successfully push their sale. A dealer who is only able to say that the stove which he offers is as good as any, that he would as soon sell one as another, will not be as successful in making sales as though he had carefully selected a stove from the best knowledge obtainable of what the trade had to offer, and was convinced in his own mind, and for his trade, that stove was the very best to be had. Such a dealer can say to a customer that in his opinion he is offering the best stove made, and say it honestly. This is not saying that a stove of the same class of another manufacturer is not intrinsically as good as this. But a stove which thoroughly pleases the dealer himself, and which he can speak of enthusiastically, will be most successful in his hands. Tastes differ, and the idiosyncracies of customers, even those of communities vary, so that it is natural that particular stoves should have a run in particular localities. Herein is the life of the stove trade. If everybody's mind ran in the same rut, the Gilded Glory or the Anti-Soot, or some other stove, might seize the entire market, so to speak. There may be manufacturers who would like the earth and a slice of the moon thrown in, but they will never get this boon. Neither can any one dealer ever hope to monopolize all the trade of his community. Let him locate where he will; let him sell what goods he pleases at what prices he will, and there will always be people who patronize his rival. Some because he is nearer; others because Mrs. So-and-So does, and others yet because Mrs. So-and-So patronizes him. Some because his rival belongs to their church; others because their father went there; others because our dealer was too urgent to have a bill paid at one time, and for ten thousand other reasons, good, bad and indifferent. A feature of the trade the present season which differs in degree, if not entirely in kind, from the trade in previous seasons in artistic heaters, is the fact of very elegant goods at moderate prices being at the command of the trade. While every dealer takes pride in selling the very best stoves made, he is gratified, when unable to sell a first-class stove on account of the price, to be able to offer a stove almost equally attractive and a perfect working stove at a less price. A stove may be a little smaller in some measurements, contain a less weight of iron, and have less nickel in its ornamentation, than the highest priced stoves, and yet work satisfactorily and be a beautiful stove. It will not last as long, and cannot be expected to be just as good and as highly ornamental as higher priced stoves, but it is a satisfaction to have a really elegant stove to offer to this class of trade. The Ironmonger, then, says to the trade, make your orders early and be on hand with new goods for the first trade of the season, which will commence some two or three months from now. Influence trade by the exhibition of the beautiful goods now at your command. Do not wait until stoves are actually needed, and the manufacturers, freight lines, and yourself very busy. By ordering early, manufacturers will be sure to be able to ship the goods promptly; the freight lines will get your goods through more promptly; handle them more carefully, and possibly give you cheaper rates; you are better situated to take care of them properly, and your customers are not disappointed. It is better all around.—Ironmonger.

TORONTO CUTLERY CO.,

65 and 67 Yonge Street, Toronto

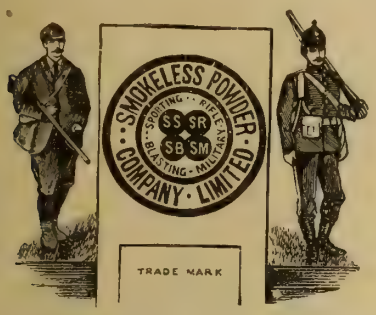
M. MAYER, Propr.

NON-XLL

Cutlery

WARRANTED

And the Most Complete Lines of Cutlery of all descriptions.



S.S. SMOKELESS POWDER is the best Made by the Smokeless Powder Co., of London, Eng. A stock kept in Montreal. 25 lb. Drums, 2 lb. Cannisters, ½ lb. Cannisters. Send for Prices. **WILLIAM DARLING & CO.**, Wholesale Hardware Merchants, 30 St. Sulpice Street, Montreal.

A FEW REASONS WHY

You should Keep your Stock fully Assorted With

Boeckh's Superior Brushes

They are always reliable and as represented.
They are guaranteed in every particular by the manufacturers.
They are made of the very best material and workmanship
They are sold at closest possible prices.
They are finished and put up in neat and attractive shape.
They are well known throughout the Dominion and are popular with all classes of consumers.
They are handled by all leading Hardware and Paint and Oil trade.

See that the name "BOECKH" Is on every brush.

Boeckh's Flexible Bridled Brushes.

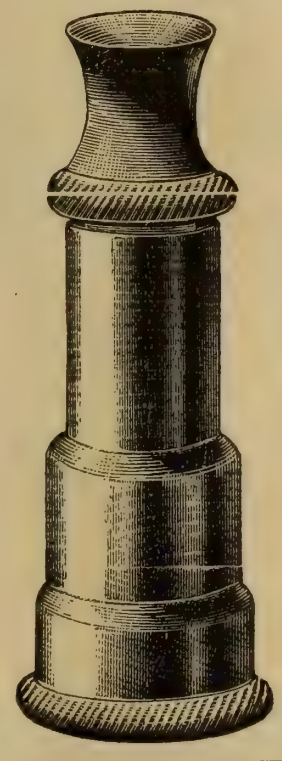
Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

TORONTO, - CANADA.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it

It is impossible for this pipe to get out of order

Give it a trial and you will use no other.

Hamilton Brass Manufacturing Co.

HAMILTON, ONT.

GUNS, FIRE-ARMS AND SPORTING GOODS

.. THE TRADE SUPPLIED ..

Send for our

. . 100 PAGE . .

Illustrated Catalogue :--



Of GREENER, CLABROUGH, and NEWMAN FRIAR GUNS. WINCHESTER, MARLIN, COLT, and REMMINGTON RIFLES, also REVOLVERS, POWDER, SHOT, WADS, ARTIFICIAL BIRDS, Etc. . . . . .

DISCOUNT SHEET TO THE TRADE.

Bowman Hardware and Sporting Goods Co. ✻ **HAMILTON, ONT.**

THE ART OF COLLECTING DEBTS.

The collecting of debts is one of the most important branches of modern business, remarks Fred Woodrow in Age of Steel. It is an art in itself, which that of the salesman is but a bagatelle in comparison. To make a sale, or secure an order, in these days of crowded markets, is not always so much of a picnic as it seems. The business world is by no means overstocked with honest men who carry the golden rule either in their vest pockets or their memories. In making bargains they haggle like horse traders and flirt like girl graduates who flatter a Roman nose or a club foot for a dish of ice cream or a box of candy. To get a grip on such social or commercial eels requires tact and skill, and he who can pot the wriggling and unctuous article needs special training to accomplish the feat. This, however, as before said, plays but second fiddle in the orchestra of business.

To get into debt is as easy as it is for a frog to visit the basement floor of a well, but to get out of it is another matter. It is unfortunate that the inducements to run risks and assume obligations are numerous. Low prices and long credits are, in the present condition of business, the most popular bait for trade. Men snap at the opportunity of securing these privileges as a frog does at a swamp fly, or a bat at a mosqito, nor is the luxury of doing so restricted to one meal a day, for there are as many men eager to sell as there are men ready to buy. If bargains were as rare as birthdays, and solicitors as scarce as tin weddings, the evil wrought by over-purchasing would be limited, like the whooping cough, to once in a life time, and the men who get helplessly into debt would not be so heavy a burden on the back of the business camel. As it is, the unpaid debt and the unreclaimable debtor are of more trouble and loss to business than Egyptian lice were in Pharoah's beard.

Many schemes have been devised to shake this incubus from the business body. All kinds of processes, legal and documentary, have been applied to the old sore, but the hospital list of cripples and sufferers still maintains its numerical premiership. Some of this is due to the imprudent pushing of business, faulty methods and the lack of system; some of it is also due to the avarice and rascality that, if it had its dues, would be in a jail instead of a store or a counting room; and not a little—perhaps the most of it—is due to purchasers who, while assuming obligations without any nefarious intent, are deficient in foresight and are afloat on an Atlantic of debt while thinking they were only wetting their toes in the shallows of Sandy Hook. Such men are not debtors by criminal intent, the fault being not so much in them as in those who handle them. Men are not past spoiling after they have matured into a comfortable crop of whiskers and the honor of running a business and raising a family.

When a creditor works without system, or lacks punctuality, decision and reasonableness, he is bound to spoil or demoralize his debtors. Some are too rigid and exact and even peevish in this matter, and while loose or foolish indulgence is hurtful in business, its opposite can be equally so. As a rule, men who owe a bill are conscious of an advantage over the man to whom they are indebted, and it requires more than ordinary tact and knowledge of human nature to secure the pound of honey without irritating the business end of the bee. It may be said, as a general thing, that most men mean to pay some day, and, though rogues are many, honest men are not all yet in the charge of the undertaker. The trouble in debts is the encouragement given to those who contract them, the lack of system in their collection, and the kind of a man who can present a bill without the airs of a sheriff and by tact and good nature can tap a cocoanut without cracking it.

LEADING UP TO THE INEVITABLE.



Mr. Philloo (who has escaped from a very late dinner and is talking to himself)—"Now, you rattle-headed ole idjut, you've gotter be careful.—



—Easy, now! I'm dead sure you're goin' t' fall, an' you know it yourself. Easy, now; e-a-s-y!—



—Well, you did ease your ole corporation down one step, didn't you? But you jest mark my words, you mizzerble 'nebriate, you're bound t' tumble, an you might 's well get good an' ready. Slow, now; slo's mud.—



—Look out, there, you tank! look out! Oh, well, it don't make any difference. P'raps you'd better hurry up an' git it over with. John Philloo 's booked for hittin' th' sidewalk, an' I hope he will.—



—That's jest what I said, you paresis-scarred ostrich! that's jest what I said; an' now th' nex' time a sensible man talks t' yer you sit down an' listen t' him an' don't try t' monkey with a flight of steps. Now go home, you sway-back!"

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

WESTERN BRANCH:

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

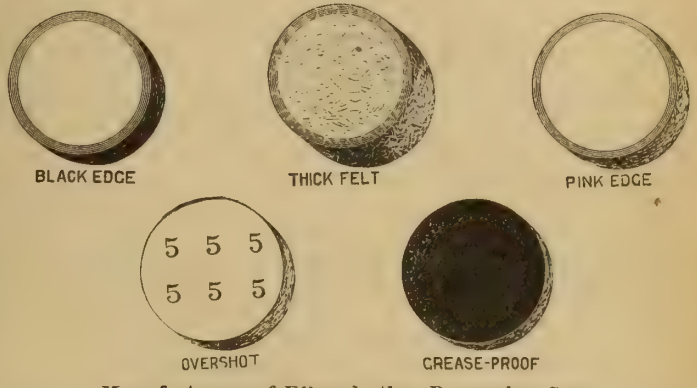
. . ELEY'S . .

CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. Wholesale Only.

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

The "ETNA" . . .

. . HOT WATER BOILER

We claim is perfect. It is the original Round Boiler, patented by U. Beaupre, Dec. 1st, 1880 and May 2nd, 1889. Each year improvements have been added; and to-day it stands at the head.

We are willing to give any guarantee necessary to protect Architects or Contractors, that the Boiler will do all we claim for it.

The Boiler costs less than those of our competitors, and we will assume all risks.

We are in the field to stay and are bound to push this Boiler to the top rung of the ladder.

The Boiler previous to our purchasing it, had never been properly advertised or pushed, consequently, is to-day not as well known as some other makes.

Since buying out the former maker the sales have increased over 200 per cent.

If you have not a cut of same, drop us a card and we will be happy to forward one with full particulars.

As we said before, the Boiler is perfect, the price less, and we will guarantee it in every particular.

We have also bought most of the Grand Universal line of Patterns from the Estate of J. M. Williams & Co., of Hamilton.

We can supply all Repairs at the Regular trade price.

We still make the old reliable line of "Leader" Stoves.

Kindly remember us when any thing we manufacture is needed by you.

Wm. Clendinneng & Son, 145 to 171 WILLIAM STREET MONTREAL QUE.

Cutlery

SPECIAL VALUE IN

Dickinson's "Damascus Blade" Carvers.
Dickinson's Improved Ivoride Tables, warranted not to shrink or discolor.
Joseph Rodgers & Co.'s best quality Pen, Pocket, and Butcher Knives.

. . . SAMPLES now ready for Fall Trade.

STEEL. Full stock of Jessop's warranted Tool Steel, at lowest prices. . .

A. C. Leslie & Co., Agents

MONTREAL and TORONTO.

You can lose more than we do by not subscribing for this paper.

MUNN'S LIQUID GLUE

IS THE BEST.

THE ART METROPOLE, Agents.

131 Yonge Street, TORONTO.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	23½ 24
trip "	25, 25½

Tin Plates—*Charcoal Plates, Bright.*

M.L.S. equal to Bradley	Per box
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 25 4 50
I.X., "	5 25 5 50
I.X.X., "	6 25 6 50
I.XXX., "	7 25 7 50
D.C., 12½ x 17	3 75 4 00
D.X., "	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be purchased at 25c. box.

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

Cookley Grade—	Per lb.
X.X., 14x56, 50 sheet bxs	6½c, 7c
14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6½ 6½
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¾ " nd thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2⅞, 2¾
26 "	2¾, 3
28 "	3 , 3¼

Canada Plates.

Blaina	½ bright	2 75 ....
Abercarne		2 75 ....
Lion		....

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Note—Cheaper grades about ½ cent per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4½ 4⅝
" ⅜ " "	4⅛ 4⅛
" 7-16 " "	4 4½
" ½ " "	3⅞ 4
" ⅝ " "	3½ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 12½	0 13
Lake Superior	0 13	0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths about fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Brasiers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 19½ 0 21
" 35 to 45 " "	0 17½ 0 18
" 50 lb and above per lb	0 16½ 0 17

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 05 0 05½
Domestic "	0 04¾ 0 05

Zinc Sheet.

5 cwt casks	0 05¾ 0 06
Part casks	0 06 0 06¼

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¾ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 17 0 19
Standard	0 16 0 18
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 13
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	4 75
No. 1 Do "	4 50
No. 2 Do "	4 25
No. 3 Do "	4 00

Prepared Paints.

(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p. cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red, (best) " "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " } " "	1 25 1 90
Canadian " }	
Paris Green, per lb	0 13 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure, 8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 [illegible]
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 45 0 47

Castor Oil.

Best, per lb	0 08 0 08½

Cod Oil.

Cod Oil, per gal	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list.
Munn's, dis. 25 to 30 per cent. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c
Shot.
Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 25

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—Socket, Framing and Firmer

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c:

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

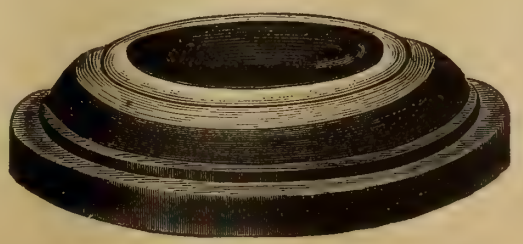
Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

Standard Keystone
TARGETS
THE BEST -:- -:-
-:- TARGET MADE.



Standard Keystone
TRAPS
THE NEW '93 MODEL -:-
-:- EXCELS ALL OTHERS

AGENTS: ❀ BOWMAN, KENNEDY & CO., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 6 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   Basis—50 to 60 dy..... 2 30
   40dy..... 2 35
   30 dy..... 2 40
   20, 16 & 12 dy..... 2 45
   10 dy..... 2 50
   8 & 9 dy..... 2 55
   6 & 7 dy..... 2 70
2. American Pattern Only
   from 4 to 5 dy 2 90
   3 dy. (lath)..... 3 30
3. Canada Pattern Only
   from 4 to 5 dy 2 80
   3 dy. (lath)..... 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross
Square, round and octagon 3 38 4 00
Diamond..... ..... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, 1bs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3½

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33½ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9½ 9¾	10¾ 11
¼, 5-16, ⅜ in.....	10 10¼	11¼ 11½
Cotton, per lb.....		18 20
New Zealand.....		9 9½
Russia Deep Sea, per lb..		13½ 16
Jute ..... " ...		08 08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen..... 1 25

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 51½ per cent.
Channel nails 5c. lb. off list
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33½ p c

Ties

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33½ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9 00

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Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 5e
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6½c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4½ 4¾
" 4 " 4 & 6 " "
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

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TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS.

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

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FIRE BRICK
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Scotch . . English or American

GAS RETORTS
GAS WORKS SUPPLIES

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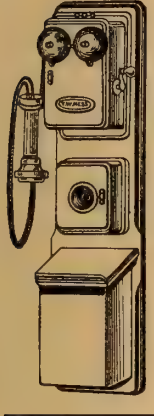
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Large Fire Proof Safe Wanted at once. State dimensions and price. Address H. M., HARDWARE Office, Toronto.

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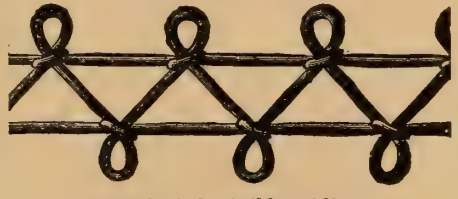
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Nails, Hinges AND Buts

Manufacturers of every description of these goods.

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Pat. Nov. 19, 1889.



Above Cut Is One-half Actual Size.

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2 x 4 Barb
Plain Twist and
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And Staples for same.

Write for Prices and Discounts.

ESTABLISHED 1860 INCORPORATED 1893 DOMINION TRADE MARK

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.



Our Lamps were all right last year, but . . .

LAST YEAR'S

- LAMPS -

Are no good for :-:

This Season.

WE HAVE

OUR NEW LINES

NOW READY

Wait for Travellers, or Write for Prices and Cuts.

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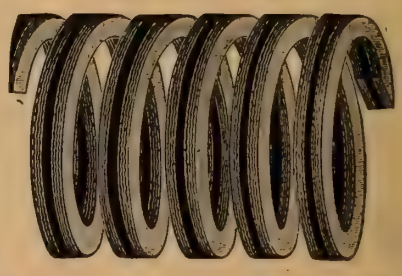
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Only Rubber Factory in Toronto.

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BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

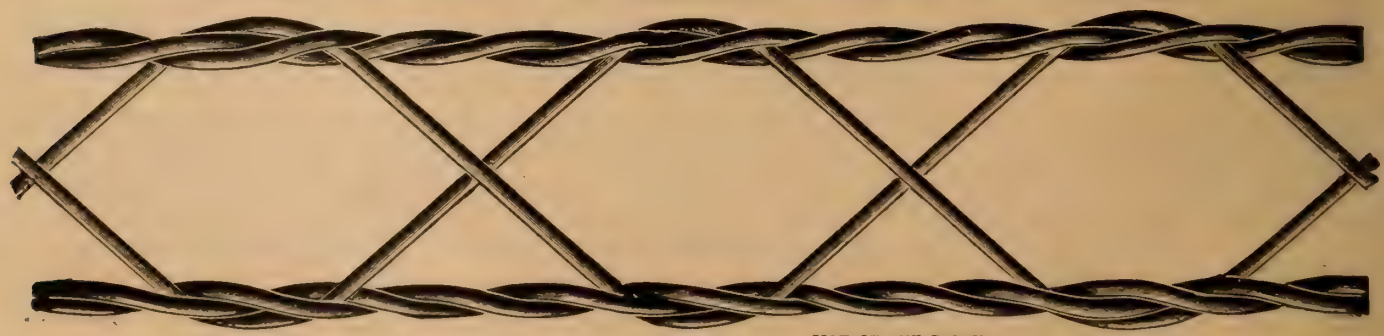
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TRUSS AND CABLE FENCE WIRE.



SIZE OF ONE STRAND.

Is Stronger and Costs Less per rod than any other Strand of equal width in the Market.

Manufactured by **Ontario Lead and Barb Wire Co., Ltd., TORONTO, ONT.**

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, JULY 29, 1893. No. 30.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

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EVERY HARDWARE STORE SHOULD HAVE IN STOCK

BLUNDELL'S ART.. ENAMEL PAINTS:

WHY?

Because they are ready sellers. Every tin sold, sell several more tins. Every one who uses them, speaks of them, so delighted are they with the result. This is not surprising when the reputation of BLUNDELL, SPENCE & CO., the manufacturers, is considered. They are recognized as the largest Paint Manufacturers in the World, and the quality of their goods is well known in every quarter of the globe as the highest.

BLUNDELL'S ENAMEL IS

Brilliant, Elastic, Durable, Quick Drying,
Easily Applied, Surface Resembling Porcelain.

SOLD IN LEVER LID TINS, OR PER GALLON.

Send for Sample Card Showing 54 Beautiful Tints. Send a Postal for this card, it is the most attractive Color Card in the market.

SOLE AGENTS FOR BLUNDELL, SPENCE & CO., Ltd., IN CANADA:

Walter H. Cottingham & Co., Fine Paints, MONTREAL

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ANCHORS = CHAINS

.Rope.

BLOCKS and TACKLE

..OAKUM..

Galvanized Tackle of all Kinds

RICE LEWIS & SON, LTD.

TORONTO.

Steel-Clad Baths

Manufactured and Patented in

CANADA,

ENGLAND,

UNITED STATES

Also Patented in Australia.

AGENCIES AND WAREHOUSES AT

MONTREAL, Que. ST. JOHN, N.B.

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Toronto Steel-Clad Bath and Metal Co.

LIMITED

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"Perfection" Inside Seam

ELBOWS.



STRONGEST, HANDSOMEST, BEST.

16

DIFFERENT KINDS

Standard Patent Stove Pipe,
Stove Boards, Coal Hods.

ORDER ALL FALL LINES EARLY.

Kemp Manufacturing Co.

TORONTO, ONT.

HARDWARE

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, JULY 29, 1893 No. 30

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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John Cameron, General Subscription Agent.

Instability is the predominating feature of the Toronto City Council. At one meeting it awards a tender to one contractor, and at the next takes it away and gives it to another. This is its policy, not only with contracts, but with nearly everything else with which it has to deal. Like a fickle child, it gives a thing one moment and takes it away the next. There have been more than one instance of this of late. One is in regard to the Hersey water meter. This meter is an American invention, but some two years ago a stock company, known as the Ontario Meter Co., was formed to manufacture the meter in this country. The promoters purchased the right to do so, and were duly chartered by the Ontario Government. This charter stipulated that the work of manufacturing the meters shall begin within the year ending July, 1894. It was the purpose of the company to locate the factory in Toronto, but owing, it is said, to the shifting policy of the Council, work has not yet been started here. The company claims to have offers from Montreal to settle in that city, but its charter being an Ontario one it could not well do that.

* * *

As is only right, before any company's meter can be used by consumers of city water it must be approved by the authorities; and this is where the trouble between the Ontario Meter Company and the city began. The Hersey meter is used, among other places, in Montreal, Quebec, Hamilton, and London. In some places, it is said, they will use no other. But of course what might do for one place might not do for another. In a word it was necessary that experts should examine the meter before it could be used here. As in nearly everything else competition among meter manufacturers is keen—although the Ontario Meter Company is the only industry in Canada of the kind—and this meant a good deal of wire-pulling, which in turn entailed a good many examinations and a good many reports, the expense of which was, if we remember rightly, borne in every instance by the Ontario company. Finally, some six or seven months ago the city decided to allow all the companies whose meters were approved of by the experts to do business in the city on each furnishing a guarantee bond to keep the meters in repair for five years. All the companies except the Ontario Meter Company refused to sign the guarantee. This gave the latter company a monopoly in the city. Then somebody suggested that it would be well to have another report made upon the Hersey meter, notwithstanding that favorable reports had previously been made. Mr. Wintern, the manager of the Ontario Meter Co., agreed, and the engineer was deputed to prepare the report; but from that day to this it has never seen the light of day, although it is known to be stored away in somebody's pigeon hole, in spite of the fact that Mr. Wintern has made repeated ineffectual efforts to procure it. The next step taken by the civic authorities in the matter was when, a few weeks ago, on the recommendation of the City Engineer, the Board of Works gave an order for the purchase of $5,000 worth of the Siemen meters, an English machine, notwithstanding that a few weeks ago a request for a similar amount was struck out of the estimates. The Ontario Meter Co. claims that this is an infringement of the city's agreement made with it when it signed the guarantee bond. There the matstands, and some interesting legal proceedings is not at all improbable, it being held that the Ontarto Meter Co. can claim damages for every meter other than its own that is put into use in the city of Toronto.

* * *

Canada's volume of trade for the month of June aggregated $25,373,325. This is nearly $9,000 larger than a year ago for the same time. The increase was, however, altogether in the value of the goods entered for consumption, there being a gain of $826,-491 in this respect, while in value the exports exhibited a decrease of $816,666. It must be borne in mind, however, that the exports for June of 1892 were unusually large. Among the articles of import which show increases compared with a year ago are agricultural implements, copper and manufactures of, gunpowder and explosives, iron and steel and manufactures of, metals, composition, etc., and manufactures of, coal oil, kerosene, etc. Of these enumerated iron and steel and manufactures of show the largest increase, namely, $219,694. Gunpowder and explosives follow with a gain of $13,525. Then comes coal oil, kerosene and other oils with $9,273, while of copper and manufactures of $8,337 worth more than in June last was brought into the country. Among the items that showed decreases were: Brass and manufactures of $1,832, coal and coke $83,827, cordage $202, earthen, stone and chinaware $1,877, glass and glassware $19,818, lead and manufactures of $32, paints and colors $22,305. Regarding the exports. Of the produce of the mine we sent out $183,738 worth more than in June of last year, while in produce of the forest we sent $548,460 less, and in manufactures $98,213 less.

* * *

The aggregate of trade for the fiscal year ending June 30 last was $236,651,282. This is about 4½ millions less than the previous year, when the total of imports and exports were the largest by far on record. But in the matter of exports the trade was even more satisfactory than last year, the respective totals for the two years being $115,187,-665 and $113,963,375, or about 1¼ mil-

lions in favor of 1893. Compared with 1868, the first year after Confederation, the exports for the past fiscal year were over 67½ millions larger, while the aggregate of imports and exports increased $105,623,750.

* * *

A contemporary remarks that "the best plan is to advertise for a reputation and not for a "store scouring." This is true enough, but it is nevertheless just as necessary to sometimes advertise "a store scouring," or clearing sale as it is commonly called, as for a reputation. The latter requires continual and systematic advertising; the former is special. No matter how careful a buyer a merchant may be, he will at the end of different seasons find himself with certain goods in stock which, either because of the fickleness of fashion or the unusual character of the season, are undesirable. Even if the goods are staples and might be sold if carried over to the next season, there are a good many whose financial strength would scarcely be equal to the task. The proper course for merchants who find themselves in such a position is obvious. In justice both to themselves and their creditors it is their duty to try and dispose of the goods in question. And we have yet to hear of a better way than through the medium of clearing sales. If a better way can be found, why by all means adopt it. But in lieu of something better, start clearing sales when you want to get rid of superfluous stocks. But when you start one, be honest about it. Do not say you have fifty thousand dollars' worth to be sold when you have not perhaps half that amount, or that you are selling for fifty cents something that ordinarily sells for one dollar. In a word, do not deceive people. There are always a number of people on the lookout for bargains. Advertise right, make your display of goods neat and attractive and you will catch customers. Be live and pushing, but be honest.

* * *

Business matters that require prompt attention are many. Among them none probably more so than the answering of letters; and yet there are merchants who are sadly remiss in this particular. Negligence in the answering of letters suggests carelessness and lack of attention to business, and when this idea obtains look out for your credit. Just as sure as two and two make four will it decay, and when your credit is gone, where are you? Like a vessel drifting to destruction, the keel of your business is already grating on the rocks of bankruptcy, for without credit you cannot do business. Protect it, therefore, as you would your good name. Procrastination is probably the cause, more than any other, of letters going unanswered. Some wholesalers tell us they cannot get answers from some customers until, after repeated writing, they threaten legal proceedings. This is not right. It is not business. No matter what a man's financial condition may be he should not omit to answer promptly the letters of every creditor. If he is not in a position to meet his obligation let him say so. Nothing is lost by being honest and outspoken. Men admire straightforwardness in their fellows. But he who tries to hide behind the hedge of silence gains nothing by it. On the contrary he loses, for his very silence creates suspicion, and where there is suspicion a calm and unprejudiced view of the conditions is often prevented. If you have not a set time for answering your letters appoint one and religiously stick to it. There is nothing like system in letter writing as well as in everything else.

* * *

The grain blockage at Kingston does not show much sign of improvement and some of the vessel owners have already began suits for damages against consignors. Interference with the movement of merchandise is to be deplored at any time, but now, when trade needs all the encouragement possible, it is still more regrettable.

* * *

Friday July 21 was the fifty-seventh anniversary of the opening of the first railway in Canada. The road was 16 miles in length and ran between Laprairie and St. John's in the Province of Quebec. In 1850, there were only 71 miles in operation in what is now the whole of the Dominion, and it was not till 20 years after the opening of the first road that we had anything like a system that we could boast about. This was in 1856, when the Grand Trunk Railway was opened between Montreal and Stratford. At the time of Confederation, 1867, the total mileage in operation was only 2,258. Ten years later it had doubled and in the next decade it did the same thing, while to day we have not far from 15,000 miles of railway in operation, not counting the electric systems which are now beginning to multiply so fast. Canada has good reason to be proud of its railway system.

AMERICAN PIG IRON.

The report of the Iron and Steel Association of the United States recently issued gives some interesting facts and statistics regarding the production of pig iron in the United States for the first six months of 1893 and the stocks of pig iron on hand and for sale at the close of that period. According to it the total production of pig iron during the period named was, 4,562,913 gross tons against 4,387,317 tons in the second half of 1892, an increase of 175,601 tons, but a decrease of 206,765 tons compared with the production for the first half of 1892, which amounted to 4,769,683 tons. In referring to the figures the report makes the prediction that the production for the second half of the present year will be less than that for the second half of last year, in which case the total American production of pig during the current year will fall considerably short of that of 1892.

The production of Bessemer pig iron in the first half of the present year is the largest half yearly production ever recorded in the States, amounting to 2,374,890 gross tons, against 2,189,696 tons in the second half of 1892, and 2,254,345 tons in the first half. The production of spiegelisen and ferromanganese in the first half of 1893 was only 46,976 gross tons against 91,757 in the second half of 1892 and 87,374 tons in the first half. There were 225 furnaces in blast on June 30th, 1893, against 253 on December 31st, 1892, and 256 on June 30th, 1892. The number out of blast on June 30th, 1893, was 312.

The report further shows that there were 549,141 gross tons of pig iron unsold in the hands of makers or their agents for June 20, 1893. These figures include part of the stocks in the yard of the American Pig Iron Storage and Warrant Co. under the control of the makers, the balance not under their control in these yards being 29,690 tons, which makes a total of 578,831 gross tons on the market on the date mentioned. On December 31st, 1892, the quantity of pig iron held unsold by makers or their agents was 506,116 tons, and there was in the storage warrant goods not under their control 29,500 tons, which makes a total of 533,615 tons which were on the market at that date, against the 578,831 similarly held on June 30, 1893.

SAW MANUFACTURE.

It is always interesting to study the early and often small beginnings of great and successful enterprises. Henry Disston struggled for eighteen years before he could command for his saws anything like the recognition to which their merit entitled them. The tariff of 1861 gave Henry Disston's saws their great start, and in return Henry Disston gave to the United States the greatest saw works in the world He created a new American industry, and founded an industrial university wherein a dozen useful trades are taught

Henry Disston landed in this country in 1843, from England, where he had learned the trade of saw making. He was then 22 years old, and with $350 as his sole capital he began making saws in a cellar, on Second street, near Arch, Philadelphia, soon after his arrival.

He built his own furnace, made his own tools, and was his own foreman, engineer and salesman. For a time he ran the whole business himself. He encountered difficulties, and then misfortunes came, many of them including financial loss. Once, after he had started a second time a boiler exploded, and he nearly went with it. Within ten days he had moved into a new building erected on the lot adjoining where he had been burned out, at Front and Laurel streets. In 1861 his business had grown to $35,000 a month, but fire came again. Within fifteen days he was making saws under canvas. It was about this time that he concluded it unwise to be importing English steel, and started in a small way turning his scraps into steel himself, thus beginning that part of the enterprise which has since grown to such proportions and had so much to do with the prosperity of the business.

Henry Disston. always looking to the future, knew that the best executive management would fail without skilled hands, and these he resolved to have, and to leave behind him. Through his life he maintained the apprentice system. now so lamentably rare in this country, and to-day the firm has indentured apprentices throughout the works, and applicants waiting to come in. Henry Disston put his own sons in the shop. Hamilton, the eldest of the sons, served seven years before he was taken into the counting room. Albert H., now deceased; Horace C., William and Jacob S., the other partners, served their time in various branches of the business before they were admitted to the partnership.

The plant has since been expanded until now it is the greatest saw manufactory in the world, and Disston's saws have a world-wide reputation for excellence. They are admittedly superior to those manufactured in England or France.—Tin and Terne.

THE OUTLOOK FOR LEAD.

The adage that one man's meat is another man's poison seems likely to have a fresh exemplification in connection with the lead trade. Concurrently with the continuous and enormous increase in the production of silver, there has been an even larger augmentation in the output of lead, because, as the former metal is almost universally found in combination with the latter, it has paid the mine owners to sell the less valuable by-product for whatever it would fetch. Hence the price of lead has drifted and drifted until properties mainly worked for that metal have either been abandoned altogether, or have been kept going in the hope that fortune's wheel would at least turn in their favor. Not very many years ago pig lead was worth over £20 a ton, and as recently as the end of 1887—less than six years ago—it stood at £15 15s., but in the closing month of that year it dropped to £9 15s. a ton, thus breaking the record,and within the last few weeks it has been dealt in at £9 5s. a ton. In these circumstances it is not surprising that the lead mining industry in this kingdom has become practically a thing of the past. The Van mine, in Montgomeryshire, which paid handsome dividends for a long series of years, held out valiantly, but it had at last to be closed; the famous Great Laxey property, in the Isle of Man, was able to pay dividends for a longer period, owing to the considerable percentage of silver contained in the ores, but in this case dividends ceased in April, 1891; while the Weardale Company, which owns the Beaumont mines in Durham—mines which for generations paid their owners handsomely—has not distributed any profits for nearly three years. Even the famous trio of Spanish mines, Alamillos, Fortuna, and Linares, have been unable to earn anything for their shareholders lately, the two former having paid no dividends since March, 1892, and the latter since September. Whatever benefits may have flown from cheap silver, therefore, it is quite obvious that the producers of lead as the staple commodity have suffered severely, although the consumption of the metal has increased very considerably. This will be seen from the amounts imported into and exported from the United Kingdom in recent years, as shown in the following table:

Year.	Imports. Tons.	Exports. Tons
1887	114,382	44,301
1888	132,911	48,616
1889	145,451	52,040
1890	158 649	55,536
1891	169,724	48,276
1892	182,782	58,101

In the five months of the current year ended with May, the imports of pig and sheet lead were practically the same as in the corresponding period of last year —75,399 tons, against 75,752 tons; while the exports were 21,691 tons, in contrast with 30,030 tons in the first five months of last year.

The falling off in the exports of lead is doubtless due to the diminished production, which has been brought about by the unremunerative prices. There is reason to believe, however, that there has been no decrease in the consumption of the commodity, and, if that be so, it follows as a natural consequence that stocks are low at the present time. This is evidently the impression entertained in the trade; for holders, instead of accepting any price offered, have been standing out for higher quotations, with the result that since the decision of the Indian Government in reference to silver and rupees was made known the market values of English and Spanish pig lead have advanced 5s. or 6s. a ton. These are not, of course, very important movements; but they seem to indicate that the long-hoped-for turning in the long road of depression has been arrived at. The future of lead is so intimately bound up with the future of silver, and the latter is so uncertain, that it would be foolish to attempt any exact forecast on the subject. Still, the prospect is that the recovery in the price of the metal, small as it has been so far, will make greater headway. As we pointed out on Monday, it is certain that there will be an enormous decrease in the output of silver in the United States and in other silver-producing countries, and this will necessarily mean a substantial reduction in the lead offered for sale. By the laws of supply and demand, the moment that the latter exceeds the former the price of the metal must improve, and, as the demand is just now brisk, we fully expect to witness higher quotations for this much depreciated metal. As to whether or not the prices ruling when the mines mentioned above were able to earn dividends will be repeated there are no means of judging; but the balance of probabilities seems to point to an affirmative conclusion on that point, because such a quotation as £10 or £11 a ton would not induce the employment of fresh capital in lead mining.—Financial News.

The report of the trustees of the gratuity fund of the Toronto Board of Trade has been presented. During the past year one name has been added to the membership, making the total of subscribing members 851. There have been 44 transfers made this year, the average age of those relinquishing their interest being 43, and of the new participants 39. There have been 15 deaths during the year. The average age of those who died was fifty years. The amount on mortgage is $52,250, invested on property appraised at $118,000. The amount in bonds is $23,000. The average rate of interest is a fraction over five per cent.

STOVE MANUFACTURERS TRIALS.

Stove manufacturers often have singular experiences in their dealings with the retail trade, and sometimes these experiences are not complimentary to the latter class. For instance, a dealer sells a stove and connects it with a poor chimney. If the stove does not work well the dealer complains to the manufacturer that the stove is "N. G." The fact is, thousands of the stoves are in operation all over the country giving entire satisfaction. A stove manufacturer whose stoves would not work, and against which there was universal complaint, could not continue in his business. A really worthless stove would bring quick diaster to its manufacturers. To establish and carry on the stove making business successfully requires capital, experience, ability. All these combined could not bring success with stoves which "will not work." The fact that a stove manufacturing concern has been in operation any considerable length of time, and that thousands of their stoves are in daily use, is enough in itself to show the absurdity of a dealer's writing to a manufacturer that his stoves are worthless. A little common sense applied to the subject cannot fail to set the dealer right upon this matter. We do not say that there may not be some fault in mounting a particular stove which would prevent its working properly in a good flue; but such instances would be rare, and another stove of the same make would be free from the objection. If a stove is put up right, flue stoppers in place, pipe tight-fitting and properly connected to the chimney, and the stove will not work, the fault is in the chimney. A stove dealer who is ambitious to build up and hold his trade will find what the trouble is and remedy it at once. He cannot afford to have one disappointed customer, and if he thoroughly knows his business he will not have one. There is another annoyance thrown upon stove manufacturers which is wholly unjust and unwarranted. It may be stated somewhat like this : A stove dealer sells A.'s make of stoves to Mrs. Z., whose neighbor, Mrs. X., has bought B.'s stove. Mrs. Z. likes Mrs. X.'s stove, and forthwith requires the dealer to take back A.'s stove and put in B.'s. The dealer growls and writes to A. that his stove is unsatisfactory. In such a case as this the dealer does wrong in making the change merely to gratify a woman's whim. Having sold the stove he should make sure that it is operated all right and then refuse to make the exchange. The woman would not think of taking a piece of dry goods back to the merchant of whom she had bought it, merely because she had seen her neighbor wear a dress she liked better than the goods she had purchased. Such a course would be just as reasonable as to require an exchange of stove, and the stove merchant should convince her of this fact. The difference between success and failure in the dry goods business not unfrequently depends upon the skill and tact of the merchant in dealing with customers. The stove dealer, if he studies his own interests, will not neglect this point, as it is to be regretted some do. The dealer who affably maintains his own rights will succeed better in the long run than if he yields weakly to the whims of his customers. By such a course he will command their respect and confidence and hold their trade.—Ironmonger.

COVERING EXPOSED IRON.

Seeing nearly every month that some attention is being given to the painting of iron work exposed to severe atmospheric influence, I would also give my experience of forty years. It was about thirty years ago that I first began to take any interest in the causes of decay in paint on iron surfaces, and then I began to think and inspect work I had done ten years previously. About thirty-five years ago I had to do some iron rods, which were string bolts for holding a large roof together in a flax-spinning factory. These rods had been painted with oxide of iron and had rusted. They were cleaned to the iron, and so thoroughly that the iron was made bright with rubbing. I had to paint them with red lead mixed with half oil and half turps and some liquid dryer of my own make. This dryer was composed of black wad, red lead and oil boiled to a pulp and then thinned with turps. The second coat was about the same as the first. The third contained less turps, and the fourth and last coat hardly any turps. This work has not been done since, and is to-day as perfect a protection to the iron as then. Four years ago I visited the place and was allowed to examine these bolts, and when I scraped off the paint the iron was as bright as when I painted them. Another case is a water-wheel which has been built seventy-five years. Twenty-five years ago I had a contract to paint this wheel. The owner thought that he would have it cleaned and painted. I employed men to clean it thoroughly, and to my surprise I found no rust. When I called the attention of the owner to the fact, he informed me that his father had it painted fifty years before, when it was built, and the red lead was made from ore got in a hill just by, and smelted in the village. However, I gave it two coats of red lead mixed as I have stated. The wheel is still running, has not been painted since and is in good condition. Now, in regard to work rusted on a smooth surface, I have done work of this kind also which has been exposed to the sea air. My first step is to clean thoroughly, and then, if badly rusted, to mix a thin mixture of lamp black with plenty of turps and dryers and a little oil, and when dry apply the red lead as above. This will give a lasting job, as the lamp black arrests and prevents the rusting. In conclusion, I would say that if any of your readers want a good permanent job of iron painting, let them try the above plan, and I am sure that they will be repaid for the trouble and extra cost as compared with the customary wash of metallic paint and oil.—Painting and Decorating.

BURNT AIR.

People have been talking in regard to burnt air ever since the first winter after Noah came out of the ark, writes a contemporary of N. Y. Metal. What they said previous to that time is not known, because the records are destroyed. It is sufficient for those who are living to know that all through the present generation it has been used to harrow up the souls of furnace men. Now, first and foremost, it can be set down as a fact capable of demonstration to all except idiots and knaves, that there is no such thing as "burnt air," and the air that people talk about as having been burned has not been harmed in the least. It is just as good for respiration as though it had never been through a furnace. "Well (somebody will say), when I get my furnace red hot the air that comes up out of the register does not smell good." The reply to that is, "Very likely, Mister." Nobody said that it was sweet to smell, but all the same it has not been burned. When the furnace surfaces become red hot the air is passing through so rapidly all the oxygen that the hot iron could take out of it would not affect the composition of it perceptibly. But the reply is, "It makes my head ache, and I can't endure it." All that is true enough, but the reason has been overlooked. The furnace stands idle all summer long, from the 1st of May to the middle of September. During almost every hot day the house was cooler than the external air. The draft in the furnace, furnace pipes and registers was very often downward. There was a strong circulation toward the furnace, and at the time when the circulation was greatest there was carpet sweeping and dusting going on thoughout the house, and the dust went into the registers. If the registers were in the floor very likely the servants used to sweep the dust in. In many houses (and many fine ones, too) the registers are used as dust pans. If any one wants special proof of it, when they go home let them lift up a floor register and look at the contents of it and the pipe around the register setting. The dust that does not stick in the register goes down the pipe, collects at the bends and goes onward into the furnace and collects on the heating surfaces. All Winter long while the furnace is in action, the dust from the outside is going into the cold air box and being quietly distributed upon the heating surfaces. Now, when a cold day comes and everything is made red hot, the whole household gets a very strong taste of roasting dust, and it is roasted dust and the smell of it and the baking of all the foulness in the furnace pipes

that causes all this talk about "burnt air." When your servant calmly throws a dust pan full of miscellaneous nastiness into the register, you have the pleasure of having that warmed over under your nose under the name of fresh air. Now comes the question as to whether there is any remedy for this. Certainly. Put cheesecloth over your cold air boxes in the winter time; a frequent renewal of it when it becomes filthy; the cleaning of registers in the fall before the furnace is lighted; cleaning out the pipes, if necessary cutting handholes for the purpose. And finally, the thorough cleaning of all the heating surface inside the furnace from dust. When this is done the furnace will be in good working condition, and can be driven considerably without giving you unpleasant odors which are usually called "burnt air." In proof that this is the case, just notice the difference between the first year that the furnace was set up and what happened three, four or five years later. In the beginning "burnt air" gave no trouble, but as the years went by and the furnace pipes became filthy, the trouble whenever the heat was great was aggravating.

THE PRODUCTION OF STRAITS TIN.

In view of the circumstances that the Settlements mine more than one-half of the total quantity of tin raised in the whole world, it is clearly of interest to endeavor to ascertain its output is or is not likely to be maintained, or even to be increased. The output of tin in the whole world for the year 1891 was 57,551 tons, of which 36,061 tons were raised in the Straits Settlements. Adding the 12,106 tons mined in the Dutch East Indies, within a few hours' steam of Singapore, it is seen that all the rest of the world raised only 9,384 tons. Much of that balance was mined in Australia and Great Britain. The output of the Straits appears to have been steadily increasing for some years past, judging by the following returns of the exports in tons:

1887	27,549
1888	29,169
1889	33,021
1890	31,976
1891	36,061

For the years 1890 and 1891 the principal shipments by countries were as under, the picul being 133½ pounds:

Country.	1890. Piculs.	1891 Piculs.
United Kingdom	267,238	293,024
Austria	5,295	4,035
France	40,935	45,446
Germany	2,102	2,532
Holland	14,304	18,355
Italy	3,698	6,676
United States	118,243	163,647

These figures show a marked increase in the shipments to the United States, owing, no doubt, to the efforts which are being made to establish the tin plate industry in that country. The tin mines of the Dutch Indies, situated on the islands of Banca and Billiton, made larger outputs in 1891 than in any previous year, Banca producing 6,460 tons, and Billiton 5,645 tons, both totals being well ahead of those for 1890. Tin has been discovered also at Singkep, on the island of Java, and a Dutch company has erected works in order to smelt and test it. The Jelebu Tin-mining Company, established in 1889 to mine for tin in the State of Jelebu, 40 miles inland from the Straits of Malacca, took over certain partly opened alluvial mines and 2,000 acres of land. It has since doubled the area of its lands, and is already producing over 800 tons of pure tin per annum. It pays handsome dividends, has European managers, and about 1,200 Chinese coolies working under their own head men. The company has imported some skilled miners from Australia, but it is scarcely probable that the old methods of working will be greatly altered, the Chinese miners being most industrious, patient, and economical. The Chinaman working for tin uses primitive appliances, his tools being a hoe, two baskets and a bamboo pole. His washing appliances are equally simple, and his diet consists mostly of rice and water, flavored by an occasional pipe of opium. The best of the Chinese mines are those in Laroot, in the north of Perak. A recent report from the district states that in the opinion of practical men both the Dutch and the Straits mines have been only superficially prospected so far, and that the store of tin is "simply inexhaustible." If that is the case, there need be no fear of anything like a tin famine. —The Ironmonger.

A TANGLE IN TWINE.

Complaint is made that the quality of wrapping twine now on the market is not up to the standard. This has been verified in two instances and the chances are that the complaint is well founded. Low prices and the necessity for competition are ascribed as the reasons for this departure from trade precedents, but it would seem as if the manufacturers had over-reached themselves in an attempt to balance their profit and loss account by foistering inferior goods on the market at the expense both of the jobber and the consumer. One instance is cited where A quality had been ordered. The goods were received and were found to be B, yet the bill was based on the A price. The purchaser refused to accept the twine, even at B prices, and it is now held in this city subject to the order of the shipper. An old saying has it that competition is the life of trade, but this particular variety is the kind that kills it. Fortunately, however, the trade is not burdened with similar complaints in other lines, despite a very active rivalry.—Stoves and Hardware Reporter.

IRON ORES OF NOVA SCOTIA.

Some notes on the "Minerals of Nova Scotia" were prepared to accompany the collection of Nova Scotia at the World's Fair, and from these, says a contemporary, we make the following extracts bearing on iron ore:

The iron ores of this province, so far as they have been developed and tested promise to be unusually large and varied. At present there are only four furnaces in operation, two of which in Pictou County have been but a few months in operation and have already passed the experimental stage. The Londonderry furnaces have been running for a number of years, and yield an excellent product from a mixture of limonite and hematite.

In the western portion of the province there are important deposits of red hematites and magnetites at Tor Brook, Clementsport, and Nictaux. The Torbrook mine in this district furnishes annually about 30,000 tons for the Londonderry furnaces.

On the opposite side of the Bay of Fundy, the Cobequid mountains contain important bodies of limonite and carbonate ores, which have been worked for many years at Londonderry. The Cobequids continue to the eastward into Pictou County, and here the deposits consist of limonite and specular ores. In addition, the Clinton Shales contain numerous beds of red hematite, some of which are 50 feet in thickness. There are also important deposits of limonite and spathic ores in low carboniferous strata. The iron contents of these ores run from 35 to nearly 70 per cent., some of the ores ranking as good Bessemer, while all are good furnace ores. In this county the ores are in close proximity to coal and fluxes, and every railway facility exists.

The continuation of this ferriferous range reaches the Gulf of St. Lawrence at Arisaig. This locality has hitherto received little attention, but several beds of red hematite of good quality are known. These ores, being close to shipping will probably be utilized for furnaces in Pictou and Cape Breton counties.

In Guysboro' several large deposits of specular ore have received a limited attention, and similar deposits occur in Richmond county. Upper Stewiacke, Grand Lake, Goshen, Selma, Pugwash, Brookfield, may be mentioned as points where important deposits are indicated.

In Cape Breton the presence of numerous deposits has been known for some time, but no mining or development work of any extent has been done. At Whyhogomah, in Lauretian strate, are red hematite deposits, probably containing large amounts of ore. Promising deposits are known as East Bay and George River. Lock Lamond, Big Pond, Smith's Brook, Lake Ainslie, Lewis Mountain, may be mentioned as yielding iron ores. The scheme, now in contemplation, of erecting a blast furnace plant in the vicinity of the coal mines, would stimulate prospecting, and no doubt many more deposits would be found and prove of value.

RETAIL ADVERTISING.

"A merchant cannot afford to sell at small profit unless he does a large business, and he cannot expect to do a large business unless he advertises his bargains"

Perhaps of the minor problems of the retail hardware merchant, that of the proper form and method of advertising is the least understood and considered. That old and true maxim which warns us that those things which are "worth doing are worth doing well" bears with particular force on the subject of general advertising.

To the large manufacturer, city dealer or specialist, who has made of the subject a special study, or employs men who have ability to furnish at call, original and attractive designs and reading notices, this matter receives careful and intelligent attention, but for the average dealer it is allowed to take care of itself or left to the construction of the printer, who has no special interest or acquaintance with the details of the business of the advertiser.

It has been stated repeatedly, and with truth, no doubt, that "millions have been made solely through advertising," but it can be said with equal truth that many millions have been wasted, solely through careless advertising. The first thing for a retail dealer to determine is the maximum amount which he considers proper to expend during the year for advertising, and when he has so decided, to expend it where it will bring the largest returns.

A. T. Stewart is said to have stated that a merchant to be successful should spend an amount yearly, on advertising, equal to his rent. His idea was that if a man could afford, and his business justified, a rent of $1,000, he, on the same principle, would be justified in spending $1,000 for advertising his business, and if the rent was ten times that amount, the advertising amount should also be increased to the same figure. While personally I agree with this statement, provided the field of operations is large enough to keep up the demand, still the circumstances of the average dealer are such that he rarely dares to carry out this idea to the full limit, and it will be found that the usual expenditure for advertising by retail hardware dealers is less than 20 per cent. of their rent. I believe that in any fair-sized city it will be found of advantage to spend at least one half as much as the rent, if not two thirds; and if possible even more.

As to the mediums for advertising, are like the sands of the seashore—countless—and as widely different as the ingenuity of man himself. Now if I had decided not to exceed, say $500 for advertising during the year, I should place it somewhat as follows. With $200 I would contract with the best—very best—local papers for as many hundred lines of local notices as this amount would buy, to be taken as desired during the year. This would give the opportunity to reach those who never look at displayed advertisements, and the further advantage of using them at seasons when I wished to push specialties. With another $200 I would contract for a stipulated space next to reading matter, to be used both as single or double column, as desired, and the privilege of daily or semi-weekly change. This particular specified space may cost 25 per cent. more than the "run of the paper" would but it is worth the difference, as it brings your space directly under the eye after it leaves the items of news. You must bear in mind that the public buy the paper mainly for its news, and to have them read your advertisement it must be placed where it will be prominently and easily and even unintentionally read. The remaining $100 I should add to the above, or spend it for signs on the fences, trees, or barns along the road leading into town from the surrounding country, and thereby keep your name and business perpetually before the suburban public whom the press might not reach regularly. This would leave nothing for fair and picnic programmes, or fans, calendars, and the like, but you will lose nothing by giving them the go by. Every kind of advertising helps, from chalking your name on the sidewalk to artistically painting it upon the summit of a mountain, but for the retail dealer nothing takes the place of, or brings such immediate returns as the use of the local newspapers.

Having briefly described the amount and medium of advertising, let us consider the method or manner of advertising. At the outset it must be distinctly understood that simply putting one's business card in the paper is, in itself, a very feeble attraction, and to catch the reader's eye, a striking head-line or design must be used. The columns of many newspapers containing a meaningless lot of two inch ads, one after another, with little break in the type or variation in style, remind one more of a business directory than the mute representation of a live business concern, and is the reason why so many dealers grumble at their advertising bills and complain that they do not pay.

If a gardener planted a garden with good seed and then left it to the mercy of the weeds, nobody would sooner see the mistake and neglect than that same advertiser (the name is misplaced) who pays his coin for an advertising space and then neglects to keep it clean and attractive. It is better, in my estimation, to put ten poorly-written advertisements in a paper during a month than but one fairly good one, because the change excites curiosity, and curiosity is the bump of human nature on which you must operate to be successful. The way to have fresh advertisements, if your time is limited, is to have a blank book at home, and when you find an idea in what you read or hear jot it down in the form of an advertisement, and so always Have a stock on hand to draw from. Read other people's advertisements, especially in the large cities, and notice points which you can utilize, and watch local events and work them into your advertisements. Then make your local notices and the regular space work hand in hand; thus, if you are advertising lawn mowers or any other line in the space have your local notice read like this:

"How to buy a lawn mower cheap: See Blank's advertisement, top third column, this page."

Or,

"How to cut grass with ease," etc.

Or,

"Blank is making a very liberal offer to purchasers of lawn mowers to-day."

This will lead those interested in the subject to at least glance at your space—perhaps for the first time—and the habit being thus acquired they will continue to glance at it on succeeding days, if the matter is kept fresh and interesting.

The cuts, generally furnished free by manufacturers to the dealer, are often the best kind of advertising matter that the merchant could possibly have, and a free use of them is recommended, as they make a target for the reader's eye, and object teaching speaks loudest in the newspapers.

Many people will tell you that it is a hard matter to keep advertisements fresh and attractive, and so in truth it is, but is it not also difficult, and often tedious, to wait on customers and suit their varying fancies? If you had a clerk who was impatient or unwilling to bestow enough labor or tact to sell to these customers, would you keep him? Is it, therefore, a valid excuse to allow the question of "hard work," which is indispensable in any line of business, to deter you in reaching the trade for which you pay the newspapers?

If you lack the ability to write an advertisement which will compare with those of "Pear's Soap" or "Pearline," you can at least state concisely what you have to sell, and, if desirable, the price, and keep the matter fresh until you have exhausted the article which you keep in stock, and then commence over again, and if you can think of "nothing new under the sun," place the day, month, and year—as "Jan. 1st, 1893," over your advertisement in large type, to remind people that yesterday is a thing of the past, and that you know it. There should also be an avoidance of vulgar or coarse statements, or an excess of slang. "United States language contains so much that is "slang" and in common use, even among cultured people, that a proper and oportune use of it is attractive; but never go too far in that direction, as often there is danger of offending some people and lowering the tone of the establishment which allows its use.

Another way in which a trader can utilize advertising when some new article of merit appears in the market, of which he has secured a stock, is to hand one to the editor or a reporter of the local paper and ask him to give his readers a notice of the new article (which you will do well to write yourself) and at the bottom of the notice refer casually to the fact that they can be had at your store. Many newspapers will admit matter of this kind without charge, if the article is novel, and its value to the merchant is more than would appear on the surface, as it carries the weight of the paper's reputation with it, and is generally read with interest by subscribers, and remembered.

The limited scope of this chapter has only admitted of a mere outline of some salient points in retail advertising, and they are the most important, and can be

BINDER TWINE

Best Makes

Write us for Prices and Special Terms before ordering elsewhere.

H. S. HOWLAND, SONS & CO.,

WHOLESALE HARDWARE

57 FRONT STREET WEST - - - Toronto

PINE TAR

In tins. Sizes Nos. 1 and 2.

14, 16, 18 and 20 Pearl Street, TORONTO, ONT.

The Toronto Lead and Color Co., LIMITED

profitably considered by any merchant who wishes to insure his profits by the ready means of advertising. They are:

The newspaper before all other mediums.

A frequent change in the matter.

A combination of reading notices with regular space.

The location of space rather than its size.

The use of trade electrotypes.

The avoidance of vulgar notoriety and adherence to truth.

The cultivation of editorial notices indirectly personal.

The value of hard work in advertising as in other parts of the business.

The aim to attract and excite comment.

Lastly, but of primary importance, the necessity of having the goods at the right prices, and enough clerks to comfortably sell them to the customers which persistent and intelligent advertising will surely bring to the "live" trader.

Advertising does not sell goods, but
It makes it possible to sell goods;
It is the connecting link in trade."

LAYING A FOUNDATION.

A novel method of laying foundations in swampy soil is mentioned by a contemporary as having been recently employed by an American Engineer. The building to be supported was a low wooden one, which it was proposed to use for the storage of machinery. Casks were set in holes in the ground along the line of posts, and filled to the depth of about one foot with iron turnings. The posts were placed in the casks, which were then filled with iron turnings compactly rammed in place. A solution of salt and water was slowly poured over the contents, under the action of which they solidified into a hard mass. The heat of the oxidation of the iron was so great that the posts were charred. This also served to act as a preservative, and, in that capacity, under such conditions, it is considered that the iron turnings are probably superior to concrete.

CARE OF TEST BARS.

W. J. Keep, of the Michigan Stove Co., in conversation with the writer, gave it as his opinion that very few foundrymen fully appreciated the value of tests of cast iron, preferring to rely on the results of previous casts made of the same mixture. "A great many of those who use testing machines are inclined to be inaccurate I visited two concerns who make tests of their iron, in Chicago, one of them the largest of its kind in the West. One was using test bars supposed to be one inch square, and one bar they used was ⅛ inch too large and another ¼ inch. The other concern was testing with bars which did not vary quite so much, though they did vary a little, but the bars were very rough—not smoothed at all—and the consequence was the bar acted in about the same way it would were it notched. Such tests are of no value, and might as well not be made. Tests to be of any value should be made with bars that vary as little as possible—certainly not over 1-16 inch, and the bars should be smooth."—Iron Trade Review.

GOOD ROADS.

We are going to have good roads in this country, says a U. S. contemporary, and sooner than most people think. It will not be due to the millionaires or mossbacks either, but to the young blood of the nation—the boys—who furnish their own motive power and travel over the country on two wheels. Charles Kingley's lines might thus be paraphrased and dedicated to the inventor of bicycles:

When all the world is young lad,
And all the trees are green;
And every goose and swan, lad;
And every lass a queen;
Then hey for legs and wheel, lad,
And round the world away;
Young blood will have its course, lad,
And every dog his day.

RETAILERS AND CREDIT.

Retail dealers are often perplexed as to how to deal with slow-paying customers says Ironmonger. The dealers need the money for their goods, and at the same time they want to hold all the custom possible, and they fear to offend patrons by too sharp and persistent dunning. The ideal condition of trade would be, that the merchant should receive the pay at the same time the sale is made. Some merchants are able to carry on business on a cash basis, but to the majority this seems an impossibility. Whether this assumption is strictly correct or not we do not here undertake to say. Accepting the condition of trade as it actually is, it is certainly true that to many merchants the severest trial they meet in business is to collect the pay for goods sold. This is one of the crucial tests of a successful merchant. That a dealer, to be successful, must have a practical knowledge of the goods he handles; that he must know the wants of his patrons and be able to supply them satisfactorily; that he must keep posted on the markets and be prepared to buy closely; that he must buy discriminatingly and wisely; that he must keep the public informed of what he has to offer and so display his goods and employ such salesmen, and conduct the details of his business so as to attract customers, these are all points not to be overlooked. But suppose all these matters to have been attended to in a most scrupulous manner, and that he has disposed of a large amount of goods at fair prices, does this make him a successful merchant? Not necessarily. The question remains to be answered whether he has received pay for the goods. It is no trick at all to do business on the benevolent plan of trusting anybody and everybody and giving them all the time they want in which to pay for the goods. That is, it would be no trick to keep this up for a time, but eventually the merchant will find himself unable to purchase goods to keep his store running, unless he can command the resources of a national treasury, or enter upon ways which do not stop short of Canada or the State penitentiary. It requires tact to keep collections up closely and hold trade steadily. This train of thought was suggested by a letter The Ironmonger recently received asking advice upon this matter of collections. The opinion of business men who have had years of experience in such matters and who are successful in meeting such cases, would be more to the point, and we would be glad to have such contribute their views. It is, of course, useless to give advice to apply in individual cases. There are too many unknown conditions to admit of this, but general principles may be stated which may be of some help. It would be very easy, in trying to answer our correspondent's inquiry, to say, sell only for cash; or in individual instances to advise instant suing. This summary manner of disposing of the inquiry would not be at all satisfactory. Coming at it in a different way we may say to begin with, that a retail merchant ought not to grant sixty days credit. Bills should be payable on the first day of every month, accounts running beyond that time would be past due. The date when an account is due should be stated on the bill head or statement. Not every merchant would consider it wise to call only once in fifteen days for an overdue account. There are, of course, all sorts of ways of dunning a man. One man will dun a debtor frequently and with sufficient sharpness to make the impression unmistakeable that he is in earnest and yet do it with such tact and good nature as to keep his debtor in good feeling and make him say to himself, "Brown's a good fellow, and I must manage to pay that account by Saturday night at the latest." Make your debtors feel the justice of your claim so strongly that they will stir up their debtors to come to time. If a collector does not secure pay for an account when due, he should get the debtor to set a day—as early a one as possible, when he will pay it, and be on hand at the date without fail to receive the amount. If the debtor fails to come to time, he should be given to understand that the merchant has gone on with his business arrangements on the basis of faith in the integrity of the debtor's word, and that the least that can now be done is to close the account by note, which the merchant can use temporarily in lieu of cash. Every merchant will be greatly aided in finding the best method of treating individual cases by seeing what tactics his debtors pursue with the dry goods merchant, the grocer, the tailor, the milliner, the butcher, the doctor, etc. If they are in debt to all these people they can hardly be called "good," and the quicker their career of credit is cut short the better. If they pay others and stand off the hardware dealer, it is not to the latter's credit if he allows the game to be kept up. Many merchants lay too much stress on their fear of losing custom by collecting accounts closely. A man who has the right qualities for a successful merchant will keep his accounts closely collected up, and will at the same time hold his customers, even customers who would be slow pay if he allowed them to be. By showing care, diligence, energy and persistence, even in pursuing collections, a merchant will command the respect of his patrons. "Business is business," and a man will be honored for conducting his business in accordance with correct business principles. A man who is thus able to command his capital, and has it in shape to turn it over several times a year, is in better position to serve his customers satisfactorily, and as a rule will so serve them in prices, quality and variety of goods, than one who is cramped by slow-paying patronage. It does not take customers—the customers best worth having—long to find out the truth of this, and it has a correspondingly beneficial effect upon business.

JOHNSTON vs. THE CANADA PAINT COMPANY.

Judge De Lorimier, in the Supreme Court, rendered an interesting judgment the other day in the case of Johnson v. The Canada Paint Company, limited, and "Econtra." This was a petition by which Wm. Johnson & Sons, Ltd., paint and varnish manufacturers, asked for a writ of injunction to prevent the Canada Paint Company from using a certain trade mark and labels. In 1889 Wm. Johnson sold out the whole of his business, including the good will, trade mark, etc., to the Johnson Magnetic Paint Company. Among other conditions of the agreement were that Wm. Johnson should be manager of the company purchasing, and would not carry on, himself, the same line of business for a period of five years, except he should be dismissed from his position of manager, when he could resume business in his own personal name. Subsequently the Johnson Magnetic Iron Paint Company, which had now become the Wm. Johnson Company, was transferred to the Canada Paint Company, and Wm. Johnson then resumed business under the name of Wm. Johnson & Sons, Ltd., and took out the present writ of injunction. The court held that the transfer to the new company included all the rights and privileges granted by plaintiff to the Johnson Magnetic Iron Paint Company, and subsequently the petition for a writ of injunction must be dismissed. On the other hand, the court granted a counter petition presented by the Canada Paint Company asking for a writ of injunction to prevent Wm. Johnson & Sons from carrying on their business.

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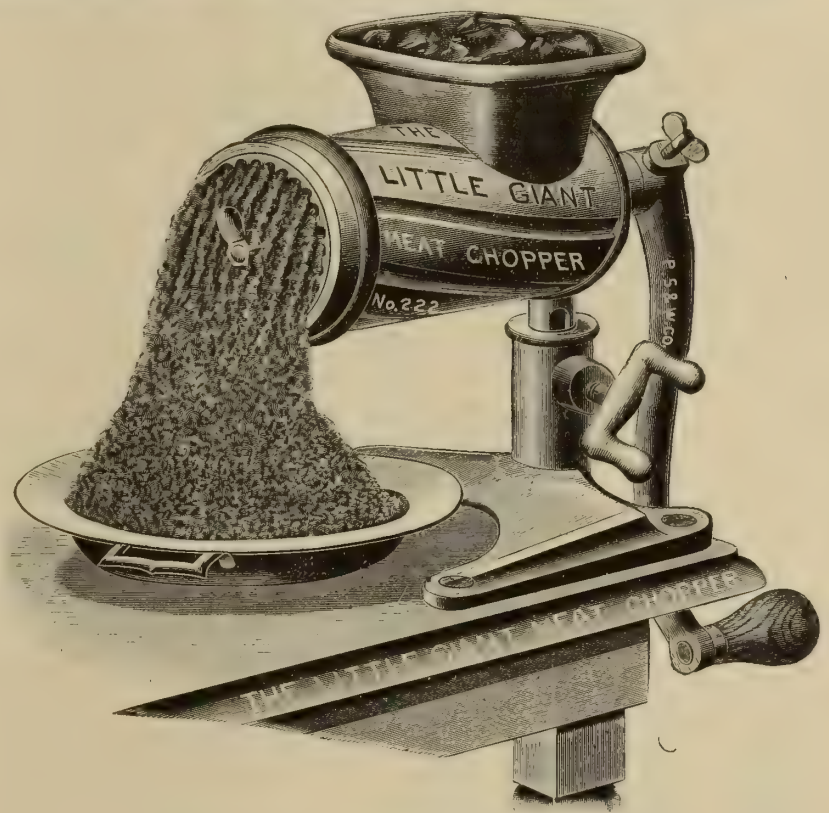
MAGNETIC IRON IN AUSTRALIA.

About 10 miles north from Port Victor is a remarkable deposit of magnetite. It is in the form of a mountain of iron, in a very nearly pure state, vide the following essay made at the Adelaide School of Mines, 1892, entitled, "Analysis of a Sample of Mount Jagged Black Iron Ore"—Ferric oxide, 90.627; ferrous oxide, 8.329; titanium oxide, 0.975; silica, 0.169. Total 100.100. Physical properties—specific gravity, 5.02; hardness, 6; streak, nearly black; color, black lustre, sub metallic; brittle, slightly magnetic, but specimens examined did not show any signs of polarity. There having been some difference of opinion as to the composition of this ore, and its utility as a flux in smelting silver ores, it was determined to make a careful analysis of it, with the above result. The small proportion of ferrous oxide—slightly lower than any example of magnetite quoted by Dana in his "System of Mineralogy"—shows that little or no weight can be attached to the state of oxidation of the iron for fluxing purposes, and in this respect the ore more resembles hematite than magnetite. The titanium oxide was very carefully determined, and the quantity as above is not sufficient to preclude the use of ore for fluxing purposes. The company who holds the lease from the South Australian Government for 99 years has recently sent to London samples of the above, at the request of an expert, Mr. Parkin, sent out by a syndicate to look out for a class of investments of this kind, the object being to manufacture iron and steel, of which the colony of South Australia alone absorbs about £150,000 worth per annum. This lode, of which there are millions of tons in sight, lies encased in a bed of beautiful kaolin, which is well adapted for the making of bricks of superior quality, suitable for the erection of steel works, including the furnaces. Limestone of the very best description for fluxing is abundant in the immediate vicinity, with an abundant supply of water in a natural reservoir with a large catchment area and annual average rainfall of about 35 in. in the district.

The surrounding country contains, in an area of not less than 20 square miles, an enormous growth of gum and stringy bark timber, well adapted for the conversion of it into charcoal, (by the retort system of the utilization of the waste heat from the furnaces) can be produced at about 12s. per ton. There exists at the foot of the mount a basin about 5 miles by 2, in which are found good indications of coal, at no very great depth from the surface. Failing this—which will be proved by boring—a supply can be cheaply obtained from New South Wales, seeing that Port Victoria harbor has been improved by a breakwater, making it both deep, safe, and commodious. A line of railway can be cheaply constructed to the works, connecting with the existing line at Port Victor. The Government will foster the industry in every possible way. There is, therefore, every possibility of this colony in the near future having its own iron and steel works, and which means keeping in the colony the sum before named annually, and the employment of not less than 1,000 men where none are employed at the present time.—American Manufacturer.

A HANDY MEAT CUTTER.

Another meat chopper is being placed on this market by H. S. Howland, Sons & Co. It is named "The Little Giant Meat Chopper," and the accompanying cut gives an idea what it is like. It is claimed to have all the essentials necessary for a family meat cutter, and it is therefore not surprising to hear that it is meeting with success. The machines



are made in several sizes, all nicely timed, and a unique feature about them is that they can be instantly changed into sausage stuffers.

MANUFACTURE OF IRON IN INDIA.

The former attempts to start the pig iron industry at Beypore, Nerbudda Valley, Chanda and Kumaon were, as is well known, unsuccessful. Railways are now, however, opening up the mineral resources of the country, and the prospect of coal mining, as well as iron working, becoming large industries is yearly improving. The supply of coal is rapidly increasing. In 1881 there were 47 collieries open; in 1890 the number had increased to 82, and the output increased from 997,730 to 2,168,520 tons. The most successful effort to produce pig iron is at Barrakur, on the East Indian Railway. The first attempts were financially unfavorable and the promoters found themselves unable to continue their operations. The works were then taken over by the Government, who, after keeping them up for a time, and turning out 8,000 tons of pig iron per annum, retransferred them to a company which was formed in 1889, under the name of the Bengal Iron and Steel Company, with a capital of £150,000. One condition of the lease was that the plant should be so improved and extended as to insure an output of at least 15,000 tons of pig iron per annum. Since the works have been taken over, the two blast furnaces have been reconstructed, and a new one 60 feet high has been built. This furnace is producing close upon 2,000 tons per month. When the three furnaces are at work they will be able to produce from 45,000 to 50,000 tons per annum. The fuel used is coke and anthracite coal, in about equal proportions, and both are available in abundance. The flux is not so easily obtainable, the quality of the limestone in the immediate neighborhood of the works being inferior, and that used has to be brought a long distance at considerable expense; but hopes are entertained that, by further explorations, this difficulty will be overcome. Foundries for the casting of pipe and railroad ties have been constructed with all the appliances adopted in similar works in England. During the three years ended October 1st, 1892, the works have yielded 8,433, 8,420, and 10,046 tons per annum respectively. In the present year it is expected that 25,000 tons will be produced. The quality of the iron is reported to be good, and the "Bengal pig" has become popular. The East Indian Railway Company has been using 300 tons per month in the manufacture of cast iron sleepers, and other railways have taken 200 tons per month. There has also been a demand for pipes, which 4,000 tons were cast last year, and the Chief Commissioner of the Central Provinces, Sir A. P. MacDonnell, was surprised at the manner in which the company had executed a contract for the Rapiur Waterworks.

IMPROVEMENT FOR BICYCLES.

A new bicycle device, says an exchange, which was exhibited and tested recently in New York, is claimed to be far in advance of the most recent elliptical sprocket, and it is said it will supplant the latest improvements. The new invention is called the Vogel hill-climbing attachment, and is a simple, ingenious attachment, which is readily applied to the ordinary skeleton sprocket wheel, admitting of a reduction from the ordinary gear of a safety wheel to any required proportion. The gear can be readily changed by withdrawing the cogwheels in the interior, where they are six in number, from the larger to the smaller sprocket. This is accomplished by merely pressing a lever, which instantly throws the gear in or out of action. The new sprocket wheel enables a rider to dispense with a brake entirely, and still keep perfect control over the machine upon the steepest incline. The one which was exhibited was geared to 64 inches, and by displacement was reduced to 32 inches for hill-climbing. The additional weight of this attachment is only two pounds

THIRTY YEARS' FOUNDRY TRADE.

The subjoined was read at the recent meeting of the Western Foundrymen's Association by W. F. Ferguson :

This is too broad a subject for anyone to attempt to cover with much satisfaction in one short paper, therefore we will not deal with details to any great extent.

One often hears the remark that there has been less advancement in the foundry than in any of the other departments of engineering. Judging from the same standpoint as the other departments are measured from, viz., special machinery, this may be true. But from a purely mechanical standpoint the facts in the case show that the foundry has developed as rapidly and as thoroughly as the other departments, and has met all requirements put upon it ; and while doing this it is surprising to think how well it has met these requirements in the face of such opposition as it has had to contend with, coming from those who should be most interested in its success. Is it not an acknowledged fact that the foundry has been the most neglected department in the majority of engineering plants in this country ? And it is only of very recent years that manufacturers have begun to realize that this department was deserving of some attention. For this change, much credit is due to those who, having the knowledge and ability to do so, spared no pains in putting their experience and knowledge before the world in the shape of books and articles in mechanical papers bearing on the subject of foundry practice. These writings have not only helped to educate the moulder in his business, but have set manufacturers to thinking that the foundry required some of their attention, and was not altogether the miserable dirty place they had supposed it was.

And truly it must be said that the standing of the moulder and his business 30 years ago was not an enjoyable one ; and along with this the general impression prevailed that it was only a business to be taken up by those only below the average in intellect and not very bright. As an illustration of this I remember an incident that occurred about thirty years ago. A young man just from the farm applied for a position to learn the machinist's trade, and his uncle, who was manager, after looking the young man over, expressed the belief that he would not make a machinist, as he " did not look overly bright," but that he might do well enough to make a moulder. So the young man was put in the foundry, and to his credit it must be said made a decided success.

With the rapid development of this country after the late war came the growth and development of the iron business, and each succeeding year found the manufacturer enlarging his plant to meet requirements. In those days it was unusual to cast daily. Some of the largest plants were satisfied with three heats per week, and each heat perhaps would not exceed three to four tons. Coke at this time was just being introduced as a substitute for Lehigh coal to melt with, and there was not the varied number of different brands of pig iron, nor of as good quality as we have at this present time.

And while there were good moulders in those days they were not taxed as to quality and quantity as they are to-day, through keen competition, and the good moulder of those days was sure to be a privileged, as well as a bibulous character, and was quite likely to go on a spree just as he knew his services were about to be required on some special job. While this is not altogether wiped out, it is fast going,and it is rarely we see such cases now. We cannot speak of the foundry now without making mention of the moulder, therefore you will pardon me for identifying him with the progress of the foundry.

Along with the enlarging of plants came the development of the foundry, and the requirements of the moulder were taxed accordingly. Some of the plants were forced to take large contracts far beyond their capacity to fill and in such cases the energy and ability of the foundryman were called upon to meet these requirements, and with varied degrees of success, until said contracts were complete. The foundryman with a 30-inch cupola would be called upon to make a four or five-ton casting, with possibly a three ton crane to handle it. If he would ask for a larger cupola or a stronger crane he would be told that was out of the question. " We had not figured on the extra expense while taking the contract, and we must now make it with such appliances as we have." Then came the anxiety of the foundryman, planning and making, with nothing suitable to do the work, but finally succeeding in getting what he considers a good, safe mould ready to be filled. The cupola is got ready with special care, and charged so as to do its best possible melting, for the final success now depends on this part of the business. But when everything possible has been done we then can see it is going to be too much for the small cupola to do. No one but the foundryman who has been there can tell the mental strain that takes place with all this cast of moulding and melting to be finally lost, simply for the lack of proper tools to do the required work. Still in these cases the loss was usually charged to the foundryman not understanding his business, when the fact is, as I have stated, it is chargeable to lack of proper facilities.

And in most cases this same thing had to be repeated more than once before the parties interested would conclude to increase their facilities, and this they were most always sure to do only to meet the present requirements, with the result that they would in a short time find themselves in the same condition as before.

Such has been the history of development in the foundry, and most men who have been engaged in this business for any length of time know they have paid well for their experience in this way. It has been noticeable also that where the facilities were about equal to the requirements, the foundry was usually as free from loss as other departments. And by this admission we have arrived at a point where we must allow that to get good results and work from a foundry with the greatest economy, it must be done with proper equipment.

Manufacturers are becoming each year more alive to the real cause of bad work and excessive cost, and, as a result, are spending more time and money to equip their foundries. But still there is plenty of room for improvement. In former years, it was the pride of the manufacturer, in showing visitors through his plant, to take them through the machine shop, the pattern shop, showing everything in detail, but when they came to the foundry would pass it by as though it was not a part of their institution. Not so with the modern foundry, with its electric and hydraulic cranes, moulding machines and patent copolas. It proves to be as interesting as the other departments, and there is a correspondingly brighter future ahead for the foundry and the moulder. And each year adds greater proof that brains are not only needed but are used to a greater extent in this part of engineering than most men are free to admit. The day is not far distant when the work of the founder will have the rank and standing in the mechanical world to which it is justly entitled.

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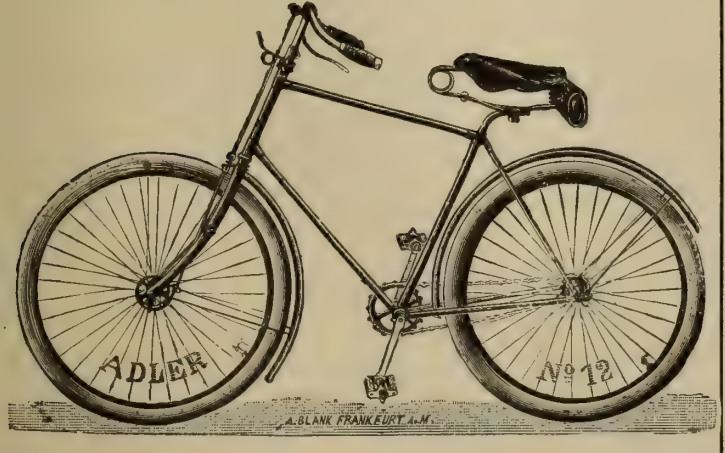
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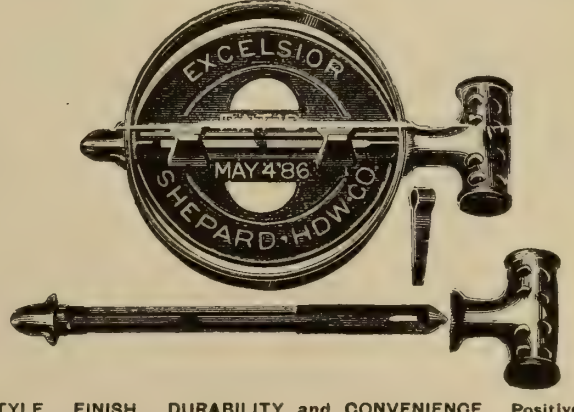
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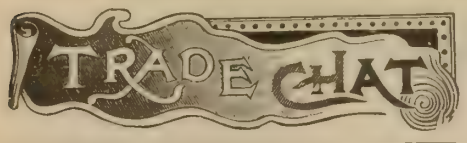
The shoulders or damper plate are made more flaring than usual, so as not to rub against the fin or rough edge around the hole made in pipe for spindle.

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EXCLUSIVE MAKERS FOR CANADA.



[This department is made up largely of items from travellers and retailers throughout the Dominion. It contains much interesting information regarding the movements of those in the trade. The editor will thank contributors to mail copy to reach the head office Tuesday.]

Boring has commenced at Winnipeg for natural gas. Toronto and Montreal capitalists are behind the enterprise.

During May last Brazil imported from Great Britain 1,721 tons of cement, as compared with 2,395 tons in May, 1892.

The Rathbun Co. is carrying logs from Madawaska river to Deseronto over the Kingston and Pembroke and Bay of Quinte railways.

Building permits have been issued to the Toronto Incandescent Light Co. to erect a large brick chimney at its works on Teraulay street, cost $5,000.

A scheme is on foot to start a company in Quebec to export pressed hay to England. It is proposed to make the capital $20,000, in shares of $10.

Saturday was the last day of the Industrial Fair, Winnipeg, which proved a great financial success, the attendance being away beyond that of former years.

Work is being pushed on the Ottawa, Arnprior and Parry Sound railway, and it is expected that passenger service between Ottawa and Egansville will be commenced in October.

All peddlers in Victoria, B.C., will now have to pay a semi-annual license of $20. Heretofore the license has varied, peddlars of certain wares being charged less than pedlers of other goods.

The Owen Sound Gas Company is putting in a new gasometer with a capacity of 22,000 feet. A gang of 30 men will be employed, and it will take three months to construct the tank.

Montreal congratulates itself, and not without reason, on being a lightly taxed city. Its rate this year is 12 1-2 mills on the dollar, while the rate in New York will be 18.7; in Philadelphia, 18 1-2; in Cincinnati, 27.7; in New Orleans, 20; in Cleveland, 21.7; in Louisville, 21; in St. Paul, 20; in Toronto, 17 1-4.—Ex.

A Kingston, Ont., despatch says that a Pennsylvania company has purchased a quantity of iron ore from the mine at Calebogie. It will be experimented with, and if satisfactory the property will be purchased and operations resumed. Ore has not been shipped from this district for over three years.

Even the commonplace poker and tongs may be made things of beauty if they are bought at the right place. There are not many shops that keep these artistic wrought iron fire implements with their hand-made spirals and twists, but the lover of the beautiful may find them if he seeks for them in the right direction.—Ex.

A villager passing William Scott & Co.'s general store, Brucefield, the other morning, discovered two men burglarizing the establishment, and immediately gave the alarm. After a lively tussle both burglars were captured and taken to Clinton jail.

The Winnipeg Board of Trade met jointly with the City Council and passed unanimously a resolution urging the Dominion Government to re-establish the river police force, the port being now virtually without any protection, to the great prejudice to trade and commerce.

The first car for the electric railway at Peterboro' arrived there a few days ago, and it is at the Canadian General Electric Works, being equipped with motors, etc. It is a handsome car, finished in elegant style, and was made by the Paterson-Corbin Co., St. Catharines. The road will open with four of these cars and two trailers.

The old style of japanned trays and waiters is finding a formidable competitor for public favor in the new white-metal articles now being very largely produced at Bilston. They have the appearance of Britannia metal, are stamped into shape by a single process, and have artistic designs on the surface produced by rapid and inexpensive mechanical means.—Ex.

The Whitney Coal Syndicate, of Boston, have just awarded a contract for ten miles of railway from the colliery at Glace Bay through Cow Bay towards Louisburg. The road, the company say, will be one of the best pieces of railway on this continent, and it looks as though they had something in view for the future besides carrying coal.

The average circulation of the notes of Canadian banks for June was $33,484,413, the highest average June circulation since Confederation. The nearest approach was in June of last year, when the circulation was $32,614,000. During the nine years 1883-92 the average June circulation was $29,900,000. The note circulation last month was 12 per cent. higher, therefore, than the average of the previous nine years.

Some Kingston merchants with large bank accounts and ample possessions endeavored in 1890 to form a protective association. Their idea of protection is to pass round an untruthful and insulting paper regarding another citizen who tried to collect an account three years old for work they had ordered. They could be in much more creditable business.—Whig, Kingston.

A gentleman from the Sound, in conversation with a representative of the News-Advertiser last night, mentioned that the nail factory at Everett, Wash., was running day and night on account of the number of orders received. He thought that it would pay well if a factory was started in this city, as the plant would not cost more than $75,000, and there would be as good a market here as on the other side of the line.—News-Advertiser, Vancouver.

The plans for the steel pipe to be used for conveying water to the power house at the "Soo" canal has been examined by a number of intending tenderers. The large steel pipe is shown to be six feet eight inches in diameter, specially constructed as to flanging and rivetting, so as to give a strong water tight tube over 1,000 feet in length. The steel pipes are to be tendered for at so much per pound. Contractors estimate that they will cost between $30,000 and $40,000.

There are still several plans on foot for the establishment of a French line of steamers between Canada and France whenever the commercial treaty between the two countries comes into force. Mr. Baddin, a millionaire, who arrived in Montreal a few days ago, is the latest promoter in the field. He would have a line of steamers from Montreal to Rouen. He is now interviewing Montreal merchants on the subject.

A joint stock company is being formed in the city for the extensive manufacture of woven wire mattresses and household furniture. Besides looking after the trade of British Columbia, the Northwest and Manitoba, the company anticipate transacting considerable business in Australian and New Zealand markets. Ald. Anderson, J. Webster, and others are interested parties. Mr. Donaldsen will manage the business for the company, the prospectus of which will be issued in a few days.—News-Advertiser, Vancouver.

Two car loads of agricultural implements were shipped by the Massey-Harris Company, of Toronto, to Melbourne, via Vancouver, leaving Toronto on the 3rd. They reached here on Tuesday, having thus taken ten days in transit. If the steamer makes an average passage, they will be landed in Australia in just 30 days, which will undoubtedly beat all previous records for speedy delivery of freight fro mEastern Canada.—News-Advertiser, Vancouver.

The dispute between the Ship Canal and the North-Western and Great Western railway companies, which is at present being arbitrated upon, has moved a step nearer settlement by a compromise, according to an English exchange. The original claim was for £333,000 by the North-Western, and £200,000 by the Great Western, both of whom declined to yield possession of the old lines until this money was lodged in the bank. The claim of the Great Western Railway Company has been reduced by one-half,

and the works are to be handed over to the Ship Canal Company on the 9th inst. The removal of the rock which lies below the railway will, it is estimated, occupy about six months, but by the time this is completed the remainder of the canal will be finished, and nothing will prevent the opening of the waterway from end to end.

The final official report on the 1892-93 oilseed crop of Bengal shows that a somewhat larger area was sown, and that the total out-turn was 636,017 tons, as against 511,059 tons in 1891-92. The season was of altogether abnormal character, beginning with a deficiency and ending with a great excess of rain. From the second week of January to the close of the cold season, says the report, both the Lower Provinces and Northern India were visited by a continual succession of heavy showers, often accompanied by hailstones, the like of which does not appear to have been experienced for a long time.

R. T. Rokeby, ex-president of the Commercial Bank, Winnipeg, who was reported to have decamped because a warrant was out for his arrest for making false returns to the Government, has safely crossed the lines, and is now in Minnesota. He drove to the boundary, where he took a train. He cannot be brought back as the offence is not extraditable. No other warrants have been executed, and it is not now likely any will be, as President McArthur's explanations are said to be perfectly satisfactory.

Turpin, the inventor of melinite, has submitted to the French War Office an electric gun alleged to be capable of discharging 25,000 projectiles in five minutes and to have a range of several miles. The apparatus is comparatively light in weight, so that it can be drawn by two horses and worked by four men. The projectiles are small shells charged with a secret chemical preparation, spreading death for sixty yards around. The English Government is said to be negotiating for the purchase of the invention, though skeptical of its value.

A new method of determining the hardness or friability of substances was described by Herr August Rosiwal at a recent meeting of the Vienna Academy. The measurements consist in comparing the losses of weight sustained by the bodies under investigation by scratching them with a given weight of polishing material mounted on a metallic or glass base until the material loses its efficiency. The polishing materials used were dolomitic sand, emery, and pure corundum. The diamond was assigned its place in the scale of hardness by comparing its efficiency as a polishing material with that of corundum. It was found to be 140 times as hard as corundum. Tested by this method, the constituents of Mohs's scale have the following numerical values :—Diamond 140,000, corundum 1,000, topaz 194, quartz 175, adularia 59 2, apatite 8.0, fluorspar 6.04, calcite 5 6, rocksalt 2.0, and talc 0.04.

Mr. James McCoy, colliery manager, and Mr. Adam Deane, colliery agent, both of Little Lever, England, have invented an improved method of shot firing, which provides for the safe recovery of the detonator and explosive charge after a misshot, for the prevention of blown-out shots, and for the suppression of all flame. A block or wedge is inserted in the shot-hole with the cartridge before the stemming, and is connected by two tubes to the exterior. By means of these tubes the shot-holders become full of water, which surrounds the cartridge. This water extinguishes all flame on the firing of the shot, and the tubes provide means whereby the electric connecting wires pass from the interior to the exterior, and also by which the cartridge can be safely and easily withdrawn in case of a misshot.

What is termed the largest portable land steam fire engine yet constructed is now owned by the Liverpool Fire Brigade. It is one of two bought by the Liverpool corporation for dealing with large fires in the docks and cotton warehouses of that port. The largest engine, the "Holt," is capable of throwing 1,600 gallons of water per minute, and is of the Merryweather's "Greenwich" type, while the "Hornby," the companion engine, is of the same pattern and capable of pumping 1,100 gallons. Both these engines have been tested and will throw powerful jets over any of the mills and factories which they are designed to protect. Liverpool may now be considered as one of the most completely protected cities as regards fires, the combined capacity of the six steam fire engines in use by the brigade being 5,160 gallons of water per minute, while the supply of high pressure water from the street hydrants is practically unlimited. The shipping of this great port is also well proteeted, the Mersey Dock and Harbor Board having a number of tugs fitted with steam fire engines capable of discharging powerful jets if fire should break out on board vessels.

TARIFF CHANGES.

The Customs Department has decided that brass pumps, whether hand or stationary, are dutiable at the rate of 35 per cent. Hitherto there has been a lack of uniformity.

The attention of the Customs Department has been called to the practice which obtains at some ports in the case of goods of small value imported by express, of ignoring for the purposes of duty any parcel of a less value than fifty cents, and of charging duty on a value of one dollar upon all parcels of a value of fifty cents or over. This practice not being sanctioned by law, collectors have been instructed that for the future all parcels coming by mail or express must be entered at the exact cost to the importers for the same, and duty must be collected on such fractional parts of a dollar in each case.

VIEWS AND INTERVIEWS.

I ran against Mr. J. MacEdwards, the well-known hardware man of St. Catharines, the other day. "Well, trade is not at all bad with us," he said in reply to a query of mine, as he backed up against the Board of Trade building. "Fall wheat is not bad, but spring wheat has not done so well. The hay crop is heavy, averaging three tons to the acre in some places."

"But, say, tell him that they are selling binder twine in St. Catharines at less than jobbers can buy it in Toronto," interposed Mr. T. G. Dexter.

"Yes, that's so," slowly replied Mr. MacEdwards as he assumed an easier position against the wall, "I'm only too sorry to say."

Then Mr. Dexter took him away to try and sell him some goods.

* * *

"We are having more trouble than enough with the scythe trade—s-c-y-t-h-e, not s-i-g-h, although it does make us sigh"—said a jobber with a worried look that only relaxed when he attempted the pun. "John," he added, turning to a salesman, "turn up and see how many different names there are."

John did as he was bid and replied: "One firm turns out nineteen scythes with different names, and another turns out seventeen."

"Now look at that," he continued scornfully pointed his finger at the catalogue, "there is one firm that gives 19 names to its scythes and another 17 names. This is worse than it ever was, and the multiplicity of these names is causing us a good deal of inconvenience, and yet, notwithstanding all these names, except for a little variety in the paint, there is blessed little difference in them. It's no use talking, the number must be reduced, for no firm can keep them all."

* * *

J. A. W. Allen, of Newmarket, was in Toronto this week doing a little sorting up. I met him in one of the warehouses and, among other things, we fell to talking about binder twine, "In spite of the Central Prison binder twine I have sold a good deal of twine this season. In fact a good deal more than usual. You see the Central Prison don't make enough to supply even the County of York, but comparatively small as was the quantity it made it was large enough to knock prices to the winds. I think it is a shame that prison labor should be allowed to compete with the legitimate trade."

BYSTANDER.

Post Office Clerk—"No address on this letter, miss."

Miss Simple—"Oh, yes, it's under the stamp."

HARDWARE STORES IN THE STATES

There are in the entire United States a little more than fourteen thousand retail hardware stores, with a commercial rating exceeding $1,000. These figures are compiled from Metal. The state which has the least number is naturally Delaware, being credited with nineteen The state of Illinois leads in being the home of the largest number of retail hardware stores, having about fifteen hundred. New York has the second largest number, about thirteen hundred, followed in order by Iowa, Ohio, Pennsylvania and Missouri, the three last named having less than one thousand and over eight hundred. Fifteen states have less than one hundred, and thirteen states more than five hundred. The wholesale houses number about six hundred and fifty, and are well distributed over the country. New York State has nearly one-seventh of the entire number, with Pennsylvania bringing up close second. Ohio ranks third and Illinois fourth. The total amount of actual capital represented by the entire number of dealers (omitting those rating $1,000) may be roughly estimated at eighty millions of dollars. On the supposition that the annual consumption of hardware purchased over the counter for individual use is equal to four dollars per capita of population, the annual turnover of hardware dealers is equal to three times the amount of capital invested.

GLEANED IN MONTREAL.

Harry Newman, of Messrs. Caverhill, Learmont & Co., is preparing for the sea side, and his brother-in-law, Mr. A. A. Brown, manager of the McClary Co.. Montreal, will shortly follow suit.

The Canada Paint Company (Limited) of Montreal, Toronto, and Victoria, B.C., have manufactured and disposed of nearly three hundred tons of pure Paris green this season.

Most of the sample rooms in the different wholesale houses are deserted at present, the travellers having gone to the sea side to brace up for the fall campaign.

It is rumored that a powerful effort will be made ere long to sell all articles now sold on six months time, such as general hardware, varnishes, etc., on a credit of four months only. Six months, it is evident, is far too long in these days of close margins, and it is thought the change to a credit of four months will be a beneficial one in the interest of the trade generally.

An effect will be made during the coming winter to induce the railway and transporting companies to bring their summer rates into force not later than March 1st. Hardware men are buying earlier than in the old days, and this year there was a terrible blockage of freight and no little confusion and loss owing to the accumulation of freight by the 1st April. Lawn mowers, barbed wire, liquid paints, and a number of other spring necessaries should be distributed and in the hands of the dealer before April.

HAMILTON SMELTING WORKS.

J. J. Morehouse, the head of the Smelting Works syndicate, arrived in Hamilton from New York Wednesday. When spoken to regarding the proposed works Mr. Morehouse said that he had ordered most of the machinery, and had placed the order for the blowing machines early, as much care was necessary in their constructton. The building will be of sheet iron, and when once begun will go up quickly. When asked whether the stringency of the American money market would at all affect their enterprise, Mr. Morehouse said it would not, as the gentlemen associated with him had made their arrangements long ago. One of the chief objects of his visit was to arrange for a charter for the company.

BRASS MANUFACTURERS' MEET.

The quarterly meeting of the Brass Manufacturers' Association of Canada was held last week in Toronto, Mr. Robert Mitchell, president of the Association, occupied the chair. Among the other gentlemen present were : Messrs. James Morrison, vice-president, of Toronto ; A. W Glassford, secretary treasurer ; T. J. Church and T. L. Clark, Montreal ; Alex. Eassman, Toronto ; J. Burns and James Essex, London ; T. McAvity, St. John, N.B., and Thos. Carrol, Hamilton. Among the questions discussed was the tariff, but the brass manufacturers, in view of the progress of the demand for tariff reform, decided not to ask for any increase of protection. The members of the trade are dissatisfied with the item 25 per cent. on electric fittings in the customs schedule. Mr. Mitchell called attention to the fact that almost identically the same fittings, when used for gas lighting, were taxed 30 per cent. Now electric and gas fittings were frequently combined The consequence was that importers were tempted to buy only combination fittings, or in some way to get the word electric inserted in the invoice. Thus confusion prevailed, and it was manifestly absurd to maintain the two rates of duty. Mr. Mitchell wrote the Finance Minister about this matter some time ago, and reeeived a reply promising that the matter would be attended to.

DULL TRADE IN CORDAGE.

A very conservative course is now being pursued by both manufacturers and jobbers of cordage, twines, etc. Manufacturers exercise great care in selling their goods, and are not disposed to sell even those enjoying the best reputation on very long time, preferring to retain possession of their goods if they cannot be sold for cash. These manufacturers report that they have had many applications for extensions of time on goods purchased some time ago, payment for which should now be made. Jobbers, on the other hand, are not attempting to push business very vigorously, and their demand for goods are not now up to the usual season's requirements. The result is that business in fibre, cordage, twines, etc., is practically at a standstill. Fibre merchants report that little business is being transacted, and some especially tempting figures on some fibres have failed to secure business from manufacturers.—Cordage Trade Journal.

NOVA SCOTIA MANGANESE.

The Provincial Manganese Mining company, limited, was organized at Windsor, N.S., the other day. Its officers and directors are: D. C. Fraser, M.P., president ; Geo. E. Boak, vice-president ; W. F. Jennison, manager ; J. T. Burgess, secretary and treasurer; and Lewis W. DesBarres.

The Chronicle of Halifax says that with the starting of this company begins a new era in the mining of the blue metal in Nova Scotia. Hants county—or that part of it around Tennycape and Walton—is full of it. This fact, long known to a few, was a year or more ago made known to the public by the Echo.

The company starts with excellent prospects of success. It has good men, good property and good ore. The directors are well known in Nova Scotia. The property contains three hundred acres in the heart of the manganese belt near Walton, and the ore is said to be the best in the world, some of it running as high as 98 per cent. in manganese.

Several shafts are being put down, ore is now being taken out, and in a short time regular shipments will be made. A large force of men will be employed, and mining will be done on a more extensive and systematic scale than ever before.

The market for this kind of ore is practically unlimited, and the profit is large. The capital is $75,000, in shares of $2 each. The headquarters are at Halifax.

HAMILTON HAPPENINGS.

Mr W. H. Dean, the commodore traveller for Messrs. Wood, Vallance & Co., has gone on a visit to the World's Fair.

Mr. J. Pringle Steedman, manager of the Gurney-Ware Scale Company, has moved his family to Burlington for the summer months. The Gurney scale works have been very busy since January. The largest scale ever constructed in Canada has just been shipped by them to Lethbridge, N.W.T. It is intended to weigh several car loads of coal at one time, being sixty-four feet long. It was tested before being shipped in the presence of a number of Hamilton gentlemen and found to weigh with the greatest accuracy.

The fusion of Whitwam & Swanson and Bowman & Moore will shortly take place. It is expected the new firm will make "strong running" and materially widen Hamilton's field as a hardware centre.

Robert Mills, of the firm of Stanley Mills & Co., is now in England on a purchasing tour.

PERSONAL MENTION.

Mr. Britton, of Cowan & Britton, butt and hinge manufacturers, Gananoque, was in Toronto this week.

Among the country merchants noticed on the street during the week were: Mr. Peaker, of Peaker & Son, Brampton; Mr. McNab, of J. & D. McNab, Claremont; Mr. Magwood, of Magwood & Calhoun, Lindsay.

ENGLAND'S OLDEST INDUSTRY.

The oldest industry in Great Britain—older it could hardly be, for its existence has been traced back to the pre-historic stone age—is still being carried on at the village of Brandon, on the borders of Norfolk and Suffolk, and is reported to be in a flourishing condition. It is a manufactory of gun and tinder-box, which still keeps its ground in very rural districts. Travellers in uncivilized regions, moreover, find flint and steel more trustworthy than matches, which are useless after they have absorbed moisture. Gun flints, on the other hand, go mostly to the wild parts of Africa, where our old friend "Brown Bess," sold by auction not long ago for what flint muskets would fetch, has found, it seems, her last refuge.

BOLT MEN LIMIT PRODUCTION.

Twenty-five nut and bolt manufactories, scattered over 11 States, and including all the leading concerns in the country, were represented at a meeting in Cleveland last week. The meeting was called to discuss a general shut-down, in view of the slack condition of trade. It was found that a general shut-down for a stated time was out of the question, owing to the varying lines of trade supplied by the different concerns, and the different circumstances of the factories as regards orders. The agreement was made that each concern when its orders were filled should shut down instead of accumulating stock for the fall trade. The difficulty of getting money to meet pay-rolls would make this imperative in most cases.—Iron Trade Review.

PROFIT IN HARDWARE.

In these days there is no branch of business in which competition is not sharp and aggressive, but in some lines of trade it is more severe than in others, writes W. H. Maher in Iron Age.

For instance, the average man supposes because he is a consumer of groceries that no special experience is required in buying and selling groceries over a counter. Hence men start in that business without experience and with little capital. How little is evidenced by an incident coming to my knowledge within a few days, where application was made by a man and his wife for credit for a stock of groceries. It developed that they had $50 in cash, and no experience in business, but considered themselves well equipped for starting a small grocery. They were advised to wait awhile until their capital was larger, but the chances are that they found a salesman who proposed to have that $50 and the trade of this pair of merchants.

Every man believes that he can weigh out and do up sugar, draw molasses and vinegar as well as any other man. The consequence is that men start a grocery and cut prices to draw trade, fail, and are succeeded by other ambitious and equally ignorant men.

The dry goods trade is constantly recruited from its own ranks, usually from men who have been heads of departments. They have been permitted to buy their own goods, and, to a very large extent, have also had influence in making prices at which the goods shall sell, and are firmly convinced that they know the dry goods business from A to Z.

The general expenses of running a store are a mystery to them. The acquaintances they have made in the way of business they look upon as personal, and their trade a tribute to their own popularity. They impress their acquaintances with their supposed popularity and ability, and induce their friends to help them into a store of their own.

Finding that the people who formerly traded at their counter do not follow them, they are obliged to offer inducements by cutting prices, and there is so much of this that the dry goods business of the country has become one of small profits, and to be successful must be backed by ample capital and command large sales.

The drug business is one that demands long apprenticeship, if the owner of the store would be independent of his clerks. The druggist must be a chemist to make his prescription business profitable, yet his worst competition is from druggists who are without experience, and who depend upon clerks for all the technical knowledge needed in the business.

Aside from this, what was formerly the most profitable part of the drug business, patent medicines and proprietary articles, are to-day made leaders and baits in department stores, and they will probably continue to be so used, for extensive advertising creates a demand for them, and the regular prices are so well known that a cut price is at once understood by the public.

The hardware business is not one that attracts the majority of young men. It is not of itself a stepping stone into "society." It offers no inducements to the dudish young man who thinks more of his clothes than of his brains. It does not attract the superficial man who is more exercised about the wages he receives to-day than the position he will have a few years from this.

Competition in the hardware trade is rather one of brains and ability than one where men simply expect success by underselling each other.

There is no special rush of men into the hardware trade in any given locality. When a man who has been a hardware clerk prepares to start in business for himself, he has learned that capital is necessary, and that business is not created in a day.

The young man who is about to select a business should consider his own tastes and adaptability, the position any given trade occupies as a money-maker, and the means it offers of gaining the acquaintance and good will of his fellowmen.

He will see that a very large percentage of the customers of a dry goods merchant or grocer is composed of women and children. The hardwareman deals as largely with men. His principal trade is with farmers, builders, mechanics and manufacturers. These are the men who make a village or city. These are the men whose personal acquaintance is of value in business and helpful in social and political life.

When one compares the stable character of a stock of hardware with the unending changes of fashion in a dry goods store, or the great loss from perishable goods in the grocery store, the business commends itself because of this. Ninety-five per cent. of the stock in a hardware store is as saleable to-day as it was a year ago, and will be just as merchantable a year hence.

The expenses of running a hardware store are, proportionately to the business done, much less than in other lines. The store needs not to be located in a principal street, clerks are not required to wait upon shoppers, for a hardware store does not tempt that class; and customers, being mostly men, generally carry their purchases away with them.

The hardware business is preeminently a business for men. It is a manual training school for an intelligent boy or young man. The salesman who would be successful in selling tools and machines, must know how, when, and where they are used. He must be able to take apart and assemble any machine, tool or weapon that he sells and educate purchasers to do this. This will be conceded by anyone who has knowledge of the business, and, being conceded, it is one very strong reason why the hardware trade is not sought by the mass of men who are looking after easy places.

To the young man who is seeking a field that will pay him best in money profits, as well as bring him into intercourse with the best men in his community, it can be said, with the confidence born of both observation and experience that the hardware business offers the most hopeful outlook and the greatest measure of success.

R. G. Waite, painter, 56 Adelaide street west, Toronto, is offering his creditors 25c. on the dollar, unsecured. It is scarcely likely to be accepted.

A train of 25 carloads of harvest machinery passed through Winnipeg Wednesday on the C. P. R., destined for Australia. The machinery was shipped by the Deering Company, of Chicago, and the shipping bill calls for delivery to be made at Sydney, Australia. The train came from St. Paul to Winnipeg by the Soo and C. P. R. lines. This machinery was formerly shipped from Chicago to San Francisco, and thence by steamer, but the establishment of the Vancouver-Melbourne line has altered matters.

NEW. CLEAN. GOOD.



Meat - Gutter

WHITE ENAMELLED

Inside, and Brown Japanned outside.

H BOKER, Manufacturer. | For Sale by Leading Wholesale Houses.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, July 28, 1893.

HARDWARE.

The week's aggregate of business in general hardware has been fair, but there is some diminution in the volume as compared with that of the past and previous week. This however dealers look upon as a natural lull, and express themselves satisfied with the business they are doing. There is a fair demand for all kinds of heavy hardware, and wagon tires, wire, horseshoes, horseshoe nails, etc., have encountered a fair jobbing enquiry during the week.

WIRE—Business in wire has been moderately good in a jobbing way, both for plain and barbed wire.

NAILS—Further good orders both for cut and wire nails are reported by makers, and jobbers also have been turning over a fair quantity of stock.

TACKS—Lines of small goods continue rather quiet.

CHAIN—There has been nothing special to note in this article during the week aside from some occasional sorting orders.

TOOLS—Demand for harvesting tools is not quite so brisk, but a fair volume of trade is still passing in them ; other tools rule on the quiet side.

CUTLERY—Several houses report an improved sorting demand for this line, some good orders for razors being noted.

WARE—The demand for enamelled kettles, etc., is still to note, and quite a lot of goods have been sent east by all the houses here during the week.

BUILDERS' SUPPLIES—These as a rule are quiet, but during the week several good sorting up orders for locks, bolts and hinges have been filled.

BINDER TWINE—The movement in binder twine is still satisfactory on the former basis, 8¾c. for red cap and 9¾c. for blue ribbon, subject to the usual discount according to quantity.

METALS.

Metals and heavy hardware show a fair degree of activity, principally for importation, the impression that we have already noted being borne out by the course of primary markets that values are down to bed rock. This has made buyers more urgent and the result is an increased volume of business.

PIG IRON—This is the only line to show actual dullness and prices still have an easy tendency. Round lots of Summerlee have changed hands at $17.50. We quote : Summerlee, $18 to $18.25 ; Eglinton, $17 to $17.25; Carnbroe, $16.75 to $17; Siemen's No. 1, $18, and Langloam, $18.50.

BAR IRON—There is very little to report in bar iron further than that the mills are doing the usual trade at combine prices.

SCRAP IRON—There is no change in scrap, which we quote nominally at $15 to $16 for No. 1 wrought.

TIN PLATES—There has been a fair movement in tin plates, and we note the sales of further round lots of cokes at $3 20. Charcoal rules steady at $3.75 to $4.25.

CANADA PLATES—Demand has been fair for Canada plates also, and several round lots have changed hands at $2.40, with smaller parcels $2.45 to $2.50.

TERNE PLATES—These are quiet, but we note some small sized sales at our quotations, viz., $7 to $7.50.

GALVANIZED IRON—Business is quiet at former prices, viz., 4¾ to 5c. for No. 28 guage.

SHEET IRON—Sheet iron rules dull with prices as before, $2.40 to $2.60 according to grade.

HOOPS AND BANDS — Some moderate quantities of these have been moved during the week at steady prices, viz., $2.35.

COPPER —Advices on copper have been easier in tone, but there is no change in spot prices, which remain nominally 11¾ to 12½c.

TIN—There is no change in tin, which is quiet and steady at 22 to 22½c.

LEAD—Prices remain as they were, $2.90 to $3.

ANTIMONY—Featureless, with prices the same at 10½ to 12c.

SPELTER—Quiet and steady at $4.75 to $5.00.

ZINC SHEETS—A few lots have been moved at $5, and we vuote at $5 to $5.50.

CEMENT—A good movement is noted in cement, and prices rule easy owing to the large supplies. We quote English brands, $1.95 to $2 05, and Belgium $1.90 to $2 per cask ex-ship. Firebricks are in fair demand at $14 to $19 per 1,000 ex-ship.

NAVAL STORES—A fair local demand is noted for turpentine at steady prices, but other lines are quiet. We quote :—Turpentine, 47 to 48c. ; resins, $2.50 to $5.00, as to brand ; coal tar, $3.75 to $4; cotton waste, 5½ for colored, and 7 to 10c. for white ; oakum, 5½ to 7½c.; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¼c. for 7-16 and upwards, and 15c. for deep-sea line ; pure Manilla, 12c. for 7-16 and upwards and 13c. for smaller sizes.

PAINTS AND OILS.

There has been a quiet feeling in leads and paints during the week, and the volume of business has been limited. Linseed oil remains as before, and other lines are featureless. We quote :—Choice brands white lead, Government standard, $4.75 to $5 ; No. 1, $4.50 ; No. 2, $4.25 ; No. 3, $4 ; No. 4, $3.75 ; dry white lead, 4¾c. ; red lead, pure, 4¼c. ; No. 1,4c.; zinc white, pure, $7; No. 1, $6 ; No. 2, $5; linseed oil, round lots, raw, 60c., boiled 63c.

GLASS.

The glass market is quiet and unchanged in sympathy with other lines of building supplies. We quote as before on the basis of $1.25 for first break with putty $1.85 in bulk.

PETROLEUM.

There is a fair demand for refined petroleum for the season of the year, but refiners are still cutting prices. We quote :—Canadian at 11½c. in shed in Montreal for round lots, and 12½c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c in 10-barrel lots, 19½c. in 5 barrel lots, and 19¼c. for single barrels, 2 per cent. off for cash ; American benzine, 23 to 25c. ; Canadian benzine, 10¾c. ; Petrolea, 12¾c. for Montreal.

MONTREAL TRADE NOTES.

Some round lots of tin and Canada plates have been moved during the week at steady prices.

Cement is in exceptionally large supply and prices are easy in consequence.

Adamant Steel Ware

The Best Grade of ENAMELLED WARE



We have just received a large importation of this ware including all seasonable lines which we offer at prices worthy of your attention. The preserving season is now on. If not supplied send sample order at once. We have also to hand large shipment of White Enamelled Ware at close prices.

ON THE MARKET.

Satisfaction Guaranteed.

Headquarters for Enamelled Ware: The McClary Mnfg. Co.

SITUATION VACANT.

TINSMITH—WITH ABOUT $1,000 TO $1,500 capital, to take an interest in a hardware store and tinware business, in a rising Ontario village on the C. P R. Apply Box 26, Shelburne.

BUSINESS CHANCES.

Advertisements inserted under this heading two cent per word each insertion.

WANTED—HARDWARE TRAVELLERS with responsible houses, to carry a small side line, not in Hardware line, but useful to hardware trade. Will probably increase trade in other lines and be a convenience to your customers. All communications confidential. Address, W. M. Titus, Box 1092, St. Thomas, Ont.

Sault Ste. Marie Canal.

SEALED TENDERS addressed to the undersigned and endorsed "Tender for Lock Gates," will be received at this office until noon on Saturday, the twelfth day of August, 1893, for the construction and setting in place in working order of five pairs of Lock Gates at the Sault Ste. Marie Canal.

Plans and specifications of the work to be done can be seen on and after the first day of August, 1893, at the office of the Chief Engineer of Railways and Canals, Ottawa, where forms of tender can be obtained.

In the case of firms there must be attached the actual signatures of the full name, the nature of the occupation and place of residence of each member of the same, and, further, an accepted bank cheque for the sum of $,500 must accompany the tender. This accepted cheque must be endorsed over to the Minister of Railways and Canals and will be forfeited if the party tendering declines entering into contract for the work at the rates and on the terms stated in offer submitted. The accepted cheque thus sent in will be returned to the respective parties whose tenders are not accepted.

This Department does not, however, bind itself to accept the lowest or any tender.

By order.

J. H. BALDERSON,
Secretary.

Dept. of Railways and Canals,
Ottawa, July, 1893

It will be to . . your . . advantage

TO PLACE YOUR NEXT ORDER, WITH

Apted Bros.

. . . Printers

as they do the Best Work . . at the . . Lowest Rates

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54 YONGE STREET, TORONTO . .

GAS, ELECTRIC, AND COMBINATION

Fixtures

Of English, Canadian, and American designs. . .

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Staple Brackets and Gas Fittings. Select stock of above always on hand.

Jas. Barwell, 88 Bay St., Toronto

SHOWROOMS OF JAS. BARWELL, SONS & CO., Birmingham, Eng.

Drawings and Estimates on application.

LAMPS LARGEST STOCK GREATEST VARIETY and Lowest Prices in Canada.

Every dealer should see our samples before placing their orders. If you cannot wait for our travellers, send for catalogue and price list. We are sole agents in Canada for the CLARK BROS. LAMP CO, of Trenton, who are the largest manufacturers of Vase, Banquet, and Hanging Lamps in the world.

ALL NEW LINES. NO OLD STOCK.

JAMES A. SKINNER & CO.

TORONTO -:- and -:- VANCOUVER

The James Robertson Co.,

LIMITED.

LAWN SPRINKLERS,
GARDEN HOSE,
HOSE REELS,
GARDEN RAKES.

Toronto

You will Insure Success IN THE STOVE Business, by selling

"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.

The Gurney-Tilden Co. Ltd.

Successors to The E. & C. Gurney Co.

HAMILTON - - ONTARIO.

TORONTO MARKETS.

TORONTO, July 28, 1893.

HARDWARE.

The usual summer quietude is gradually becoming more pronounced. This season, however, it is delaying its coming longer than usual, business having kept up remarkably well, and there is still a fairly good trade doing, better in fact than is usual at this time. This applies to the hardware trade in general. A good many of the travelers are now in the houses or taking their holidays. The principal demand at the moment seems to be for harley forks, large numbers of which are going out. A fair demand is still reported for wire for baling. Business is falling off for rope, but binder twine is going out freely, and in some lines a scarcity is reported. Some nice orders are being booked for cutlery. Demand continues well maintained for nails, and there is a little more stir in chain. In guns, rifles and ammunition an increasing business is reported, and a fair trade is still being done in some kinds of preserving kettles. There is a little more doing in builders' supplies, but in plumbers' supplies there does not appear to be any improvement. The demand for harvest tools continues to slacken off. Orders, for fall delivery, are being freely booked for stove boards, stove pipes, elbows, dampers, rope, halters, cow chains, axes, ax-handles, cross-cut saws. Payments are fair and improving.

WIRE—Trade keeps fair for bailing hay, and there is a little fencing wire moving.

ROPE—Demand is slackening off; ¾, ⅞ and 1 inch are the principal sizes moving.

BINDER TWINE—There is a good movement, and advices report that the stock of red cap brand is almost exhausted.

CUTLERY — Samples are in travellers' hands, and some good orders are being booked.

NAILS—Demand continues good for both cut and wire nails, and, compared with a year ago, there are more selling. The movement in wire nails is said to have exceeded expectations.

CHAIN—Enquiries are coming in for coil chain of all sizes for fall delivery, and import orders are beginning to arrive for cow chain.

TACKS—There is the usual trade doing in this line at unchanged prices.

SPORTING GOODS—There has been a good enquiry for guns and rifles the past week, and powder is beginning to move.

WARE—There is hardly anything doing in brass preserving kettles, but there is still a fair business doing in peerless and enamelled ware. Makers of peerless ware are getting behind in their orders.

PLUMBERS' SUPPLIES—There is no improvement, business in this line still being next to nothing.

BUILDERS' HARDWARE—Trade in this line is good in certain sections of the country, and taken on the whole, is better than it was a week ago. City trade shows little or no improvement.

TOOLS—Trade continues to slacken off in harvest tools and there will be enough to supply requirements. In garden tools business is practically over for the season.

FREEZERS—Thereis nothing much worthy of note beyond the fact that stocks are nearly exhausted

METALS.

Not much that is new has developed during the week. Pig iron continues dull, with prices lower, and the little that is moving is on private terms. In bar iron a fair business is still being done, and several orders have been placed for hoops and bands. Some good sales are reported in corrugated iron. Ingot tin is a little lower, and in lead some large orders have been placed.

PIG IRON—The market continues sick. There has been some purchasing of 100 and and 150 ton lots by large consumers at prices that were not current. Apart from this practically no iron was selling. Prices are about 50c. lower. Nova Scotia is about the only iron on this market, and it is nominal at $18 50 to $19.

Rogers, Brown & Co., Buffalo, N.Y., report the Toronto pig iron market as follows:—Demand for iron is of the hand to mouth nature, with a further curtailment in the amount of business doing. While production is apparently falling off faster than consumption there is enough offering to supply all needs. Prices have held steady during the week, and a growing sentiment is apparent among buyers that it is a favorable opportunity for buying in anticipation of the future if in a position to do so. We quote for cash f. o. b. cars, Toronto, in bond: IX Foundry Strong Coke Iron, Lake Superior ore, $15.20; 2X Foundry Strong Coke Iron Lake Superior ore, $14.45; 2 Foundry Strong Coke Iron Lake Superior ore, $14.20; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17 45; Southern Soft 1, $13.60; Southern Soft 2, $13 10.

HAYES' PATENT
MANUFACTURED BY
METALLIC ROOFING Co.
TORONTO
ILLUSTRATED CATALOGUE FREE
STEEL LATHING

BAR IRON—A fair business is doing at the $1.95 basis, but the market is without feature.

HOOPS AND BANDS—Several orders have been placed during the week at prices which are said to compare favorably with those of last year.

TIN PLATES—Business in this continues quiet at unchanged prices.

TERNE PLATES—Trade is about as is usual at this time of year, quiet, and prices are unchanged.

CANADA PLATES—Orders are coming in freely and prices are unchanged, all dull being quoted at $2.65, half-half at $2 75, and all bright at $2 80 to $3 per box.

GALVANIZED IRON—Stocks are arriving, and some good sales are reported at 5 to 5¾c. for Queen's Head and Gordon brands.

IRON PIPE—Stocks are being broken, but fresh shipments are expected shortly.

CORRUGATED IRON—Some good sales have been made this week at $4.75 to $5 according to quality.

INGOT TIN—Quite a number of sales have been made, but prices are lower, small lots being quoted at 23 to 23¼c., but these figures would be shaded for large quantities.

INGOT COPPER—A few sales are reported at unchanged prices; 12 to 12½ is the idea for small lots.

SHEET IRON—There is not a great deal doing and prices are unchanged; 2¾ to 3c. is the idea for 20 to 28 gauge.

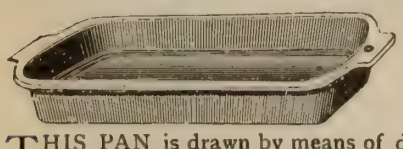
ZINC SHEET—An increasing business is reported at 5¾ to 6c. for 5 cwt. casks, and 6 to 6¼c. for part casks.

SPELTER—Quiet and unchanged at 3¾ to 5¾c.

LEAD—Orders for largs lots have been placed and business now is principally confined to small lots. Prices are firn er.

ANTIMONY—Not much doing and prices

"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

MARKETS—Continued

are unchanged, at 12 to 12½c. for Cookson's and 11½ to 12c. for common.

GLASS.

An increasing demand is reported for glass and prices are unchanged, at $1.25 to $1.30 for first break. The movement in plate glass is as yet small.

PAINTS AND OILS.

Trade is good for July. Oil and white lead are the articles most enquired after, and there is some movement in dry colors. There is some improvement in white lead, particularly in the country, and prices remain unchanged at the 4¾c. basis. It is between the seasons in prepared paints and business in this line is consequently quieter. There is not so much doing in Paris green, the demand having taken a sudden drop. Trade in varnishes is quiet, as is usual at this season. Linseed oil is in brisk demand at 60 to 62c. for raw and 63 to 65c. for boiled. The demand for turpentine is scarcely as good as usual, but prices are unchanged at 45 to 47c. There is not much doing in castor oil, and prices are unchanged at 8 to 8½c. There is considerable glue of one kind and another moving, with the advantage if anything with French medal. Payments are reported to be coming in well.

OLD MATERIAL.

Old material remains quiet. Supply good, but demand weak: Agricultural scrap, 60c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40 to 50c.; No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper, 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings and turnings, 10 to 15c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—Market in hides is quiet. Few sales are being made at 4¾c. No. 1 green stands at 4c., No. 2 at 3c.

SKINS—Skins remain much the same as last week. Dealers are paying 7c. for selected No. 1 calf. Lamb skins continue firm at 40c., full grown sheep skins are running from $1 to $1.50. Pelts continue at 15 to 20c.

WOOL—There is a slight move in wool at 16½ to 17½c. for select combing. Owing to the States dropping entirely out buyers are compelled to look to our own consumers, but as factories continue running on full time the consumption is naturally large.

TALLOW—Tallow offered is poor and difficult to dispose of. As soap manufacturers are having no little difficulty in the disposal of their productions at prices that will pay, they do not care to buy country summer rendered tallow. If this continues much longer tallow will have to come down. Dealers are paying 5c. for rendered and selling at 5¼c.; rough remains at 2c.

PETROLEUM.

The Petrolea Advertiser, in its weekly review, says:—"Following the first ebullition of joy or of disappointment, according to the political bias, following the change in the tariff with regard to the importation of refined illuminating oil, and the possible or probable effects on our oil industry here, we do not see any cause to despair. The crude market remains firm. The possible effects have been freely discussed in financial circles, and some have contended that the oil industrial securities will be seriously affected by reasons of unfavorable conditions likely to follow to the detriment of the business. We regard a full discussion of this subject at this time as somewhat premature, but the alarmists are making the most of this opportunity for the purpose of affecting crude oil securities, and this has caused us to take notice of the matter." Petrolia crude, $1.07 per barrel.

There is a brisk trade doing on the Toronto market in both burning and lubricating oils. Canadian oils are ½ to 2c. per gallon lower, and American show a decline of 2½ to 3c. We quote, imperial gal., Toronto: Canadian, 12½ to 13c.; carbon safety, 16½c.; Canadian water white, 17c.; American water white, 18½ to 19c.; photogene, 22c.

MARKET NOTES.

Ingot tin is a shade easier.

Big sales of barley forks are reported.

H. S. Howland, Sons & Co. report large sales of binder twine.

McDougall's Foundry, Montreal, was destroyed by fire Thursday. Loss $8,000.

H. S. Howland, Sons & Co. report another large consignment of Askham's table cutlery.

Rice Lewis & Son have a range of samples of cow chains which are said to be showing extra good value.

A large importation of Calcutta castor oil in cases has just been received by the Toronto Lead and Color Co.

The Gurney Foundry Co. has been awarded the contract for heating with hot water the Mercer School at Windsor, Ont.

The Toronto Lead and Color Co. are putting up in two sizes of self-sealing tins an extra quality of Southern pine tar. They are handsomely labelled and make an attractive shelf package.

The employees of Frankel Bros., the Toronto Mill Stock and Metal Co., and the Toronto Smelting and Refining Works, will hold their annual picnic at Long Branch on Saturday, August 2. The steamer Lakeside has been chartered for the occasion.

Two new ranges have just been placed on the market by the Gurney Foundry Co. The one is cast iron and is named the Duchess of Oxford, and the other is a new art baseburner, with and without oven, and is named the Countess of Oxford.

M. & L. Samuel, Benjamin & Co. report that their stocks of Roger, Butler, and Askham cutlery, and of their own special "Maple Leaf" brand of pocket knives are almost complete. Large sales of the last named are reported.

H. S. Howland, Sons & Co. were advised by the Consumers' Cordage Co. Thursday that stocks of red cap brand binder twine are entirely exhausted except a small quantity at the Montreal mill. Those in want of this twine are advised to place their orders as soon as possible.

AMERICAN MARKETS.

New York, July 28, 1893.

PIG TIN.—Lower prices ruled at the early session on 'Change, but failed to stimulate speculation. To the contrary the weakness not only checked ventures but seemed to have subdued what has remained in the shape of bullish sentiment the past few days. That pressure is kept to bear with a view of dislodging some holdings seems very probable, and to that may be attributed the softening in prices to some extent. It is very evident, however, that general industrial and financial conditions are a more or less serious drawback, since they not only make the cost of carrying tin quite burdensome, but check consumption to no inconsiderable extent, thus offsetting the natural influence of reduced stocks in first hands. During the forenoon spot stock was offered at 18.80c. net cash, and the chances looked slim for sales at above that price for August, although offers at less than 19c. were extremely few and far between.

COPPER.—Demand from home consumers does not improve perceptibly. Export movement, except in the form of deliveries on previous purchases or consignments by producers' agents, continues moderate. To that extent the market has a rather soft appearance, and the offering, while not remarkably large, seems sufficient to give buyers more or less advantage, particularly where prompt deliveries are involved. The few facts brought out show that dealings are still on a moderate scale, and that more radical movement is necessary to stimulate operations here or in the foreign markets. However, enough stock goes out to hold stock quite steady at 10 1-4 to 10 1-2c. for Lake Superior ingot, 10 to 10 1-4c. for electrolytic, and 9 3-4 to 10c. for casting brands.

PIG LEAD.—The official bulletin price has moved up to 3.40c., against 3.25c. quoted on Saturday, but for spot cash business on regular terms anything over 3.40c. was strictly the exception. In other words the market remains in flat, stale, and unprofitable condition. August and later deliveries still held at some premium over spot stock, but there are few if any buyers of the remote deliveries and prices for the same are nominal in a great measure. St. Louis wire to the Metal Exchange was 3.25c. The London cable quoted £9 17s. 6d. for soft Spanish.

SPELTER.—Moderate sales of ordinary Western were made at 3.95c. delivered, and there seemed to have been no difficulty in securing larger quantities relatively as cheap. In fact, the market wore a weakish appearance, with St. Louis price down to 3.75c. From London there was no change, the quotation being £17 10s. for good merchant brands.

Antimony.—Business is still chiefly of a jobbing nature and moderate all told. Prices are barely steady at 9 3-4 to 9 7-8c. quoted for Hallett's, 10 3-8 to

MARKETS—Continued.

10 1 2c. for Cookson's, and 10 1-8 to 10 1 4c. for LX and similar brands in round lots.

TIN PLATE.—The demand from all sources and from all varieties of plates continues moderate. At intervals there is some little reaction, but the lines called for are invariably small, and the trade passing is chiefly at the prices which have ruled for about a week past.

PIG IRON.—The movement in this quarter is still on a very moderate scale, and contrasts in no marked degree with the general run previously this month. The reduced output still serves to restrict selling pressure, but it is the fact that supplies are more than sufficient to meet current needs of consumers, and that discriminating buyers can purchase as cheaply at the present time as they did three or four weeks ago.

Spiegeleisen and ferro manganese sell very slowly, and prices remain quite nominal. Sellers offer 80 per cent. ferro manganese at $57 ; 20 per cent. spiegel at $25.50, and 10 to 12 per cent. spiegel at $22.50 landed here.

Scotch pig iron is selling in small quantities only, the demand continues slow, and there is no improvement in the demand. The cost laid down here is about $21.50 to $22 for Coltness, $20.50 to $21 for Summerlee, and $129.50 to $20 for Eglinton.

MANUFACTURED IRON AND STEEL.—There has been no increase of orders for nails or track material. Contracts for structural material continue moderate also, and prices for the same are still rather weak. Standard section rails are quoted at $29 f.o.b. mill, but light section and girder rails continue irregular.

CORNISH MINERAL INDUSTRIES.

Though subject to periodical fluctuations, says Industries and Iron, Cornwall seems still able to maintain its fame as a leading metal producing county, more especially in regard to tin. Time was when no other county in the United Kingdom could boast of being able to return copper in quantities equal to Cornwall, but for the last twenty-five years the product has gradually diminished in quantity, so that from a former annual value of about half a million, that obtained last year realized but £24,746 for 495 1-2 tons, and compared with the previous year even, a considerable decrease, seeing that the value of 719 3-4 tons realized £40,708, on an average of but £1 15s. 9d., against £1 19s. 2d. for the previous year, and the standard but £70 2s. 8d., against £76 10s. 6d. It is no wonder, therefore, that considerable attention is paid and large sums invested in the production and development of the kindred metal, tin. For many years vast sums have been expended in removing the primitive machinery of our forefathers and in substituting mining machinery of the latest and best type. This has enabled mining to be carried on at considerably greater depth than previously. As a natural consequence, the cost of producing the metal has risen considerably, but as a set off the metal obtained is found to be of much greater value. Thus, in 1891, the quantity of tin raised and sold was 9,353 1-2 tons, which realized £881,139, whilst the 9,251 3-4 tons brought to the surface in 1892 realized for its owners £892,982.

The produce of other minerals is comparatively small in this country. For instance, lead, the accumulated gain for which has been but £105, and arsenic, 1,086 tons for £1,067. China clay has yielded, and continues to yield, very well, in spite of all the difficulties and troubles arising from proposed amalgamations which did not prove successful. These works have produced no less than 408,492 tons, which, at the works, is valued at no less than £306,369. The whole of this was shipped with the small exception of 3,581 tons, which made its way into the English centres.

The production of iron ore has improved, 691 tons having been worked in a year. This is a somewhat new industry for Cornwall, and there is every probability of its being continued with vigor. Capital has been found for this purpose, and if melting houses were created so as to allow of the metal being despatched in pig—thus saving the heavy cost of carriage for so long a distance to the centres and the north—many difficulties would be removed.

ELECTROLYTIC ACTION AND PIPES

Lead water pipes that are used on streets occupied by electric railways who use the rail for a ground and return, are found in various places to be seriously affected by the eating away of the outside of the pipe by electrolytic action. In the city of Hamilton the water department have been compelled to renew the service pipes in quite a few places, the worst affected seeming to be in close proximity to the power house. It would perhaps be quite a difficult matter to advance a proper theory for this result. It is perhaps caused by the pipe being laid in a particularly dry sandy soil, and by the return current in its effort to reach a good ground finding such ground by way of these lead pipes to the water mains in preference to forcing its way to a wet spot in the ground through dry sand or perhaps rock. That it should occur in the immediate vicinity of the power house is more difficult to account for, unless it be that the rail connections on the ground plate at that end offer a greater resistance to the passing of the current than does the intervening earth between the rails and these numerous water service pipes. In the case of Hamilton the water mains are several feet higher than the level of the bay and the streets all dip at a great angle to the bay, forming thereby a water shed that must result in a somewhat dry subsoil. That the pipes are eaten away as the result of the current going to ground through them there can be no donbt, and that this action is purely an oxidization of the metal through the electrolytic action is reasonably certain. To remedy the trouble we think will be quite a difficult matter, but as experiments in that direction will no doubt be the order of the day, we would suggest the following as worthy of consideration and trial : Wrap the pipe with a covering of tarred (pine tar) hemp about half an inch thick before burying it ; give the outside of the pipe a thick coat (or two or three coats) of a good, hard, but elastic japan, which has been well dried in an oven; let the outside of the pipe be enamelled with with an elastic enamel the same as is now being used on the inside of some lead water pipes ; surround the pipes by a square box some three or four inches in internal diameter, thereby allowing an air space as an insulator; last but not least, see that the rails are well grounded, bearing in mind the fact that a hole dug some six or seven feet in the ground and a large piece of an old boiler stuck in with a number 4 galvanize iron connection to the rail is simply no ground at all in a sandy soil, and would not be much better in a pool of water. For the carrying of heavy currents such as are used in street railway work, a good ground should consist of at least 100 square feet of exposed metallic surface, preferably copper, covered on its two sides with at least one foot in thickness of fine gas coke and buried in decidedly moist earth, and connected to each rail by a No. 0000 copper wire well rivetted and sweated on. With such a ground every quarter of a mile, and good and sufficient bonds between the rails we perdict that the eating away of lead water pipes would soon be a thing of the past.—Canadian Architect and Builder.

"HAMMERING" AT CANADA.

The Whitman & Barnes Manufacturing Co., whose first hammer advertisement appears in our advertising columns, are now placing that line of goods on the Canadian market in addition to their other numerous manufactures. The reputation of this firm is such that it is unnecessary to say anything further than that these goods will be kept up to the usual standard of excellence maintained by this firm on all goods manufactured by them. They have also just purchased the good-will and business of the Capital Manufacturing Co. of Chicago, so far as pertains to the wrench business. This covers the steel twisted handle wrench known as the Acme wrench, together with all their patents on combination wrenches, pipe wrenches, etc. While the goods will be manufactured by the Whitman & Barnes Manufacturing Co. at their new factory in West Pullman, Illinois, still the Canadian portion of the business will be in the hands of the St. Catharines branch, where all orders for these goods should be placed.

At a special meeting of the London City Council the offer of the M.C.R. to run the L. & P. S. road for thirty days on a basis of 50 per cent. on the profits was accepted, the city guaranteeing the M.C.R. against loss from law suits. The L. & P.S. Railway Board ratified the action of the Council, and once more the white elephant has been safely housed for a month.

H. D. SIMMONS & CO.

Manufacturers' Agents,

85 York St., TORONTO

REPRESENTING

PECK, BENNY & CO, MONTREAL.
J. L GOODHUE & CO, Leather Belting, etc., DANVILLE, QUE.
ALEX. McARTHUR & CO., Tarred Felt Building Paper, etc, MONTREAL.
BELGIAN SYNDICATE, Cement, Iron Beams, etc.



COW TIES.—Open Ring, Closed Ring and Walton. Our Cow Ties are made of Brown's steel chain, all fittings being of steel throughout. There is no other chain on the market that will compare with these chains for strength, lightness and handsome appearance. We confidently believe that our ties of a given number are fully equal in strength to a size larger of any other on the market. If you have not tried the Cow Ties, send for sample half dozen and discounts.

Manufactured by THE B. GREENING WIRE CO., Ltd., Hamilton, Ont.



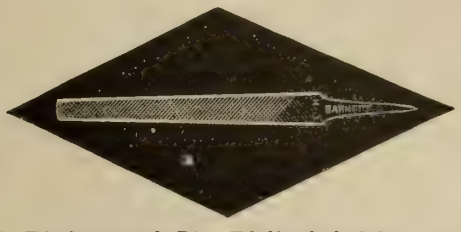
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MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES.
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EVERY OTHER DESCRIPTION OF SAW FILES.

STRENGTH

Is what a Hardware Merchant requires in his paper. He gets it when he buys . . .

THE E. B. EDDY CO.'S

Hardware - - -
Heavy Manilla -
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PAPER

THE HIGHEST QUALITY. THE LOWEST PRICE.

TORONTO BRANCH : 29 Front St. West.
MONTREAL BRANCH : 318 St. James St.

MAMMOTH WORKS : HULL, CANADA

ACCUMULATION OF OLD STOCK.

How to prevent the accumulation of old stock? Old stock is, as a rule, bad stock, and the best way to prevent it from accumulating is not to buy any. This is very easily said, but very far from being so easily done, more especially in such a complicated business as that of the ironmongery trade. In treating this subject I will divide it into two parts: (1 How to prevent the accumulation of old stock. (2) How to get rid of bad stock.

I shall suppose that a middle-class furnishing and general ironmongery business is about to be started. As it affects the subject in hand, I will treat of what appears at first sight to be altogether foreign, but which, in reality and ultimately, has very much to do with it.

The Shop.—In starting choose a shop in a good business street. Take one with plenty of room in it—and I would almost say, and to spare. It will be really cheaper in the end. Fit it up to suit your business—a place, the best place, and the best adapted and arranged place, for everything. By doing so you will find that you can work with a smaller stock, turn it over quicker, handle it quicker, and require fewer hands. The stock being thoroughly and systematically arranged, it will be easier kept up; you will thus avoid running out of goods (one very fruitful source of loss of sales and profits), your customers will not be annoyed and disappointed, and orders will be quicker and better executed, both to your own and customers' satisfaction. When you have too little room, and goods are jumbled here and there all over the place, you hardly know where; you are continually running out of goods, cannot get what goods you want, waste your own and your customers' time, and very often lose sales which you might otherwise have secured. When goods are thus stocked you are often at a loss to know (without a great amount of time and labor) what you really have in stock, and often buy goods which you already have. Having spoken of the shop and fittings, I will now treat of the buying of goods.

List of Goods to be Stocked.—Make up a list (alphabetically) of all the goods you intend stocking. An additional list of the same goods classified is also very convenient for buying purposes.

Makers' Lists.—Classify, arrange, number, and index these. Index them according to maker's name, and also according to class of goods.

Address Book.—Have a double index book, one side for makers' names and numbers, the other side being used as an index for goods, with all the makers' numbers opposite from whom these goods can be obtained. Thus: Lawnmowers, A1, B7, W3; nails, C41, B4, W6, etc. You are thus able to compare all the lists you have on referring to any particular line of goods.

Current Prices.—Keep yourself well posted up with the current market prices of all goods you deal in.

Find out the best houses, both makers and factors, and buy from them. Do not buy from too many, as you divide your custom too much. By dealing with only a few houses your custom is worth getting, and you get better value from those you deal with. Again, do not deal with too few houses, as then you are apt to be taken advantage of, and are not kept posted as to the best value in goods on the market. The proportion to be bought from makers and factors depends upon the nature and amount of business done. It is often advisable to pay a little more to a factor and buy only the quantity you really require than to buy from a maker and buy more than you need.

Goods.—The goods you have decided to stock, and such lines as you think advisable from time to time.

Quality.—Keep only goods of good saleable quality. Do not buy goods of bad quality because you can get them at a low price. You will find as a rule that your customers will not have them at any price. This is one source of bad stock.

Variety.—Do not stock too great a variety; only sufficient to suit your customers.

Range of Prices.—Do not let your range of prices run too near each other.

Patterns and Value.—Buy the best patterns and the best value for the money you are prepared to pay to suit your range of selling prices. Have the best you can get at the price you want it at and no other.

Quick Selling Goods.—Of regular goods which are selling daily buy a sufficient quantity, and a correct proportion of each size, so as not to be always running out.

Slow Selling Goods.—Of goods the sale of which is slow and irregular buy sparingly. Keep only as much as you really require.

New Goods.—Buy these very sparingly until you see whether they are to take or not. You can easily repeat if necessary.

Doubtful lines.—Of these, if you touch them at all, buy the smallest possible quantity, and repeat if necessary. Buy carefully for a considerable time, as, although they might go at first, the sale might not keep up.

Seasonable goods.—Always have a sufficient stock early in the season, so as to be ready to catch the first sales. Toward the end of the season buy only as much as you need, so as not to be left with much stock when the season is finished. This applies particularly to such lines as lamps, skates, garden requisites, etc.

Quantities.—Do not buy a larger quantity of goods than you really require for the sake of a slight reduction in price. Very likely, if you do, by the time you clear them the goods will be down in price, and you will probably lose as much as, or more than, you have gained. There is also a tendency when you buy a large quantity to cut the price to get it sold out again.

Accepting Agencies for Goods.—If the agencies are known to be good, by all means take them if you can get them, but be very careful about accepting agencies for goods, the sale of which is doubtful, if you have to buy a stock of the goods as a condition of receiving the agency. This is a very fruitful source of bad stock. You are offered, say, the sole agency for a certain article on condition that you buy a certain quantity. The result, as likely as not, is that the greater part of it will go to swell the amount of bad stock you may already have. The only safe plan where there is any doubt is either to buy only a very small quantity, or make it conditional that in the event of the goods not selling they can be returned. If makers will not give you the agency on these terms, let them go somewhere else with it. If the article is really good, you will generally find they will give you the agency on these conditions.

By Letter.—Having convinced yourself, either from their lists or by receiving quotations, which house offers you the best value, buy from that house the amount you require and no more.

From Travellers.—When travellers are advised, make it a rule to look carefully over the stock of goods his firm deals in, find out what you really want to complete your stock; have the order ready for him when he calls, and if his prices suit, give it to him at once, and not waste his time and your own. If he has anything new to offer which suits you add it to the order. Do not buy more than you require (as very often happens, more especially if you are on very friendly terms with the traveller). If you are really requiring nothing at the time, tell the traveller so plainly and courteously, and do not let him waste his time "calling back." Do not on anyaccount "manufacture" a line for any traveller, no matter on how friendlyterms you may be with him. Only buy if you are in want of the goods.

Stock Book.—Have only one book for taking a note of the stock for ordering. Date the different entries and index it up. It will prove of great value in ordering goods in future.

Order Book.—Have only one order book (duplicate and indexed). Enter all orders here, whether given to travellers or sent by post. Index up the goods ordered thus: Galvanized goods, page 1, 7, 13, etc., bellows, page 3, 27, etc.; and so on. Have a separate index for the names of the firms to whom the orders were sent. By adopting this plan you can tell very accurately what amount of any particular article you can sell in a given time, and the proportion of the different sizes. This is of great value in buying.

If convenient or necessary to take three or four months' credit, pay on the exact date it becomes due, or, in the case where the traveller collects the account, pay it to him without fail, and do it "pleasantly." Ask for his account at once and settle it, and do not let it lie over to the last moment before he leaves.

Bad stock will accumulate to a greater or less extent in spite of every precaution. Clear it out at once, as soon as you recognize the fact that it is bad—clear it out, or possibly it may become worse. Sell it to the best advantage possible, but sell it.

To effect this have all goods which you have decided are bad, and also all which are doubtful, removed to one room or place specially set apart for this purpose. This will facilitate the clearance very much. Keep a list of all these goods. During stock-taking mark on the margin of stock book all goods which you think are remaining too long in stock; remove to bad stock room and enter on bad stock list.

Have a list of same printed (which would cost very little) and send a copy to everyone whom you think likely to pur-

chase all or part of same, marking in red ink those items you think would be specially suitable to each particular party to whom the lists were sent. As a rule you can thus clear all bad stock quickly and lose much less than if you allowed the goods to lie on the shelves year after year. If goods are specially difficult to clear, either call in the brokers and sell the goods at the best price you can get for them, or have them sold by auction, either by themselves or by the ordinary auctioneer.—Henry Gatt, Aberdeen, N.B., in Ironmonger.

ECONOMY IN ELECTRIC CURRENT.

We are looking forward to the time when the electric current will be cheap enough for general use in domestic purposes as well as in commercial enterprises, as no one can deny that the electric current possesses advantages over any other form of energy known at present from the ease in which it may be subdivided and conducted wherever we wish to use it. We look with longing to the time when we may have current on tap for all purposes, for lighting our homes and for heating as well, with which may well be included the use of current in cooking, thus saving the housewife many hours of hard hot labor, by giving her a fire which she can regulate at will and shut off entirely whenever she pleases. These we all know are very desirable, but we are too apt to think that it can never be attained with our present systems, but that a very radical change in methods is necessary. While this may be correct when we talk about the ultimate cheapening of its production, we are too apt to overlook the small things that go to increase the cost of its production, which is too often considerably increased by little leaks that make quite an item when added together. Beginning with the station we can at first see if it is located in the most economical place for the production of power, the cost of getting fuel to it, the removal of ashes and the water supply being the main things to be considered. The ideal situation would seem to be beside a stream large enough for transportation of coal and the removal of refuse in the same manner, as water carriage is the cheapest yet produced and may be still further reduced by means of electrically propelled canal boats.

Situated by the side of a large canal where we can get our coal cheaply, use the water for condensing purposes, and then get rid of our refuse in the same cheap manner, we have made a good beginning toward an economical production of electrical energy or any other form for that matter.

The next step is in the selection of a good boiler or boilers, which should be selected with a view of economical production of steam rather than cheap first cost, and it is an open question whether the best types of fire tube or water tube boilers are to be considered the most economical. Neither the boilers nor engines should be of such size that the disabling of any one would cripple the plant, although the remaining units should not be forced beyond a safe capacity in maintaining an overload. In selecting any part of the motive power or other appliances it should be made a point to consider the probable cost of repairs as well as first cost and economical work, for though a boiler save 5 per cent. of fuel it is costly if the annual repairs amount to more than the amount saved. The engines should be preferably of a slow or moderate speed, of the highest type of automatic cut-off, compounded and condensing with steam jacketed cylinders and well protected steam pipes, the the bends being of large radius and few in number. Feed water heaters, and in fact everything that really saves even a small percentage of the cost of electric production should be used, from the location of the plant to the construction of the lines and installations in buildings, and in this way every possible saving made. We will not pretend to say what amount could be saved in this way, but in some stations that are commonly seen it is perfectly safe to estimate that from 25 per cent. to as much as 50 per cent. in some instances may be saved from the cost of production, the latter is probably an extreme case but the former can be saved in many a plant in operation to-day.

It requires extreme care on the part of all the attendants, the manager must be untiring in his efforts to keep the plant up to its high standard, and the best of everything new and really good must be had whenever the opportunity offers. The power station should not be satisfied with producing light as cheaply as gas, but should strive to make the current available for other purposes in domestic use, and while the profits per customer may not be as large as now, the total profit will surely yield fully as large an income, and the benefit to be derived by all who can afford to use it not counted in dollars. It is the small savings that count, and these should be looked after in order to run to the best advantage.—American Mechanic.

PRECIPITATON OF TIN BY ZINC.

A substance known as argentine has been introduced in Germany for making the so-called silver paper which is used instead of tin foil as a packing material.

It is a finely divided form of metalic tin, also known as tin dust, of such texture as to become an extremely fine powder, which must be perfectly uniform in grain, of a bright metallic grey tint, and entirely free from crystalline particles. The author was for some time in charge of a manufactory of this article, and introduced some modifications in the process, which are described.

The raw materials of the manufacture are tin, hydrochloric acid and zinc. The first may be used in the form of block or grain tin, but generally waste materials, such as bearing metal turnings, which are obtained from railway repairing shops in large quantity, as preferred.

These are very variable in composition, including white and red metal, with the proportion of tin varying from 27 6 to 74 5 per cent. The solution is effected by boiling the alloys with hydrochloric acid in large copper vessels, taking care to keep the stanniferous material in large excess, under which condition the copper is not attacked, while the greater part of the tin dissolves lead, copper, and antimony remaining wholly or partially undissolved. The purified solution, consisting essentially of stannons chloride, with traces of antimony, lead, and iron, has an average density of 40 deg.

Beaume, corresponding to about 23 5 per cent. of tin, is diluted from one to two hundred times its volume of water, and transferred to large vats in which plates of zinc are suspended, when, if all conditions are right, the tin precipitates as a uniform gray mass, rendered spongy by the simultaneous evolution of hydrogen, falling, when dried and rubbed through a sieve, to a fine dust. Foreign Abstracts of the Institution of British Civil Engineers.—A. Harpe in American Artizan.



Fruit Knife (Double Bolster), Reduced Size.

GURANTEE CERTIFICATE.

We hereby guarantee that all Spoons, Forks, Knives, Ladles, etc., bearing our name and trade mark are heavily plated with pure Sterling Silver upon the finest grade of Nickle Silver, the best known base for plating upon, that the deposit is fully twenty per cent. heavier than the usual standard, having been accurately weighed upon the goods, and rigidly inspected with a view to their durability. We hereby authorize the purchaser, when our wares shall not prove exactly as represented, to return them to us and we will remit their invoiced value or replace them.

Respectfully,

TORONTO SILVER PLATE CO.

Factories and Salesrooms:
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E. G. GOODERHAM, Manager. - - JNO. C. COPP, Sect.-Treas.

SYSTEM IN A HARDWARE STORE.

The merchant who carries a stock of from $5,000 to $10,000 cannot possibly attend to all the details of business himself. A young, strong, healthy man between 30 and 40 years old may do it for a few years, but the constant strain will tell, and he will begin to feel it at a time perhaps when he requires his best judgment to carry him through a crisis or the sharp competition which he finds himself obliged to encounter. Hence he must have help at the outset and the more competent, trustworthy, and reliable it is, the easier will be the responsibilities of the merchant. Have everything plainly marked, with the cost in cypher, and the selling price in figures, either on the article itself or with a tag according to the nature of the goods. Frequent inspection is necessary in a country town, where tags are liable to be pulled off and lost, and whenever that fact is discovered, replace it at once with a new one, if busy with a customer, jot it down, and as soon as through attend to it. Now right here is where the reliability of your help (salesman) comes in. If careful and attentive to his business a missing tag will be replaced or an imperfect mark will be restored and so on as the call may be, This constant inspection if the more necessary in a store carrying a limited stock of goods, as there is usually only one salesman, and his time, when not occupied with customers, should be used in looking over the stock. To do this properly, the work must be systematized, a certain section of the shelf goods one day, then another, and so on each day until completed. Then attention will be required at the steel goods, etc. A competent salesman will thus enable the proprietor of the store to devote more time to his books, etc. Poor, inefficient help is worse (almost) than none, as even the most ordinary rules and systems in use in the store are scarcely given a thought. Good, reliable salesmen and a proper system in a country hardware store are sure helps to ultimate success.—Industrial World.

FURNACES AND MOISTURE.

There are very few furnaces sent out from first-class establishments at the present time which are not provided with water-pans, and there are very few houses having first-class furnaces in which any water can be found in the pans. The reason is that the quantity of moisture required to make a furnace heated house agreeable is very much greater than most people imagine, and sufficient water is not put into the furnace, and usually there is not proper arrangements made for its evaporation if it were provided. One has only to place a dish containing water in any furnace heated room in the winter time to find out what an enormous sponge warm air becomes. Where a piano sits in a room kept constantly hot by a furnace, a dish with water should be kept near, or under the instrument, in order to prevent the great dryness from injuriously affecting the woodwork. This plan is recommended by some of the great piano houses of New York city.

Now there comes a very curious development of the present knowledge of these facts. People know that the air with stoves and with furnaces is unnecessarily dry, that moisture is desirable. And so we find that when a man sets up a gas stove in his room, or a kerosene oil stove, he commonly puts a dish of water on top of it, to prevent the air from becoming too dry. As a rule there is a sufficient amount of water produced by the combustion of illuminating gas and kerosene to keep the air of a room which is heated by such means comfortably moist. The use of the water bowl in such cases is a mistake. If any one wishes to prove this they have only to examine the condition of the windows which are usually covered with moisture.

CUTLERY.

There is good and bad table cutlery like everything else. Of course, the quality of materials used and manner of construction. If there is anything worthless it is poor cutlery. The material used in the poorer grades of knives and forks is brittle in the extreme and will stand but little wear, as the blade and prongs are easily broken, and the handles, being of inferior matter, do not stand much handling, as they are intended to. If there is any care to be exercised in selecting a piece of cutlery, it should be in regard to the selection of the carving knife and fork. These articles should be of the best steel as these implements go through hard service. If there is anything aggravating it is to attempt to carve with a poor knife and fork. The knife, if of a good quality of steel, will hold an edge for a long time, and when it shows signs of dullness, by giving it a few draws across the steel, the edge can soon be resharpened. Carving cannot be well done without a fork that is strong enough to hold the joint in place. Both the carving knife and fork should be well tempered. For the meat course at the table, knives with steel blades are preferable. Bread and butter knives are placed beside individual bread plates, and those used for dessert and supper should be of sterling silver or heavily plated. Special shapes in both the knife and fork are of silver for the fish course and a broad silver knife and fork are provided for the serving. Oyster forks are especially shaped and are of silver. Knives and forks of medium size are used for entrees. All fork prongs for table use should be of silver. Taste may be indulged in considerably as to the selection of the handles of these implements. Buckhorn and imitations are largely used for carving sets. Ivory is considered exceedingly good form but its use is limited on account of its liability to split in change of temperature. Celluloid and ivorine are replacing ivory, and hold their color and do not turn yellow or crack. Fine pearl handles are also the choicest and most elegant form. They are very expensive, but with good care are very durable. Sterling silver handles being entirely triple plated are much used, but of course are not counted as swell table furniture. Good care is of the utmost importance if you wish your table cutlery to put in a good appearance and give long service. A case for trays lined with some soft material such as chamois or flannel is considered the proper thing in which to keep cutlery when not in use. Cutlery should be perfectly dry before putting in the case. —House Furnishing Review.

NEW LUMBER POSSIBILITIES.

An opening is seemingly being found for yellow cedar lumber, 1,000 feet of which has lately been shipped from Claxton on the Northern Mainland to Tacoma, where the wood is to be used for decorating a large mansion now in course of erection. Yellow cedar, it is said, lends itself readily and well to decorative purposes and is excellent wood for carving. Unfortunately, it is also timber difficult to obtain in large quantity and good condition, but there is a moderate supply available in Northern British Columbia.

The great tanning value of the spruce and hemlock bark of Washington State points to a profitable opening that should also ere long be found for much of the same barks in British Columbia which will be found equally rich in tannin. Prof. Fiebing, of Milwaukee, the leading leather trade chemist of the United States, has just reported that he finds on analysis that Washington hemlock bark possesses no less than 20.1 per cent. and spruce bark 18.9 per cent. of tannin, whilst fir bark has but 6.2 per cent., but is, nevertheless, peculiarly valuable for the reasons stated below. Mr. Fiebing says: "I have never before analyzed bark anywhere near so rich in tannin as this, the average hemlock bark not running over 10 per cent. tannin. Spruce bark seems quite as rich in tannin value as your hemlock, and if the available supply is large enough, can certainly be economically utilized. The richness of your bark in tannin properties is astounding and unprecedented."

While the fir bark is low in tannin as compared with the hemlock and spruce, it is of considerable value on account of the beautiful light color of the leather it produces, being far superior to oak bark in this respect.

The supply of tan bark in the east is becoming rapidly depleted and is steadily advancing in price, and it is only a short time when Washington State will be furnishing the entire supply of tanning material for the United States.

Considering the great general resemblance of our British Columbia conditions to those of Washington State in the light of Mr. Fiebing's report, as also the fact that lumbermen in Pennsylvania have made fortunes out of their hemlock trees, it looks as if shrewd British Columbia lumbermen should in the early future make large and profitable use of their spruce, fir and hemlock bark.—B. C. Commercial.

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FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,
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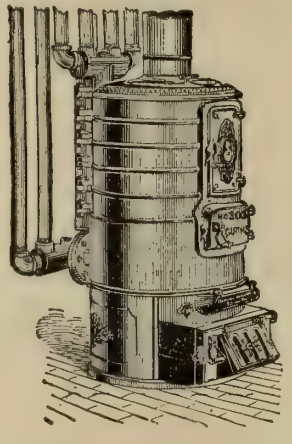
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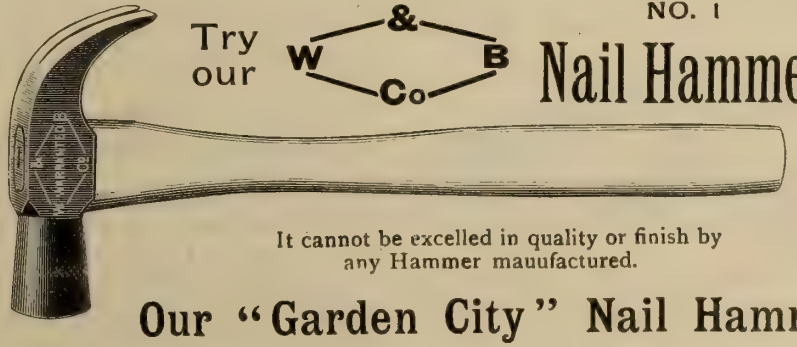
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Is the best and cheapest "Solid Cast Steel" Hammer on the market. . . .

We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .

BUSINESS CHANGES.

SALES MADE OR PENDING.

Mrs. John Gibson, tinware, Toronto, is advertised to be sold out by bailiff.

E. W. Shaw, general merchant, saw mill, etc., is advertising mill and lumber for sale.

The stock of S. R. Sleep, tinware, Wolfville, N.S., has been sold to Lewis W. Sleep.

PARTNERSHIPS FORMED AND DISSOLVED.

Beaulieu & Sailary, plumbers, Quebec, have dissolved.

Ash & Cross, general merchants, Beaver Harbor, N. B., have dissolved.

Percy Simmonds and Rich H. Neil have been admitted to partnership in the wholesale and retail hardware firm of George H. Smith & Co., Halifax.

Hermenegilde Laniel and Moise Laniel, doing business as wood and coal merchants at St. Cunedonde, under the firm name of Laniel & Frere, have dissolved partnership.

Thomas St. Jean and Paul St. Jean will in future compose the firm of St. Jean Freres, hardware merchants, Montreal, the first named taking the place in the firm of Jacques St. Jean.

John Scully, contractors' supplies, Toronto, has assigned to W. A. Campbell. The property is valued at $90,000, subject to mortgages to the extent of about $50,000. There are about $10,000 of unsecured liabilities. To real estate is attributed the cause of the trouble.

Samuel Coulson, merchant, Montreal, Emily Guscot Rea, wife separate as to property of David Rea, and formerly doing business as merchants and manufacturers under the name of David Rea & Co. have dissolved partnership. The business will be carried on in future under the same firm name of Mrs. E. G. Rea.

ASSIGNMENTS, DIFFICULTIES, COMPROMISES.

W. H. Stephenson, general dealer, Norwood, has assigned.

W. L. Sterns, general merchant, Souris, P E.I., has assigned.

H. Eckensweller, general merchant, chattel mortgage foreclosed.

W. Geddes, general merchant, Saber Island, N. S., has assigned.

W. A. & H. R. Lambert, general merchant, Craven, Man., have assigned.

Mrs. A. Lindsey, Apsley, general store, has assigned to Henry Barber & Co.

J. L. Preville, general merchant, Joliette, Que., has compromised at 60c. on the dollar.

Beckett & Co., brick manufacturers, Port Haney, B.C., advertised for sale by chattel mortgage.

A. G. Horne & Co., general merchants, Nanaimo, B.C., have assigned to Joseph Lawson.

G. Duckett, general storekeeper, Maxville, is offering to compromise at 45c. on the dollar.

Attachment is out against M. C. Crowdis, general merchant, Margaree, N.S., and he is away.

Beaubien & Frere, general merchants, Ste. Elizabeth, Que., are offering to compromise at 50c. on the dollar, cash.

The creditors of Thomas Coulter, the insolvent coal and wood dealer of Toronto, have instructed Assignee Barber to sell the estate.

John Ballantyne, general merchant, Havre-aux-Maisons, has assigned. H. O. Fortier, in the same line of business at Sherbrooke, has followed his example.

David A. Giles, hardware dealer, 518 Dundas street, Toronto, assigned Wednesday to Eckardt & Young. The liabilities are about $3,500, consisting of trade debts $1,000 and covenant on a mortgage $2,500. The assets, consisting of stock, amount to $1,000.

The crockery firm of Charles & Bawden of Kingston has assigned to a Kingston firm. The liabilities are about $2,000, the assets about $3,000. The firm was endeavoring to obtain a compromise, when some of the creditors secured a judgment, with the foregoing results.

CHANGES.

J. A. Palmer, hardware, Gladstone, has sold out to McCrae & McLean.

Strutt Bros., carriage makers, Westmeath, have sold out to Robert Howard.

George F. Tate, foundryman, Mount Albert, is out of business and has left the place.

Robt. Campbell, blacksmith, Mansfield, is out of business.

George Barber, general merchant, Rosemont, out of business and gone to Sault Ste. Marie.

H. J. Dean, blacksmith, Stanton, has been succeeded by John H. Woods and has removed to Orangeville.

FIRES.

John Dawkins, general merchant, Bethany, burned out.

R. Walsh, brass works, Ottawa, has been burned.

The shop of J. Shepherd, builder, Guelph, has been burned.

The planing mill, of R. Bartlett, contractor, Campbellford, has been burned.

The Dominion Stained Glass Co., Toronto, has been partially burned out; insured.

Jeremiah Stout, furniture, and H. P. Allington, blacksmith, Fairville, have been burned out.

The furnishing shop of D. Hibner & Co., furniture mfgs, Berlin, has been burned; loss $3,000; insured.

Among the sufferers of the Chesley fire Monday last were A. McConnell and D. Lillico, agricultural implement dealers.

Wm. Beatty's sawmill, Parry Sound, was totally destroyed by fire early Monday morning. Loss about $10,000; partly covered by insurance.

Thomas Reid's livery stable, Chesley, occupied by James Armstrong, were totally destroyed by fire Monday, and before the fire could be got under control four other buildings were destroyed. Loss, $3,000; insurance, $1,800. The fire was caused by a lamp exploding in the livery stable.

DEATHS.

Andrew McNabb, ex-alderman and a well-known carriage builder of Winnipeg, died of diabetes at Carberry Sunday.

THE ECONOMY OF SPECIAL TOOLS.

The modern processes of manufacture have beenreduced in many cases by sheer financial necessity to such systematic arrangement as to make possible the production of a number of articles far within their cost by the older methods, remarks Iron Age. The milling machine, the turret lathe and the screw machine are daily turning out by hundreds what the lathe and planer can only make by tens. And yet the relative economy of these new tools is to the greatest degree dependent upon the number of pieces to be made. It is the wise man who knows when, and when not, to prepare special tools, jigs, etc., so that, notwithstanding their increased first cost, his completed article may be more cheaply made. Likewise, the minute division of labor, that makes of every workman a specialist and an expert, is warranted only by multiplicity of similar pieces and operations. In the manufacture of watches, for instance, this is carried out to a degree that would have opened wide the eyes of a manufacturer 25 years ago. At the World's Fair, in the exhibit of the American Watch Comany, is displayed a specially designed continuous lathe, so ingenious in its construction, and so accurately timed in its movements that the piece fed in at one end is clamped in a chuck operated upon by a single tool, released at just the instant when an automatic finger has grasped it, is swung around to another chuck, dropped by the finger as soon as caught by the chuck, operated upon by another special tool, and then sent along on its journey to successive tools in the same general machine. This masterpiece of machine design doubtless effects a saving in the cost of the finished pieces that pays a handsome interest upon its first cost, and yet what economy could there be in the use of a similar, but stronger, machine in the ordinary machine shop. Surely the end must justify the means, and one of the first principles in the introduction of such a machine must be to determine its interest account per piece made, and add this to the actual cost of the piece, in deciding upon the economy of its use. A machine for ordinary manufacture that cannot be almost continuously employed must show marked economy in its operations to prove a financial success. Nevertheless, when the articles made are great in numbers, the skill acquired by the workman who performs only a single operation, and the perfection of result with reduction of time attained by the special tool, render the entire process systematic, decrease the cost, and improve the quality of the completed piece.

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See that the name "BOECKH" Is on every brush.

Boeckh's Flexible Bridled Brushes.

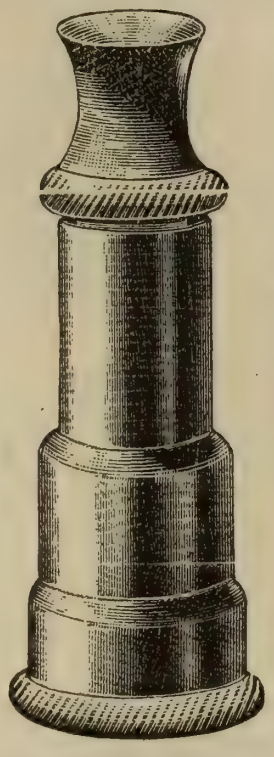
Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

TORONTO, - CANADA.

Hamilton Brass Manufacturing Co.



THE IMPROVED

"GEM" HOSE ..PIPE..

(Patent by T. J. Carroll)

IS THE SIMPLEST HOSE PIPE ON THE MARKET

It has no centre spindle to get bent and prevent the pipe from working. It has no screws or ground joints to wear out so you will have to throw the pipe away.

The pipe will spray from the finest mist to a drop spray, and will throw a straight stream, and a child can operate it.

It is impossible for this pipe to get out of order.

Give it a trial and you will use no other.

Hamilton Brass Manufacturing Co.

HAMILTON, ONT.

GUNS, FIRE-ARMS AND SPORTING GOODS

.. THE TRADE SUPPLIED ..

Send for our

. . 100 PAGE . .

Illustrated Catalogue :--



Of GREENER, CLABROUGH, and NEWMAN FRIAR GUNS. WINCHESTER, MARLIN, COLT, and REMMINGTON RIFLES, also REVOLVERS, POWDER, SHOT, WADS, ARTIFICIAL BIRDS, Etc. . . . . .

DISCOUNT SHEET TO THE TRADE.

Bowman Hardware and Sporting Goods Co. ✻ **HAMILTON, ONT.**

THE NAU METHOD OF MAKING STEEL PLATE.

A method of casting steel ingots has recently been devised and patented by J. B. Nau, of Allegheny, Pa., the object of which, says American Manufacturer, is to secure a gradual cooling from the bottom so as to avoid the formation of blow-holes and hollow spaces in the centre. Instead of teeming the steel, as is done in the ordinary practice, into moulds, the steel ladle with contents is brought over a heating furnace of which the bottom is left out entirely, and in its place has a mould of sufficient capacity to receive all the steel contained in the ladle. This mould is mounted on a car, which can be raised and lowered by hydraulic machinery located in the foundation of the furnace. It is lined inside with refractory material of sufficient thickness to prevent a too rapid cooling of its contents. The outer iron casting of which the mould is made presents at its lower part a double shell, which is largest at its base, and decreases to nothing at its upper point. The bottom of the mould, which may be lined also with refractory material, is a cast-iron plate with a coil of pipes inside. This coil, as well as the double shell at the lower part of the mold, is arranged to admit of the circulation of water to cool the lower part of the ingot.

The operation is as follows: The mold, after having been raised in the furnace, is heated up to a suitable temperature. The metal is then cast through a hole in the roof of the furnace. The temperature inside is kept high during the casting as well as afterwards, in order to keep the upper regions of the ingot liquid, while its lower part is made to solidify by means of the circulation of cold water. If found necessary the mould can be lowered gradually in order to increase the cooling effect at the bottom, while the upper surface remains exposed to the intense temperature of the furnace. By these means it will be made possible to obtain the solidification of the ingot in an ascending way and to avoid the formation of a hollow space in the upper region. A sound ingot will be the result. Of course these means of casting can only be used when heavy ingots are required, as in the manufacture of armor plate, for instance.

The solidification can be obtained in two different ways. The metal can be made to cool rapidly upward, and segregation of the non-metallic elements will be avoided to the same extent as it is obtained in the ordinary manner of teeming. Or the mass can be made to solidify slowly in an ascending way, and segregation of the non-metallic elements will be fostered. An ingot of heterogeneous character, containing more carbon in the upper than in the lower region, will be obtained. This will be of great importance in the manufacture of armor plates, because it will admit of producing an ingot with more carbon on one than on the other side.

Another advantage, however, that may be derived from this method is the facility with which ingots with different physical characters and different chemical compositions on the opposite ends can be obtained. When the ingot has been solidified to a certain height, and before the upper region has passed from a liquid to a solid state, a new addition of different composition and different nature can be made on top. The block of metal thus obtained, transformed later by means of hammering or rolling into plate, will furnish a finished compound product, while the particular method of casting will largely contribute to avoid the blow-holes and eliminate the danger of hollow space.

CUTLERY WAGES ABROAD.

In Sheffield the workmen in the cutlery trade are almost invariably employed on piece work, and are not bound down to regular hours. The factories are open twelve hours a day, five days in the week, and six hours on Saturday. Cutters and fitters work as many hours as they please, and earn from $3.50 to $9.75 per week. A man skilled in peculiarly fine work can earn more at times. The grinder's wheel is in operation fifty hours per week, but he can work less time; his maximum wages are $9.75 per week. The forger employs a boy as an assistant, whom he pays less than $2 per week, he getting nearly $15 in that time for both. Girls and women are paid on a basis of fifty hours, which is called a week, for which they receive from $1.25 to $3.65. Naturally, something depends on the state of trade. Considerably larger accounts could be earned in booming years, while again in a dull year less would not cause remark. The figures given are satisfactory to the workman of average ambition. It is noticeable that a game of cricket, football or a foot-race will almost empty a factory, and that Sunday's dissipations are apt to make a holiday on Monday, and that the workman does not get fully inspired until late Tuesday.

In Solingen work begins at 6 o'clock in the morning and lasts until 7 p.m., in which time there are three intermissions—half an hour at 10 a.m., for what is called second breakfast, one hour at noon for dinner, and half an hour at 4 p.m. for coffee. The division of the work is peculiar.

A manufacturer with an order to fill, obtains the raw material and gives one workman all the forging, another all the grinding, a third the bolsters; in short, only one small part is given out to an individual, who is an expert in that line. These workmen sometimes rent rooms in large factories, where they can have steam power; in other cases the manufacture is carried on at home, the women and children lending a helping hand. There are, however, factories for the manufacture of cutlery where everything is done under a single roof. Friday is the assembling and settling day.

Earnings are considered fair. It takes a workman above the average standard of intelligence to save anything. In hard times there is much self-denial practised, while in flush times ill-advised strikes destroy the advantage of opportunities. About $10.00 per week are the highest wages paid to a single workman. A good forger, or grinder, or finisher can make that amount, the grinder and finisher paying, however, $1.50 per week for rent for each person. A hardener gets $4.50, and this is the average price paid to all the rest, except packing men, who get $4.50 and girls $1.80. The "Reider," who assembles the knife, works at home, and, unless he has the advantage of a large family, makes only $3.60 per week. Linings and springs are made by day laborers, who are paid 83 cents per day. The forger generally owns his own trip hammer and dies. Steam power is generally used, having slowly displaced that of water. The whole system is thoroughly systematized and it is probable the cheapest place in the world to make knives and cutlery. —N.Y. Hardware.

ZINC CULINARY UTENSILS.

A visit to the cheap and other stores, writes E.S. in a contemporary, shows one many articles placed on sale that are coated with zinc. While ash pails and coal hods can be made of galvanized iron without injury to their usual contents, the same cannot be said of water buckets, dippers, and other articles used in the kitchen. The highly decorated ice water tanks may please the eye, but many of them are lined with zinc or galvanized iron. Zinc is acted upon by most waters, and may be detected in those which have been stored in galvanized iron or zinc tanks. The corrosion is especially active if the coating is imperfect. Theodore G. Wormly, M.D., says: "As metallic zinc is more or less acted upon by certain articles of food, especially such as contain free organic acids or fatty matters, its use for culinary operations is not altogether free from danger. In an instance in which we were consulted, a family, consisting of eight persons, suffered from symptoms of zinc poisoning, occasioned by the use of apple butter prepared with cider, which had been concentrated in a galvanized iron pan. On chemical examination, the concentrated cider was found to contain 1.14 grains of zinc oxide in each fluid ounce."

Competition is keen and active and the only way to meet it successfully is to buy from the best houses, and at lowest prices.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

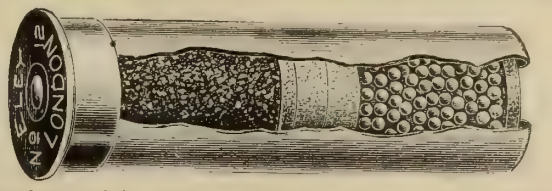
WESTERN BRANCH :

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

. . ELEY'S . .

CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. **Wholesale Only.**

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

The "ETNA" . . .

. . HOT WATER **BOILER**

We claim is perfect. It is the original Round Boiler, patented by U. Beaupre, Dec. 1st, 1880 and May 2nd, 1889. Each year improvements have been added; and to-day it stands at the head.

We are willing to give any guarantee necessary to protect Architects or Contractors, that the Boiler will do all we claim for it.

The Boiler costs less than those of our competitors, and we will assume all risks.

We are in the field to stay and are bound to push this Boiler to the top rung of the ladder.

The Boiler previous to our purchasing it, had never been properly advertised or pushed, consequently, is to-day not as well known as some other makes.

Since buying out the former maker the sales have increased over 200 per cent.

If you have not a cut of same, drop us a card and we will be happy to forward one with full particulars.

As we said before, the Boiler is perfect, the price less, and we will guarantee it in every particular.

We have also bought most of the Grand Universal line of Patterns from the Estate of J. M. Williams & Co., of Hamilton.

We can supply all Repairs at the Regular trade price.

We still make the old reliable line of "Leader" Stoves.

Kindly remember us when any thing we manufacture is needed by you.

Wm. Clendinneng & Son, 145 to 171 WILLIAM STREET MONTREAL QUE.

Cutlery

SPECIAL VALUE IN

Dickinson's "Damascus Blade" Carvers.
Dickinson's Improved Ivoride Tables, warranted not to shrink or discolor.
Joseph Rodgers & Co.'s best quality Pen, Pocket, and Butcher Knives.

. . . SAMPLES now ready for Fall Trade.

STEEL. Full stock of Jessop's warranted Tool Steel, at lowest prices. . .

A. C. Leslie & Co., Agents

MONTREAL and TORONTO.

You can lose more than we do by not subscribing for this paper.

MUNN'S LIQUID GLUE

IS THE BEST.

THE ART METROPOLE, Agents.

131 Yonge Street, TORONTO.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—		
56 and 28 lb ingots, per lb	23½	24
trip "	25.	25½

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
M.L.S. equal to Bradley		
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 25	4 50
I.X., "	5 25	5 50
I.X.X., "	6 25	6 50
I.XXX., "	7 25	7 50
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

	Per lb.
Ookley Grade—	
.X.X., 14x56, 50 sheet bxs	
" 14x60, "	6½c, 7c
14x65,	

Tinned Plates

72x30 up to 24 gauge	6¼	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates4-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¾ " nd thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2¾, 2¾
26 "	2¾, 3
28 "	3, 3¼

Canada Plates.

Blaina	½ bright	2 75
Abercarne		2 75
Lion		

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head

16 to 24 gauge, per lb	5, 5¼
26 gauge, "	5¼, 5½
28 " "	5½, 5¾

Gordon Crown—

16 to 24 gauge, per lb	5, 5¼
26 gauge, "	5¼, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅝ 5
" 5-16 " "	4¼ 4⅝
" ⅜ " "	4⅛ 4⅝
" 7-16 " "	4 4¼
" ½ " "	3¾ 4
" ⅝ " "	3½ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 12½	0 13
Lake Superior	0 13	0 13½

Bolt or Bar.

Cut lengths, round, ¼ to ¾ in.	$0 22	$0 25
" round & square 1 to 2 in	0 20	0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 11x48 and 14x60	$0 16	0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17	0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26	0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 19½	0 21
" 35 to 45 " " "	0 1.½	0 18
" 50 lb and above per lb	0 16½	0 17

Boiler & T. K. Pitts.

Plain Tinned per lb		0 21
Spun " "		0 25

Wire.

Pure, in coils—		
From 1 to 20 gauge	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20	0 21
" " 27 to 30 "	0 23	0 25
" " 30 and up	0 26	0 28
Sheets, hard-rolled 2x4 ft	0 21	0 23

Zinc Spelter.

Foreign, per lb	0 05	0 05½
Domestic "	0 04½	0 05

Zinc Sheet.

5 cwt casks	0 05½	0 06
Part casks	0 06	0 06½

Lead.

Imported Pig, per lb	0 03½	0 03¾
Domestic "		0 03½
Bar, 1 pound		0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04¾	0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¾	0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.	per lb.	
Bar Half-and-half (guar.)	0 17	0 19
Standard	0 16	0 18
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12	0 13
Other makes "	0 11	0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	4 75
No. 1 Do "	4 50
No. 2 Do "	4 25
No. 3 Do "	4 00

Prepared Paints.
(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1	20
2nd qualities "	1	00
Barn (in bbls)	0	65

Colors in Oil.
(25 lb tins, Standard Quality.)

Venetian Red, per lb	0	05
Chrome Yellow "	0	11
Golden Ochre	0	06
French "	0	05
Marine Black	0	09
" Green	0	09
Chrome "	0	08
French Imperial Green	0	19

Colors, Dry

Yellow Ochre(J.C.) bbls, p.cwt	1 35	1 40
" " (J.F.L.S.) "	2	75
" " Royal "	1 10	1 15
Venetian Red, (best) "	1 80	1 90
English Oxides per cwt	3 00	3 25
American " } "	1 25	1 90
Canadian " }		

Paris Green, per lb	0 13½	0 15
Burnt Sienna, per lb	0	08½
Burnt Umber "	0	05
do pure	0	08
Drop Black "	0	09
Chrome Yellows "	0	12
" " Lemon pure, 8 lb. tins, per lb	0	19
Chrome Greens "	0	12
Golden Ochre	0	03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0	89
Extra "	0	90
Brown Japan "	0	55
Brown Japan, Turpentine p. gal.	0	71
No. 1 Carriage "	1	30
Gold Size Japan "	1	00
Pure Orange Shellac "	1 95	2 05
Hard Oil Finish	1	30
Oil Shellac	1	40

Linseed Oil (in bbls)

Raw, per gal	0 60	0 62
Boiled "	0 63	0 65

Turpentine (in bbls)

Selected Packages, per gal	0 45	0 47

Castor Oil.

Best, per lb	0 08	0 08½

Cod Oil.

Cod Oil, per gal.	0 50	0 51

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet	0 13	0 15
White, extra	0 16	0 18
Gelatine	0 20	0 30
Strip	0 16	0 17
Coopers	0 17	0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list
Munn's, dis. 25 to 30 per cent. off list

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross.... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 & 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto - Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 4 00 4 50

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mortar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 35 to 37½ per cent.

Standard Keystone
TARGETS
THE BEST -:- -:-
-:- TARGET MADE.



Standard Keystone
TRAPS
THE NEW '93 MODEL -:-
-:- EXCELS ALL OTHERS

AGENTS: ❁ BOWMAN, KENNEDY & Co., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 50 to 55 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 6 7½

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Finsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   Basis—50 to 60 dy 2 30
   40dy 2 35
   30 dy 2 40
   20, 16 & 12 dy 2 45
   10 dy 2 50
   8 & 9 dy 2 55
   6 & 7 dy 2 70
2. American Pattern Only
   from 4 to 5 dy 2 90
   3 dy. (lath) 3 30
3. Canada Pattern Only
   from 4 to 5 dy 2 80
   3 dy. (lath) 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American 1 85 3 50

Nail Sets.

per gross
Square, round and octagon 3 38 4 00
Diamond 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 25 per ct.

Pails.

alvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross 1 00 4 25
" Carpenter 2 25 3 60

Picks

Per doz 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Star. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. B. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz 1 35 2 00

Pruning Shears.

Per doz 4 00 5 50

Pulleys

Hothouse, per doz 55 1 00
Axle. 22 33
Screw 27 1 00
Awning 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot 3 3½
Sliding Door, " 3½ 3¾

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33½ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9½ 9¾	10¾ 11
¼, 5-16, ⅜ in	10 10½	11½ 11½
Cotton, per lb	18	20
New Zealand	9	9½
Russia Deep Sea, per lb..	13½	16
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross-Cut, Disston's, per ft. 35 to 55.
S. & D. dis. 35 to 40 per cent.
Hack, complete, each 75 2 75
" frame only 75

Saw Sets.

Per doz 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails, bright, dis. 77½ and 20 per cent.
Bench, wood, per doz 3 25 4 00
Bench iron per doz 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen 1 25

Soldering Irons.

Per lb 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons .....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4½ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 50 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p cent
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 51½ per cent.
Channel nails 5c. lb. off list
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75 p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33½ p

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33½ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9 00

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap 0 11½
" Crown 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " " } 4½ 4¾
" Plain twist, 2&3 wires
" Steel thorn and ribbon 4½ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33½, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON HALL MILLER & CO. QUADRUPLE PLATE HOLLOW WARE

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

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SEWER PIPE
WATER PIPE
INVERT BLOCKS

Canadian, Scotch or American

Write for Prices to

THE COLMAN-HAMILTON CO., LTD.

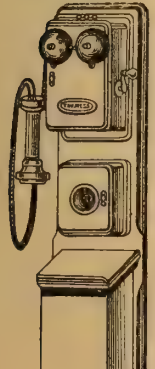
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Also for Fire Brick, Fire Clay, Gas Retorts, Gas Works Supplies, Portland Cement, Keen's Cement, Roman Cement, Mortar Colors.

Phone. 3763 Mention this Advt

TELEPHONES

Private Line Installed and sold outright.



Why pay rental when you may own your telephones?

Sample letter from a well known firm using a large number of our instruments.

WALKERVILLE, ONT.
Jan. 9, 1893.

T. W. NESS, ESQ.,
Montreal.

"Pleased to say that both the Switch Board and Telephones bought from you have given entire satisfaction."

WALKER, SONS & CO.

T. W. NESS

Manufacturer of Telephones and Electrical Supplies. . .

749 Craig St. Tel. No. 1100.
Toronto Branch, 106 King W.

THE HATHEWAY PATENT FENCE WIRE.

Pat. Nov. 19, 1889.



Above Cut Is One-half Actual Size.

The Hatheway Patent Fence Wire, the most popular fence wire throughout the United States, and fast gaining that position in the Dominion of Canada, as it contains all the requisite qualities of a fence wire, being handsome, strong, visible—seen at a long distance; will not sag or get out of shape; allowance for contraction and expansion, heat and cold; being broad, requires less strands to make a complete fence; easily put up, splices itself; will not injure stock. Put up in spools of 120 lbs. each. For sale by all the leading hardware stores in the Dominion.

Manufactured by THE COLLINS MFG. CO., 84 Adelaide st. E., Toronto.

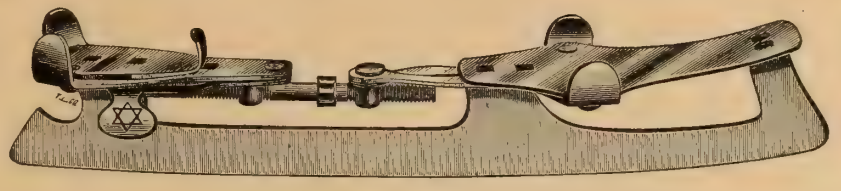
COWAN & BRITTON

GANANOQUE, ONT.

Nails, Hinges AND Buts

Manufacturers of every description of these goods.

The Star Skate



Is of entirely different mechanism from our **GENUINE ACME** and is introduced to meet the demand for a cheaper skate than has yet been offered. Made all of first-class steel. Toe and heel clamps simultaneously adjustable to suit any size sole or heel. Holding powers perfect. **Quality and efficiency considered, it is the cheapest skate on the market.**

The Starr Mnfg. Co., Ltd., Halifax, N.S.

SOLE MAKERS OF

GENUINE ACME SKATES : Hockey and Racing . . . **SKATES**

None Genuine without this Brand



Stamped in head of Every Package.



ASK FOR THE GRAHAM NAILS.

Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St, Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 x 4 Barb
Plain Twist and
Strip Fencing

And Staples for same.

Write for Prices and Discounts.

ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.



OUR Lamps

AND

LAMP GOODS

ARE NOW READY

Look at samples and get prices from other dealers, then come to us — we'll get the order. Why?

BECAUSE OURS ARE

Best Value . .
by a Long Shot

Gowans, Kent & Co.,

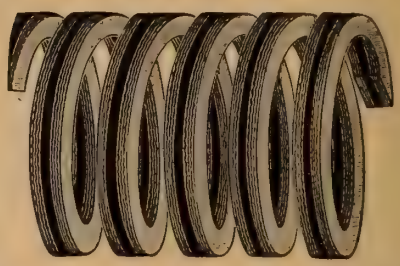
TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

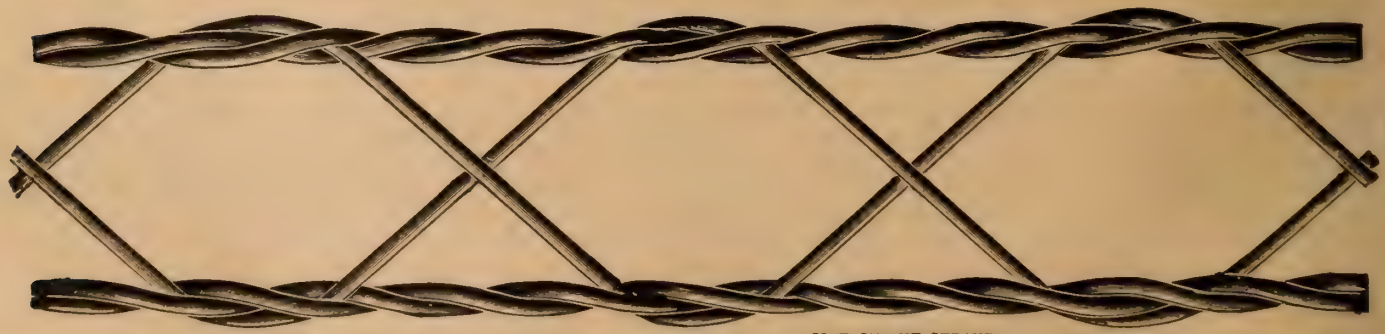
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AND METAL MERCHANT

VOL. V. TORONTO, AUGUST 5, 1893. No. 31.

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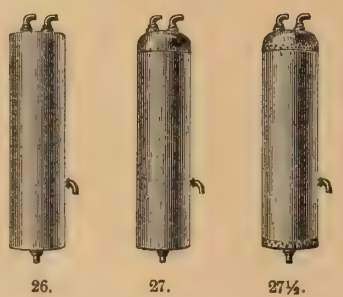
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Published Weekly. $2.00 a Year.

Vol. V. TORONTO, AUGUST 5, 1893 No. 31

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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It is a peculiarity about strikes that they often occur at the moment when the most injury can be inflicted upon employee, employer and the community in general. An instance of this is to be seen in the unfortunate strike now on among the English coal miners. Depression most severe has for some time had its centre over the coal, iron and steel trades of England. Every careful reader of the newspapers knows this. In the coal trade the trouble has not been so much the lack of business as a decline in price, the fall in the latter compared with a year ago being about equal to three shillings a ton. According to the Board of Trade returns the exports for the first six months of the present year aggregated 14,509,000 tons, against 13,431,000 tons the same time in 1892, an increase of 1,078,000 tons, but a decline, compared with 1891, of 398,000 tons. On the other hand, while the tonnage was larger the value of the exports were only £6,912,000, compared with £7,797,000 for the first half of last year, and £9,283,000 for the corresponding period of 1891. But notwithstanding the fair showing of the tonnage as regards quantity, the miners have not by any means being working full time. On the contrary, many of the pits are working only one or two days a week and the best of them but about four. At the moment there are some slight signs of an improvement in the iron trade, but this unfortunate strike among the English coal miners is likely to delay the day of a more satisfactory trade. Should the strike extend to any length of time it will seriously affect not only the great iron works of Lancashire, Derbyshire, North Staffordshire, etc.—which have already in some instances withdrawn prices from the market—but the potteries and chemical works besides. Thus making an enormous addition to the nearly half a million miners and their dependents that are already out of work.

* *

Regarding the cause of the strike some people are a little obscured. Since 1888 there has been an advance in five stages of 40 per cent. in the wages of the miners, while price of coal has on the other hand fallen about 35 per cent. during the five years. What the master now propose is a reduction of 25 per cent. from the 40 per cent. advance, not from the total wage. An effort was made to settle the matter by arbitration, but the miners rejected the proposition, hence the strike. No matter how just the cause of the employees may be they have injured it by refusing to arbitrate.

* * *

The financial situation in the United States shows some signs of an improvement; and it is to be hoped that they will be permanent. While we in Canada are not directly interested we are indirectly so, just as when misfortune strikes one neighbor the sympathies of the other are aroused, particularly if they also have business relationship with each other, as happens to be the case with Canada and the United States. The tonics which are bringing about the healthier conditions are the expectation of the repeal of the silver law and the turn America-wards of the gold tide. President Cleveland is determined upon the unconditional repeal of the silver law. He has placed himself on record to that effect. And while this may delay the repeal in the first instance it is scarcely likely that any time will in the long run be lost. In any case the free silver men will make a long and a bitter fight, and they would be hardly less willing to accept a compromise that did not give them at least nearly as much as was taken from them than they would be to give up all. With public opinion as it is it is evident that Congress dare throw no sop to the free silver men that will be large enough to mollify them. Under such circumstances the wisest thing to do is to adopt the plan of campaign mapped out by President Cleveland. If the advocates of repeal should perchance not succeed, the last condition of affairs in the United States would be worse than the first. It was when the President called for a special session of Congress for August 7 that public confidence began to be restored. If the object for which it is called is not attained that little confidence will sink lower in the financial horizon than ever before. And what that means is obvious. The duty of Congress is to unconditionally repeal the silver law. After that if anything reasonable can be done for the silver men well and good. But until concerted international action is taken the United States cannot do much for either the silver miners or for restoring silver to the place it once occupied as a factor in the currency.

* * *

Confidence is one of the most important essentials in the commercial world. As the keel is to the vessel so is confidence to trade. Remove the one or the other and over will go either vessel or trade at the first blast. There have been many instances of this in the United States during the last few months. When the whirlwind that had its origin in unwise silver legislation began to sweep across that country, menacing credit and trade, the nation became alarmed. Some even more so than the conditions warranted. When people lose their heads they are little fit for anything, particularly business, and at the cry of "wolf" will run without stopping to see whether there is a wolf or not. Possessed by this fear the people in some of the Western States have been making runs upon and bearing to the ground banks that, in many instances, were sound.

Although some of these banks are resuming business again, much of the injury that has resulted from the runs consequent upon a lack of confidence is irreparable.

* * *

Individual merchants as well as people in general can glean lessons from the recent runs on banks in the Western States. To succeed in business a man must have courage. Obstacles surround him on every side. He can not get around them. He has either to surmount them or run away from them. Some choose the latter course. The mole hill they magnify into a mountain and, throwing up their hands in despair they run from it. Their mole hills are sometimes in the shape of accounts falling due, and then in despair, some merchants throw themselves into the arms of an assignee or flee pell-well the country, when infrequently there is no reason for any such action. Instances of this are continually occurring, one only a few weeks ago. In this particular instance the frightened one was a large flour dealer, who, because the markets had gone against him and trade was dull, he, in a moment of weakness, assigned. When his affairs were investigated experts failed to discover any reason why he should have assigned and when the hour set for the meeting of the creditors arrived the insolvent and the assignee were the only ones to put in an appearance. What the business man of to-day wants is a foundation made up of experience, capital, tenacity and continuity. With a foundation such as that confidence will not be wanting when demands are made upon it.

* * *

A woman was the other day convicted in London, England, of fraud. In the evidence it came out that she was employed by a manufacturer at wages that were not enough to keep body and soul together. It was to keep the two from going assunder that led her to defraud her employer. An English trade paper in commenting on the same remarked: "However he (the employer) may be blamed this man must not stand alone. To the full the purchasers must share the blame." This line of argument, to our mind, has little or no legs upon which to stand. No man, whether he be saint or sinner, preacher or layman, wholesaler or retailer, manufacturer or consumer, can be blamed if he buys a thing cheap as long as it has not been stolen. The price of an article is not determined by the whim of this or that purchaser. It is the law of supply and demand that is the great governor. If the manufacturers in any given article turn out more than the market can absorb the price will naturally fall, and so will the remuneration of the employee. The same results are obtained if, in the rush to get business, merchants undersell each other. If merchants and manufacturers cut and slash prices the consumer cannot be blamed if he takes advantage of it. To blame the purchaser because Jones the grocer, Brown the tailor, Smith the hardware man, or Johnson the boot and shoe dealer, sell their goods below cost and do not give their clerks sufficient remuneration is unreasonable. Most of the evils, such as inadequate profits, bad debts, etc., that beset business men are of their own making, and it is no use anyone trying to deny it.

VIEWS AND INTERVIEWS.

"There's something we are just putting on the market," remarked the cutlery man in M. & L. Samuel, Benjamin & Co.'s as he pulled open a drawer containing samples of butchers' knives. "It is called the 'Wapacut' butcher knife, and the name, you see, is engraven across the blade. The handle is solid. The tang, which is V shaped, is driven about two-thirds the way into it, and is then secured near the blade by one rivet. The rivet has a large oval head instead of having the simple 'burred' end as has been the fashion in the past. By this new process the blade cannot possibly work loose This mode of construction also cheapens the handle materially, and consequently the maker can afford to spend more money in the tempering and finishing of the blade.

* * *

"I don't know whether you know it or not, but some of the makers are putting up two sizes of packages of pine tar," said a maker to me Thursday. "What is the difference between them? Well, you know we used to put the tar up in imperial pints only. Now we are putting it up in wine pints as well. We were led to do so owing to the growing demand for a smaller package."

* * *

"Since the duty on glue was made specific, instead of ad valorem, it has not paid us to bring in cheap glue," said the representative of a jobbing house the other day. "As a result of this, the quality of the glue on the market is better than it used to be, but the people are all the time looking for cheap glues just the same."

* * *

"The apple crop north," said a traveler to me Saturday, "is a failure. I saw tree after tree that had not a single apple on it. Do you know I think there is money in dried apples. You can buy them at about 4c. and I believe that in the spring you will be able to 7c. for them. But you have got to hold them. That is the worst of it."

* * *

"Sales of copper baths have been remarkably good lately," remarked a wholesale hardware man, "and we are now hoping that it will entail a little brisker demand for plumbers' supplies." BYSTANDER.

WHEN TO BUY.

This question is a matter hard to determine. When in need of goods, necessity compels buying at once, but if prices are not known to be right, the quantity bought may be regulated to present needs. We have known dealers to buy goods in July for September delivery, and have awakened to the fact that a good profit had been lost by buying too soon, and again we have known times when July prices could not be duplicated in September. While considerable reliance may be placed upon the representation of an honorable salesman, as to the probable advance or decline in prices, yet, generally speaking, the best results come from the merchant's own careful consideration and conclusions. Before it is necessary for him to buy in quantity it is advisable to ask different houses for discounts, or best net prices, upon the receipt of which he will know how to intelligently handle the quotations given him by the salesman. However, better prices from the house than the salesman can quote are a rarity. He not only knows the lowest margin his house will accept, but is thoroughly posted on the prices of his competitors. As a rule, it is safe to place your order in his care, and it should be attended to at a time in advance of actual need as will admit of some little delay, without creating the annoyances and vexations incident to hurried orders when the trade is on.—L. S. Bonbrake, in Business.

S. S. Warrimoo, of the Canadian-Australian line, sailed for Sydney via Honolulu and Brisbane last night. Some hours before sailing every available inch of cargo room was filled up, and she had to refuse a quantity of lumber and other freight. She has in all over 1,000 tons aboard, the cargo for the different ports consisting of the following: For Honolulu—50 tons coal, 500 bbls lime, 600 bundles shingles, and a quantity of lumber; for Brisbane—600 bundles shingles, 4 tons dried salmon; for Sydney—4 carloads of agricultural implements, 100,000 feet of lumber, 250,000 laths, 6 tons of dried salmon, and between 50 and 60 tons of general merchandise. The cold storage chamber is filled with salmon. She will also take on at Victoria 100 cases of salmon for Australia. Besides this she has a quantity of samples on board. She took 14 sacks of mail, and had 19 saloon and 9 steerage passengers.—News-Advertiser, Vancouver.

HOW TO COMPETE WITH THE STORES.

How to compete with the stores? This is a question indeed!—a question which increases daily in its intensity and reality, and which we traders, especially if we happen to live in an aristocratic neighborhood, must find an answer to if we mean to continue our trade—aye, or even our very existence. For do we not find that the lord of the manor, the squire, the parson, the doctor, and even the merchant possess a copy of the stores list, and order their requirements direct from London, apparently ignoring local traders, who are their neighbors, their very supporters, and who used to be their friends—a body who, at all events, pay the greater part of the rates, sell the very goods the merchant produces, are the very best customers of the parson and the doctor, and contribute a very large proportion of the rent roll of "my lord" or the squire?

Our grievances in this respect are many, and not the least is that when "my lord," Sir William, or the colonel sends his order to the store he takes care care to enclose a cheque for the amount; or possibly he may have a sum on deposit, thus actually paying for the goods weeks or even months before they are ordered; whereas, if he sends his servant to his neighbor for an article or two he forgot to include in his list, he does not send the money, and would feel insulted if the account was sent in under three months, and still further insulted if he was asked to pay it at the expiration of twelve months.

Now, it seems to me that this system of credit is the crux of the whole matter. The only way to compete with the stores, in my opinion, is to possess a capital sufficiently large to be able to pay cash for everything. Study the stores list, and find the market for and buy goods that you can, with a fair amount of profit added, sell at the same prices as they do. Having done that, make widely known the fact that you are prepared to supply goods at store prices on store terms. A printed season's list is a necessity. The prices thereon should be an exact copy of the stores list. Then when Sir William, having learned by circular that you are anxious to regain his custom, calls to look at hose-pipe, lawn-mowers, garden tools, etc., and is shown in print that yours are bottom prices, and the same as he has been in the habit of paying, and, moreover, sees at the top of every page that the prices are "For cash at time of purchase only," he will not fail to buy, and also pay for them, at once. Be assured that in this competition price is everything. It overrides friendship, convenience of choice, courtesy in serving, punctuality in delivery, and even quality itself. Every consideration is thrown aside where £. s. d. rules.

The stores work on the same lines as the cutting draper. They have their "leading lines," such as mowers, proprietary articles, and any well-advertised novelty, such as the new bread-knife. These things are cut to death; but do not let us shut our eyes and dream for one moment that huge buildings, large salaries, big dividends, and directors' fees are paid by the sale of mowers and bread-knives. No; it is by the profit made on the thousand and one other things which are sold, the prices of which cannot be known to the public. Do you think that they sell a kettle, scuttle or fender cheaper than you do—or, rather, would do, if cash were paid for it? No; it is the "leading line," the advertised article, that is cut, and so by that means the public are gulled.

The best method, then, of competing with the stores is to possess ample capital; pay cash for everything; buy your goods to sell at store prices; sell at these prices for cash only; have a printed season's list, and advertise well the fact.

In developing a cash trade we find one of the greatest obstacles to be the working department. This department has been described as the "backbone" of the trade. In the absence of a good cash retail department it undoubtedly is the backbone of many businesses.

Now, the stores offer to do work on these terms: A valuation must be made of the job, two-thirds of that valuation be paid down before the job is commenced, and the remaining third on completion. This, to my mind, is a very cumbrous way of doing business, and I think we shall have no difficulty in keeping this department. On the contrary, the more customers we get to deal with us owing to our low cash prices the more work we shall get. The way work-accounts should be treated is to render them monthly, with the remark in red ink printed on the bottom of the bill—or on an enclosed slip—that, as only a cash trade is done, the above account is due, and should be paid immediately. The more you impress on the public that yours are low cash prices the more ready are they to believe it.

The cash system for goods and the monthly account for work will be found to be acceptable to the man who has the money and who wants to pay—these are the people we want to attract and retain—but will not be at all palatable to the impecunious man who wishes to buy what he cannot afford and there must have credit. This class we can afford to do without.

Now's the time to strike the blow; now is the time to alter our system. The stores have begun to educate the public in cash payments. Let us develop that education; and if we succeed in perfecting that, the lesson the stores will have taught us will be a very salutary one, and in the course of time the trade may have occasion not to curse, but rather to bless, their enemies.—W. H. Aish, in Ironmonger.

STICK TO THE LAST.

The writer of a letter to a trade journal says that he had been in one line of business for twenty years. "About fifteen years ago," he continues, "I added musical instruments and sewing machines to my harness business; twelve years ago I added a stock of general hardware, and last year started a tin shop in connection. I carry them all on successfully, though I would not advise any brother-chips to do the same, unless they have spare capital and do not mind hard work and worriment." This is good advice, adds a contemporary. The trouble with many business men who do not realize all their anticipations is that they have too many irons in the fire and cannot make them all profitable. An investment in staple articles like hardware and tin was probably the evolution of this dealer's trade ideas, and now that it is the result of his many years' experience a due caution should prompt him to stick to his last choice and avoid side issues. Other dealers will here find an illustration applicable to their own business.

HINTS FOR CREDIT GIVERS.

Is he married or single?

Does he gamble or speculate?

Satisfy yourself in regard to the habits of his private life.

Is he extravagant or disposed to live up to or beyond his means?

Is he prompt in settlement, and how does he stand in his own trade?

Record and standing as man and merchant should also be considered and thoroughly investigated.

Ascertain if there is anything which would lead him to spend more money than his business can afford.

Has he ever failed? And if he has, under what circumstances and what was the character of the settlement made, if any?

Banks are excellent references. They won't tell you what a man's balance is, but they will tell you, as a rule, in plain English, what they think of him.

If you can give a hint or clue to your commercial agency don't fail to do it. It often opens up new developments which the creditor may be seeking to hide.

The amount of credit given should be governed primarily by the amount of capital invested in the business for which the credit is sought and by the outside resources of the person or persons conducting the same, providing, of course, that such outside resources are in the name or names of the party or parties in interest.—Ex.

COMPARING MINERAL PRODUCTIONS.

A diagram in the census report for 1890 on the comparative value of the mineral productions of the several States and Territories is, according to N. Y. Journal of Commerce, of interest in connection with some of the statements made as to the consequences of the collapse in the price of silver. Pennsylvania, with its iron and coal, is represented in the diagram by a line more than twice as long as that of any other State, and nearly four times as long as Colorado; the Pennsylvania product being given as $150,800,000. Michigan with its copper comes second, with a production estimated at $70.800,000, and Colorado third with $41,100,000. No other silver State rises as high as $35,000,000; Montana coming near to that mark, followed by Ohio, with mineral productions of $26,600,000, and New York $24,100,000. California ranks seventh, with mineral productions of $19,600,000, of which $12,500,000 was gold, $1,300,000 silver, and $5,800,000 other metals and minerals. Illinois, Missouri, Utah, Minnesota, Iowa and Wisconsin all follow in the order stated with larger aggregate mineral productions than Nevada.

COPPER FROM JAPAN.

Very little attention was paid by the copper trade of the world to doings in Japan until increasing quantities of metal began to be offered in English markets, remarks N. Y. journal of Commerce. Even the highest authorities seem to possess meagre information concerning the magnitude of Japanese copper interests or of the character of deposits and other data bearing on the question of the ability of Japanese producers to meet the world's markets. Especial interest, therefore, attaches to volume entitled "The Mining Industry of Japan," issued by Wada Tsunashiro, director of the Mining Bureau at Tokio. How rapid has been the expansion of production in that country may be gathered from the following statistics covering the period of 1881 to 1890, inclusive. During the same period the exports were as follows:

Copper Production in Japan.

	Production. Pounds.	Exports. Pounds.
1881	10,603,601	.....
1882	12,479,955	6,058,080
1883	15,054,690	5,252,053
1884	19.751,906	11,517,308
1885	23,223,281	17,994,956
1886	21,718,857	21,242,302
1887	24,585,519	18,990,821
1888	29,720,190	21,433,206
1889	36,119,364	22,446,903
1890	40,256,433	43,135,474
1891	.....	38,501,311

It may be of interest to state the direction which the export movement has taken during the past few years. The following table, covering the years 1889, 1890 and 1891, in detail, show that China is by far the greatest customer of the Japanese producers, and that the shipments to Great Britain undergo very violent fluctuations:

	1889.	1890.	1891.
British India.....	4,287,132	467,904	1,815,936
China.....	6,881,225	3,385,004	8,002,599
Hong Kong	3,815,211	15,424,437	24,164,731
Corea.....	1,954,417	2,112,900	1,368,473
France....	435,661	444,144	290,840
Germany..	1,075	393,887	233,544
Great Brit'n	5,072,111	20,903,329	2,616,562
Other c'n't-ries.....	91	3,867	8,656
Total....	22,446,923	43,135,474	38,501,311

A moderate proportion of the copper produced in Japan is obtained from mines the principal reliance of which is the silver contents of the ore. The indications are, that Japan will continue to expand as a producer of copper, and may be expected to become an increasingly important factor in the world's markets of that metal.

PHOTOGRAPHING CUSTOMERS.

Some one suggests that if a salesman could only have before him a series of photographs showing exactly the impression he is making upon the mind of a customer, it would be an invaluable help to him. Doubtless it would be. It would teach him when to speak and when to keep silent, what line of persuasion was effecting the most good, and what was prejudicing the case more than advancing it. The idea, if only it were practicable, is capable of immense expansion. If the barrister could thus take mental photographs of the jury he is addressing, the political speaker of his audience, the legislator of the opposition, and if, in private life, every one who attempts to make a convert could take snap shots of the mind under attack, what a saving of fruitless labor there might be! Unhappily, the suggestion is beyond the pale of realization, but it may help us to understand how the cultivation of the faculty of close observation goes a very long way towards making a successful salesman. To him every expression and movement of the customer is part of a series of mental photographs by which he feels his way along the road of persuasion. He does not need to be told in so many words, "There, now, you are hitting on a strong point," or, "Why don't you shut up for a minute, and let me think this out for myself," or, "If you can't give a better reason than that, I'll not take the article." He sees and feels, without being told, that he is making a hit, or had better keep silent, or advance a sounder argument, and adapts his manner and his conrse to that instinctive apprehension of what is best by means of signs invisible to less acute perceptions, just as the mariner steers a sure pass through trackless seas by signs that altogether elude the landsman. Some men seem to have an almost instinctive faculty of close observation and acute analysis, but it is capable of the highest cultivation by anyone, and even where it seems most intuitive, it would be found that the power had been largely the result of persistent self-training.—Ironmongery.

IS THIS ALL TRUE?

"It is strange that no manufacturer of garden tools has put in market light spades, hoes and other tools for woman's use in the flower garden. The so-called ladies' garden sets are really suitable for children or women of exceeding short stature," writes the agricultural editor of a daily exchange. "The handles are about half the length of the ordinary handles of the regular rake, hoe, spade and digging forks, and a woman of medium height must stoop uncomfortably to make any use of them. She is, therefore, almost restricted to the trowel and weeding fork, which can be used only in a stooping position. An iron rake with a little shorter handle, and even a small hoe and digging fork, would be very convenient tools for women who delight to work in the flower garden. Not even tennis is such a health-giver as this garden work, and nothing is more fascinating to a woman who loves flowers. The blades of the best sets of the tools that are now put in ladies' sets are excellent, though they might be a little heavier and longer for practical use. But the handles are very much too short, and there is no reason why they should not be made of some lighter material than the heavy wood used for the ordinary garden tools for men. Our wall brushes and some of the brooms are made with handles of especially light wood, which is not the less strong because it is light."

HOUSE VENTILATION FOR HOT CLIMATES.

A new method of house ventilating suitable for hot climates, the invention of W. B. Gwyther, of the Indian Public Works Department, is described as follows by a London exchange:—The object of the invention is not only to prevent the penetration of heat through the roof or damp through the floor, but also to provide a means of carrying away heated and vitiated air from inside. The method consists in the use of hollow tubes of earthenware; in the case of flat-terraced roofs these are employed as a substitute for ordinary flat tiles which support the roof concrete. The tubes are laid closely side by side, and where they meet end to end, a cross flue to secure more perfect ventilation is formed by the use of half pipes. The ends of these flues when feasible should be provided with iron gratings for the ingress and egress of air; the ends of the hollow tubes where they rest on the wall should open into a longitudinal flue made in the wall. Where

lateral openings or gratings cannot be arranged, vertical openings through the roof, covered with bent pipes, may be resorted to as an alternative. To draw away the vitiated air from below, perforations in the under side of the tube have been devised. The efficacy of these openings in removing air from the upper part of rooms rests on the fact that heated air moves upward, and after passing through the small apertures, will be carried off through the tubes and cross flues, within which a movement of air will always be going on. In the case of floors the prevention of damp can be effected very thoroughly by the doubly ventilated space.

LOCATION OF PIPES.

Waste water and steam pipes carried openly through a building and covered only where they pass through the floors, are not likely to be dangerous, because their conditions can be constantly observed. If accidents occur the point at which the break takes place or the defect shows itself can be reached at once, and while repairs are facilitated, there is no tearing open of walls and ceilings and costly carpentry work to finish the job.

There is another point which applies to all kinds of pipe work, but especially to plumbing. The quality of the work when it is exposed gains materially, because the plumber or the steam-fitter who knows his work is sufficiently respected to be put up where it can be seen will take a pride in doing it well. On the other hand, when all the piping in a house is to be hidden out of sight, as though it was something too bad to see daylight, there will be a feeling among the men that the work must correspond to the owner's opinion of it. In any event it will correspond with his opinion in spite of inspection or honest intentions.

There are various ways of carrying pipes through floors without leaving an opening, and wherever they have occasion to pass in this way from one storey to another the opening made for them should be closed entirely so as to prevent the passage of odors and cut off all communications. This has been done usually by putting in a solid block of cement around the pipes over the top and plastering at the bottom. When this is done the runways for rats, mice, roaches and water bugs are cut off. There are then no private convenient passageways for them from the kitchen or cellar to the top of the house. These vermin under such conditions can be exterminated. In houses where the pipes run in chaces or where a covering board is used to shut them into a recess, breeding places of the most perfect character are formed for roaches, rats, mice and water bugs. Free passage is provided for them from the top of the house to the bottom, and more congenial quarters could hardly be imagined. It is simply free rapid transit with unlimited fields for colonization.

But this practice of concealing pipes has another disadvantage which is not generally appreciated. Odors pass through the recesses and circulate in the floors, crossing from side to side of the house between the beams, so that the kitchen ventilation is effected by delivering the kitchen odors under the baseboards of every room.

Where pipes are exposed in a perfectly frank and open manner they can be decorated so as to form rather attractive features of a room. If painted a bluish black or dark grey scarcely removed from black, the bands and rims of the pipe can be covered with nickel or aluminum leaf, or the whole pipe can be finished in two or three shades of bronze.

Lead and wrought iron pipe receive somewhat similar treatment to the cast iron. In any case there is no difficulty in making the decorations of a pipe very effective.

It is a most satisfactory thing to note that information on this subject is becoming more widely diffused, and builders and architects at last understand that the covering of pipes is no longer considered satisfactory. From the architect it is to be hoped that the knowledge will gradually extend to the layman, and that opposition to open piping will gradually disappear.—N. Y. Metal.

COST AND SELLING PRICES.

Dealers quite often complain that the current prices for staple goods are not justified by the selling price of the material from which they are manufactured, remarks Iron Age. In other words, they say, there is a too wide margin of profit for the manufacturer and the middleman, and, as a consequence, they do not find a ready market for their goods. When they arrive at this conclusion, they have ignored some of the necessary elements of cost and yet which do not appear in the goods which they have purchased. Experience has taught the average manufacturer that it costs about as much to sell his goods, even with proper economy, as it does to make them. That is to say, the first cost is doubled by the expense of selling, exclusive of storage charges in the way of rentals for warerooms or the interest on the investment when these warerooms are owned, and without regard to the interest accumulating between the date of sale and that when the bills are paid. Dealers can determine from their own experience what this interest averages, and they know that this is no inconsiderable item in figuring up the cost and selling price.

But there are other considerations. Out of a hundred bills sold, a certain percentage will not be paid or else will drag on for months before a settlement is finally effected. This in inevitable. It is the luck of the thing and must be provided against. Then comes the guarantee, a practical trade-mark that costs money to maintain, and often the patents under which the goods are manufactured on a royalty. This again costs money, as do the brains and skilled labor which have made the goods what they are, saleable from their merit and their adaptability to the wants of the trade and the consumer.

TIN ORE PRODUCTION IN BRITAIN.

The blue book of the British Home Department gives the following statistics of the production of tin ore and tin in Great Britain for the year 1892:

The total quantity of dressed tin ore mined in Great Britain, chiefly in Cornwall, in 1892 was 13,356 gross tons and 11 cwts., against 14,488 tons and 1 cwt. in 1891. From the tin ore mined in 1892 there was produced 9,270 tons and 1 cwt. of metallic tin, against 9,353 tons and 10 cwt. in 1891. The imports of tin ore into Britain in 1892 amounted to 3,485 gross tons, against 2,332 tons in 1891. The imports of metallic tin, in blocks, ingots and bars, into Great Britain in 1892 amounted to 29,468 tons, against 28,207 tons in 1891. The exports of domestic tin in 1892 amounted to 5,647 tons, against 5,165 tons in 1891.—Ex.

REVOLUTION IN LAMP WICKS.

The Liverpool Journal of Commerce draws attention to an extremely simple little invention which has just been perfected in Liverpool, and if the opinions of its creators, as well as of many competent experts are to be taken for anything, nothing short of a complete revolution in lamp wicks will be the immediate result. A small piece of asbestos web is inserted in the end of an ordinary lamp wick for about three-quarters of an inch. A very small portion of the asbestos web appearing above the wick, and the result of this ridiculously simple arrangement is to enormously increase the power and usefulness of the wick. It is claimed that rigidly conducted scientific experiments have indicated an increase in the intensity of the light of an ordinary lamp from six candles to eight candles, while the life of the new wick is asserted to be practically everlasting, an experiment conducted with a ship's side light for 600 consecutive hours showing no appreciable effect on the wick. Combined with this practical indestructibility, it is also claimed that no trimming is required after the first adjustment, and that the combustion is so perfect that neither odor nor smoke can be perceived. Asbestos has frequently been taken advantage of both for its heating and illuminating powers, and as applied to gas there has already been patented an invention closely following on the lines now adopted. There is certainly a ready market for a wick which requires no attention, lasts forever, does not smell, and increases the intensity, and, so far as ship's side lights are concerned, everyone connected with shipping will be glad to learn that an increase of 30 per cent in the power of the lights can be so readily produced. An American patent has been secured for this invention, and it is the intention of the proprietors of the patent rights to manufacture the wicks in this country.

WIT OR MUSCLE ?

We so often hear it said that "smart" men no longer adopt mechanical professions or pursuits, that we fear many young men may be misled, and many older ones disappointed with their choice of occupations, says an exchange. It is true that many of our "smart" men will not adopt any calling imposing any considerable toil upon them. They want to get along by their wits, not their muscle. Surely, well-meaning boys should not be guided by the action of such chaps. There are others who are not lazy or careless how they make money, but who are over fastidious, and who consider old clothes, grease, dirt, and honest manual toil degrading, even though it requires much brain work also. They may be nice fellows, but they seldom amount to much, and very, very often come at last to that alleged degradation so carefully shunned in their youth. It is not to be expected that such men will ever enter a shop. Those who talk most about men of ability steering clear of mechanics, think that all the ability comes from the upper middle, as generally known, and the aristocratic classes. The proportion of such people who now take up mechanical work is greater than it ever was, but the pessimists do not consider that the poor, from which class the shops are recruited, furnish more brains and genius than the comparatively well-to-do classes. Drones and easy-going men will not progress in any walk of life, and there are many mechanics, as well as men of other callings, who get along poorly. But, on the other other hand, there are many professional men, clerks, accountants, etc., who would be far better off if they were skilled workmen in some mechanical capacity. There are instances without number of mechanics rising from a humble position in the shop to great power, influence and wealth by using their brains and applying themselves to the work in hand. How many have exempted themselves from daily toil by inventions and by starting in business for themselves in a small way ? Thousands in every state. There are whole wards owned principally by mechanics, who have bought their homes, furnished them confortably, many elegantly, and sent their children to school, often to college, on their wages. They are in better shape, with better prospects of ease in the future, than the majority of small merchants and salaried store and office help. There are, in fact, few men so independent, as a first-class machinist, sober, reliable and industrious, who owns his own home, has some money in the bank, and a business-like administration of household affairs. How many doctors, lawyers, and other men, who, when they were turning the corner of boyhood, would call him a "poor fool" for learning a trade instead of going to some "'varsity" and getting crammed for a profession, would now be glad to swap positions with this man. You can find them in every block, every square in a a city or a town. The one who has in him the mettle to succeed on the line of his natural adaptability and preference will find, if his ability lies in the mechanical direction, that there is a broader and indefinitely better opportunity for emolument in the machine shop now than at any previous period.

SALE OF SPORTING GOODS.

These goods cannot usually be satisfactorily added to a general hardware stock, says T. W. Stake, in Iron Age, unless a special department with a competent manager be started. The line has grown so large and varied, being almost as complicated as a general hardware stock, that it requires an experienced person to talk intelligently on each subject, such as guns, bicycles, fishing tackle, lawn tennis, football, gymnasium goods, baseball goods, and athletic clothing, etc. A salesman in this line particularly must gain the confidence of the sportsman; he can then sell him the goods he recommends, and can take orders for goods he does not carry in stock. Fortunately, the different lines are seasonable at different times in the year, so that the stock can be changed to suit the season; each particular line can be reduced, so that at the end of the year a very small stock is carried over. The seasons are as follows: For spring, bicycles, fishing tackle; for summer, baseball, lawn tennis, and fishing tackle; for fall, guns, football; for winter, gymnasium goods, and, I might add, skates. Revolvers sell in a small way all the year round.

The kind of goods usually sold in hardware houses with sporting goods departments, or exclusive sporting goods houses, in my experience as a traveller for ten years and manager of a sporting goods department for five years, the size of the stock carried being graded by the size of the town and its locality, is as follows:

Guns.—A few single barrel breech loaders; a fair line of imported guns, to sell from $10 to $25; a fair line of American made guns, to sell from $25 to $75, and a very small sample line of high grade imported guns, from $100 to $250.

Fishing Tackle.—Medium and high grade goods that suit the section of the country. Toy and stationery stores usually sell the common goods.

Bicycles.—Get an agency for a high grade wheel, and carry a sample line from $20 to $100. This with a line of sundries is all that is necessary.

Lawn Tennis.—A fair stock of good quality rackets, with a few common goods; also a good supply of best balls, with samples of nets, markers, etc.

Baseball.—A complete line of balls and bats, but principally good-quality goods; also mitts and gloves, as well as masks, etc., also sample material for baseball suitings.

Football.—A small line of American rubber foot-balls, with a better line of leather rugby-shape balls, and a few association leather balls; also samples of football clothing to take orders from, as this amusement is increasing in popularity.

Gymnasium Goods.—A complete line of Indian clubs, dumb bells, together with a small line of chest weights. Have a catalogue of some large maker of gymnasium apparatus.

Revolvers.—A complete line, although better goods sell the best.

Skates.—A complete line where the climate permits of skating.

The sale of the goods can be increased by the clerks or partners joining or taking an interest in the clubs in town, thus making the acquaintance and gaining the confidence of the members. It is policy to keep the stock in season in full view—at the front of the store if possible—so that everybody coming in to buy hardware can see this line easily.

The stock should be kept clean and fresh, especially bicycles, guns, revolvers, tennis rackets, and fishing tackle. Clerks in this department should always dress neatly and keep the store clean. It is good policy for salesmen to show sporting goods to customers, even though they are buying other lines.

Goods should be delivered promptly, and when taking special orders never promise goods before the time you can deliver them. The display in show windows should be given special attention and changed often, always showing seasonable goods only, and making the windows attractive by adding special features from time to time—such as pictures of crack bicycle riders, baseball clubs, prominent football or tennis players, and in the fall mounted animals or any novelty which would attract people. I believe a good percentage of the most profitable business comes from the show windows.

All of the suggestions I mention can be carried out on a small or large scale according to the size of the town. While it may seem that I have mentioned a great many different articles connected with sporting goods, still their coming in at different seasons makes the investment rather small at any one time.

I believe in this age of sharp competition it would be difficult to do much business with the catalogue alone, as no person more than a sportsman likes to handle the goods he wants to buy. Still, in very small towns where there is no competition samples of some goods could be carried, and orders taken from catalogues for others, but the business must necessarily be small.

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STRENGTH OF ALUMINUM.

There are many misconceptions about aluminum that are widespread, and which it seems difficult to correct in the public mind. Aluminum is not, section for section, a very strong metal. It is only one-half as strong as wrought iron. It has a very low elastic limit. It is not rigid, but bends under a transverse strain steadily. It is in its alloys that its utility commences to appear. With eight to twelve per cent. of copper, or aluminum bronze, we have one of the most dense, finest grained, and strongest metals known.—N.Y. Hardware.

PROUD OF HIS CLEAN SHOP.

The Chicago Helper publishes a letter from one of its subscribers, this extract from which is worth more than a passing notice:

"I found this shop just as 'rocky' as many others where I have been, but now I keep it open for inspection to anyone caring to come in. I am proud of my clean shop. In my spare time, instead of playing cards and reading novels, I clean up; and, if I do say it myself, it is always clean, and the boss has a good trade."

In replying to this letter the Helper says that there are those who will see no connection whatever between the features just alluded to ("always clean" and "open for inspection"), and the significant remark with which the extract closes, "The boss has a good trade." Possibly in this case there may be no connection; it may be simply a coincidence. But there are some craftsmen who will see in the clean shop a good trade, a very close and direct connection; some will even go so far as to think of them and speak of them as direct cause and effect, and these latter have very good reasoning and dead loads of experience to substantiate their claim. Another point worth noting in the words of our friend is the encouragement this incident gives to men whose change of situation brings them into badly arranged and unclean shops, and sometimes into contact with bosses who don't care a cent whether the shop is clean or not. It suggests possibilities within the reach of a determined man that means a great deal. This man's boss, unless he be a freak, cannot help seeing the difference in his shop, and if he has any sense will see how much more valuable to him is a clean workman than a slouch.

HOW SCISSORS ARE MADE.

Though no complexities are involved in in the making of scissors, yet the process is very interesting, remarks an exchange. They are forged from good steel bar heated to redness, each blade being cut off with sufficient metal to form the shank, or that destined to become the cutting part and the bow, or that which later on is fashioned into the holding portion. For the bow a small hole is punched, and this is afterward expanded to the proper size by hammering it on a conical anvil, after which both shanks and bow are filed into a more perfect shape, and the hole bored in the middle for the rivet. The blades are next ground and the handles filed smooth and burnished with oil and emery, after which the pairs are fitted together and tested as to their easy working. They are not finished, however. They have to undergo hardening and tempering and be again adjusted, after which they are finally put together and polished for the third time. In comparing the edges of knives and scissors it will be noticed, of course, that the latter are not in any way so sharply ground as the former, and that in cutting scissors crush and bruise more than knives.

SPEED OF LOCOMOTIVES.

Locomotive engines were run successfully at high speed at times when it was generally thought entirely impracticable to run stationary engines of equal size at similar speeds. No longer ago than 1876 the writer had an argument with an engineer of high attainments and considerable achievement, who took the ground that for some unknown reason a locomotive could make more turns in a given time than any stationary engine that had been or could be built, without giving trouble by heated bearings, etc. The position taken seemed absurd, when the difference in the working conditions was considered, when, from an engineering standpoint, seem far more favorable to the stationary engine running on a solid foundation in a cleanly power house or engine room, always on a level base, and in perfect alignment, whereas the locomotive is continually surging from side to side, changing the level of its base, and running often through clouds of dust difficult to exclude wholly from bearings. The fact remains that for many years locomotive engines led the van in the matter of high speed running. The reason appears to have been that the high speed was so imperatively demanded that the necessary efforts to get it were put forth. So far in the history of mechanical progress sufficient demand has secured sufficient supply, and there is no reason to believe that it will be otherwise in the future.—Age of Steel.

HE INVENTED THE PROPELLER.

The centenary of the birth of Joseph Hessel, the inventor of the marine screw propeller, has been celebrated in Austria by the unveiling of a monument at Mariabrunn, where he lived when a student of forestry, by the inauguration of memorial tablets in the various towns in which he stayed, and by a great commemorative festival around his statue in front of the Polytechnic Institute in Vienna. His claim to priority in the invention of the screw-propeller was disputed in England and elsewhere, but seems now to be well established, the various documentary proofs having just been published, together with invectives against his "stupid countrymen" and the "heartless foreigner who snatched the honor and glory from him to whom both were legitimately due." As a matter of fact, the great English Admiralty prize of £20,000 was awarded in 1852 to five English competitors out of forty-four claimants, and the papers of the forty-fifth, Joseph Hessel himself, were not so much as considered in London. This perhaps accounts for their neither being returned nor acknowledged. But for his imperfect technical education Hessel might have ranked amongst the greatest inventors of the age. It is really astonishing to read the long list of his inventions, none of which came to maturity through want of funds. It comprises steam tramways, the pneumatic-tube post, the use of iron for the ribs of ships, the laying of chains in the beds of rivers, bent wood for furniture, and a number of other eminently practical ideas, partly carried out by others many years after his death. Even as one of the inventors of the screw propeller his name deserves to be honored in England, where, perhaps, he was unwittingly most wronged.—Ironmonger.

THE REWARDS OF INDUSTRY AND ECONOMY.

Circumstances may to some extent assist or retard the progress of the individual along the road that leads to wealth and influence, but it is entirely a question of personal character as to whether success is ultimately attained or not. Luck cuts no figure in the problem, and the sooner the young aspirant for business honors disabuses his mind of the notion that success is dependent upon luck, the sooner will he rise above his present position. "If only I had So-and-So's luck," is an exclamation often uttered by young men, who lack everything perhaps that is requisite to success except ambition and good health. With the most favorable circumstances this class of young men would miss their aims, because they either do not know how to proceed, or are incapable of the sacrifice of ease or comfort, and therefore allow whatever ambition they possess to exhale itself in sighs and plaints. The instances of remarkable material success attained by men with very unpromising beginnings, are sufficiently numerous, one would suppose, to convince doubting Thomases that success in business is dependent upon one's own exertions. Perhaps a good many young men in subordinate positions are well aware of this truth, yet imagine that no special effort save economical living is demanded of them until they have succeeded in entering business on their own account. This is as gross a delusion as the notion that luck is a factor in the problem of how to achieve success. The individual who has never distinguished himself by faithful and assiduous devotion to duty, as an assistant in the store would hardly make a shining success of the business if it should ever pass into his own hands. A habit of hard work must be formed, skill acquired by close attention to the business, and sound business principles instilled, if the clerk is ever to be worth his salt as a merchant. The clerkship period is the period for the formation of character, provided the individual enters upon his duties immediately after leaving school, and is, therefore, the most critical time in the future merchant's life. Slothful or dissipated habits formed then may be impossible to ever shake off. Unfaithful conduct to one's employer may sap the integrity which should form no small item in the capital of the merchant that is to be—in fact, the injury inflicted on the interests of the employer is far less serious than that which the lazy, inefficient and faithless clerk suffers by his own acts.—Merchants' Review.

THE BOTTOM IN IRON.

Iron Age says: "There is some encouragement in the fact that the present severe financial stringency has found the iron and steel trades with prices at bottom The depression did not come at a time when values were inflated, and has, therefore, had relatively little effect upon them. How different the influence of the present condition of affairs would have been if we had been running along with prices at a normal level may be easily imagined. Ore is down to its lowest possible notch. Coke has settled down very heavily of late. Soft steel, as soon as business begins again in earnest, will probably sell at figures close to the record. Plates, structural iron, bars and shapes are selling at extremely low prices, the only article which nominally is selling at a remunerative rate, if there were any business, being steel rails. The reduction in labor in the west may be regarded as an equalizing. It will simply mean that Western works will penetrate a little further away from home, while plants in other sections will correspondingly lessen their sales and their output. Those who figure on any material reduction in the prices of iron and steel in the near future will probably reckon without their host."

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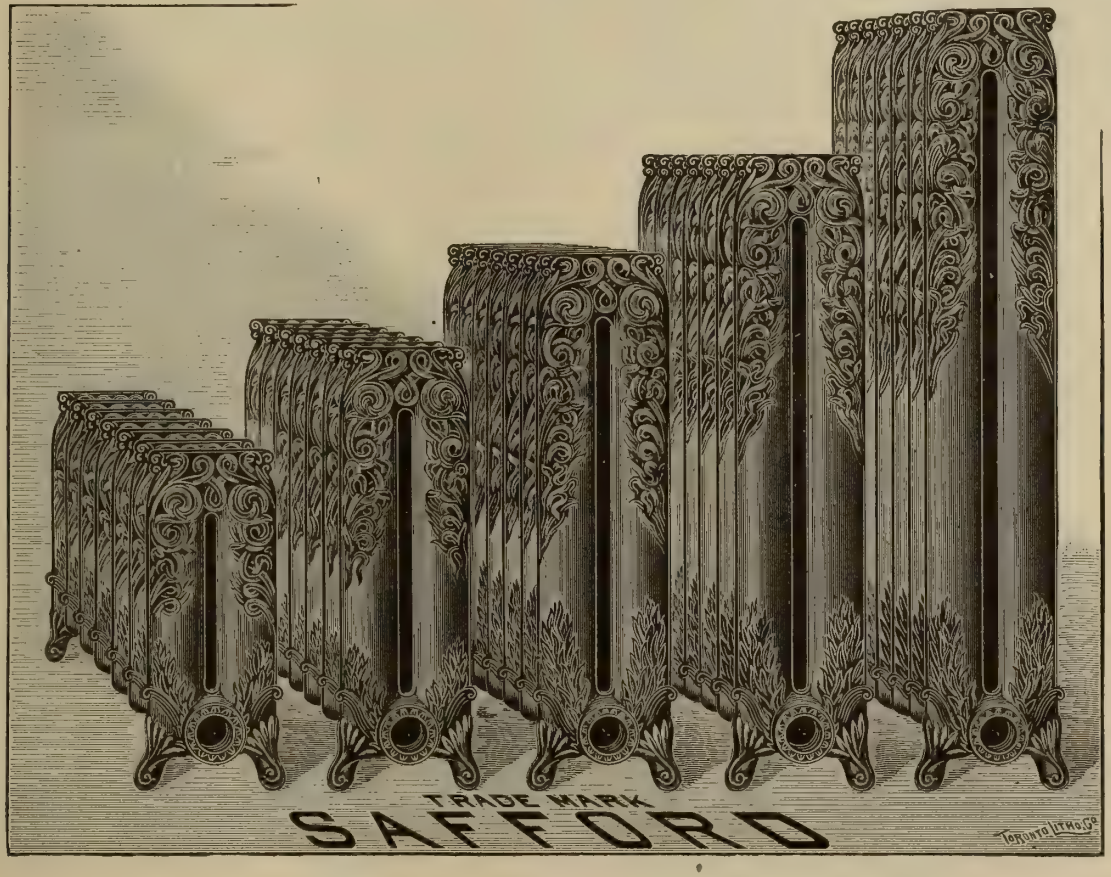
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IT FINDS THE SUREST MARKET.

As the country becomes more and more populous, it will be found that he who does the best work, and he who sells the best goods, will belong to a class who, all other things equal, will make the best success. The over-production in this country, when the industries are fairly employed, is something wonderful, and prices for the average qualities will for many years be lower, but if one seeks for something that is really excellent, it will be found that a good sum will have to be paid for it. Plenty of watches can be bought for $1.50 each, yet the best cost nearly as much as they ever did; there are plenty of cheap hotels, still the newest and best obtain higher rates than three years ago, and so on. There are some manufacturers who will not do work that they can slight; they will not allow their workmen to become accustomed to jobs which will not pay for the best mental effort, and the best quality of material, simply because they do not care to abate even in a slight degree the tone of their establishments. The true principle now is to do the best you can all the the time, and to sell the best goods your community will take, keeping, perhaps, a little ahead of every one else in this respect. —N. Y. Hardware.

LAZY MEN.

An exchange puts in a word in defence of lazy men by saying that "we are indebted to them for most of our labor-saving inventions." This may be true, as we have not a full history of all such inventions and inventors, but we do not believe it. All that we know of, or have any authentic account of, were invented by active, energetic men, who could not accomplish as much work by the slow process and imperfect machinery they had, and set themselves at work to find a method by which more work could be done in the same time. We have seen some so-called labor-saving inventions, patented by lazy men, but never saw one that was worth the room it occupied in the shop, field or house, any more than was its inventor.

A man is not necessarily lazy because he stops to think about his work while he is doing it, or because he may at times desire to change his occupation for a few hours, and exercise a different set of muscles, while the man who works a specified number of hours each day at a certain regular rate of speed, as steadily as the clock ticks, may be too lazy to run down hill unless running is easier than walking. They have not energy enough to change their habits, or even to think about any possible improvement in methods. They do not really live, but they exist, and continue to do so because it is too much trouble to do anything else, and are as useful and reliable in their day and generation as the sun dial, and for the same reason. Wherever they are put they are always there.—Industrial World.

ENGLISH VIEW OF U. S. EXPORTS.

"Hitherto, say Iron Trade Review, an English paper, the United States may be said to have manufactured for their own requirements alone. While their output has increased enormously, it has almost wholly gone into home consumption. The total value of the American exports of iron and steel in 1892 was not more than twenty-eight millions of dollars, or £5,00,000, and it shows no marked tendency to largely increase, while the corresponding exports of British iron and steel are not much short of thirty millions sterling. Will the United States be satisfied to retain the subordinate position as an iron exporting country? Is it not rather probable that if the tariff is modified, the hitherto more or less latent ambition of America to become an iron-exporting country will become a consuming passion, and that American manufacturers, still sufficiently protected in their own markets against the foreigner, but with their costs of output greatly reduced by incessant mechanical improvements and by the irresistible spur of competition with one another, will at any price secure a footing in outside markets, even if they are compelled to adopt the German system of selling for export at much lower rates than they sell to home producers, and making their profits on home supplies pay for losses on the surplus supplied to outside customers? Already American manufacturers run us pretty hard for foundry products, nails, tubes, and other productions in Canada, and in South and Central America. What they will do in the future is, of course, a sealed book, but one that probably cannot remain so much longer."

CLEANLINESS NOT A CREDIT.

"There is no secret in making your shop clean and attractive," said a prosperous hardware dealer to a reporter. "The first thing is to have a place for everything, and everything in its place. There are always odd times, when not busy with customers, that you can replace things that have been taken out to show. A convenient dust brush and an observant assistant will keep the general surface all right without much effort. When a package is broken, it can be done up neatly and then tied up before it is replaced. When a new order comes in, I pile the fresh packages, with the labels out and right side up, in front. If this is done with some reference to the general effect, your stock presents an attractive appearance at a very little cost of time or labor. In fact, it is just as easy to do it in the right way as in the wrong way, and when it is once put in place it takes only a little care to keep it so. In changing goods about, I manage to keep the seasonable goods in sight. This is easily accomplished, and the customer's eyes does not fall on last winter's articles when he is looking for spring goods. A dealer does not have to go outside of legitimate hardware to have something fresh for every season. His location and the class of custom he has determines what he shall buy, but there is always something in demand. There are times when more is doing than at other times, but such periods are very short, and I make up for that by a good deal more of energy. I take a personal interest in all our business, and have just as much pride in appearances as when I began some 30 years ago."

GOOD ARTICLE TO SPECULATE ON.

A correspondent of N. Y. Journal of Commerce writes as follows: "While contemplating and deploring the unprecedented condition of nearly all branches of finance, commerce and trade throughout the United States, it is refreshing to be able to turn to one article that can be relied upon to furnish easy and safe speculation during the coming few months—that that is hedged about by so many pronounced elements of strength that, to those who are conservative but have a little money, we feel confident the facts and figures below will lead them to invest, to a moderate extent at least. Stock in the United States August 1, 1893, 7,500 tons; importers and dealers in New York, 4,500 tons; do. in Boston, Philadelphia, Baltimore and Chicago, 1,000 tons; in consumers' hands throughout the country, 2,000 tons; total, 7,500 tons. The consumption of pig iron from August to November, inclusive, we estimate at fully 2,000 tons per month, or 8,000 tons. Total spot, with none to arrive (and none produced in the United States), 7,500 tons. It will, therefore, become imperative to import during November, and, as pig tin abroad is exceptionally low, the chances are that by the time we enter foreign markets for fresh supplies, instead of paying about 22c. present cost, we shall be obliged to pay much higher prices. The only kinds of pig tin deliverable under the rules of the New York Metal Exchange are the various brands of Straits and Malacca, and the tin must be in public stores in the city of New York, licensed by the Exchange. We estimate the stock in New York city at 4,500 tons, including 1,000 tons Australian, Billiton and Banca, not deliverable on Exchange contracts, and 1,000 tons in dealers' hands, not in licensed stores. Recapitulated, the position is as follows: Total stock in the United States, 7,500 tons (including 1,000 tons at outports not enumerated above), and 2,000 tons in the hands of consumers. Ordinarily the consumption from August to September inclusive amounts to 8,000 tons. Present cost of importation is over 22 cents per lb.; present price in New York spot is about 18c. per lb. Stocks are concentrated in few, strong hands (costing very much more than present prices), and those holders are about ready to advance the market sharply, having absorbed all lots in weak hands."

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

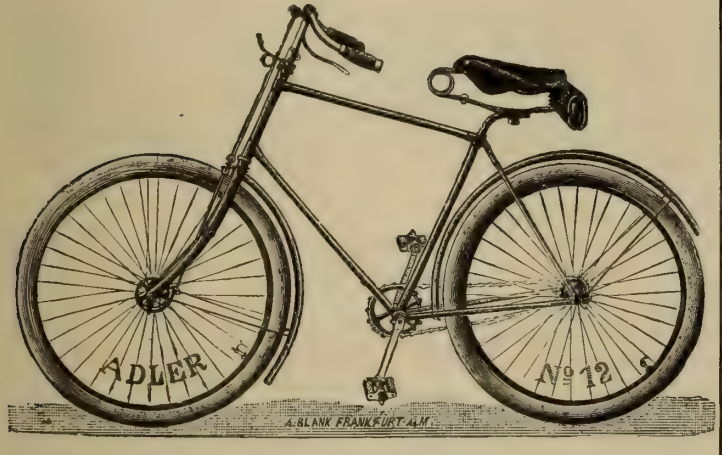
Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."

BRITISH SHEET GLASS
P.B.

These words and brand are on every box. None genuine without this Trade Mark. We warn our friend against misrepresentations. There is no other, Belgian or English, equal in quality to this make.



"ADLER" SAFETY BICYCLES

—WITH—

LATEST IMPROVEMENTS.

Best Finished, Strongest, Lightest and Easiest Running Wheels in the Market.

Sole Agents for the Dominion :

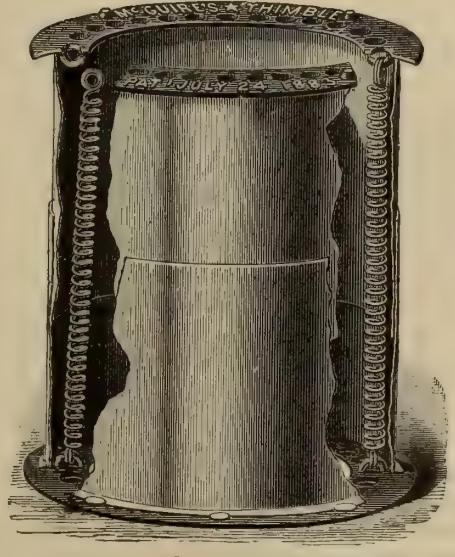
E. HEUSER & Co.,

MONTREAL.

P. O. Box 787.

CHENEY'S PATENT - -

DIAMOND EXTENSION **STOVE PIPE THIMBLE**



Best, Cheapest, and Most Durable

The heads are connected by Spiral Steel Springs, whose tension adjusts them to any thickness required.

Made for Six and Seven inch pipes.

Supplied either complete, or Castings and Springs only, as required.

SEND INQUIRIES AND ORDERS TO

THE JAMES SMART M'F'G CO. LIMITED
BROCKVILLE, ONT.

EXCLUSIVE MAKERS FOR CANADA.

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

W. Brethour of Vallentyne purposes selling out in the fall.

C. Deverell of Ravenshoe has commenced business as general merchant in opposition to R. S. Webster & Co. at Udora.

The consumption of copper for the twelve months ended on June 30th last was 111,457 tons, against 109,336 tons as compared with the previous twelve months.

The output of pig iron in America has been restricted to 80,000 tons, owing to the blowing out of furnaces, and the July output is expected to be restricted by 20,000 tons additional.

The total of duties collected at the port of Toronto for the month of July, 1893, was $392,134.63. For the same month in 1892 the total was $398,830.50, showing a decrease of $6,695.81.

The general depression in trade is severely injuring the tin box industry in Brooklyn, and, it is said, that the tin box manufacturers will petition Congress to repeal the tariff on tin, both block and plate.

The creditors and shareholders of the defunct Commercial Bank are uniting for the protection of their interests. A circular letter has been addressed by a committee to all shareholders and depositors.

At the suggestion of their employes, the ironmasters of Halifax, England, have allowed the question of a reduction of wages to stand over another month, the men entering the plea that trade is improving.

The wire nail manufacturers held a meeting in Pittsburg last Saturday, and in view of the depressed condition of the business, it was decided to continue the shut down until September. All the wire nail factories in the United States are shut down at present.

As considerable curiosity has been exhibited as to the meaning of the names of the two steamships of the Australian line, it may be stated that the Warrimoo means the Eagle and the Meowara the Emu, the two greatest and strongest Australian birds.

An order-in-council has been passed amending order-in-council of June 26, respecting the importation of petroleum in tank cars, by adding to the list of places where petroleum may be so imported, the towns of Windsor and Gananoque in Ontario and Newcastle, N.B.

The Dominion Express Co., in alliance with the C. P. R. Pacific Steamship Co., has extended its connections to the Sandwich Islands and Australia. Canadians can now send express and freight over exclusively Canadian lines with the most rapid despatch to the furthest ends of the world.

Below we give the total statistics for Europe and the United States, as compiled by the New York Metal Exchange, showing: Total visible supply August 1, 1893, 14,929 tons, against total visible supply July 1, 1893, 17,286 tons; against total visible supply August 1, 1892, 14,181 tons.

Mr. Knight, the general secretary to the Society of Iron Shipbuilders, England, says: "Shipbuilding orders continue to be placed with refreshing regularity, and prospects for the second half year are steadily brightening. In addition to new contracts which have come in during the month, there are a good many inquiries in the market."

The store of Botkin & Co., at Delaware, was entered by burglars on Saturday night. Entrance was effected by means of a rear door, and the necessary tools were procured from a near-by carpenter shop. A hole was drilled in the safe, and about half a pound of powder placed therein, when it appears the burglars found the key and opened it without further trouble. About $15 in small change was all they got, and few articles were taken out of the shop.

Robert E. Daniels, in charge of the roll turning department of the Mahoning Valley Iron Company, at Youngstown, O., more than two years ago secured a patent on what is known as the Daniel's Corrugated Steel Railroad Tie, and has given them a practical test. Several weeks ago 83 of these ties were put in on the main track of the Lake Shore railroad at Youngstown, and a recent examination showed the line to be in good condition, though an average of 1,600 cars per day had passed over it. The ties are made of corrugated steel, 8 feet 6 inches long and ¼ in. thick, and are fastened to the rails by clamps.

The British trade statistics for the first half of 1893 contain several matters of interest in the United States. The importation of wheat was almost exactly the same as in the first half of 1892, the increase being 364,393 hundredweight. The importation from the Atlantic States fell off more than a million hundredweight, and from the Pacific Coast it increased three million hundredweight, the total increase from the United States being 1,722,442 hundredweight. There was also an increase from a mere trifle to more than three million hundredweight from Russia, and an increase of nearly two million hundredweight from Argentina, and a small increase from Australasia. There was a decrease of 75 per cent. from the British East Indies, and material decreases from Chili, British North America and Turkey, Roumania and Egypt.

A prophet on the other side of the Atlantic sketches out a specification for the bicycle of 1993, remarks an English contemporary. The general design, he believes, will be much as at present—viz., two small and equal-size wheels—but by using some alloy of greater tensile strength, weight for weight, than steel, and by filling the tyres and frame-tubes with hydrogen instead of atmospheric air, the weight of a road machine will be reduced to 10 lbs., or less, while racers will scale no more than half that amount. The machine will also be made to fold up, so that it can be easily carried about or stowed in a corner, and the method of applying power will be so perfected that absolutely nothing will be lost. It will take longer than 100 years to fulfil the whole of this prophetic scheme, I fancy; but there are suggestions in it which might be acted on within the next 100 days if some of our inventive geniuses would concentrate their minds upon the problem.

The chief of the U. S. Bureau of Statistics in his statement of the exports and imports of gold and silver reports that the exports of gold from the United States during the twelve months ending June 30, 1893, amounted to $108,680,844, and the imports to $21,174,381; excess of exports, $87,506,463. During the corresponding period of the preceding year the exports were $50,195,327, and the imports $49,699,454; excess of exports, $495,873. The exports of silver during the twelve months ended June 30, 1893, were $40,737,319, and the imports $23,193,252; excess of exports, $17,544,067. During the corresponding period of the preceding year the exports were $32,810,359; and the imports were $19,995,086; excess of exports, $12,855,473. For the six months ended June 30, the exports of gold amounted to $73,717,938, an increase of $32,148,788 over the corresponding period of the preceding year. The imports were $11,759,043, an increase of $3,723,435.

Travelling through the West and North-West of England a few days ago, say Vulcan in Ironmonger, I was amused at some of the peculiarities of ironmongers which attracted my attention. In one town an ironmonger, who stated that previous to settling down to business he had had seventeen years on the road, and knew exactly what the trade and the public required, was exposing for sale at his shop-door a parcel of pea-guards. I ventured to remonstrate with him against such an unseasonable display of goods, but he did not see the point. I was not astonished to learn later on that he is one of the unhappy souls who finds the times unsuited to his ideas. The windows of another ironmonger, I observed, were occupied almost exclusively with meat-safes and perambulators, and yet across the way I noticed that an enterprising draper was running—and successfully, he told me—tennis bats and balls.

The "Railway Review" is responsible for the statement that a line of American steamships to ply between Philadelphia and Mexi-

can ports has been organized by Philadelphia and Baltimore capitalists. The new line will be put on a solid basis and will start with one vessel, the number to be increased as the business warrants it. The recent demand in Mexico for American coal and coke has been unprecedented, and as there have always been return cargoes for ships from Mexico, but nothing for them to carry out, it is believed that the vessels can hereafter go out and back loaded. Such a traffic both ways would pay fairly for transportation and secure first-class vessels. The whalebacks have been chartered because they are of light draft and big carriers, and can enter many of the Mexican ports without lightering their cargoes, which process has heretofore added to the expense, and has prevented shippers from sending Philadelphia's manufactured products to compete with European goods. Nearly all of the Mexican ports are surrounded by shoal water bars, over which the whalebacks can pass without any trouble.

The Toronto City Travellers' Association have chartered the steamer Chippewa for a promenade concert on the night of August 21. The band of the Highland regiment has been secured for the occasion.

It appears that in spite of very low prices shipbuilders were quoting last month to secure business to keep their yards going, the number of vessels built in the whole country shows a falling off of 86 compared with June last year. The vessels under construction throughout the country at the end of last month were only 352 of a total capacity of 609,120 tons, against 447 vessels of 778,462 tons in June, 1892. Further, the tonnage in course of preparation was only 120.718 tons this year, against 123,249 tons at the close of the first half of last year.—Iron Trade Circular.

First Traveler—"What is your business?"

Second Traveler (haughtily)—"I am a gentleman, sir."

First Traveler—"Indeed, how long have you been out of work?"

W. B. Brown & Co., Globe Works, Bankhall, Liverpool, have just completed one of the largest steel wire cables on record, having a continuous length of 4½ miles, or one mile longer than a similar cable which they manufactured a few months ago. The total weight is over 25 tons. It is 3¾ inches in circumference, and is made upon the Lang's patent principle, with 42 wires of No. 10 standard wire gauge of the finest quality of improved patent crucible steel wire, the tenstile strain of the cable exceeds 45 tons. The facilities of the firm are such that the whole work from the commencement of the drawing of the wire to the completion of the cable was carried out within 14 days, although there were 220 miles of wire used in its manufacture, the machinery for such heavy work being of special design. The cable is to be used for endless haulage, and to transmit loads of 40 to 60 tons at a speed of eight miles per hour. It was treated in course of manipulation with W. B. Brown & Co.'s improved self-lubricating anti corrosive compo sition.

Inspectors in Minnesota, Wisconsin and Iowa have been instructed to increase rates 20 per cent. owing to the great and unprecedented loss to insurance by fire. This advance will take effect on all risks except dwellings and private barns, flour mills, elevators, grain warehouses, sawmills, and mill and wholesale lumber yards, and also other risks which are now rated under a mandatory tariff. The advance takes effect to-day and must hereafter strictly be complied with. Agents, in reporting the increased rates, are requested to terminate the same in five, or the nearest multiple of that figure, for ease in calculating the proper premium. This increase is not all unexpected, in fact it is deemed necessary from the unprecedented losses which have been meted out to the companies doing business in those States during the past month. The rates at Ashland, Wis, because of the inferior fire department, have been made ten per cent. above the general figures for the State. This makes the raise in that city 30 per cent.

"There are geniuses in trade, as well as in war or the state, or letters; and the reason why this or that man is fortunate is not to be told. It lies in the man."—EMERSON.

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, TORONTO

ENGLISH HOUSE: **SAMUEL, SONS & BENJAMIN**
164 Fenchurch St., London, E. C.

AXES MONTANA, FOREST CLIPPER, LANCE, MAPLE LEAF, BLACK PRINCE, KEEN CUTTER, M. L. S. MODEL.

CROSS CUT SAWS RACER, MAPLE LEAF, LUMBERMAN'S PRIDE, DISSTON'S LANCE AND CHAMPION, DISSTON'S TOLEDO, NARROW RACER.

HOW NOT TO ADVERTISE.

I wonder if the men who write advertisements ever think how the advertisement looks to the man on the other side, says William Everett in N.Y. Metal. When a traveller is riding quietly in a Pullman car along some beautiful or picturesque line, and constantly sees staring at him from the opposite side of a winding stream or a mountain valley "Sackbut & Psalterey's Corn Plaster and Apple Sauce," he is not likely to have a great respect for the common sense of the pair of monumental idiots who have disfigured nature in such an outrageous manner. When I see such a sign as that I quietly make up my mind that if my corns are never cured and I never have any more apple sauce, unless I buy of Sackbut and Psalterey, I shall go without apple sauce. When men produce offensive and disgusting advertisements they produce a bad impression on the public, no matter how good the article may be. The newsboy who comes up behind you and yells in your ear is not the one from whom you buy your papers. You are just mad enough to purchase of the other fellow who manages to avoid offending.

Advertisers generally say, "If I can only make a noise, and only attract attention enough, I can succeed in my business." Now, it does not strike the purchaser in that way. He don't care a "continental" how much noise a man makes. He is not in the market to buy noise. In fact, most people would prefer to buy a little peace and quietness if it were for sale anywhere at a reasonable price. There have been men who have made large fortunes without advertising. There are some men who are making fortunes in business to-day without it, but undoubtedly their fortunes would be bigger and grow faster if they knew how to advertise. But it teaches a lesson, and one that the advertiser and the non-advertiser are not likely to learn—that the purchasers are not buying advertisements. They are buying goods. It is the goods that they want, and not Sackbut & Psalterey's effrontery and bad taste.

Sometimes a firm is successful in spite of its bad taste, because it knows how to tell the public that it has a useful or valuable article for sale. Half the advertisers in the world think that Goodrich made his money because he published ugly portraits of himself in all the newspapers, from Podunk, Me., to Tombstone, Ariz. There is just where the advertisers don't know anything about it. If he published a portrait of Lydia Pinkham, the great Khan of Tartary, or Lillian Russell, or had used a cut of the clover leaf, or even had used no cut at all, the result would have been the same. The particularly striking feature of that advertisement was not seen by the general advertiser. What was it? It was made up of two things. First, he advertised something that every grown man wanted, at a very low price. The second, he lived up to the remarkable promise which he made. No one was able to say that the advertisement was a humbug. These were goods that were needed; they were cheap, and could be obtained at every post office in the United States at a low figure. The quality was guaranteed. Now, it would have made very little difference what sort of a display such an advertisement had. Everybody who buys is looking for just such things, and when an honest man tells his story in an honest, convincing way, the deed is done, provided the type is large enough to be read.

Now, when old Grumblegreen wants to make money in the same line, he starts with an article that is only worth half the price that he asks for it. Then he proceeds to get his ugly face transferred to metal, and he rings changes on his portrait, and he fills every newspaper in the country with his big portrait and his small "ad." After this is done he wonders why he does not make as much money as the honest man did. The reason seems to be plain enough to those who buy. He is trying to gull the public, and his admiration for himself sticks out all over his advertising. He reads it: "I am selling the greatest bargains under the sun." And the purchaser reads the advertisement: "This man is the biggest humbug under the sun." Now, the two readings are not particularly in harmony, and if he ever makes any money it will be a wonder.

A POSTMASTER WHO TUMBLED.

It was in a far west village of about 500 people, and the postmaster was so bland and courteous when the mail came in that I felt it my duty to give him a few words of praise.

"I hev to do it, hev to do it," he whispered in reply. "Come to the door with me. D'ye see them three graves over thar?"

"Yes."

"Them's my predecessors in office—three of 'em!"

"Postmasters who hev died, eh?"

"Postmasters who hev been killed, sir—wiped out right here because they didn't tumble to human natur' around a post office!"

"You must have a special brand of human nature in this town?" I queried.

"Exactly sir. Mebbe you noticed old Bill Wheeler? He's never got a letter in his life, and probably never will, but when he asks for mail I go over the hull grist, and do it mighty careful too. If I jest said, 'Nuthin' for you, Bill!' he'd out with a gun and blaze away. Did ye take notice of that one eyed feller—Jim Hastings? Of course I know thar ain't no letter fur him, but I hev to run 'em over and enquire about his health and keep him good natured. He shot the first postmaster here. P'raps you observed the little old woman with a bundle under her arm—John Dawson's wife? Her husband shot the second postmaster because he wouldn't open the office Sunday afternoon.

"And what was the third one shot for?"

"Got too high toned. Uncle Tom Wallace tried to get him out of bed at midnight to see if thar was a letter fur him, but he bucked. Uncle Tom kinder hated to shoot, but he felt that he orter do it fur an example."

"And do you get up nights?"

"I don't hev to. I leave the mail out here in a basket, keep a light burnin' and the door open, and if anyone wants to paw the grist over he's at liberty to do it. It's the same on Sundays, and I guess the folks are purty well satisfied with the way things is runnin'. Leastwise I hain't been shot at in the four months I-ve had the place, and I take that as a sign." M. QUAD.

NICKEL STEEL.

An important test of nickel-steel has just been concluded in Washington. The first test was of a nine-inch plate, six feet four inches wide and nine feet and seven inches long, a sample of the side armor of the monitor Monadnock. It was nickel-steel, weighed ten tons, and was made by the Carnegie-Frick company. Three Holtzer projectiles, weighing 250 pounds each, were fired against it from an eight-inch rifle, the muzzle being fifty-eight feet from the face of the target. The first projectile had a velocity of 1,400 feet per second at the moment of impact, and penetrated the plate and oak backing to a depth of 11.7 inches. The second projectile, with a striking velocity of 1,683 feet, went through the plate, three feet of oak backing, and lost itself in the earth against which the butt was built. The third projectile had a velocity of 1,536 feet, and penetrated plate and backing to a depth of 14 1-2 inches. The plate well withstood the strain of the attack, no cracks being perceptible.

The test of the second plate was an exact duplicate of the first in its results. It was a sample of the curved plates for the barbette on the Indiana, made by the Bethelehem company, and, like the first, of nickel-steel. Its dimensions were eight feet four inches in height, twelve feet one inch in length, and seventeen inches thick, forming a mass weighing 31 1-2 tons. It was the heaviest plate yet tested, and its thickness will probably not be surpassed to any great extent until there is a change in the method of naval warfare and ship-building. It was subjected to an attack from a twelve-inch rifle, which threw a monster Carpenter shell, weighing 850



A GREAT LOSS?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss. The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

pounds. Its muzzle was 319 feet from the face of the plate. The striking velocity of the first shot was 1,322 feet a second, and it penetrated to a depth of 16.6 inches, lacking less than half an inch of going through. The second shot was fired with a velocity of 1,495 feet a second, and went three inches into the oak backing. The third and last shot had a velocity of 1,858 feet a second. The shell went clear through the plate and thirty-six inches of oak backing, and, then, finding the embankment rather thin, was deflected into the air, and plunged into the river some hundreds of yards away, or was lost in the woods on the hillside. The plate secured for its makers the acceptance of the whole contract, amounting to from 500 to 700 tons, but earned no premium.

The cost of combining the nickel with the steel was $11.20 a ton. The same process is said to cost the French armor-plate manufacturers $140 a ton. The contract price for the steel tested at Washington on Monday was $575 a ton. The interest in the business for Canadians, says the Globe, is that we have at Sudbury the greatest nickel deposits in the world, and if the great naval nations adopt nickel-steel as the latest development in armor-plating it would have an important bearing on the rapid development of these deposits.

LITTLE THINGS.

I have recently become a thorough convert to the principle of paying attention to the little things in business, and I'll tell you why, said a manufacturer to a reporter. I had occasion a few weeks ago, to call on a manufacturer of copper goods to place an order that required some explanation, and I was pleased at the trouble he took to make everything plain and satisfactory. While talking to him a gentleman came in who wanted a small article made of copper. As I desired to do some figuring on the cost of the goods I was ordering, I requested the manufacturer to wait on his customer in the meanwhile, but this took so much longer than I thought it would, that my attention was at last taken up with the conversation between the two. The customer was very particular as to how his article was to be made ;although it was a small and simple thing, yet the manufacturer was as patient and particular in every detail as if the job was worth $1,000. The time taken was nearly half an hour, and I was getting somewhat impatient before the matter was settled.

When the manufacturer returned to his desk I asked him if he had many such jobs as that. His reply was characteristic of the man, and showed me plainly he knew my thoughts. While excusing himself for the delay, he said his rule of business was to pay strict attention to every order, personally, no matter what its size, and further conversation brought out the point that this habit was taught him by his father whom he had succeeded in business. The time he had consumed with the customer, he observed, was worth more to him than the profit on the work, but that was a point he did not consider. While the customer might never need his services again, his good-will was worth something, as was that of every man, no matter how humble, and a strict observance of this custom to pay attention to little things had brought him large orders from parties unsolicited, which he believed he would not have received otherwise.

GUNS, FIRE-ARMS AND SPORTING GOODS

. . THE TRADE SUPPLIED . .

Send for our

. . 100 PAGE . .

Illustrated Catalogue :--



Of GREENER, CLABROUGH, and NEWMAN FRIAR GUNS. WINCHESTER, MARLIN, COLT, and REMMINGTON RIFLES, also REVOLVERS, POWDER, SHOT, WADS, ARTIFICIAL BIRDS, Etc. . . . . .

DISCOUNT SHEET TO THE TRADE.

Bowman Hardware and Sporting Goods Co. ✻ HAMILTON, ONT.

LUBRICATING CAR AXLES.

The difficulty which has hitherto attended the question of lubricating car axles in a thoroughly efficient and economic manner is likely to be permanently settled by the introduction of a patent car axle lubricator which is the invention of ex-Alderman Walker of this city. The business of that gentleman; as is know, brings him into constant association with varieties of lubricants and lubricators, and he has consequently given much thoughtful consideration to the present crude method of lubricating car axles on railways with a view to its improvement. The inventor claims that by the introduction of his patent the present system of packing with oil waste will be entirely dispensed with, causing a saving of one-third in the quantity of oil used, in addition to the cost of the waste. That hot boxes, which are a source of so much trouble and expense to the authorities and danger to the travelling public, will be entirely unknown, and further, owing to the absence of packing accumulation, there is no liability to freeze—a most important matter in extremely cold climates. So simple is the arrangement that should it be necessary to remove it to replace a broken brass, or for any other purpose, it can be removed and replaced in one minute by any person however limited his knowlenge of mechanical contrivances.

The management of the C.P.R. have thus far recognized the value of the intervention by having it placed on General Superintendent Whyte's official car, which left for the west on Saturday. It is intended to thoroughly test the merits of the invention, and should the result prove satisfactory it will completely revalutionize the system at present in use on this continent, the invention having been patented in Canada and the United States.

PERSONAL MENTION.

R. E. Bingham, of R. E. Bingham & Co., Stayner ; J. W. Kennedy, of J. W. Kennedy & Co., Georgetown ; Mr. Peaker, of Peaker & Son, Brampton, were among the country merchants who paid business visits to Toronto this week.

Mr. W. B. Stewart, of Stewart & Wood, who became suddenly blind some time ago, is reported to be regaining the sight of one eye.

H J. Irwin and —. Colwill, merchants, of Arthur, have started out on an extensive holiday trip.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Aug. 4, 1893.

HARDWARE.

The week has shown more dullness if anything, but the fact occasions no complaint with the trade, for it is the normal state of affairs at this season, and dealers remark that considering the fairly satisfactory trade they have done this season they have no reason at all to complain. The principal movement to note in general hardware at the moment is a sorting up demand for shelf material of all kinds, the aggregate of which is fair. Demand for harvesting tools, which constituted the bulk of the business recently, has fallen off to small proportions, as wants have been supplied. Demand for nails and tacks is fair, and in addition the makers report good orders for future delivery contracts. In heavy material business shows some improvement in a jobbing way as well as the increased movement on export account that we have already noted. Quite a few good jobbing orders for galvanized plates, coke, tin, etc., have been filled during the week. In the matter of values there is not much change to note, and with respect to the future it is a moot question with the theorists in the trade whether the financial and industrial depression south of the line will have any seriously appreciable effect on business on this side. There is nothing special to say about payments, which are generally reported as fair.

WIRE—There is a fairly good business still to note in wire, both smooth and barbed, during the week at the standard quotations.

NAILS—Makers report further encouragement in the shape of fall orders from jobbers, and the latter also note a continuation of the demand that we have already referred to, both for cut and wire nails. Quite a few good lots of the former have been sent forward during the week.

TACKS—Tacks remain as before, with nothing special to mention.

CHAIN—Some fair sized orders have been attended to during the week, both for logging and cow chain. Demand for the former is more apparent in a stocking up way from adjacent points.

TOOLS—Tools rule quiet, both for harvesting and general lines.

CUTLERY—A fair sorting-up trade is to note, the aggregate of which means a business of considerable volume. In fact it is one of the lines of shelf goods which show activity in a sorting-up way.

SPORTING GOODS—Most of the houses are receiving consignments of their fall supplies, and are engaged in pushing forward orders given some time ago for guns, etc.

WARE—There has been quite a fair demand to note for enamelled ware during the week, and rather more business in a sorting-up way has transpired in ordinary iron ware.

BUILDERS' SUPPLIES — Business rules quiet, both in plumbing and building supplies.

BINDER TWINE—There is no change in binder twine. A moderate business is doing at former prices—viz., 8¾ to 9¾c., as to brand, with the usual discounts.

METALS.

The position in metal, pig iron and heavy hardware is much the same. Demand has been fair for galvanized sheets, coke tin, etc., but pig iron has ruled quiet. We note further business in tin plate and Canada plates for importation at steady prices.

PIG IRON—There is very little change in the pig iron market here, and advices from primary markets, as shown both by the speculative and regular quotations, are fairly steady. We quote as follows: Summerlee, $18 to $18.25; Eglinton, $17 to $17.25; Carnbroe, $16.75 to $17; Siemen's No. 1, $18, and Langloam, $18.50.

BAR IRON—This line rules quiet, with only a light business to note. We quote the usual combination rates.

SCRAP IRON—Some heavy lots of imported scrap have been received during the week, but they were not on the market at all, being for foundrymen. Some wrecking scrap has been offering here at quotations. We quote $15 to $16 for No. 1 wrought.

TIN PLATES—The movement in tin plates has continued fair, lots of 100 to 250 boxes changing hands during the week at $3.20 to $3.25 for coke. Charcoal remains steady at $3 75 to $4.25.

CANADA PLATES—These have also furnished some large sales at steady prices, and we note to-day a transaction in a 200 box lot at $2.45, which is a fair representative quotation of value, smaller quantities of course necessitating an advance.

TERNE PLATES—Business rules quiet and prices are unchanged at $7 to $7.50.

GALVANIZED IRON—Some good fair lots of galvanized sheets have left jobbers' hands during the week at our previous prices of 4¾ to 5c.

SHEET IRON—This article is dull but steady at $2.40 to $2.60 according to grade.

HOOPS AND BANDS—Nothing special to report and prices steady as before at $2.35.

COPPER—There is little doing in copper, and prices are nominal at 11¾ to 12½c.

TIN—The demand is small, but prices rule steady at 22 to 22½c.

LEAD—No change to note, $2.90 to $3 being still the basis.

ANTIMONY—Dull and unchanged at 10½ to 12c.

SPELTER—Steady at $4.75 to $5.

ZINC SHEETS—Some fair sized quantities of zinc sheets have been moved during the week the enquiry having picked up a little. Prices remain the same, $5 to $5.50.

CEMENT—The cement market does not show any change. Business is slow and there is little sign of improvement in prices, while receipts continue heavy. We quote: Belgian $1.85 to $1.95 and English brands, $1.95 to $2.10. Firebricks are in fair demand at unchanged prices, $13.50 to $19 per 1,000 being still the idea.

NAVAL STORES—This line is quiet, but dealers profess to see prospects of an improvement later on. Prices are unchanged with the exception of manilla which is easier. We quote the following:—Turpentine, 47 to 48c.; resins, $2.50 to $5.00, as to brand; coal tar, $3.75 to $4; cotton waste, 5½ for colored, and 7 to 10c. for white; oakum, 5½ to 7½c.; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep-sea line; pure Manilla, 11c. for 7-16 and upwards and 12c. for smaller sizes.

PAINTS AND OILS.

Trade is dull in leads, but dealers come to the conclusion this week that they had been selling long enough at inside prices and decided to advance prices 25c. all round which went into effect this week. Linseed oil is steady and fish oils are unchanged. We

Adamant Steel Ware



The Best Grade of ENAMELLED WARE

We have just received a large importation of this ware including all seasonable lines which we offer at prices worthy of your attention. The preserving season is now on. If not supplied send sample order at once. We have also to hand large shipment of White Enamelled Ware at close prices.

ON THE MARKET.

Satisfaction Guaranteed.

Headquarters for Enamelled Ware: The McClary Mnfg. Co.

BUSINESS CHANCES.

Advertisements inserted under this heading two cent per word each insertion.

WANTED—HARDWARE TRAVELLERS with responsible houses, to carry a small side line, not in Hardware line, but useful to hardware trade. Will probably increase trade in other lines and be a convenience to your customers. All communications confidential. Address, W. M. Titus, Box 1092, St. Thomas, Ont.



All kinds of Office and Store Fittings and Furnishings

Sault Ste. Marie Canal.

SEALED TENDERS addressed to the undersigned and endorsed "Tender for Lock Gates," will be received at this office until noon on Saturday, the twelfth day of August, 1893, for the construction and setting in place in working order of five pairs of Lock Gates at the Sault Ste. Marie Canal.

Plans and specifications of the work to be done can be seen on and after the first day of August, 1893, at the office of the Chief Engineer of Railways and Canals, Ottawa, where forms of tender can be obtained.

In the case of firms there must be attached the actual signatures of the full name, the nature of the occupation and place of residence of each member of the same, and, further, an accepted bank cheque for the sum of $,500 must accompany the tender. This accepted cheque must be endorsed over to the Minister of Railways and Canals and will be forfeited if the party tendering declines entering into contract for the work at the rates and on the terms stated in offer submitted. The accepted cheque thus sent in will be returned to the respective parties whose tenders are not accepted.

This Department does not, however, bind itself to accept the lowest or any tender.

By order.

J. H. BALDERSON,
Secretary.

Dept. of Railways and Canals,
Ottawa, July, 1893



GAS, ELECTRIC, AND COMBINATION Fixtures

Of English, Canadian, and American designs. . .

Globes and Shades

Staple Brackets and Gas Fittings. Select stock of above always on hand.

Jas. Barwell, 88 Bay St., Toronto

SHOWROOMS OF JAS. BARWELL, SONS & CO., Birmingham, Eng.

Drawings and Estimates on application.

LAMPS LARGEST STOCK GREATEST VARIETY and Lowest Prices in Canada.

Every dealer should see our samples before placing their orders. If you cannot wait for our travellers, send for catalogue and price list. We are sole agents in Canada for the CLARK BROS. LAMP CO, of Trenton, who are the largest manufacturers of Vase, Banquet, and Hanging Lamps in the world.

ALL NEW LINES. NO OLD STOCK.

JAMES A. SKINNER & CO.
TORONTO -:- and -:- VANCOUVER

The James Robertson Co.,

LIMITED.

LAWN SPRINKLERS,
GARDEN HOSE,
HOSE REELS,
GARDEN RAKES.

Toronto

You will Insure Success IN THE STOVE Business, by selling

"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.

The Gurney-Tilden Co. Ltd.

Successors to The E. & C. Gurney Co.

HAMILTON - - . ONTARIO.

MONTREAL Markets Continued.

quote as follows :—Choice brands white lead, Government standard, $5 ; No. 1, $4.75; No. 2, $4.50 ; No. 3, $4.25 ; No. 4, $4.00 ; dry white lead, 5c. ; red lead, pure, 4½c. ; No. 1, 4¼c.; zinc white, pure, $7; No. 1, $6 ; No. 2, $5; linseed oil, round lots, raw, 60c., boiled 63c.

GLASS.

The glass market is quiet and unchanged. We quote on the basis of $1.35 for first break, with putty $1.85 in bulk.

PETROLEUM.

This market is dull and quiet. We quote : at 11½c. in shed in Montreal for Canadian round lots, and 12½c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c in 10-barrel lots, 19½c. in 5 barrel lots, and 19¼c. for single barrels, 2 per cent. off for cash ; American benzine, 23 to 25c. ; Canadian benzine, 10¾c. ; Petrolea, 12¾c. for Montreal.

MONTREAL TRADE NOTES.

Receipts of cement during the week have aggregated over 8,000 casks.

The lead and color makers have at last decided to advance prices 25c.

Simpson, Hall, Miller & Co. think that the closing down of the Elgin and other pig, brass and plating works in the New England States foreshadows a dull period here as well.

G. A. Gray, of the Canada Plating Co., who has just returned from a trip through the New England States, says that more than one-half of the big brass works are closed down for an indefinite period.

Pamchaud, Squire & Co. are receiving this week an extensive consignment of firearms from Dumoulin Freres for the execution of their fall orders.

Thos. Davidson & Co. report satisfactory fall orders for the lines of tinware, etc., which they turn out in specialties.

The hot weather is booming the demand for electric motor air fans, and T W. Ness is kept busy supplying the demand.

Dominion Wire Co. report business for prompt delivery quiet, but note fairly encouraging orders on fall account.

The contract for heating the big seminary building on Sherbrooke street has been awarded. The architect's plans specify that Safford radiators shall be used.

Jno. Thorpe, Canadian manager for Pilkington Sons, has returned from a trip to Chicago, where he was visiting the World's Fair He diagnosed the business prospects out in the Western States as pretty blue.

TORONTO MARKETS.

TORONTO, Aug. 4, 1893.

HARDWARE.

Trade is about at one of its most uninteresting stages. Nearly all the travelers are holidaying at the sea or lake coasts or sitting in some shady nook on the bank of some stream watching the "bob" and every anything but business. Butnotwithstanding this business is much better in the country than in the city. Taken on the whole, however, trade is fairly good for midsummer, and payments continue to improve. Axes, ax-handles, cross-cut saws, etc., are in increasing demand for fall delivery, but trade for harvest and garden tools is over for the season. Trade is fair in haying wire and there is a little movement in rope of the smaller sizes. In cordage some falling off in the demand is exhibited. There is a good movement in sporting goods for fall delivery.

WIRE—There is still a fair trade doing in haying wire, but in other kinds there is not much to note beyond that the discount on hat and coat wire has been increased from 50 to 55 per cent. to 55 to 60 per cent.

ROPE—Some movement is reported in the smaller sizes.

BINDER TWINE—Business in this line is not so good as it was. Deep sea is quoted lower at 12¾ to 13c.

CUTLERY—A fair trade is being done, particularly in carvers, pen and pocket knives. The season is promising in this line.

NAILS—A fair seasonable trade is being done, and the discount on Canadian horse shoe nails has been increased to 65 to 70 per cent.

CHAIN—Some enquires are heard for coil chain, but otherwise trade in this line is quiet. A ¼c. decline is shown in ⅜ and 7-16 sizes of coil chain.

TACKS—There is the usual trade doing and the only thing worthy of note is an advance in discounts in certain lines, but carpet blued has been raised to 55 per cent., clout nails, 60 to 65 per cent. The discount on trunk tacks (tinned) is 62½ per cent.

SPORTING GOODS—A good many guns, and rifles are selling for fall delivery, and there is a good enqutry for ammunition.

WARE—There is still some enquiry for peerless and enamelled ware, but in other kinds the demand is about satisfied.

PLUMBERS' SUPPLIES—Trade in this line remains quiet and unchanged.

BUILDERS' SUPPLIES — No material change, business continuing quiet, particularly in the city.

TOOLS—The demand for harvest and garden tools seems to have exhausted itself, and for the first time in many weeks we have to report that there is practically nothing doing in this line.

CHURNS—There is an odd one going out here and there, but business, too, in this line is about over.

METALS.

Trade in metals continues to be of the quiet nature that usually characterizes it at this season. Pig iron is particularly flat. Some grades of tin plate are lower, and sheet iron shows a fractional decline. The

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METALLIC ROOFING Co.
TORONTO
ILLUSTRATED CATALOGUE FREE
STEEL SHINGLES

same can be said of ⅜ and 7-16 sizes of coil chain. Zinc spelter is quoted ⅛ to ¼c. and solder 1½ to 2½c. lower.

PIG IRON—The market is dull and featureless.

Rogers, Brown & Co., Buffalo, N.Y., report the Toronto pig iron market as follows :—There is no change in the conditions which have prevailed during the past few weeks. The movement of pig iron is at its minimum. Prices are steady, but transactions are all small, buyers taking only what is required for immediate consumption, and quite a large proportion of the foundries are shut down. The prices quoted below represent the nominal range of the market. We quote for cash f.o.b. Toronto, in bond: IX strong Foundry Coke Iron, Lake Superior ore, $15.20 ; 2X Foundry Strong Coke Iron, Lake Superior ore, $14.45 ; 2 Foundry Strong Coke Iron, Lake Superior ore, $14.20; Jackson County Silvery 1, $17.55 to $18.30 ; Jackson County Silvery 2, $17.05 to $17.80 ; Lake Superior Charcoal, $17.45 ; Southern Soft 1, $13.60 ; Southern Soft 2, $13.10.

BHR IRON—Some good large lots have been moving during the week at the basis of $1.95.

HOOPS AND BANDS—Trade in this line exhibits some falling off, being now characterized as dull.

IRON PIPE—Supplies are arriving and broken stocks are being replenished.

CORRUGATED IRON—Trade fair at $4.75 to $5.

GALVANIZED IRON—Much as before with 5 to 5¾c., still the idea for Queen's Head and Gordon brands.

TIN PLATES—Quiet with Raven and P. D. grades 25c. cheaper in certain weights, I.C. being quoted at $4 to $4.25, I.X. at $5 to $5.25, I.X.X. $6 to $6.25, L X.X.X. at $7 to $7.25.

TERNE PLATES—Remain as before, quiet and uninteresting.

CANADA PLATES—In fair request. Prices unchanged, all dull being quoted at $2.65, half-half at $2.75, and all bright at $2.80 to $3 per box.

INGOT TIN—There is a fair trade doing in small lots at 23 to 23¼c., but large lots could be got at lower figures.

INGOT COPPER—Quiet at 12 to 12½c. for small lots.

SHEET IRON—Quiet; sizes running from 22 to 28 gauge are quoted ⅛ to ¼c. lower, 22 to 24. now being 2½ to 2¾c.; 26, 2¾ to 2⅞c.; 28, 2⅞ to 3c.

ZINC SEEET—Business is fair at 5¾ to 6c. for 5-cwt. casks and 6 to 6¼c. for part casks.

ZINC SPELTER—Some large lots have gone out during the week at prices ranging from 3¾ to 5¾c.

LEAD—Demand is quiet but prices continue to advance ; prices range from 3½ to 5c.

MARKETS—Continued.

SOLDER—Prices have declined 1½ to 2½c. Bar half-and-half being quoted at 15½ to 16½c., standard at 14½ to 15½c.

ANTIMONY—Dull and unchanged at 12 to 12½c. for Cookson's and 11½ to 12c. for common.

GLASS.

Trade remains as before, fairly good, at the basis of $1.25 to $1.30. Plate glass continues quiet.

PAINTS AND OILS.

The feature of the trade this week is an advance of 25c. per cwt. in the association price of white lead, the basis now being $5, while No. 1 is quoted at $4.75, No. 2 at $4 50 and No. 3 at $4.25. The advance is in sympathy with the lead market. Some English manufacturers have been so filled up with orders owing to the expectation of an advance that they have found it necessary to withdraw prices from the market. The demand here at the moment is light, which is usual at this season. In prepared paints trade is still of a sorting up character. Although trade in Paris green is practically over for the season occasional orders are still being received at 13½ to 15c. Trade in varnishes is merely of a seasonable nature with prices as before. Linseed oil is in fair demand. Advices from England report that the linseed oil market there is still advancing. Here prices are unchanged, 60 to 62c. still being quoted for raw and 63 to 65c. for boiled. Owing to the financial crisis in the United States turpentine there has dropped 1c. a gallon, and the Ontario Association will probably announce a similar decline today, a meeting for that purpose having been held yesterday (Friday), but with what result we do not know at the hour of going to press. The demand here for turpentine continues to fall off. There is an active demand for pine tar at steady prices.

OLD MATERIAL.

Trade continues dull with supplies liberal. The only change is a decline of 5c. per cwt. in wrought scrap, it now being quoted at 35 to 45c. Agricultural scrap, 60c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 35 to 40c. per cwt.. No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings and turnings, 10 to 15c.

PETROLEUM.

The Petrolia Advertiser, in its weekly report, says: The crude oil market is practically at a standstill, and nothing is being done worth relating. The price remains firm at the above quotations. We are looking forward however, to a sudden rise in values, just as soon as the Premier refinery gets to work. Who the purchasers of the Premier works are is not yet positively known, but there are many strong evidences of the Imperial Oil Company's having bought it. A very short time now will tell. There is very little doing in refined, which may be quoted at 10c. f.o.b. in car lots.

HIDES, SKINS, TALLOW, WOOL.

HIDES—There is not much change since our last report. There continues a small demand for short hair fresh hides, for which 4¾c. is being asked; in long-haired winter hides there appears to be no sale at any price.

SKINS—In calf skins there is nothing doing. There is a moderate supply coming into the market, and dealers are taking them at fair quotations. Lamb skins have advanced 5c. during the week. They are now standing at 45c., at which price they are likely to continue for some time, as, for the first time in many years, there is a suitable quantity coming into this market from the United States, where just now, owing to the financial disturbance, markets are dull. Sheep skins are away down in prices.

TALLOW—Tallow is a little weak; as poor grades are not wanted at any price sales are slow. Many of the soap factories are closing down, and as they are the principal consumers, the demand is slacking off.

WOOL—In fleece wool there are few or no transactions reported. Dealers are not anxious to buy, and market holders of wool are still asking figures far beyond value. In foreign wools there is very little doing.

MARKET NOTES.

White lead is 25c. per cwt. higher, the basis now being $5.

Grindstone fixtures are from 12 to 25c. lower.

We quote discount on Lane's hangers at 45 to 47½ per cent.

The discount on Stebbin's patent molasses gates has been increased to 70 to 70 and 10 per cent.

Rice, Lewis & Son report a large trade in smokeless powder, and their customers are speaking highly of it.

Some large orders are being placed for black sheets.

H. S. Howland, Sons & Co. are in receipt of a fresh shipment of Rogers' cutlery.

Orders are being booked for the genuine Enterprise meat cutter and also for the Canadian made article, which, from appearance seems equal to that of the genuine, and it is much cheaper.

Lewis Bros. & Co., hardware merchants, Montreal, have removed their warerooms and office to 30 St. Sulpice street, that city, the premises so long occupied by W. Darling & Co.

AMERICAN MARKETS.

New York, August 4.

PIG TIN.—London cables quoted rather lower prices in that market, and very moderate transactions for the day. New York is working independent of London to a great extent, but the poor news from that quarter, along with the financial condition on this side of the Atlantic, served to check speculation and keep prices down to a comparatively low point. Thus, spot stock was quoted on the "Call" at 18.85 bid, while subsequent offers to sell at that price met with no response. Distant deliveries suffered in less degree, but were exceedingly difficult to sell.

At the close prices softened to 18.75c. asked for spot tin, 19c. for August delivery, 19.30c. for September, and 19.60c. for October.

COPPER.—The market remains in an unsettled condition. Consumers buy sparingly, export purchases are on a moderate scale, and producers offer with as much reserve as existing conditions permit. Still enough copper comes out from one source or another to have a depressing effect upon values, and accurate quotations are practically out of the question for the time being. The nominal prices are 10 to 10 1-8c. for Superior ingot, 10c. for electrolytic, and 9 3-4c. for common casting stock.

PIG LEAD.—Common domestic was on sale at 3.35c. delivered here, and very few carloads were taken. Further than this there is nothing to report, except that buyers are extremely indifferent and that the tone of the market shows no sign of improvement in the absence of better demand. London cable to the Metal Exchange quoted an advance to £10 5s. for ordinary Spanish.

SPELTER.—The situation remains practically the same as described in yesterday's report. Demand showed no improvement at all events, and the offering was free enough to indicate some anxiety on the part of smelters to sell for current month delivery. Prices are still uncertain, with 3.90 to 3.95c. apparently the best that can be secured for carload or larger lots. London cables to the Metal Exchange quoted £17 10s. for good merchant brands.

ANTIMONY.—There is little doing and prices are easy at 9 3-4 to 9 7-8c. for Hallett's, 10 3-8 to 10 1-2c. for Cookson's and 10 1-8 to 10 1-4c. for LX and similar brands in round lots.

TIN PLATE.—Only a small trade is passing, and, while showing no radical change, prices still tend more or less in buyers' favor. Concessions of 2 1-2 to 5c per box where desirable orders are concerned are, as a matter of fact, the rule rather than the exception.

TORONTO CUTLERY CO.,
65 and 67 Yonge Street, Toronto
M. MAYER, Propr.
NON-XLL
Cutlery
WARRANTED
And the Most Complete Lines of Cutlery of all descriptions.

HINTS FOR BOYS.

A gentleman advertised for a boy to assist him in his office, and nearly fifty applicants presented themselves before him. Out of the whole number he selected one and dismissed the rest. "I should like to know," said a friend, "on what ground you selected that boy without a single recommendation?" "You are mistaken," said the gentleman, "but he has a great many. He wiped his feet when he came in, and closed the door after him, showing that he was careful; gave up his seat to that lame old man, showing that he was kind and thoughtful; he took off his cap when he came in, answered my questions promptly and respectfully, showing that he was polite and gentlemanly; he picked up a book which I had purposely laid upon the floor, and replaced it on the table, while all the rest stepped over it or pushed it aside; and he waited quietly for his turn, instead of pushing or crowding, showing that he was honest and orderly. When I talked with him I noticed that his clothes were carefully brushed, his hair in nice order, and his teeth as white as milk; and when he wrote his name I noticed that his finger nails were clean, instead of being tipped with jet like that handsome little fellow's in the blue jacket. Don't you call these letters of recommendation? I do, and I would give more for what I can tell about a boy by using my eyes ten minutes than all the letters of recommendation he can give me.—Scientific American.

THE ANCIENT AND THE MODERN GUN.

An engineer, after visiting the caravel "Santa Maria," says an exchange, remarked that the little guns of that vessel were silent witnesses as to the limited advance in the science of ordnance, but bore potent testimony of the advance in the mechanic art. "Here," said the engineer, "is a built-up, breech-loading gun; it has a central tube, or which jackets are shrunk (or forced) in short sections; at the joints between these sections there are other iron bands, tightly shrunk. The breech block, which is chambered, contains the cartridge; it is held in place by a key, or wedge. This gun is certified to be a fac similie of those actually used by Columbus on board the 'Santa Maria.'

"The difference between this gun and those now being built, and about which we read such interesting accounts, differs in magnitude, not in principle. The molecular strain in a forging or casting of great size led to the abandonment of cast guns and the adoption of built-up guns in our own generation; it seems evident that as the cupolas advanced in size and the molders' art progressed, the cast guns of large size became practicable; but with the increased internal pressures demanded the castings reached their limit, and built-up guns became essential.

"The gun of to-day is composed of a central tube, on which are shrunk hoops in shorter sections; its breech block is held in place by a slotted screw, which is but another form of the wedge, being a circular inclined plane.

"The difference between the guns of Columbus' ship and those of to-day is due almost exclusively to the mechanic arts; to the steam engine as the power; furnaces, the cupolas, the hammers, and the lathes as the tools, and to the brawny sons of toil who work these machines; the advance has been gradual, and is wrought by mechanics and draftsmen, and the claim that gunnery or that ordnance belongs to the occult science pales before the scrutiny of commonsense observation."

THE MOST EXPENSIVE LIGHT.

Perhaps the most costly artificial light ever produced as an incident of scientific research is that of the diamond burning in oxygen, exhibited by M. Moissan in the course of his investigations into the different peculiarities of the diamondiferous forms of carbon. The action of oxygen upon the diamond has long been known, but hitherto no precise data concerning the temperature of combustion has been obtained. In order to ascertain information, M. Moissan employed a modification of the Le Chatelier pyrometer, placed along with the diamond in a wide porcelain tube closed at the end by glass plates, through which the combustion of oxygen could be observed. It was first found that, when the temperature is slowly raised under these conditions, the combustion of the diamond proceeds slowly, without the production of light. But if the temperature is raised to 40 degrees or 50 degrees above the point at which this slow combustion commences, a sudden incandescence occurs, and the diamond appears surrounded by a brilliant flame. Various deeply-colored specimens of diamonds burned with production of incandescence and flame at temperatures of from 690 degrees to 720 degrees C.; but transparent Brazilian diamonds did not attain the stage of slow combustion without incandescence until the temperature of 760 degrees to 770 degrees C. was reached. Specimens of exceedingly hard bort began to combine with oxygen at 790 degrees C., and burned brilliantly at from 840 degrees to 875 degrees C. When Cape diamonds were heated to a temperature of 1,200 degrees C. in a current of hydrogen, they remained unchanged; but if the stones had previously been cut, they frequently lost their brilliancy and transparency. It is a curious fact that metallic iron at its melting point combines with the diamond in a most energetic manner, and crystals of graphite are deposited in the mixture as it cools. Hence the experience forms a striking mode of converting the allotropic form of carbon, which crystallizes in the cubic system, into that which crystallizes in the hexagonal system.—Iron Industries' Gazette.

GAS AS A FIRE EXTINGUISHER.

An experiment in fire extinguishment was tried at Salem, Mass., this week. The apparatus was a sheet-iron cylinder about three inches in diameter, and sixteen inches long. This cylinder was charged with gases and chemicals sufficient to throw a stream half the size of an ordinary lead pencil about twelve feet continuously for five or six minutes. After the cylinder had been charged, a box eight feet long and four feet high by four feet wide was obtained, the inside smeared with tar, and a half-gallon of kerosene oil was sprinkled upon it. The whole thing was set on fire. After the fire had burned the boards nearly half through the contents of the little can were turned on, and in less than a minute the flames were extinguished. "While," says the N.Y. Journal of Commerce, "it is to be regretted that the inventor followed the old dodge of allowing the kerosene to exhaust itself before starting his apparatus, still the results seemed fairly favorable."

THE DIAMETER OF A GEAR WHEEL.

The writer noticed a man the other day trying to figure out the diameter of a gear wheel. He could not get at it to measure it with a rule on account of the shaft, and the calipers not being handy the man in question seemed to think he had run up against a steep job. It is only necessary in such a case to measure accurately the pitch of the teeth. When this is once figured out, multiply it by the number of teeth, and divide the product by 3.1416; this gives the diameter of the pitch line at once. For instance, let the number of teeth in a wheel be 75 and the pitch equal 1.675 inches; then the diameter would be 75 multiplied by 1.675 divided by 3.1416, which equals about 40. Therefore the gear wheel is 40 inches in diameter on the pitch line, from which, of course, all measurements must be made. If it is necessary to find the number of teeth a wheel must carry in order to give a certain velocity, it is only necessary to multiply the velocity of the driver by the number of its teeth, then divide the product by the velocity of the driver. For example, consider that the velocity of a driver is sixteen revolutions per minute, the number of teeth 54, and the velocity of the pinion 48; then the operation will be 16 multiplied by 54 divided by 48, which equals 18, which will be the number of teeth the pinion must have in order to run at forty-eight revolutions per minute. If it is required to find the diameter of a pinion when the diameter of a wheel or the number of teeth in both wheel and pinion are given, then multiply the number of teeth in the pinion by the diameter of the wheel and divide the product by the number of teeth in the wheel. With a wheel 25 inches in diameter, containing 210 teeth, the diameter of a pinion having 30 teeth will be equal to 30 multiplied by 25 divided by 210, equals about 3.5 inches. —American Mechanic.

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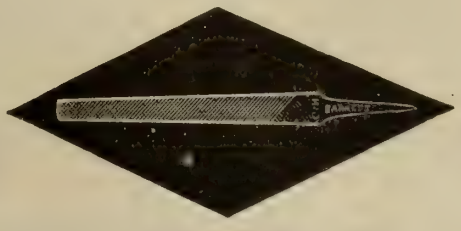
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ARISAIG IRON MINES.

A correspondent of the Halifax Chronicle, under date of July 22, writing from Arisaig, says: "The first shipment of about 200 tons of iron ore this summer from here was made last Monday, and the second of 200 tons or so was made yesterday. A barge, or large scow, towed by a steam tug, carries the iron ore from the wharf to the railway terminus at Pictou. There it is carred, and thence sent to the smelting works at Ferrona. About 1,000 tons of ore are hauled and ready for shipment. The barge and scow are expected to make two trips a week, wind and weather permitting. The seam from which this iron ore is and has been taken was discovered last spring in a gulch between two mountains at the rear of John McInnis' lands, situate about three miles from the wharf here. This seam is from six to eight feet wide, and is easily worked owing to the fact that it runs up the whole length of the side of one of the mountains above mentioned, having only a few inches of earth or ground over it, and therefore hoisting gear and horse power are not at present needed to take the ore over ground. The ore from this seam is said by good judges to be the best grade of iron ore ever discovered in eastern Nova Scotia. From 40 to 50 tons are daily put over ground from this seam at present, and it is said that when proper carrying facilities are afforded 500 tons can easily be put over ground every day from the same seam.

"The seam in Dan Gillis' brook and in the mountains near the Trunk road, so-called, situate about four thousand yards from the wharf here, and from which large quantities of good iron ore were sent to Ferrona smelting works last year, are not worked at present, but will be, I understand, worked the coming winter and spring in good shape.

"Many of our people are in hopes that our iron mines will prove remunerative, and therefore help at some future day to give us a railway from our mines to French River. That there is plenty of excellent iron ore in this place can no longer be questioned or disputed, but to get it to Ferrona as things are at present must, I should judge, be rather expensive, therefore I expect the railway must ere long be built from French River to our mines, as good iron ore is now, and likely to be for some time, at least, in good demand.

"Our fishermen are doing fair business in their line. Mackerel have struck in and some boats have taken from 300 to 400 each for the first few days. Our farmers are busy at their hay, which, they say, will not come up to last year, by 25 per cent. The grain looks fine all along the gulf shore, and the potato bug is not yet very troublesome, but may be."

A MODERN BOILER PLANT.

This is an age of progress, and, aside from the rapid advancement in electrical science, there is probably nothing attracting the attention of constructing engineers at present more than boiler plants, says F. W. Shillito, jr., in American Mechanic. Those of us who strive to keep pace with the advancement must be very rapid thinkers indeed or else have considerable leisure.

That which is to follow, in explanation of one of the newest designs of a boiler plant is written exclusively for the benefit of the every-day engineer, of limited leisure, and the writer trusts that some facts of interest may be found herein.

The present plant for generating steam is for an electric railway power station, and consists of three Manning patent boilers of 150 H.P. each.

The gases of combustion from these boilers pass through a Locock Economizer, having 120 four-inch tubes through which the feed water passes on its way to the boilers, the gases giving up from 100 degrees to 200 degrees Fahr. of their heat, and thereby entering the stack at a temperature much too low to produce natural draft. To offset this apparent difficulty an artificial draft is maintained by using a slow speed exhaust fan set under the base of the stack, practically exhausting the boiler gases from boilers, breaching and economizer, and discharging them directly into the stack. This admits of an unusually short and comparatively inexpensive stack, this one being four feet in diameter and only 40 feet high, built of wrought iron, and having a capacity for 1,000 H.P.

The fan is driven through the medium of one six-inch belt, by a five H.P. Kriebel engine, using, on the average, less than one H.P., and capable of a great range of speed, thereby making this mechanical draft very flexible, giving the fireman absolute control of fires under all conditions of weather and at all times. There is also a relay fan engine as a security against interruption, from derangement or repairs to engine in present use.

During the past winter the plant was put to an unusually severe test, which came about as follows: During a February snow storm, when, in addition to the regular cars being taxed to their utmost, a number of extra work-cars and two electric snow ploughs were put on the line, and great difficulty was experienced in keeping up steam for the three 13-22x13 compound engines, owing to the combination of poor coal and overload.

It will be well at this point to digress sufficiently to explain a point or two as regards the method in use in this plant for heating feed water. The exhaust steam from vacuum pump, feed pumps and fan engine pass through a National heater, giving off its surplus heat to the feed water, and raising the temperature of the latter to 200 degrees Fahr. before it enters the economizer.

At one time during the storm the meter in the feed pipe was registering at the rate of seven cubic feet per minute, with steam at 70 pounds guage pressure (140 pounds being required to do the work properly), also owing to a break in the injection pipe the condenser could not be used, and, as the exhaust steam from the feed pumps and fan engine was wholly insufficient to raise the temperature of water above 80 degrees Fahr. in the heater, the final temperature was very low, not being over 180 degrees Fahr when entering the boilers.

Now let us compute this work, on the 30 pound basis and compare results, with the commercial rating. It has been stated that the boilers were being fed at the rate of seven cubic feet per minute, which is equal to (7 multiplied by 62.4 multiplied by 60) 26,208 pounds of water an hour. The rating of boiler performances, as fixed by the Centennial committee, was: "The evaporation of 30 pounds of water from 100 degrees Fahr. into steam at 70 pounds guage pressure equals one horse power." The conditions as previously spoken of were the evaporation from 180 degrees Fahr. into steam at 70 pounds guage pressure, which is equivalent to 32.34 pounds per hour equal to one horse power. Then by dividing 26,208 pounds by 32.34 pounds we get the evaporative duty, (uncorrected for moisture, etc.) of (26.208-32.34) 810 H.P., approximately, and the rating of the boilers making a total of (3 multiplied by 150) 450 H..P; then 810 less 450 equals 360 horse power in excess of rating of plant.

While it is not the intention of the writer to advocate this forcing of boilers, this is merely given to show what can be done with this system of mechanical draft; it also goes to show the excessive demands on a steam plant for electric railway work.

We have previously hinted at the gain due to the economizer, stating that from 100 to 200 degrees Fahr. may be abstracted from the flue gases and added to the feed water. In actual everyday practice, thermometers placed in feed pipes, give, for temperature of water at economizer inlet, after it has passed through the heater, 200 degrees F., and at economizer outlet on the run to boiler, 320 degrees Fahr., which, with steam at nominal pressure of 140 pounds guage, leaves only (361 degrees less 320 degrees) 41 degrees Fahr. to be taken up from the fires to raise the temperature of the water in the boiler to the point of evaporation. The twofold gain due to using economizer and exhaust draft will be apparent to the thoughtful reader.

The writer has frequently heard engineers remark that the upright tubular boiler is very wasteful of fuel, and in answer to this statement will say that some of them are, but the following actual results will prove the fallacy of this remark when applied to the Manning:

Seven readings of the temperature of flue gases were taken with a very fine long thermometer, by the writer, accompanied by his assistant, in the boiler side of flue inlet of economizer, with an average result of only 451 degrees Fahr., steam pressure at the time being 125 guage. Now, the temperature due to a pressure of 125 pounds is 352.9 degrees Fahr., which, deducted from the average temperature of flue gases, show the latter to be only 98.1 degrees Fahr. hotter than the steam in the boiler, which fact speaks for itself.

This method of boiler economy may be new to a great many of our readers, and is well worth considerable study.

At some future time we will endeavor to give the results of more complete tests, which will no doubt be interesting owing to the addition of another boiler of 250 H.P.



TRAINED.

MURPHY—"What's all thot fuss in yure yard?"
KINEELY—"Corny th' goat got th' buttin' habit on him an' th' ol' woman's foolin him inter batin' th' bist-room car-rpet."

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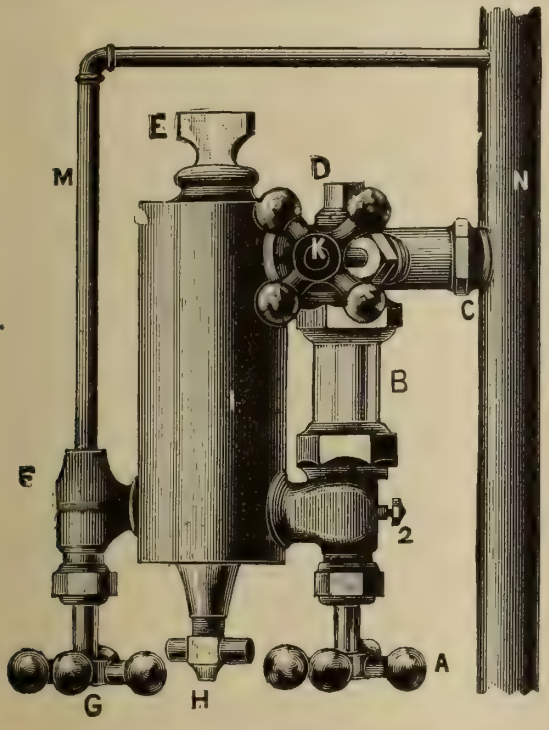
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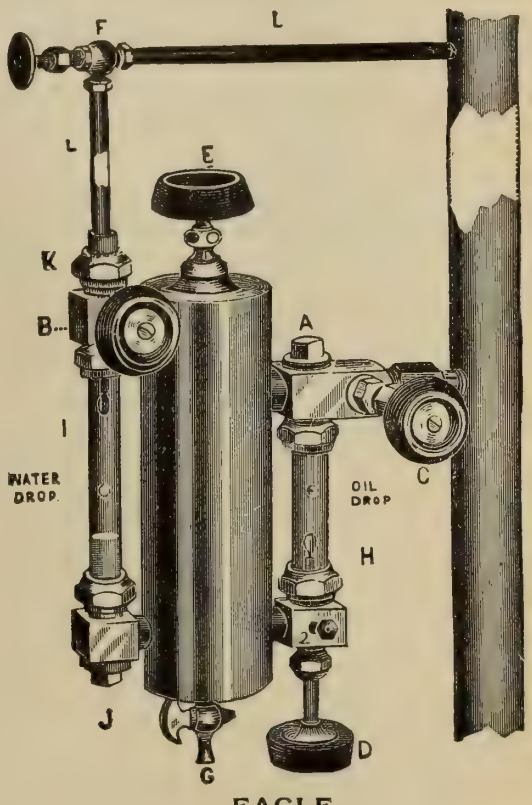


CYCLONE.

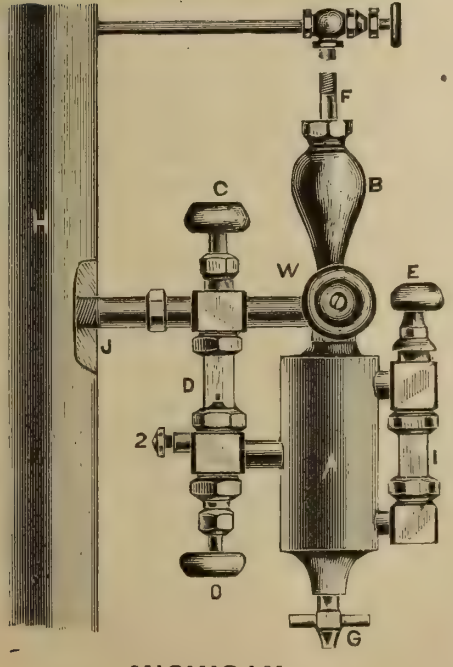
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HER WITS WERE SHARPENED.

Nearly half a century ago a maiden lady, residing in Roxborough, purchased an axe from George Davis, a hardware dealer in Manayunk. The axe was in constant service and by its many trips to the grindstone was worn down until the steel blade was no longer of use. Yesterday the old lady carried the pole or head of the axe to Manayunk to have a new blade inserted. Meeting a friend, he advised her to go to Davis' store, now kept by two sons of the former proprietor, and get a new one in exchange, as the old one was warranted to last a lifetime. The two Davis brothers protested against exchanging, while the lady vehemently urged her rights. A large crowd soon congregated, everyone siding with the woman. She finally triumphed, and walked out of the store with a brand new article, waving it above her head as an emblem of her victory over the firm.—Philadelphia Record.

FIXING THE ELECTRIC BELL.

Fifty years ago the amount of mechanical knowledge in the country was so small that people said the sewing machine was mysterious. Thirty years ago the same machine crawling slowly into use was regarded as one of the most wonderful complex affairs, and few people used one without a certain feeling of awe in the face of so much complicated machinery. Domestic steam pumps, motors, and all sorts of machines have since that time come into universal use. Today a girl can go into a sewing machine shop, buy a machine that she has perhaps never used, and when it comes home, set it up and run it as though she had been born a machinist. Mechanical skill has started in all corners of the world. Men and women, girls and boys alike, have to know a great deal about mechanics, or else the buzz saw, the motor or some other mechanical contrivance is very likely to carry them out of the world in a very injudicious manner.

In electrical matters, at present, there is a great deal of the same feeling that prevailed fifty years ago in regard to machinery. There is a good deal that is unexplained. There is no end of mystery about the battery and the call bell. Our school books are not as full of electricity as they are of the steam engines, and consequently we are at a loss to know how to do the smallest repairs that become necessary when the call bell gets out of order, and in the large cities a professional is sent for when anything gives out and the bell stops ringing, and he usually makes a very large bill for a very small amount of skill and labor. All this is humbug. Now and then his services may be needed, but usually his services can be dispensed with very nicely. Here are some directions very much to the point, and by the aid of which, the owner, in a good many cases, may be able to make repairs and put things in running order as well as the professional, and that too,, with advantage to himself in a business way.

When the mistress finds that cook does not answer the summons, though she pushes the button vigorously, and the housemaid keeps the visitor standing on the door steps longer than is pleasing, you are called to look into the matter. It is not so mysterious as it seems, and nine times out of ten you can do this job just as well as the electrician.

At the outside door look first. If the bell is a "touch-the-button" design, you will find that the outer cap, whether brass, bronze or japanned iron, screws on and off. Underneath the cap are two metal springs, the termini of the wires, which the pressure of the button causes to touch together, and thus complete the electric circuit. Sometimes these get caught or sprung a trifle out of place, and by pressing them together without the cap and the button which is merely held in place by the former, you can generally detect the trouble and easily remedy it with a pair of pliers.

More frequently the trouble is in the mechanism, which is made up of the gong, the bell tongue, and the coiled magnets, with their screws. This mechanism in city houses is on the walls of the basement hall near the ceiling. Looking at the mechanism carefully, you will see that the metal bar is placed close to the coiled black magnets. This bar is fastened to the long vibrating wire which supports the bell tongue, while screwed to the same bar is a slender steel spring. The upper end of this spring is touched on its right hand side by a thumb screw. When the button is pressed at the outer door, the electric current passes through the wires instantly, and should draw the bar upon the bell tongue up against the ends of the magnets, thus closing the electric circuit. This throws the bell tongue against the gong ringing it as long as the pressure lasts on the button. The little spring on the side of the bar is pressed flat by the contact, but throws off the bar and the bell tongue when the current is removed. The whole process is so intantaneous that one must be alert and look sharply to see it.

Now, the point for the amateur electrician to examine is the thumb screw on which the metal spring rests. This screw frequently works unscrewed, and does not keep the spring near enough to the magnet, so that the current can draw the bar up. All that there is to be done is to turn the thumb screw up a trifle. Test your work by trying to ring the bell, but do not turn the screw too much and give the spring no chance to play. This will muffle the gong, and there will be no resonance to the tones of the bell. If the screw is corroded and will not turn, rub it with a few drops of kerosene oil and then wipe it, and the difficulty will usually be overcome.

The same mechanism is used in the indicator in the kitchen, which connects with the bells and tubes from the rooms and halls, but the magnets, springs and bar are hidden in a metal case. On top of the box holding the indicators are the gong and the thumb screw. This screw should be treated in the same way as is done with those connected with the outer bells.

And now to the cellar, where the electric batteries are stored, the third place for domestic inspection. You will find two or three glass jars set on a high shelf, with the wires running into them, and the jars filled with a gray green fluid. The large black carbon in each jar is practically indestructible, and very rarely needs renewal. But the long strips of zinc which are suspended in the liquid are sometimes eaten up by it, and need to be renewed. Whenever you see the zincs are too short, take out the old bits by loosening the screw which holds them, and insert new ones, which can be bought for fifteen cents each at any store selling electrical appliances.

The solution in which both the carbon and the zinc are placed will evaporate and become weak from usage. It can easily be replaced without sending for professional aid to doctor this phase of electrical ailment. Take four or five ounces of sal-ammoniac, and make a saturated solution with water—that is, let the water dissolve all the sal-ammoniac that it will. Dilute the solution thus formed one-third with water, and fill up the jars. This solution can be put into glass cans and tightly closed, and may be kept on hand to make up the loss in the jars from evaporation on other jobs. If these jars of the battery were attended to with regularity and filled up, the vexatious stopping of electric bells from weakness of the current would be almost entirely avoided.

The frequency with which the zincs and the acid solution need to be replaced cannot be accurately determined, as much depends upon the amount of usage given the bells, and on the temperature of the cellar, But it is a small matter for the tinner to look at them occasionally in the houses where he keeps up general repairs, and so be ready in advance for any breakdown or stoppage. —N.Y. Metal.

WHO HAD THE KNIFE ?

A learned professor, according to an exchange, was explaining to his class how the identity of a thing might remain even with the loss of its parts. "Here," he said, "is a penknife. Now suppose I lose the blade and replace it with a new one—you see it has three blades—is it still the same knife ?" "Yes ! yes !" cried the class. "And suppose," he said, "I lose a second blade and replace it with a new one, is it still the same knife ?" "Oh, yes," said the class.

"And suppose," he said, "I lose the third blade, and replace it with a new one, is it still the same knife ?" The class eagerly responded "Yes !" "Now," said the professor triumphantly, "suppose I lose the handle and have a new one made, is it still the same knife ?" "Certainly !" roared the scholars. But here a youth arose, one of the clear-headed kind. "Professor," said he, "suppose I should find those three blades and the handle and put them together again, what knife would that be ?" The professor's answer was never recorded.

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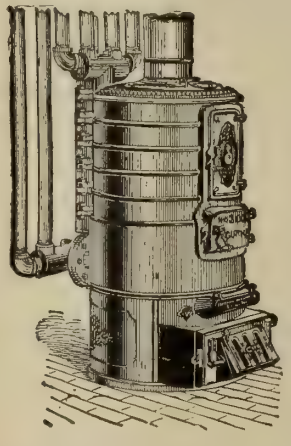
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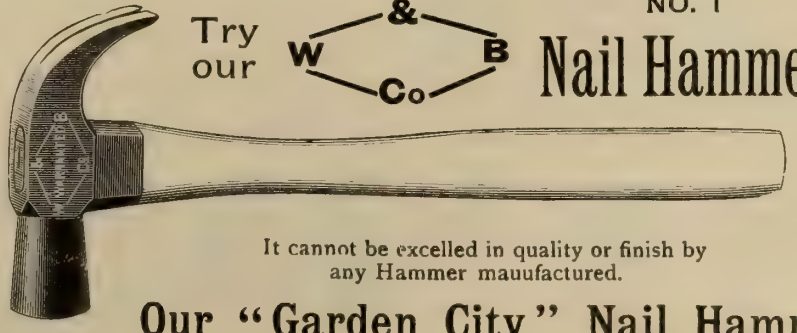
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BUSINESS CHANGES.

ASSIGNMENTS, DIFFICULTIES, COMPROMISES.

J. M. Hynes, terra cotta manufacturer, Toronto, has assigned.

W. L. Sterns, general merchant, Souris, P.E.I., is offering to compromise.

Isaac McNaughton, harrow manufacturer, Reverton, N.S., has assigned.

John Watt & Co., general dealers, Uxbridge, have called a meeting of their creditors.

F. J. Hawse, stoves and tinware, St. Catharines, has assigned to L. B. Lenbsdorf.

L. A. Sundeen, manufacturer of bed springs, St. Catharines, has assigned to W. C. Armstrong.

J. McManus & Co., general merchants, Sherbrooke, Que., are offering to compromise at 25c. on the dollar cash.

P. E. Venner, general merchant, St. Saveur, Que., has assigned at the instance of Hamel Bros. Assets, $23,000; liabilities, $16,500.

John Burns, one of the oldest carriage and waggon makers in Toronto, carrying on business at 126 John street, has assigned to E. R. C. Clarkson.

Elijah Bond, proprietor of the Globe hotel, St. Thomas, has made an assignment to W. Bromell, sr. Liabilities, $5,400, including a mortgage of $2,500; assets, $4,000.

Mrs. E. Eastland, general merchant, Apsley, has assigned. John Upham, in the same line of business at Brussels, is also in difficulty, and has assigned to McCuig & May.

Henry Pepin, contractor, Montreal, has assigned with liabilities of about $25,000. The heaviest creditors are the Banque du Peuple, notes, $4,300; W. P. Beaudin, notes, $2,869; J. Robert & Fils, mortgage, $6,000; Sisters of the Congregation of Ville Marie, mortgage, $8,300; N. Desjardins, $971; Shearer & Brown, $870, and other accounts of lesser amounts.

SALES MADE OR PENDING.

A. E. Sulis, electric light, Bridgetown, N.S., has sold out.

The estate of J. B. L. Jones, general merchant, Victoria, B.C., has been sold to Walter Jones.

The stock of A. Lindsay, general merchant, Southampton, is advertised for sale by auction August 4.

The stock of J. L. Preville, general merchant, Joliette, Que., is advertised for sale by auction August 9.

PARTNERSHIPS MADE AND DISSOLVED

G. & S. R. Smith, plumbers, Montreal, have dissolved.

W. A. Metzler & Sons, painters, Moncton, N.B., have dissolved.

The Vale Barrel Machine Co., of Hamilton, has been incorporated.

W. W. Philip, blacksmith, Kirkwall, has been succeeded by W. J. Gray.

The Katrine Lumber Co., of Hamilton, has obtained a charter of incorporation.

McCourty & Donohue, of the Galvanized Iron Works, St. John, N.B., have dissolved.

The McLennan French Paint Co., Ltd., has applied for a charter of incorporation.

Flatt & Baker, general merchants, Greenway, Man., have dissolved. James Flatt continues.

McNabb & Boland, general merchants, Eganville, have dissolved. John D. McNabb will continue.

Kirkpatrick & Tupper, manufacturers of shingles, Vancouver, B.C., have dissolved. Mr. Kirkpatrick continues.

W. P. Landon, hardware merchant, Ninga, Man., has admitted Thomas Hallsworth as partner. Style: Landon & Hallsworth.

Walter H. Cottingham, Montreal, has registered that he is doing business as merchant under the firm name of W. H. Cottingham & Co.

Walter H. Cottingham, of Montreal, has registered that he intends to do business as a dealer and manufacturer of boats and canvas under the firm name of the St. Lawrence Canoe and Boat Company.

CHANGES.

Robert Swine, general merchant, Doaktown, N.B., has been succeeded by Swine & Co.

FIRES.

John Watson, box maker, London, has been burned out.

The Caledonia Iron Foundry, Montreal, has been burned out.

Hayden & Dunbar, foundry, Woodstock, N.B., has been burned out.

E. J. LeBlanc, general merchant, Buclouche, N.B., has been burned out.

The Canada Patent Brush Co., Ltd., Windsor, Ont., has been burned out.

A blaze at the varnish works at Hay's furniture factory, Woodstock, Saturday, did damage to building and stock to the extent of about $1,500. No insurance. Cause of fire unknown.

DEATHS.

T. T. Coleman, salt wells, Seaforth, is dead.

S. J. White, manufacturer of boxes, Belleville, is dead.

TESTING A FIELD TELEPHONE.

The Signal Office at Washington has, according to an exchange, been conducting some interesting experiments with a field telephone line imported from France. The line used is known as the Charallois equipment. A special conductor is used, and the wire is bimetallic, with steel core covered with copper. Captain C. E. Kilbourne of the Signal Corps states that the wire is stronger and less oxidizable than the wires in ordinary use. It is used in connection with ordinary magnetic telephones, no battery or microphones being used. It is claimed by the inventor that communication has been had through a length of twelve and a half miles of this wire, and that communication has not been interrupted when the wire is unwound naked upon the wet or dry ground, or even upon grass covered with dew, or when the wire is submerged in water for a certain length.

A Charallois outfit, consisting of two telephones, one reel and the wire, were experimented with a few days since. Half a mile of naked wire was unwound upon the grass. The earth was quite moist, sufficiently so as to have made a ground for a telephone wire. No difficulty was experienced in conversing through this wire. The wire was then wound around an iron hoop, and even this did not interrupt the conversation. The voice sounded much more distinct when one of the service or Crown telephones was used in place of the French instrument.

Later there was another test, when a mile of wire was run out, 30 feet being submerged in water. No communication could be had, but the instant the wire was drawn up clear of the water the difficulty disappeared.

On the third test the wire was tramped in the grass and earth, which were thoroughly soaked with water. The experiment was entirely satisfactory, conversation being had in an ordinary tone of voice. There is no necessity for using any kind of telephone which requires a battery, as the common magnetic telephone will prove a satisfactory instrument both as transmitter and receiver. Captain Kilbourne believes that conversation can be depended upon for distances up to 12 or 15 miles.

ENOCH MORGAN'S SONS'



Important Announcement

Please take notice that the price of

SAPOLIO

In ¼ and ½ Gross Boxes

Is now $11.30 per gross, ex store, in any quantity, whether large or small. Terms, cash, 10 days, less 3 per cent. discount; or 30 days, less 2 per cent. discount. This brings the price to the retailer down to about $11.00 per gross, net, and he can sell Sapolio at 10 cents per cake, with a fair profit.

Depots at MONTREAL, QUE. and at ST. JOHN, N.B.

EMIL POLIWKA & CO., Selling Agents

ENOCH MORGAN'S SON'S CO., 38 Front St. East, TORONTO, ONT.

A Course of Training at the

CENTRAL Business College

TORONTO AND STRATFORD.

Opens up the road to success in business life. Thousands of former students are now enjoying handsome salaries in many of the best business hou es in Canada and the United States.

Why don't you Follow their example?

Fall Term begins MONDAY, SEPT., 4th.

Write for Catalogue.—

SHAW & ELLIOTT, Principals.

A FEW REASONS WHY

You should Keep your Stock fully Assorted With

Boeckh's Superior Brushes

They are always reliable and as represented.

They are guaranteed in every particular by the manufacturers.

They are made of the very best material and workmanship

They are sold at closest possible prices.

They are finished and put up in neat and attractive shape.

They are well known throughout the Dominion and are popular with all classes of consumers.

They are handled by all leading Hardware and Paint and Oil trade.

See that the name "BOECKH" Is on every brush.

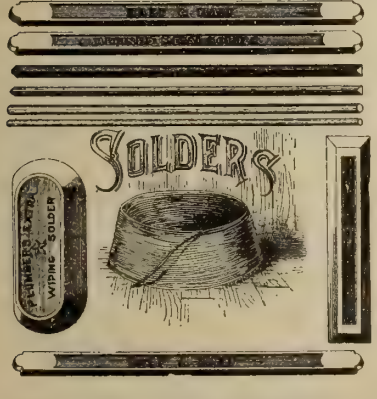
Boeckh's Flexible Bridled Brushes.

Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

TORONTO, - CANADA.



C. C. HARRIS

Manufacturer of Solders and Antimonial Alloys.

Cor. Wickson Ave. and Yonge St., Toronto.

E.O.W.

IMPROVED Labor-Saving CARPENTERS' TOOLS.

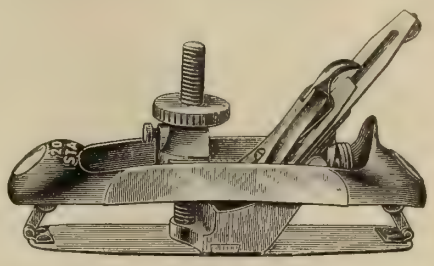
STANLEY

RULE & LEVEL CO.

New Britain, Conn.

SOLD BY ALL Hardware Dealers.

Stanley's Improved Victor Circular Plane.



The Flexible Steel Face of this Plane can be made concave, or convex, by turning the screw which is attached to its centre.

No. 20. Circular Plane, Nickel Plated, 1⅜ in. Cutter, $6.00



Silver Metal Spoons, Forks, Etc.

Trade Mark "SILVER METAL"

A SOLID WHITE METAL Resembling Sterling Silver in color, of equal durability, and at less than half the cost. **Silver Metal Spoons and Forks are not plated,** but solid metal, which requires only to be kept clean by the use of Electrome, prepared chalk, or any good polish (unlike Silver Plated Goods which require care to preserve the plate), the more these goods are used and polished the whiter and more beautiful they become. We caution all to see that each article bears our Trade Mark, "SILVER METAL."

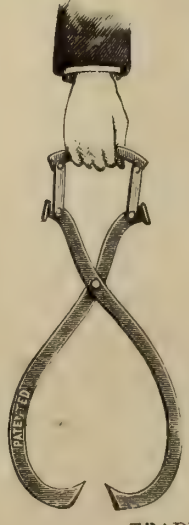
Manufacturers of Sterling Silver and Electro Silver Plate. . .

TORONTO SILVER PLATE CO.

Factories and Salesrooms:

570 KING ST. WEST, TORONTO, CANADA.

E. G. GOODERHAM, Manager. - - JNO. C. COPP, Sec.-Treas



Neverslip Ice Tongs.

(N. K. Wright's Improved Patent.)

They are the newest, best, handiest Ice Tongs made. Sold in two sizes.

MANUFACTURED BY

DENNIS IRON AND WIRE WORKS

LONDON, ONT.

TRADE SUPPLIED BY

FLETCHER MFG. CO., 440-442 YONGE ST, TORONTO.

BOWMAN, KENNEDY & CO. LONDON.

Write for Circulars and Prices.

THE USE OF A WINDOW.

"The shop window is to the pubilc
what the coat is to the man, it is the
straw by which society judges its possessor."

No matter how little or much you spend on newspaper advertising, never omit the valuable and inexpensive method of drawing public attention by the display of goods in your store window. Hundreds of people pass your door every hour, of whom a large percentage are in quest of, or need articles which you keep in stock, and if your window is so arranged as to attract attention, very little further effort is necessary to effect the sale.

Some years ago, among a certain class of so called "exclusive tradesm n" it was thought the proper thing to have dark blue curtains lowered to conceal half the height of the windows, which were entirely empty save for a gilt sign, or mirror in the rear; but the dealers of to-day vie with each other in their efforts to attract attention and admiration from the passing throng, by the display in their windows. Indeed such an art has this mode of advertising become, but we find in our larger cities many individuals who earn large incomes by their skillful service in artistic window dressing, and in Chicago there has been published for some time a journal which treats entirely on this subject. It is, therefore, not my intention to furnish any new ideas upon the subject, but rather to impress upon your mind the importance of bestowing great care upon window display.

The quickest route to the public pocket is through the eye, and it is therefore to the sense of color, size and pleasing combination, which window displays must cater. The first thing is to keep the glass perfectly clean, and free from streaks, or dust, and the woodwork tastily painted in a subdued color which will harmonize with the surroundings. Nothing repels a transient customer more than an unwashed and fly-specked window, and the brighter the lights within the more prominent appears the dirt upon the surface of the glass. The inside of the window, at the back and sides, should be covered with cloth, or paint which will reflect the light, without color, upon the goods, and not detract the attention, but form a pleasing background for the display. Plain white, red and yellow are too glaring, and offend the eye; while wine, olive, old gold, and other shades, either entire or in combinations, attract the eye and add to the appearance of the goods.

If the window is small its size may be apparently enlarged by the use of mirrors at the sides and rear, to duplicate by reflection the articles displayed. A platform of steps made in movable sections, and covered with cloth, is essential to the display of many small articles and admits of easy changes in the arrangement of the goods. The light for the window should be reflected from the outside, for the reason that gas or electric jets in a window detract from the appearance of the goods, and form shadows, besides covering the glass with steam, which turns to ice in winter; and even if the window is so ventilated as to prevent this, the heat, or gas produced, is often injurious to the goods.

In arranging the articles in the window, the effect must be considered from the outside, which can only be ascertained by stepping out occasionally, as you arrange, to observe how the goods combine. One often sees articles appear "left-handed" and "looking backward" in store windows, because the one who arranged them failed to consider them from an outside standpoint. Another point to keep in mind, is to have some of the goods a little in advance of the season, to catch the eye of those thrifty individuals who "take time by the forelock" and buy for future needs; and to turn the public attention to the fact that you are well prepared for their coming wants. Goods which are new or novel should find a place in the window, not only to force their sale, but to keep the public interested in your store and merchandise. If you are advertising any particular article in the newspapers, have a variety of the goods in the window, and if the value was stated, attach a tag "As Advertised" with the price to the article. By this means, if your advertisement has caught the eye of a person who needs the goods, the display reminds him of it, when he passes your store, and may prevent a competitor from profiting at your expense. It is a good plan, regardless of your other advertising, to have many of the articles tagged with the price, and some remark as to their use, if of a novel character. Many people admire goods in store windows, but dislike to come in and ask the price, as they do not expect to buy, but if the cost was plainly marked so that "He who runs may read," they would remember the price, and buy later, and perhaps also tell someone else who needed the goods. To make "Somebody tell Somebody" is the result sought after by shrewd traders, who recognize the value of such personal advertisement of their goods and prices.

I think a good point in window display is to take different lines of goods one after another, according to the season, and display the full variety of each line separately, rather than to overcrowd the windows, in the effort to squeeze samples of the whole store in at all times. Thus, if the season was proper for farming tools, I would think it preferable to make a solid display of this line of goods, showing the entire variety you keep, and leave out for the time being other merchandise. The store windows should be changed entirely at least once a week, and fresh goods, or a different arrangement made. The time to best make the change is early in the morning before trade starts in. A window containing a small boy, stretching himself upon a ladder in the endeavor to wash the glass, and surrounded by pails of water, loose papers, cloths, empty boxes, etc., is not an edifying sight to the public or conducive to trade, and should be performed either before or after business hours, when the curtains can be drawn, and thus maintain the delusion which a peep behind the scenery often dispels. When one has seen the board near the top of the barrel which gave the appearance of a large display of fruit, the effect loses its attraction, and an undressed window is in the nature of an immodest insult to the buying public, who are supposed not to know that a window is ever devoid of goods or needs cleaning.

There are many mechanical devices for attracting attention to goods displayed in store windows, such as an "electrical tap" on the glass at regular intervals, or dancing figures moved by clock-work, etc.; but really the most valuable attraction and one of most profit to the dealer, is a well-arranged stock of seasonable goods, with reasonable prices attached to them, displayed in a well-lighted and clean window.

"The heights by great men reached and kept,
Were not attained by sudden flight;
But they while their companions slept,
Were toiling upward in the night."

A NOVEL PROFESSION.

The host of labor disputes which have marked the past few years in England, and the great loss and inconvenience attendant upon strikes, have caused the evolution of a new profession in that country, says Metal Worker. There has arisen a class of leaders of men, termed "strike defeaters," whose business is that of breaking down strikes, not by physical or military force, but by the more peaceful method of doing the work of the strikers until they come to terms. One of the most prominent of these individuals whose name is Graeme Hunter, is described as a powerful, energetic man in mind and body, who lives with his men, but rules them with strict discipline. His methods are in some respects peculiar, and appear slightly arbitrary to an American mind. As described by English journals, Mr. Hunter's system is as follows: He has the reputation of never interfering in a strike until all means of settling it have been exhausted and he believes the strikers to be in the wrong. Then he simply puts his men to work and keeps them at it. He tells his hands how much he gets to do the job, and the way he makes his own remuneration is by simply dividing the whole amount among them, according to their labor, less one penny out of every five shillings they earn, over and above the expenses incurred. He has under his control some 3,200 men, whose average wages are about $6 a week, besides board and lodging. They are all obliged to live together near to where they may be working, and Mr. Hunter insists on every married man sending home at least one pound a week to his wife, paying them this amount in postal orders, collectable at the home of the wife. Fines are exacted for the absence from work, etc., and no recognition of union rules is had. It is said that eight of his gangs were recently employed at eight ports, including Liverpool, Glasgow, Greenock, Dublin and Bristol, by which it would seem that these men are all-round laborers and not skilled workers.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

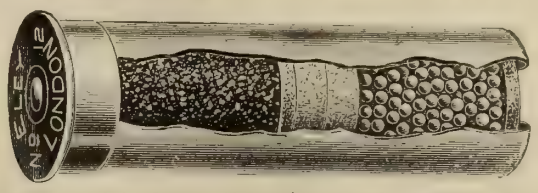
Head Office and Factory: Montreal; **J. J. McGILL, Man.**

WESTERN BRANCH :

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

. . ELEY'S . .
CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING

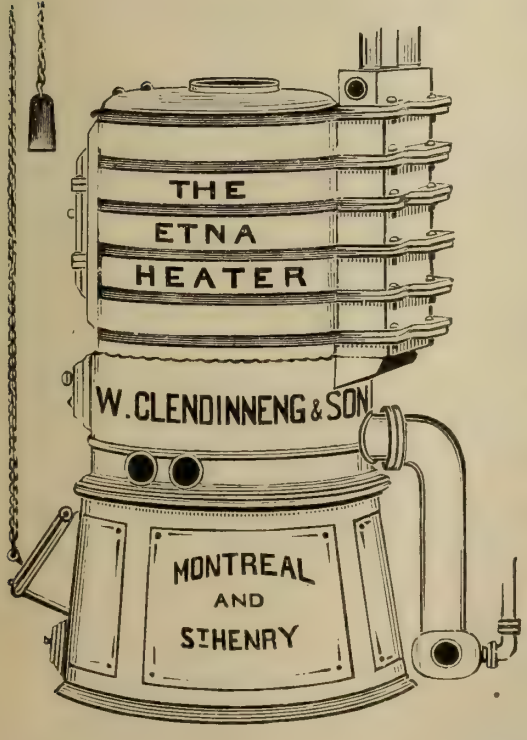


Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. **Wholesale Only.**

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.



THE "ETNA" HOT WATER BOILER

We claim is perfect. It is the original Round Boiler, patented by U. Beaupre, Dec. 1st, 1880 and May 2nd, 1889. Each year improvements have been added; and to-day it stands at the head.

We are willing to give any guarantee necessary to protect Architects or Contractors, that the Boiler will do all we claim for it.

The Boiler costs less than those of our competitors, and we will assume all risks.

We are in the field to stay and are bound to push this Boiler to the top rung of the ladder.

The Boiler previous to our purchasing it, had never been properly advertised or pushed, consequently, is to-day not as well known as some other makes.

Since buying out the former maker the sales have increased over 200 per cent.

If you have not a cut of same, drop us a card and we will be happy to forward one with full particulars.

As we said before, the Boiler is perfect, the price less, and we will guarantee it in every particular.

We have also bought most of the Grand Universal line of Patterns from the Estate of J. M. Williams & Co., of Hamilton.

We can supply all Repairs at the Regular trade price.

We still make the old reliable line of "Leader" Stoves.

Kindly remember us when any thing we manufacture is needed by you.

Wm. Clendinneng & Son, 145 to 171 WILLIAM STREET MONTREAL QUE.

Cutlery

SPECIAL VALUE IN

Dickinson's "Damascus Blade" Carvers.
Dickinson's Improved Ivoride Tables, warranted not to shrink or discolor.
Joseph Rodgers & Co.'s best quality Pen, Pocket, and Butcher Knives.

. . . SAMPLES now ready for Fall Trade.

STEEL. Full stock of Jessop's warranted Tool Steel, at lowest prices. . .

A. C. Leslie & Co., Agents
MONTREAL and TORONTO.

You can lose more than we do by not subscribing for this paper,

MUNN'S LIQUID GLUE
IS THE BEST.

THE ART METROPOLE, Agents.
131 Yonge Street, TORONTO.

Clarkson & Cross
ACCOUNTANTS . . .

Established 1864.
26 Wellington St. East, TORONTO

OUR SALES OF
"BURHAM" Portland Cement
For the past 8 months have been
25,499 CASKS.
"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,
McRAE & CO., OTTAWA



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	23½ 24
trip "	25, 25½

Tin Plates—*Charcoal Plates, Bright.*

M.L.S. equal to Bradley	Per box
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 00 4 25
I.X., "	5 00 5 25
I.X.X., "	6 00 6 25
I.XXX., "	7 00 7 25
D.C., 12½ x 17	3 75 4 00
D.X.,	4 75 5 00
D.X.X. "	5 75 6 00

Note.-Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

	Per lb.
C okley Grade—	
.X.X., 14x56, 50 sheet bxs	6½c, 7c
14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6¼ 6½
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¼ " nd thicker	2 25

Sheet Iron.

1 to 20 gauge	2⅞, 3
22 to 24 "	2½, 2⅝
26 "	2⅝, 2¾
28 "	2⅝, 3

Canada Plates.

Blaina	½ bright 2 75 ....
Abercarne	2 75 ....
Lion	....

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head

16 to 24 gauge, per lb	5, 5¼
26 gauge, "	5¼, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5¼
26 gauge, "	5¼, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅜ 5
" 5-16 " "	4½ 4¾
" ⅜ " "	4¼ 4½
" 7-16 " "	4 4¼
" ½ " "	3¾ 4
" ⅝ " "	3½ 3⅜
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 12½ 0 13
Lake Superior	0 13 0 13½

Bolt or Bar.

Cut lengths, round, ½ to ⅞ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

14x6 ft, 25 to 30 lb ea, per lb	0 19½ 0 21
" 35 to 45 " "	0 17½ 0 18
" 50 lb and above per lb	0 16½ 0 17

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft	0 21 0 23

Zinc Spelter.

Foreign, per lb	0 04½ 0 05
Domestic "	0 04⅝ 0 04¾

Zinc Sheet.

5 cwt casks	0 05½ 0 06
Part casks	0 06 0 06¼

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04⅜ 0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 15½ 0 16½
Standard	0 14½ 0 15½
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 13
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do "	4 75
No. 2 Do "	4 50
No. 3 Do "	4 25

Prepared Paints.
(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.
(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red, (best) " "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " " "	1 25 1 90
Canadian " "	

Paris Green, per lb	0 13½ 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure, 8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 (9
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 45 0 47

Castor Oil.

Best, per lb	0 08 0 08½

Cod Oil.

Cod Oil, per gal.	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list
Munn's, dis. 25 to 30 per cent. off list

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads. in ½ lb. bags	0 70
Best thick white card wads. in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross.....
" Sewing, " .... } 7 25 8 00

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, eacn 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 25

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... ..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.

1st break	$3 65
2nd "	3 90
3rd "	4 60
4th "	4 95
5th "	5 40
6th "	5 90
7th "	0 50

Picture Glass.

Pilkington's ordinary.

1st break	4 0
2nd "	4 70
3rd "	5 40
4th "	5 90
5th "	6 50
6th "	6 90
7th "	7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb . 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

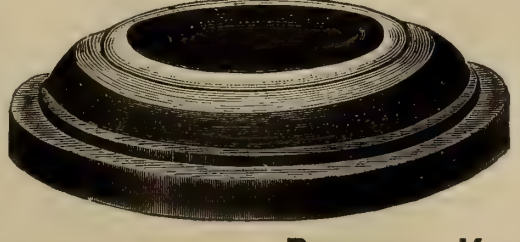
Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

Standard Keystone
TARGETS
THE BEST -:- -:-
-:- TARGET MADE.



Standard Keystone
TRAPS
THE NEW '93 MODEL -:-
-:- EXCELS ALL OTHERS

AGENTS: BOWMAN, KENNEDY & CO., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy	2 30
40dy	2 35
30 dy	2 40
20, 16 & 12 dy	2 45
10 dy	2 50
8 & 9 dy	2 55
6 & 7 dy	2 70

2. American Pattern Only

from 4 to 5 dy	2 90
3 dy. (lath)	3 30

3. Canada Pattern Only

from 4 to 5 dy	2 80
3 dy. (lath)	3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross 1 00 4 25
" Carpenter 2 25 3 60

Picks

Per doz 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz 4 00 5 50

Pulleys

Hothouse, per doz 55 1 00
Axle. 22 33
Screw 27 1 00
Awning 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, 1bs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9½ 9¾	10¾ 11
¼, 5-16, ⅜ in.....	10 10½	11½ 11½
Cotton, per lb.....	18	20
New Zealand	9	9½
Russia Deep Sea, per lb..	12½	13
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D, dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 to 40 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, " 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen 1 25

Soldering Irons.

Per lb 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross	7 50	12 00
Dessert " ..... "	21 00	.....
Table " ..... "	30 00	30 00
Dessert Forks.... "	24 00	.....
Medium " .... "	27 00	.....
Table " ... "	36 00	.....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb	0 25	50
Hindostan, per lb.....	0 06	07
" Slips, per lb		9
Labrador, per lb	....	0 13
" Axe, "	....	0 15
Turkey "	....	0 50
Arkansas "	....	1 50
Water-of-Ayr "	....	0 10
Scythe, per gross.....	3 50	5 00
Grind, per ton	15 00	18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties

Cow, per doz ..... 1 [illegible] 2 50

Tinner's Shears and Snips

P.S. & W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9 00

Twines.

Bag, per lb	0 12½ 0 20
Wrapp'g, mottl'd, pr. pack.	0 50 0 60
" cotton, per lb ..	0 18 0 20
Mattress, per lb	0 33 0 45
Staging "	0 27 0 35
Broom "	0 30 0 5[illegible]
Binding, flax, per lb	....
" jute "	....
" Blue ribbon	..... 0 12½
" Red cap.....	..... 0 11½
" Crown.....	..... 0 10½
" Silver Composite	0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz	4 00 6 00
Bench, parallel, each	2 00 4 50½
Coach, each	6 00 7 00
Peter Wright's, per lb	0 12 0 13
Pipe, each	5 50 9 00
Saw, per doz	6 50 13 00

Washer Cutters.

Per doz 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

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Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
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Galv. 2 barb, 2½ & 5 in. apart	}
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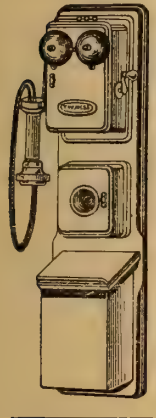
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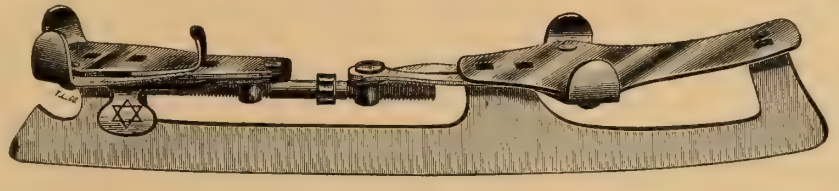
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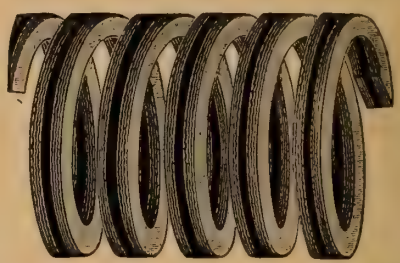
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CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, AUGUST 12, 1893. No. 32.

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BEST ANTI-FRICTION METAL FOR

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Easily Applied, Surface Resembling Porcelain.

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Published Weekly. $2.00 a Year.

Vol. V. TORONTO, AUGUST 12, 1893 No. 32

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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President Cleveland's message at the opening of Congress called to repeal the silver law is a masterly effort. Most of Mr. Cleveland's official deliverances usually are. With a clearness that betokens knowledge and a straightforwardness that is to be commended he speaks his mind upon the question at issue. There is no ambiguity or trimming. He states plainly his belief that "the existence of an alarming and extraordinary business situation, involving the welfare and prosperity" of the people is "principally chargeable to Congressional legislation touching the purchase and coinage of silver by the general Government." For a remedy he does not suggest any half-way measure to mollify anybody, as too often does the average politician. He demands the unconditional repeal of the present law. Nothing more nor nothing less. And with him he has not only a vast majority of the people of his own country but the best minds of the financial world at large.

* * *

The act of July, 1890, was raised upon a foundation contrary to all economic principles. Its foundations were as sand; and no sooner did the waters of practical experience touch them but they crumbled away, threatened to drag down with them the very credit of the country. To charge all the financial depression existing on the other side of the line to this unwise piece of legislation would be absurd. The present depression is world-wide. Europe as well as America is under its influence. But at the same time it does not seem at all unreasonable to charge the silver law of 1890 with being the principal cause of the present financial plight in the United States. To mathematically prove this it is only necessary to ask: Would the conditions be as bad as they are but for this piece of legislation? Certainly not. The law requires that the four and a half million dollars' worth of silver that the Treasury is commanded to buy shall be paid for in Treasury notes, redeemable on demand in gold or silver at the discretion of the Secretary of the Treasury. The value of such discretionary powers is plain. People do not as a rule prefer silver in lieu of gold, and therefore for the Secretary of the Treasury to refuse to redeem the notes with the yellow metal would mean discredit to the country and depreciation of note value. It is not to be wondered at therefore that between the period beginning May 1, 1892, and ending July 15, 1893, no less than 49 millions in gold was paid out for the redemption of treasury notes, while for the period named the notes of this kind issued in payment for silver bullion only exceeded this sum by some five millions. In other words, fifty-five millions were issued in treasury notes and forty-nine millions in gold were expended in redeeming them, and causing the reserve to be encroached upon for the first time since its creation. Largely to this same cause is also attributable the excess of 87½ millions in the gold exports over the imports. But whatever may be the opinion regarding the proportion of responsibility that shall be borne by the silver law of 1890 for either the depletion of the stock of gold in the treasury or for the heavy outward flow of the precious metals, upon it must be put the blame for the financial distrust that has seized upon the people of the United States and which drove so many of them into a panic a few weeks ago. "The silver law must go" is the cry of President Cleveland; and it is the cry of the people of the United States.

* *

It is a long lane that has no turn. Ever since the Intercolonial Railway was built, some seventeen years ago, it has been a losing concern. True there have been odd years in which the receipts have exceeded the expenditures, but the aggregate deficits since the road was opened are no less than $4,614,485. A good many had despaired that the road would ever make two ends meet, for whether the Administration at Ottawa was Conservative or Reform deficits were just about as regularly reported. Much of the 1,141 miles of country through which it runs is but sparsely settled, and some of it could never be expected to be ever anything else, so natural conditions, let alone mismanagement, make it difficult to run the road on a paying basis. But it was built as one of the conditions of Confederation, and of course, pay or lose, must be maintained. When the present Minister of Railways and Canals took charge of affairs he gave it out that he was going to put a stop to the era of deficits. Most people pooh-hooed the idea; and with the remembrance of the past before them they had good reason for so doing. Mr. Haggart first began to weed out the superfluous employees, and for the fiscal year 1891-2 he had brought the operating expenses down to a little over 73c. per mile. And although the deficit was nearly half a million and odd persons here and there began to take courage. But it is scarcely probable that anyone even dreamed that the fiscal year ending June 30, 1893, would show a surplus. Yet such is the case anyhow, the earnings being $3,065,499 and the working expenses $3,045,317, leaving a surplus of $20,181. A peculiarity to be noted is the fact that the record has been broken all round, both the earnings and surplus being larger than ever before, while the working expenses are the lowest. The surplus was nearly double what it ever was before,

Canada has evidently found at last a Minister of Railways who not only knows how to manage a railway but has the courage to run it, not for the benefit of private individuals but for the country. It is to be hoped that the policy he has inaugurated will be continued by himself and followed by his successors.

Of all the industries in the United States that are in a bad way at the moment, none seem more in need of a physician than the glass industry. Like an enormous and expanding weight the depression has extended until every factory in the country was obliged to shut down, throwing 10,000 men out of employment. And closed they seem likely to remain, for all told there is something like two and a half million feet in stock. In fact so oppressive is the atmosphere that even the Plate Glass Trust, with its $8,000,000 capital, could not live in it, dying before it was out of its swaddling clothes. At an rate it has been decided to not now perfect the organization of the company, which means that it is defunct if not absolutely dead.

He who is the successful merchant looks after the "littles" as well as the "muckles." In other words, he cultivates the custom of the small buyer as well as of the large buyer. Philip D. Armour, the Chicago millionaire, is an instance of this. His trade is a world-wide one, but notwithstanding this he is ever drumming up new trade. In a town in Western Ontario is a small factory. Among the raw material it uses is glue, and not a great deal either. But the trade of this factory was none too small for Armour to cultivate. More than once has he sent a representative all the way from the "Windy City" to try and secure it; and while the desideratum was not secured at the first attempt the persistency of the firm has at length been rewarded. It is such perseverance and industry as this that has made the name of Phil. D. Armour known the civilized world over. Every merchant or manufacturer may not be able to achieve a reputation as extensive as that of the great Chicagoan or accumulate as many millions of money, but he can, by taking a leaf out of his book, achieve success. And what more than that does a man really need anyhow?

• • •

If you lie upon roses when young you'll lie upon thorns when old.—Ex. Some people lie upon principle, but what they'll lie upon hereafter is a query.

TACT IN BUSINESS.

Business is a game, and a pretty hard one at that as a rule. To play it successfully needs tact. Experience, capital and industry are scarcely as essential.

An officer in the time of war may be as brave as a lion, but unless he is a tactician he will lead himself and his men to destruction. So it is with the merchant who fails to exercise tact. But the difference between the two is this: One has enemies to capture or destroy and the other has friends to capture and preserve as customers.

If the need for this qualification of tact leans more to one than to the other it is towards the merchant. His is a perpetual warfare, and the competition is not only as a rule excessive but not infrequently unfair. Whether it is buying or selling, he needs to be ever planning and scheming. If he cannot buy right he cannot sell right. In the matter of credit it is necessary to determine who shall or who shall not be accorded it; and to do this the exercise of much diplomacy is often demanded.

There are probably some people whose custom the merchant may still desire to retain while, at the same time, he will allow them only a limited credit or no credit at all. The care that needs to be exercised in steering such a course is obvious. Under such circumstances a merchant requires to stop and think well before acting, for an injudicious turn, no matter how slight, may be the means of losing more than one customer, everybody having more or less friends. A customer can be refused credit just as well politely—in fact better than in an unpolite tone. To make an enemy every merchant should studiously avoid, for the more friends he has the better. Even if a person's custom is a matter of unconcern it is just as well to have his good opinion anyhow. And through tact is the only way it can be got.

A good field upon which there is ample room for the exercise of tact, is the varied peculiarities of customers. One likes this and another doesn't like that. Mrs. Brown thinks herself a lady of high degree and wants to be treated as such, while Mrs. Smith is modest and abhors a superfluity of attention. Mr. Jones wants nothing more or less than what he asks for. Press upon him anything in addition and he would be annoyed. With Mr. Robinson the opposite is the case. To suggest that something nice in this or that article is in stock is not infrequently to secure an additional order. Still another customer is somewhat distant and dislikes familiarity on the merchant's part, while the characteristics of the next that arrives in the store may be the opposite. It is the ability to fathom all these and the tact to handle them that every merchant should acquire. And he can acquire it if he will.

THE UTILITY OF ALUMINUM.

The utility of the different metals is gradually being extended; but of all the metals none probably promises so well in this respect as aluminum. Already it has been put to many and varied uses. The latest use found for it is that of statue-making. The statue was erected in London, England, and is of pure aluminum. People are now asking to what use the metal will next be put. Echo answers, What? Regarding its adaptibility for uses ad infinitum there is no question. The great obstacle is cost of production; and this too in spite of the fact that it exists wherever clay beds are found. At one time the cost of extracting the metal was enormous, and although modern methods have vastly decreased the cost the utility of the metal is still heavily handicapped by its dearness. Unlike most metals, it cannot be crushed out of the earth. It requires an electric furnace heated to 6,000 degrees Fahr. to do this. The market price of the metal ranges from about 50 to 70c. per pound. Aluminum was first produced as a separate metal in 1828 by Wohler, but for 30 years after it was nothing beyond a product of the laboratory. Then, owing to improved methods of production, it began to be used for manufacturing purposes. It resembles silver in appearance and is ductile. It is 2½ times lighter than water and 4 times lighter than silver. One great advantage about it is that atmospheric action nor even acids have any effect upon it. Of all the uses to which aluminum may be put the most important is that of shipbuilding, its lightness, combined with its undoubted durability, having already demonstrated that it is the best metal in existence for the purpose. Already large aluminum launches have been constructed on the Lake of Geneva; and those of our readers who are posted in sporting matter probable know that a well-known American oarsman has been this season using a shell constructed of this metal, while an aluminum house at the World's Fair suggests that it may possibly be used for building purposes. In the German army the water-bottles and the stirrup "irons" for the cavalry are made of aluminum, while the world over paper knives, cups, penholders and novelties of different kinds are turned out in the same metal. It looks as though we were on the verge of an aluminum age.

ABOUT PIG IRON.

There is a saying that pig iron is generally a pretty good barometer of the position of general business, because it enters into the composition of so many articles that it is to a certain extent a reflection of the position of trade in the branches of business which handle such goods. If this is so general trade must be pretty quiet in Canada, for the pig iron market remains as dull as ever. In fact, buyers cannot be induced to anticipate their wants at all, although round lots have been offered at very low prices in Montreal for fall delivery. This does not tempt them in the least, which is somewhat strange, considering the fact that the stock of pig in Montreal is not by any means ample.

Values on the other side have shown an upward tendency during the month. The first week in July Scotch warrants stood at 41s. 7 1-2d. to 41s. 10d., Hematite 44s. 9d. to 45s., and Cleveland 35s. 1d. to 35s. 3d. in the London speculative market. Comparing these with the prices for the closing week of the month, the upward tendency is apparent, and it may be remarked, whether it signifies anything or not, that this disposition has ruled pretty steadily. During the closing week Scotch warrants closed at 42s. 1 1-2d. to 42 s. 4d., Hematite 45s. 4 1-2d. to 45s. 7 1-2d., and Cleveland 35s. 5d. to 35s. 7d., the upward tendency being marked from day to day during the week. This strength is no doubt largely due to the coal strike, and its effect on the situation, which kept the market firm.

With regard to the stocks in public stores in Great Britain, and the shipments, the change between the opening and closing weeks of July has been unimportant. During the first week the total stocks in Scotland, Cumberland and Middlesboro' showed a decrease of 34,618 tons as compared with the previous year. This was chiefly due to the falling off of 87,295 tons in Connal's Glasgow stores, as on the other hand both Cleveland and Hematite showed an increase of 33,000 and 19,600 odd tons respectively. In the matter of shipments there was a small increase of 1,343 tons from Scotland, but a big increase of 160,217 tons compared with the same time last year from the Middlesboro' district. From Cumberland, on the other hand, there was a decrease of 61,861 tons. The total shipments for the year to the first week in July, compared with the same period in 1892, show an increase of 99,609 tons, which must mean more business. The figures for the closing week in July indicate, however, that stocks are creeping up again. On the 29th of that month the stock in the Glasgow stores was only 18,000 odd tons less as against 87,000 odd of a decrease shown at the opening of the month. The stocks of Hematite and Cleveland also evinced a tendency to further accumulation, showing increases of 39,706 and 23,745 tons respectively, as compared with the stocks at the close of July, 1892. The total shipments, however, continued to increase also from from the three districts, there being a falling off from Scotland and Cumberland, but a big increase of over 100,000 tons odd from Middlesboro', making the total shipments to the close of July from the three districts 122,893 tons greater than the shipments for the corresponding period in 1892.

AN AGREEMENT ON HARVEST TOOLS.

The Canadian manufacturers of harvest tools have formed an association.

The object is to curtail production, regulate prices and cut down expenses. The members are the Rixford, Whiting and Welland Vale companies. Next season a uniform price will prevail for all makes, and jobber as well as manufacturer is bound by the agreement. Quite a reduction, it is understood, is to be made in the manufacturers' staff of travelers. Hitherto each firm has had on an average three or more representatives on the road. Now, under the new order of things, upon two men will devolve the duty of representing the three concerns.

One thing that will receive the endorsation of the jobbing trade is the decision to reduce the number of brands of scythes. "Hitherto," said a jobber, "we have been supposed to carry several dozen of each of the thirty-four makes turned out by two manufacturers. Of course we could not well do that, and we have had an endless amount of trouble as a result. In fact we could not execute orders promptly. Now the manufacturers have decided to cut off between them some fourteen brands. This will leave twenty still, and with this number I think we shall be able to get along nicely."

A NEW KIND OF WIRE.

A Connecticut manufacturing firm has brought forward a new resistance metal in wire, sheet or castings, which is regarded as a very important contribution to this class of material. The wire resembles ordinary copper wire on the outside, has a pinkish white tinge at the surface of fracture, and is very strong without losing much ductility; the torsion test shows over 80 twists in 6 inches for an annealed wire, which still possesses 70,000 pounds of tensile strength to the square inch, and hard-drawn wire is said to run to 100,000 pounds tensile strength, with about 40 twists in 6 inches. Combined with these favorable mechanical quantities, it is claimed that the wire has the remarkable resistance of 35 times that of copper with a temperature co-efficient of less than 1-10 that of German silver. By having the resistance lower than as above described the tensile strength can be increased up to 140,000 pounds per square inch.—Ex.

THE TRAVELERS GETTING READY.

The members of the City Travelers' Association are making elaborate arrangements for their promenade concert on the steamer Chippewa on Monday night, Aug. 21. Glionna's string band of 30 musicians has been engaged for the occasion. The committee have arranged that the promenade conert shall be held in one part of the boat, dancing in another and card playing and smoking in still another, while each will have its band of musicians in attendance. The following are the members of the committee: Messrs. J. Owens, chairman; W. F. Daniels, 360 Givens street, secretary; A M. Piper, treasurer; W. Bremner, R. Maxwell, Ben Dack, S. H. Moore, W. Soper, F. Gallow, J. A. Dickson, J. A. McGuane, W. H. Steele, S. G. Martin, J. Mortimer. Tickets will be given out by all these gentlemen.

THE CEMENTATION OF STEEL.

The influence of electricity on the cementation of steel seems likely to throw light on the physics of the process, says an English paper. M. Jules Garnier has recently published the results of his first experiments in this direction, in which a current of electricity was made to form a circuit with the carbon packing as anode and the iron to be hardened the cathode. Both the metal bar and the carbon were enclosed in a tube, which was placed horizontally in a small reverberatory furnace and heated during the experiment, his idea being that the heat would determine the mobility of the carbon, while the electric current would determine the direction of motion of the carbon atoms. The minimum voltage to overcome the resistance was employed, and in one experiment the conditions were 7 volts 35 amperes and 3 hours at a temperature from 900 deg. C. to 1,000 deg. C. After the experiment the bar was examined, and the cementation was found to have penetrated to a depth of 10 mm. In a second experiment two bars of metal formed the two electrodes, and were separated by a carbon packing of about 10 mm. In this case with a current of 55 amperes, at a pressure of 2.5 volts, after three hours' heating the anode bar remained unchanged, while the cathode was hardened to a considerable extent on the side opposed to the anode. It is suggested that the cathode should be rotated during the process, and thus secure a uniform action. The rapidity of the process should more than compensate for the cost of the electrical plant, if future experiments confirm these results.

A total of 7,228,650 bushels of wheat were inspected at Winnipeg for the year ending July 31. Scarcely half graded No. 1 and No. 2 hard.

ENGLAND'S ANNUAL COAL WASTE.

In working out our coal deposits large quantities of fuel are left behind, in a few cases unavoidably, but in too many cases purposely, remarks Industries and Iron. While it may be taken that at least 30 per cent. of the coal in the seams worked is left behind, at least two-thirds of this might very well be brought to the surface and utilized. In fact, if the whole of the coal broken down in every mine throughout the kingdom were brought to the surface, the question of coke supply would be greatly simplified, as the latter would be a product from waste material only, and, being produced at a less cost than at present, would assist in cheapening crude iron, and thus help to resist foreign competition. In addition to the coal left behind in the seams actually worked, there are also seams of dirty or impure coal, which are practically lost, though easily workable. These would provide fuel for manufacturing purposes if cleaned, while if pyritous, the recovery of the pyrites—using the term in its widest sense—would be at least a process which would tend to produce a profitable return, if not covering all expenses of working. It is not particularly necessary that these seams should be other than interstratified with foreign matters, as the cost of breaking up the coal with a good machine of the ordinary cage pattern is not great, while excessive breaking up is not necessary so long as the different materials are dissociated. The separation can then be made perfect, and a coke produced having only a medium quantity of ash.

Allowing that 20 per cent. of our coal is wasted—the percentage varies at different mines—this means that there is a preventible loss of 2,000 tons with each million tons raised and converted ed into coke, a loss of at least 1,000 tons assuming that the whole average produce of coke is only equal to 50 per cent. of the weight of the coal used in its manufacture. Taking the annual output of coal as averaging about 120,000,000 tons, we get an approximate loss of 120,000 tons of coke. This would have a probable value of 10s. per ton, or £60,000. The cost of saving the coal now wasted would not be very great, as it chiefly consists in sending to the surface that which is already broken down but which is left behind in the working and where it is often a source of danger. Of course, where dirty seams are worked a greater cost would be incurred; but this would have to form a separate calculation, quite apart from that with respect to present workings. Undoubtedly the slack and coal recovered would be more or less dirty, and, this being the case, it would have to be washed and separated; but, speaking generally, this would only involve a small cost per ton if proper arrangements were made. It is not usually advisable to deal with less than from 300 tons to 500 tons of dirty coal of a small character daily where the most economical working is desired, and in fact, the following rough plan would be calculated to secure this result.

Washing and separating plant—such as that of the Luhrig Company—should be erected in a position accessible from a railway, and in connection with this should be arranged a sufficient number of coke ovens to take all the washed slack as produced. Conveniences for loading wagons should also be provided. To this central plant the coal to be treated should be brought by private railways, aerial ropeways, conveyors, or similar means, and the saleable products would be, of course, sent off direct from the works. The cost of treatment would then be reduced to the lowest possible point, as centralization in work of this kind is a valuable aid to economy. Possibly, it will be asked, Who is to erect expensive plant such as would be needed? In reply to such a question it may be said that the royalty owners should arrange this part of the business, while the mining people should pay the actual cost of working and a fair interest on the cost of erection, as by this method of working both parties benefited would share in the costs in a fair manmanner. We may enter into details on another occasion; to do so at present would occupy more space than we can afford to devote to this subject, but its importance will be recognized more and more as we gradually exhaust the seams of our richer coal fields.

ANTIQUITY OF THE BLACKSMITH.

The blacksmith occupied an important position among the craftsmen of the Middle Ages, says an exchange. The insecurity of life and property, which was one of the chief grievances of the times, made strength of material indispensable, whether to guard the shrine of a saint or protect after a more homely fashion the family chest or coffer. The strength and durability of iron led to its use for defensive purpsoes from early times. Until coal came into general use, malleable iron was produced directly from the ore with charcoal fuel by continuous working. Sussex, England, was from an early time the chief seat of the iron industry. The earliest possible record of the trade there is contained in a grant made by King Henry III. to the town of Lewes in 1226, by which the inhabitants were empowered to raise toll for the repair of the town walls after the battle. Every cartload of iron destined for sale which came from the neighboring "weald" was to pay one penny toll, and every horse load of iron half that sum. In 1290 a sum of money was paid to a certain Master Henry, of Lewes, for the ironwork to the manument of Henry III. in Westminster Abbey, which shows that talented smiths were taken often long distances for important works.

THEY LACK DIGNITY.

Lamp shades exhibited are remarkable for their lack of suitability and dignity, which is a quality that even a lamp shade may miss, says House Furnishing Review. One is of pink tulle, most inflammable of stuffs, made after the model of a ballet dancer's skirts, and has tiny silk birds sewed fast at intervals of only a few inches. Another is also pink, but of silk, and has around its upper edge a wreath of ostrich plumes swaying with the lightest breath of air in the apartment. Most suitable are the effects in crape paper, which have to be seen to be appreciated. A novelty for this jubilee year are the Columbian shades, showing the national colors in bayadere stripes around the globe or frame. Besides there is a bewildering array of exquisite combinations for shades of this cheap and most artistic fabric.

KNOW COMMERCIAL HISTORY.

When a young man enters a mercantile career, and first becomes the head of a business establishment, if one should suggest to him the propriety of reading the history of commerce and the business history of the world, he would say, "these things don't interest me. What I want to know is how to run my business to-day and how to make money. I am not interested in what happened a hundred years ago, nor how the old heathen made money when the world was young." This remark was made over and over again during the war. It was made repeatedly after the war was ended. And yet, because men had never known the history of money, and did not know that it had its rise and fall in price, like any commodity, thousands of men were ruined in New York city by the depreciation (as they called it) in the value of property. Had they been familiar in boyhood with the course of speculation, they would have known when the war began that the value of money was going down, and that they became rich by putting their money into commodities or real property. When the war was over and the value of money began to appreciate, they should have known that this was the time to reverse their operations and exchange their goods and real estate for money, and thus escape from the losing side of the speculation. The laws which govern the course of trade are as little to be trifled with as the laws of nature. They may be suspended or thrown aside for a time, but they are there. Because "the mills of the gods grind slowly," young men are prone to forget that they grind at all. When they wake up to the fact that they have been ground "exceeding small," it is too late to learn their lessons over again. The grinding goes on, but lines of business in which they may have prospered for years are suddenly wiped out of existence with a vim that seems altogether out of proportion to the sins they have committed.—N. Y. Metal.

WHAT IS TIN PLATE?

On listening to the queries of the sightseer at the tin-plate exhibit at the World's Fair the lack of information and acquaintance with the features of tin plate manufacture becomes conspicuous. The general but incorrect impression is that a secret and wonderful skill is required to plate the black sheets. In fact, in many cases, this all important essential is a seemingly new thing to the inquirer. In the production of the black sheet from 80 to 90 cents is expended of every dollar spent in making tin plate. On the toughness of the fiber depends the value for working. On the even thickness depends its desirability and value for various purposes. On its surface depends the amount of material used and the ease of coating it. With the black sheet possessing all of these desirable features the coating is by no means a serious condition to meet and is readily overcome, as is shown by the 10 to 20 cents of the dollar which pays for both the pig tin and the labor. For some reason it is not generally known that the English tin plate makers are just as far from the mines where they get their supply of pig tin as we are, and that the tin mined on the British Isles is not suitable for use in coating plates. We have lead at home for making terne plates, and have that advantage. The price of tin plate will always be sympathetic with the price of sheet iron, and not with pig tin, to so great an extent. The puddler and rolling mill man, rather than the miner, will always exert the more potent influence on the tin plate market. This does not seem to be the public opinion, but just think it over and the truth will become manifest.—L. M. W. in Metal Worker.

PAINTING OAK COLOR.

Jobs painted in oak color are popular, as pleasure vehicles used for summer driving, and while the work is somewhat difficult, the experienced painter will soon master the details, so as to turn out satisfactory work. The ground may be made of white lead and golden ochre, white lead and chrome yellow, or white lead and Italian sienna; but, taking everything into consideration, we prefer the white lead and Italian sienna, as it gives a better toned ground—a closer approach to chamois-skin color—than any of the others. Mix the ground color in one-third oil to two-thirds turps, using a tablespoonful of japan to a paint of color, if two coats per day are desired. The lightest obtainable japan should be used, so as not to change the ground color. Particular care should be exercised to get a uniformly solid surface.

In graining, it is not to be supposed that the carriage painter, having but little of it to do, comparatively speaking, can go on and do a complicated design of graining, such as is embraced in the "dappled" style and in the "veined or sap," the latter style being the more difficult. These very complicated examples are not called for, generally speaking, but if they are, a professional grainer should be called in. Pure raw Italian sienna, ground in oil, will answer for the graining color. Add a little japan, and thin down to the proper consistency with turpentine. An ordinary sash tool, worn somewhat, will work well to rub the color on with; a round, or oval, dry bristle brush to wipe up flat edges, and some clean cotton cloths to wipe out with, together with a couple of steel graining combs, will comprise the necessary tools. Brush some of the color on a certain section or pannel, then with a piece of the cotton wipe the mixture into streaks and waves, running them the length of the section or panel.

Plenty of color should, however, be left on the ground. Then follow with the comb, combing the color in. By covering your thumb with the cloth, you can take out what are called the lights. The fleshy part of the thumb will wipe out the broad lights, and with the nail the fine ones can be developed. The cloth should be changed after wiping out of each light line. Go over the body surface in this way, imitating as closely as possible the natural oak. In making the dapples, use the graining comb before wiping out with the cloth. At the first trial the work may look somewhat crude, but a little practice and study will improve the results wonderfully. On the gear parts apply the color as you do on the body, and a simple combing will suffice, excepting on the exposed surface of the side bars and axle beds. These, if a really fine job is desired, should be both wiped and combed out.—Painters' Magazine.

GLASS-MAKING.

Glass making was, perhaps, the first manufacturing enterprise started in America, and glass made in the first glass house, which was built in 1608, near Jamestown, Va., was shipped to England. This was the first exportation of any manufactured product from the North American Continent.

The materials of glass are sand, oxide of lead or red lead, potash, saltpetre and nitrate of soda. These materials go into the mixing bins in the order in which they have been named. They are mixed by workmen with shovels, and after being turned several times and sifted, are put into the melting pots and subjected to an intense heat for thirty or thirty-six hours. When the process of vitrification is finished, these materials have melted into a plastic mass known to the everyday world as glass. It is while in this plastic condition that glass is blown and worked into the many beautiful and useful forms with which all persons are reasonably familiar. The metal is gathered from the pot upon the end of a pontil, a hollow iron pipe, by a skilled workman. It is then rolled upon a flat, smooth slab of iron to give a regular surface. The workman then expands it by blowing through the pipe. The shape of the glass on the end of the pipe may be lengthened by swinging or shortened by holding the pipe upright. The hollow pipe is replaced by a solid iron rod, and then the workman molds the glass with wooden tools into any shape that he pleases. The molded article is annealed for twenty-four hours in the annealing oven. It is then ready for cutting and ornamentation.

In the manufacture of artistic modern glassware, the most important part of the manipulation is the cutting, a process that may be seen every day on Midway Plaisance at the World's Fair in Chicago.

It is in this process that the highest skill of the glassworker's art is most clearly shown. When the cutter receives from the annealing room the article which he is to operate upon, he divides it into squares with a pair of callipers, according to the pattern to be cut. He also marks intersecting lines over which the cutting wheel must pass.

The dish is then held upon the face of a Bessemer steel wheel, which revolves rapidly in a heavy frame. Over the frame is suspended a hopper containing a fine, moist sand, which drops down and forms a cutting surface upon the wheel. The sand-coated wheel cuts deeply into the glass, leaving a mitre which represents the first part of the cutting process. The Bessemer steel wheels vary in size from three to twenty-four inches in diameter, according to the pattern to be cut.

This process leaves the dish with the pattern roughly cut upon it. The smoother then takes the dish and holds it upon the face of a fine sandstone wheel mitred to the same angle as the cuts. The smoother runs the sandstone wheel over the cuts, and takes out the sand and rough places, leaving the article ready for the polisher.

The polishing is done on the mitred edge of a rapidly revolving wheel, which is sprinkled with putty powder. When the polishing has brought out the lustre and brilliancy of the pattern the dish is ready for market.

The degree of artistic workmanship necessary to the completion of the finer articles of cut glassware may be appreciated when the fact is borne in mind that the work of cutting is regulated entirely by the eye and that an intricate pattern requires many days of constant manipulation.

To the high order of intelligence of American glass artizan is due a great part of the credit for the unrivalled excellence of American cut glass. Judging the future by the extraordinary success of the past fifteen years, there would seem to be no reason why America should not continue to lead the world for all time to come.—The American Exporter.

A KITCHEN "TROUSSEAU."

At some of our large stores can now be obtained what is termed a kitchen "trousseau," explains an exchange. The pieces are packed in a trunk provided for the purpose, and in this guise is perhaps not a more utilitarian wedding gift than custom sanctions. A "trousseau" of sixty-eight pieces will consist of a jelly mould, teapot, coffee biggin, pepper box, flour dredge, two covered saucepans, preserve kettle, wash basin, colander, milk pans in three sizes, pudding pan, gridiron, spout strainer, gravy strainer, biscuit pans, scoop, two pronged fork, paste jagger, cake turner, flat skimmer, ladle, two dippers, oblong pan, frying pan, tea tray, crumb pan and brush, dust pan, coal shovel, teakettle, dish pan, basting spoons, teaspoons, tablespoons, forks, cake cutters, pie plates, six of each, and a flour sieve, and the new housekeeper will want every one of them.

HOW TO COMPETE WITH THE STORES.

The following was one of the prize essays published in Ironmonger, London, on "How to Compete with the Stores":

The question of "Store Competition" has become a very serious one with nearly all the distributive tradesmen of this country; perhaps few of them have experienced the loss of trade due to this source of competition which the modern ironmonger has had to put up with. The remedy for this evil (and all evils have a remedy) is not easy to put in a condensed form; but, perhaps, the most likely method of arriving at a solution of the problem is to view the situation from the purchaser's point of view, and then to meet his requirements in the manner which seems most likely to suit them, and, at the same time, to afford the ironmonger the necessary profit to carry on his business and pay his way.

First, then, the purchaser has the preconceived idea that to "send to London" or to get an article from the Stores is an infallible way of obtaining it at a specially low price. Remedy.—Let your customers and the general public in your locality know, by means of advertising and otherwise, that you will supply goods at "Store prices." This does not necessarily mean that you must forthwith halve your profits, but that you are prepared to make certain concessions in the matter of prices to those who will deal on the "Stores" terms of business, viz., cash on or before delivery.

2. The purchaser has a list of articles sold by his "Stores" from which he can make a selection. Remedy.—Offer every facility to the public in the way of descriptive and illustrated lists; if your business is sufficiently extensive, print one for yourself. People like to pick and choose from a large selection, and a customer will more often take substitute for the desired article if a lot of similar things are shown than if simply two or three are offered.

3. The Stores' lists and articles are by by means of numbers, etc., easily identified, and a purchaser does not like buying things in the dark. Remedy.—Mark goods in plain figures, and if the article is one that is known to the public by advertisement or otherwise, mark the advertised price on the ticket alongside your retail figure. The absurdly large margin of profit usually allowed by the manufacturers of advertised specialties generally allows of a considerable reduction, and this is one of the great trump cards of the "Stores system." A shilling article for ninepence or tenpence seems like saving money to the general run of buyers, and does not, as a rule, spoil the profit which the modern-day tradesman must put up with.

4. Such goods as are received ready packed or prepared for sale are sold by the Stores at a smaller rate of profit than those which have to be handled or got ready in a manner involving labor. This applies to such goods as paints in tins, varnishes, cutlery, tools, household wares, like saucepans, tinware, and a host of kindred articles in more or less general demand. The Stores system is adapted specially for a handling business, in which goods do not deteriorate by keeping to any great extent, and which does not require any special training or technical education to conduct. Remedy.—Make up your mind as to the rate of profit you require on such goods, and apply it to them, after adding to the prime cost the necessary expenses of carriage and working expenses. The expenses of a concern in the way of wages and rent, etc., will, of course vary, but the Stores rate of working expenses varies from 6 to 8 or 9 per cent. on the turnover, carriage not on many items which they get delivered, but on which the country tradesman has to pay. This, of course, is the rate of expense on a combined turnover of all sorts of goods besides ironmongery, and probably would be increased if restricted to this branch of their trade, as the stock does not "move" so rapidly, and the capital invested is, consequently, not turned over so quickly as in the departments like the grocery and meat, etc.

5. The Stores, by handling an enormous variety of goods, are enabled to equalize their profits on each department to a greater or less degree, as the loss of profit (i. e., interest on the capital locked up) caused by the slow sale of some articles is compensated by the quick turnover of the same capital as represented by others. Remedy.—Handle as many things as you conveniently can. Lots of articles are being sold at good profits which an ironmonger could, by simply stocking a sample or two, obtain a quick sale for, and in many cases cases could work at less expense than those at present holding the monopoly of their sale. For example, bicycles, sewing machines, rubber goods, electrical and similar apparatus, and a host of other goods which would not cost a penny extra in the wages bill, and would simply require a little extra warehouse or showroom space.

Lastly, in applying the above remember that you have no chance with the Stores if you are competing on a different footing—I mean, Credit versus Cash. To hold your own and increase your returns you must observe the following rules: 1. Sell for cash. 2. Buy for ditto, and get best terms. 3. Do not overbuy and lock up money unnecessarily. 4. Keep expenses down. Do not keep one man to wait on another; at the same time, do not overwork your staff, as this means scamped work and rushing customers. Do not expect a net profit of 15 or 20 per cent. on your year's turnover. You will not get it many years running. The British public knows a lot, and is knowing more every day. 6. Sell all you can. Do not decline a small commission; a little bit of business often leads to larger orders if transacted satisfactorily. 7. Do not keep customers in the dark too much. A mysterious consultation over a book or list frightens folks. Have your selling lists plainly and straightforwardly marked, and let people see and pick for themselves. 8. Do not be too modest. Blow your own trumpet a bit; but mind you are prepared to show something tangible when the purchaser comes in response to the noise. Do not, for instance, advertise "Store prices," and then ask 1s. 3d. for a tin of enamel. 9. Give your own personal attention to buying and selling of everything. If marking off goods, estimating for contracts, and ordering from travellers is left to subordinates, you cannot expect your business to pay. 10. Deal openly and honestly with all and sundry. It is to be hoped that this last injunction is not required in the trade of ironmongery but the caution may be useful.

Many other amplifications of the points enumerated will, of course, suggest themselves; but I think a businesss conducted on these lines deserves to succeed. "'Tis not in morals to command success, but we'll do more—deserve it."

The country ironmonger can compete with the modern Stores if he is prepared to meet them on the above lines. In connection with the above a point I have overlooked is the necessity of doing all you can to oblige customers by ordering things not in stock, and, above all, procuring such special orders promptly by post or passenger train. If the profit is lost by the expense of carriage, the seller will be recouped indirectly by the confidence the customer learns is not misplaced, and further orders will generally result.

H. S. HOWLAND, SONS & CO.,

37 Front Street West, Toronto

Orders . .
Solicited . .

Wholesale Hardware

PINE TAR

In tins. Sizes Nos. 1 and 2.

14, 16, 18 and 20
Pearl Street,
TORONTO, ONT.

The Toronto Lead and Color Co., Limited

FORGING ROUND SHAPES.

The claim, according to an exchange, has been made by a Boston company of producing the first successful machine for electrically forging round shapes. The machine, which is designed and built for rapid and accurate work, is rotary in all its movements, and thus no time or power is lost in the return of the dies to their working position. Articles from one-half inch up to six inches long and from one-half to an inch in diameter can be turned out, meeting, in its capability, the production of the great variety of things now made of iron or steel, of low carbon, in order that they may be turned out economically. By this machine, however, it appears that highly carbonized steel may be worked equally as well as iron or soft steel, and it is within its range to roll successfully steel of the highest grade of crucible down to the open hearth and Bessemer; copper and brass are also satisfactorily worked. By this rolling process one hundred perfect handles are capable of being made in the time required to make one by former methods. Anti-friction steel balls, from one-eighth to two inches in diameter, are likewise manufactured by this forging process at a speed otherwise unapproached. A red-hot steel bar is inserted between the revolving dies, and for every revolution of the dies a ball is forged, or a conical shot, a chair screw, a bolt with thread and head complete, a boiler rivet, a staple or taper pin, etc., are produced.

ELECTRICITY A GERM KILLER.

A series of experiments which promises to prove of great importance in solving one of the gravest problems presented to large cities, has, according to an exchange, lately been made in one of the towns on the Croton water sheds in the presence of Dr. Cyrus Edson, of the health board, M. T. Daly, commissioner of public works, and other prominent officials of New York City. The tests were conducted at Brewster, a town of about 30,000 people, and were intended to determine the efficacy of a process of treating sewage by electricity. The tests were eminently successful, as they not only removed the odor entirely from the sewage, but satisfied the officials of the efficacy of the treatment in destroying the germs of disease.

The discoverer of the disinfectant calls it "electrozone," and although its exact nature is still a secret, electricity performs the most important part in the operations. A fluid is conveyed by a pipe into the sewer. During the experiments referred to a glassful of refuse was taken from the outlet of the sewer, and into this there was poured a quantity of iodide of potassium. The solution turned to a jet black color, thus demonstrating the presence of ozone, which is considered one of the most powerful germacides. It is claimed that sewage treated by this process will be relieved of the germs of all contagious diseases, including those of diphtheria, scarlet fever, measles, typhoid and typhus fevers and cholera.

One of the most interesting features about this disinfectant is the very low figure at which it can be manufactured, says the Chicago Post. The apparatus with which the experiments at Brewster were made takes care of the sewage from a town of 30,000 inhabitants at a cost of $4 per day, and it is easy to figure the cost for cities of larger dimensions. If, however, it is thoroughly demonstrated that the discoverer of "electrozone" has hit upon a reliable method of rapidly and effectually killing the disease germs in sewage, cities would not be likely, unless he should be extremely unreasonable, to dispute with him about the cost.

WE'D LIKE TO SEE IT.

By means of a simple arrangement, lately brought forward, it is found practicable to prevent the jolts and the jars and vibrations common to vehicles that are driven over rough roads or on street pavements when ordinary wheels of rigid construction are employed. Surrounding the outside of the periphery of the wheel, and in close contact with the tire, are a series of independent springs, which form the outer tread of the wheel. These springs are so arranged as to work in conjunction with each other, and, when moving under a heavy load, their free ends are sprung in toward the rim, coinciding with the true or working periphery of the wheel, the springs not coming in contact with the plane until the spring is nearly under the center of gravity. In this way the spring resistance is used in sustaining the load, and not in retarding the movement of the wheel—the springs, after passing the center of gravity, exerting a force against the plane over which they are passing to force the wheel ahead, thus making, as is claimed, a wheel that is not only easy riding, but easy propelling as well.—New York Sun.

INSISTS THAT IRON IS FIBROUS.

The London Engineer took to task a writer in a contemporary, for saying that iron is fibrous. In his reply to its request that he give a reason for the existence of fiber in iron, its beginning and its end, he says: "When pig iron comes from the puddling furnace all of the carbon is supposed to have been eliminated, but, in most cases, a trace still remains, which causes it to harden somewhat, when suddenly cooled; and also gives it an uneven structure, the carbon not being distributed uniformly. The fiber is produced in rolling by elongating, the molecules being drawn in one direction as the bar is held on all sides, and allowed to increase in only one direction—lengthwise. There is always some slight difference in the chemical make up of contiguous molecules, so that the slipping of the particles on each other in rolling gives them the fiber nature. In many cases, when iron bars are broken, a part of the fracture will show a crystalline, and other parts a fibrous surface. For some reason, cast steel always maintains its crystalline nature, and is without fiber, breaking as well in one direction as another. Sulphur causes iron to be 'hot short,' breaking easily when hot. Phosphorus makes it 'cold short,' so that heat changes the nature or chemical qualities of iron, as was illustrated in a former letter by the writer, where a lot of wire that had been pickled, after being rolled in sulphuric acid, and not thoroughly washed in lime water and heated, was very brittle (crystalline), but which, after being heated to 300 degrees, was restored to a tough, stringy (fibrous) condition, incredible as it may and does seem. When it was said by the manufacturers that the brittleness was caused by the action of the acid, and that so little heat only was required to restore it, the idea was scouted, but, when the remedy was tried which resulted in a cure, skeptics were compelled to change their tune. Perhaps some one can explain the why and and wherefore in this case, but the writer only knows of the facts as given, and is unable to explain."

NATURAL GAS.

It is generally known that natural gas gushes up out of the well and doesn't have to be pumped out, but only a vague idea exists as to the force with which it comes. The highest pressure reported was found in a Canada well, which was calculated at 700 pounds to the inch. A few have been found in the Pittsburg district that have run up to 500 pounds, while a pressure of from 300 pounds up to 350 pounds is not uncommon. At a manufacturing plant at Gas City, Ind., that had not yet got the boiler in operation, a gas pipe was connected with a pumping engine instead of the steam pipe, and no difficulty was experienced in pumping water from a well 280 feet deep. In using the gas for fuel it has been found necessary to use pressure regulators to reduce the pressure to about 8 ounces, which seems to be most satisfactory. One ounce or an ounce and a quarter is about the usual pressure found in the artificial gas manufacturing plants of the average city. In many sections where there is an abundance of natural gas, the right to bore for gas is leased by a syndicate from the owners for all promising land near a given centre, where, as an inducement for manufacturers to locate, a plot is given and gas furnished for fuel free of charge. As a result economy of consumption or perfection in combustion is given little consideration, and leaks and wastes impart a perceptible odor to the atmosphere. In some cases a blower is used to force air into a mixing chamber with the gas to secure a clean flame and a high temperature.

In the tin-plate plants workmen who have formerly used coal are quite enthusiastic over natural gas. It supplies an even temperature, never making the plates too hot or too cold (to demand extra work or loss of time) and there is no replenishing of fuel or stooking necessary, consequently more work and wages result.

For light forging an oven or furnace built of brick, is used for heating the iron or steel. The ovens are of various sizes, set on iron legs of convenient height, and consist of two thicknesses of brick on the bottom and on the top. One in mind had side walls about 14 inches high on the outside and was 24 x 36 inches in size, with an opening 4 inches high across one side, through which the material was inserted. On looking inside no flame was apparent, but a bright red heat was clearly perceptible and the blacksmith had no difficulty in shaping his work when placed on the anvil.

In the brass foundry a flame encircles the crucible and frequent heats can be readily made.—L. M. W. in Metal Worker.

WHY IS STEEL NOT MADE SOUTH?

A writer discussing the above question in the latest issue of The Tradesman, says that one of the chief difficulties met with in the manufacture of steel from Southern ores has been the high percentage of sulphur and silicon contained in the pig iron, and it is only quite recently that experiments conducted by the Tennessee Coal and Iron Co. have proved successful, and resulted in producing a low silicon iron from the brown ore from Blount county, Ala. At Bessemer, recently, 1,200 tons were produced, averaging less than 0.5 per cent. silicon, with sulphur averaging between 0.05 and 0.06 per cent. Dr. Phillips in a recent article on the subject, and after referring to this fact, goes on to state that: "This would indicate that the vexed question of basic open-hearth stock is beginning to yield to rational treatment. If some means can be found for dispensing with the use of so much scrap in the basic open-hearth furnace without impairing the quality of the resulting steel, a great step forward will have been taken here." In the same article he continues: The Jefferson Steel Company is running the basic open-hearth furnace formerly owned by the Henderson Steel Company, and is turning out very fair metal, most of it going to the Birmingham rolling mill. The production now is 2 heats of 10 tons each per 24 hours. An interesting experiment soon to be tried here is the substituting of Alabama dolomite, in part or wholly for the styrian magnesite for bottoms. The dolomite, which carries about 0.75 per cent. silica, is obtained from an extensive deposit within two miles of the furnace.

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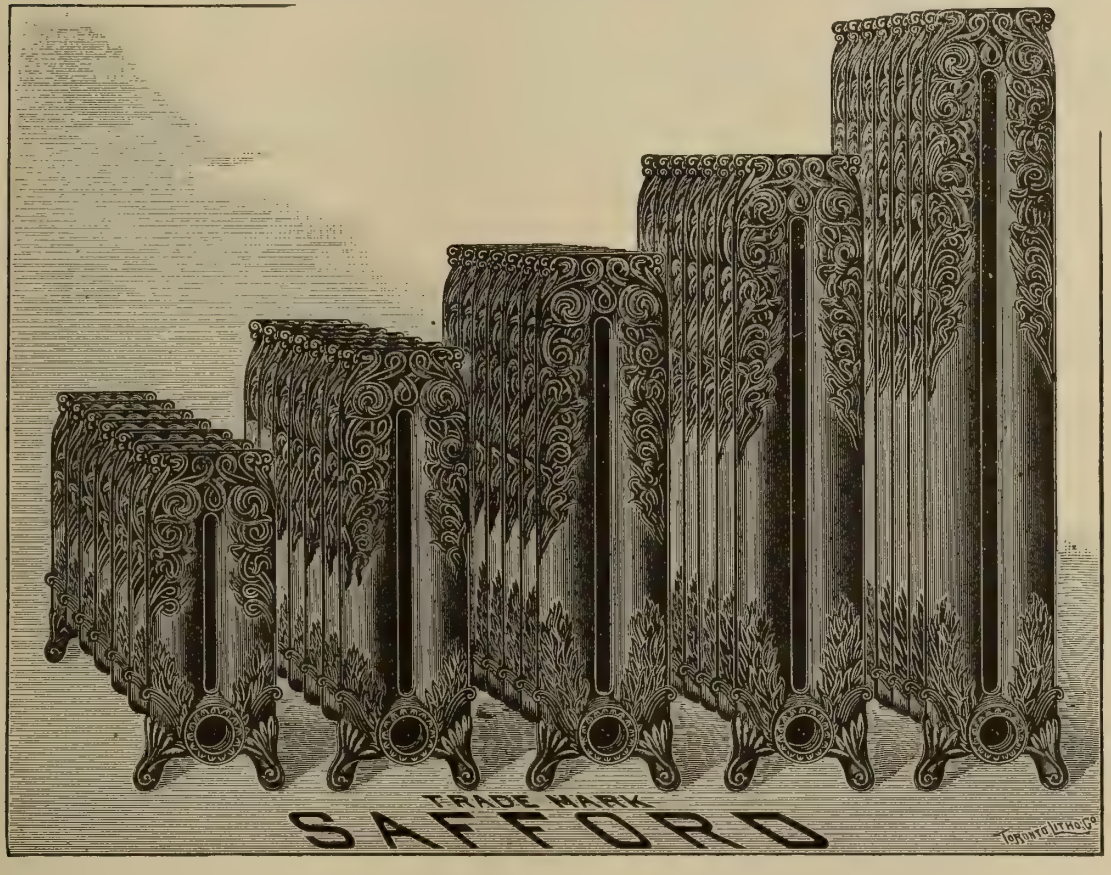
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VIEWS AND INTERVIEWS.

"I don't know for the life of me where all the nails are going too this season," said a jobber to me. "The demand is keeping up wonderfully well, and it can't be because of any buildings going up here. In fact there are none of any account. Well all I can say is that it is a puzzler."

* * *

"We are having a good deal of difficulty in getting manufacturers to fill our orders for American cast enamelled ware," remarked a representative of a Toronto wholesale house. "Back some six months ago they advanced prices, as you already know. But now, what is worse still, we have no end of trouble getting our orders filled. It is terribly annoying I can tell you."

* * *

"There that will give you an idea how the coal strike in England is affecting the iron trade," said a wholesaler as he picked up a letter file and began turning over invoices. "There, what does that say there?"

"Prices withdrawn on account of the coal strike," I replied as I read.

"Well, then, that is what the English houses are writing across the face of their invoices these days," he resumed. "But you will observe by these brackets that the reference is only to iron. Steel and so forth, you will notice is all right. It is expected from this that the price of iron will be advanced if this strike is prolonged."

* * *

"Well, I should say that smokeless powder is selling fast this season," said a hardware man. "Sportsmen are using it extensively with the old ordinary black powder. Of course I don't mean that they mix it; but this is what a good many of them are doing: In one barrel they will put a cartridge of the smokeless and in the other a cartridge of the black powder. The object of course is obvious. The first barrel they will discharge at an object will be that containing the smokeless powder. Then of course if it is necessary to discharge the other barrel the sportsman's view is not obscured by smoke, while in using the smokeless and black powders alternately the expense is lessened. Some of those follows are pretty 'cute, I can tell you."

* * *

"Yes, we have something more to contend against in selling binder twine than the Patrons and Central Prison twines," remarked a retailer who does business in a town north of Toronto. "What do I mean? Why, just that the Cordage Company itself is undermining our trade by selling direct to the Patrons of Industry right under our noses."

* * *

A traveler thus sized up the situation to me: "The farmers had not got through with their hay when their fall wheat was upon them, and now they have got their peas and oats in addition to look after. As a consequence the farmers are extremely busy and scarcely one of them is to be seen in the towns. In such sections business is at a standstill. On the other hand, where the crops have not matured so fast, business is better."

* * *

"I hear some kicking now and then from country merchants because of the injury they receive from the sale of bankrupt stocks in their towns," said a wholesaler the other day. "Now I really think that they have themselves to blame in a good many instances. Por instance, there was So and So's stock in Blankville. It sold at 65c. on the dollar to an outsider, who, ten chances to one, will sell it in the same town to the injury of other merchants. Now this is what I want to get at: Couldn't the merchants up there have got their heads together and bought up that stock. It would have been worth more to them than to the fellow that bought it. But supposing that they had lost $10 apiece, that would not be so much as they probably will now if the stock is sold off as bankrupt stocks usually are by the itinerant merchants."

BYSTANDER.

USEFUL RECIPES.

The following recipes are taken from The American Artizan Pocket Reference Book, for Tinsmiths and Sheet Metal Workers:

BABBIT METAL.

Melt four pounds copper, add by degrees 12 pounds best Banca tin, 8 pounds regulus of antimony, and 12 pounds more of tin. After four or five pounds tin have been added, reduce the heat to a dull red, then add the remainder of the metal as above.

This composition is termed "hardening." For lining, take one pound of this hardening and melt with it two pounds of Banca tin, which produces the lining ready for use. The proportions of Babbit metal ready for use are, therefore, four pounds of copper, eight pounds regulus of antimony, and 96 pounds of tin.

BRONZING TIN.

Tin and tin alloys, after careful cleansing from oxide and grease, are handsomely and permanently bronzed if brushed over with a solution of one part of sulphate copper (blue-stone), and one part of sulphate of iron (copperas), in 20 parts of water. When this has dried, the surface should be brushed with a solution of one part of acetate of copper (verdigris) in acetic acid.

After several applications and dryings of the last named, the surface is polished with a soft brush and bloodstone powder. The raised portions are then rubbed off with soft leather moistened with wax and turpentine, followed by a rubbing with dry leather.

TO WASH BRASS WITH TIN.

Boil together six pounds cream of tartar, four gallons of water, and eight pounds of grain tin, or tin shavings, for half an hour in a porcelain-lined vessel; put clean brass ware in the boiling liquit for a few minutes or until properly coated.

TO CLEAN BRASS.

Never clean brass work with acid, for it soon leaves it a dull color. Sweet oil and whiting, followed by a little soap and water, is best.

TO CRYSTALIZE TIN PLATE.

The figures are more or less beautiful and diversified according to the degree of heat and relative dilution of the acid. Place the tin plate, slightly heated, over a tub of water, and rub its surfaces with a sponge dipped in a liquor composed of four parts of aquafortis and two of distilled water, holding one part of common salt or salt ammoniac in solution. Whenever the crystalline spangles seem to be thoroughly brought out, the plate must be immersed in water, washed with a feather or a little cotton (taking care not to rub off the film of tin that forms the feathering) forthwith dried with a low heat, and coated with a lacquer varnish, otherwise it loses its lustre in the air. If the whole surface is not plunged at once in cold water, but if it be partially cooled by sprinkling water on it, the crystalization will be finely variegated with large and small figures. Similar results will be obtained by blowing cold air through a pipe on the tinned surface, while it is just passing from the fused to the solid state.

Here is another recipe: Sulphuric acid, 4 oz.; s of water, 2 to 3 oz., according to the strength of the acid, salt, 1 1-4 oz. Mix. Heat the tin hot over a stove, then with a sponge apply the mixture, then wash off directly with clean water. Dry the tin, and varnish with demar varnish.

TO GLUE CLOTH TO TIN.

To fix a metallic to a soft substance requires a tough substance, not a varnish nor yet a glue, but India-rubber cement. Warm the metal and rub over with the cement, and when yet hot, apply the cloth and press with a hot flat iron.

HOT TO TIN CLOTH.

A mixture of finely pulverized metallic zinc and albumen, of about the consistency of thin paste, is spread with a brush upon linen or cotton cloth, and by means of hot steam coagulated. The cloth is now immersed in a bath of stannic chloride, well washed and dried. Running the cloth through a roller press, the tin film is said to take metallic luster. Designs cut in stout paper, letters, numbers, etc., when laid between cloth and roller, are impressed upon it. It can also be cut in strips, corners, etc.

TO GLUE LABELS ON TIN BOXES.

Labels can be glued on tin boxes, etc., exposed to moisture, by the following process, and they will not come off, even if dipped or allowed to remain in water.

The white of an egg should be mixed with half as much water, of the dissicated albumen of commerce dissolved in two or three times its weight in water. Apply with a brush to the surfaces to be united, then iron with a very hot flat iron. Several layers of paper and glue thus treated will render any box or anything of the kind impermeable to the water.

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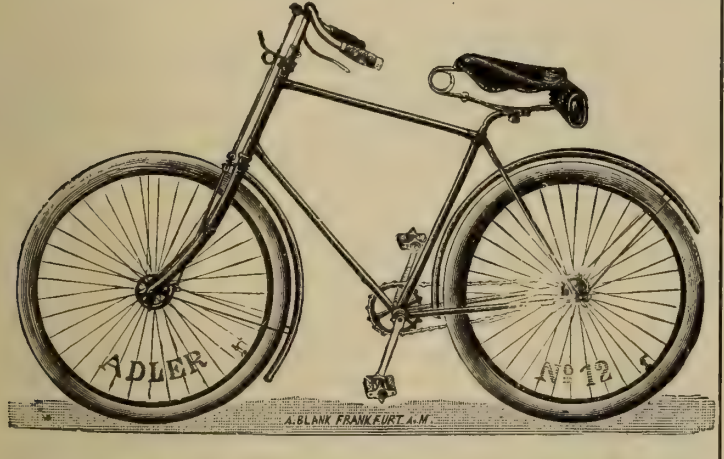
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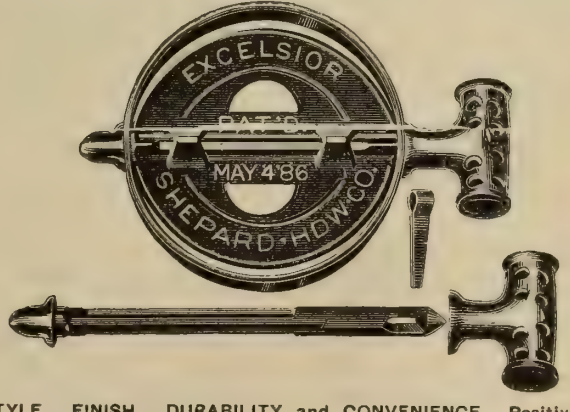
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Friction on outside of pipe, at both ends of spindle.

Acorn tip at end of spindle not only ornamental, but covers hole in pipe that is punched for spindle.

Spindles flat and do not turn in plate.

The shoulders or damper plate are made more flaring than usual, so as not to rub against the fin or rough edge around the hole made in pipe for spindle.

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PRAISES CANADA'S BANKING SYSTEM.

Referring to the present condition of affairs in the United States, The Montreal Gazette remarks:

"The immunity of Canada from the disorders which afflict our neighbors is attributed to our better banking system, sounder currency, and freedom from uncertainty respecting tariff changes, and in all these respects we unquestionably occupy a vantage ground. The branch system of banks, such as exists in Canada and Scotland, gives the managers of these institutions a better knowledge of and control over domestic trade than can be obtained under a system of small local banks like that of the United States. Moreover, the branch system facilitates the distribution of capital and currency. A sudden demand for money in any part of Canada can be readily responded to by our banks without friction or disturbance to other sections, whereas in the United States the measure of the banking facilities of each locality or State is the capital at the disposal of the purely local institutions. Our currency system combines the essentials of convertibility, safety and adaptability to the needs of commerce. Its volume expands and contracts not by arbitrary legislation, but in obedience to the demands of trade, thereby ensuring regularity in the rate of interest. The United States, on the other hand, has an arbitrary currency."

There is too much truth in this claim for our people to lightly ignore it. The Canadian banking system is immeasurably superior to our own in its working arrangements and in its specific adaptation to the wants of North American populations; and, in future modifications of our National system, no better model could be followed.—N.Y. Journal of Commerce.

WHY PLUMBERS ARE POOR.

I see that you have an open question in your paper as regards, "Why are Plumbers as a Class Poor." I don't propose to be able to settle this by my revision of it, I only wish I could reverse it so that it would read "Why plumbers are as a class rich." I only give my views and experience which are somewhat scattered. I have worked for S. B. Hubbard, in Jacksonville, Fla, the land of flowers, and P. V. Dwyer, Third street, St. Paul, Minn., land of zero and the ice palace, between those points I have experienced some vicissitudes of climate and fortune, but have only run a shop in this city (Atlanta, G.), and nearly all the places I visited I found poor plumbers, of course the two above mentioned, I am glad to say, are not of that class.

Most all small shops and some of the larger ones try to make their profit nearly all from labor, which I think is a wrong idea; merchants figure their clerks as an expense and not as merchandise, the burden of profit should rest on the material and not on labor; associations should uphold a fair and legitimate profit on all goods. Men start in this business, first from the bench, where their entire profits came from labor, and with that idea ruin the prices of material, thinking that their only expense is a living which they had before; they let owners of large bodies of real estate that have a great deal of work done know prices and discounts, and they educate them by itemizing accounts until they can tell you if you happen to overcharge on an elbow or trap. What is it their business to know how much putty or anything else is used, the result of the work is all that effects them.

I say, don't itemize an account, not of repairs, anyhow. I have tried to get our association to adopt it as a law. Take bidding on work, say sewer, we have it down so fine here that if the labor cost a little more than our estimate we lose money. The idea of trying to make a profit off a poor coon who gets $1.00 a day, a "princely salary" and such easy work, nothing to do but use a small pick and long shovel ten hours a day. We figure sewer at about cost, seven cents a foot, and if the dealer should sell our customers at less than ten or twelve cents a foot we would kick, and from the sewer on up it is the same.

We, in our local association, followed in the footsteps of others, I understand, made a price list and it would not stick, and dropped it, and now have only a social union, which, though, is doing good. I, as chairman of sanitary committee, have been to the board of health and mayor in regards to examination of plumbers, etc. The men seem more successful; they ask, and eventually demand good wages. Associations should have a minimum price that should never be underbid, and those that knew the business and wanted to see it upheld would soon root out these men who hurt the trade, as their days are numbered anyway. The good men should not hesitate to shorten the number, as it is no charity to them and it is a direct injury to the better class in the trade.—J.A.G.B. in Plumbers' Trade Jurnal.

BLAST FURNACE PRACTICE.

In a paper read at the International Engineering Congress in Chicago on this subject, E. C. Potter said:

It has been shown that rapid driving and low fuel are not incompatible, and the American practice has at last been thought worthy of serious consideration by our European friends. But progress is still the order of the day with us, Edgar Thomson having developed the practice of rapid driving, and South Chicago having added thereto the possibilities of fuel economy, the Edgar Thomson furnaces, under the masterly management of James Gayley, again claim the attention of the metallurgical world by still more marvellous achievements in the way of large outputs, low fuel consumption, and enormous increase in the life of the furnace lining. The last is the newest problem in furnace practice to which furnace managers have been devoting their best efforts, and in which Mr. Gayley has been signally successful. One of his furnaces, which has just completed 37 months of its present blast (April, 1893), has made in that time 370,000 tons of metal, and is now running at the rate of 11,000 tons per month. There is no reasonable doubt that this furnace will make over 400,000 tons on this lining. Mr. Gayley has records of 633 tons in a single day, 3,203 tons in a week, and 12,800 tons in a month, from a single furnace.

A record which compares with this, taking into consideration the difference in the size of the furnaces, is that of the Illinois Steel Company's Milwaukee No. 2 furnace. This furnace has 8,150 cubic feet capacity, and was running on foundry iron. The record is as follows:

Largest day, March 12, 1892, 225 tons of 2,268 pounds.

Largest week, 1,430 tons of 2,268 pounds.

Largest month, 31 days, 6,127 tons of 2,268 pounds.

Average per day, 197.6 tons of 2,268 pounds.

Fuel consumption last week, 1,824 pounds coke.

Fuel consumption, best month, 1,925 pounds coke.

Grade of product, foundry iron, 75 per cent. No. 1.

Average sulphur for month, 0.032 per cent.

This record reflects the highest credit upon the manager, T. W. Robinson. The yield for this month is at the rate of 2.42 tons per 100 cubic feet capacity per day, which, I believe, has not yet been equalled. In 1879 the same furnace was making regularly 350 tons per week with a fuel consumption of 3,500 pounds of coke per ton product. The alterations made in the furnace plant since that time consist in the substitution of fire brick, regenerative hot-blast stoves for the old iron pipe stoves, an additional blowing engine, altered lines, and a new manager. It is interesting to compare this record with that of Edgar Thomson furnace A of 1879 previously cited. The difference in the size of the furnaces is not so great—furnace A having 6,400 cubic feet capacity—but the comparison serves to indicate sharply the progress made in thirteen years. The records of these two furnaces stand as landmarks in the history of American blast furnace practice, the performance of A furnace in 1879 being as remarkable an advance over contemporaneous practice as that of the Milwaukee furnace of 1892 is over that of furnace A.

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TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

The Stanstead Granite Company has been incorporated.

The American Hardwood Co., Ottawa, is applying for a charter of incorporation.

Two hundred thousand men are estimated to be out of work in Chicago, and the mayor fears trouble.

The Steam Boiler and Plate Glass Insurance Company has received a license to transact business in Canada.

The G.T.R. Foundry and Bolt Works, Hamilton, will hold their annual picnic on August 12 at Victoria Park, Niagara Falls.

All the wire nail factories in the United States are closed down, and they will not be opened again at least until September.

The M.C.R. have laid off one brakeman on each of the locals, and the number of telegraph offices has been reduced and the operators laid off.

W. J. McMillan, a former Petrolea driller, who has recently returned from the oil fields of India, will shortly take back a number of drillers.

Hiram Walker & Co. have undertaken the work of piping natural gas to Walkerville from the South Essex fields. The cost will be about $100,000.

The Edmonton Bulletin says it is reported that about 800 musk ox robes were traded this spring at Forts Rae and Resolution on Great Slave Lake.

Gardner Bros., of the Essex handle works, shipped 1,000 dozen axe handles to Sudbury last week. A carload was shipped by them to St. Catharines recently.

A special train of 16 cars, containing 200 binders, left the Massey-Harris works, Brantford, one day last week bound for Buenos Ayres. They form half of a 400 order.

One hundred and thirty of the Canadian Pacific employees in the car shops at Montreal were discharged the other day. The majority of them are single men.

The Linden Steel Company, one of the largest concerns in Pittsburg, is financially embarrassed. The company has large Government contracts, and is engaged in the manufacture of armor plate.

The first open-air experiment for a statue in aluminum has just been made in London. It is the figure of an angel placed on the monument recently unveiled in memory of the Earl of Shaftesbury.

The phrase "to take care of" maturing commercial paper was construed by the Supreme Court of Minnesota, in the case of Yale vs. Watson, to mean to take up by payment or renewal, or to secure an extension of the time of payment.

A new system is to be established in Ottawa in connection with the postal service. The mails will be taken to and from the post office and the railway stations by the electric street railway, and several special postal cars will be built for the service.

All hands in the machinery department of the C.P.R. at Winnipeg have been notified that the shops will be closed all day on Saturdays, working the usual time for the rest of the week, viz., 10 hours. The shed department is to work 9 1-2 hours per day.

The Canadian Pacific has begun work on the telegraph line to run from Revelstoke to New Denver, Kaslo and Nelson. Two gangs of men are now employed, one working towards Revelstoke from Kaslo and the other from Revelstoke towards Kaslo.—Free Press, Winnipeg.

There is an agitation on foot at Ottawa, led by The Journal, to have an expert investigation of the capabilities of the water power at the Chaudiere and the Rideau Falls, as it is thought that it is unnecessarily monopolized at present by a comparatively few firms.

The British Admiralty have placed an order with the French firm, Delaunay, Belleville et Cie., for a battery of boilers of the Belleville type for the torpedo-destroyer "Sharpshooter," of 4,000 horse-power, now building in England. This is the first occasion on which such a contract has been placed out of the United Kingdom.

A very important change is being made on the Grand Trunk Railway by placing the Gould coupler on the cars in place of the Miller coupler. The reason for the change is that the cars from the United States had the Gould coupler, and a link had to be used to connect them with the cars in Canada, which would leave a space between of two feet, over which a board had to be placed for a footing.

The employees of the Gurney Foundry Co., Ltd., held their first annual excursion Saturday last. They went to Wilson Park, N.Y., by the steamer Garden City. The excursionists all told numbered about 550. The weather was delightful, and everybody had an enjoyable time. The programme of games contained twenty events, and $200 was given away in prizes. The works were closed down for the day.

The lumber trade between Montreal and South America is just recommencing. Several vessels have been chartered for Beunos Ayres at $9 to $10, which is, however, the lowest figure for a number of years. The trade is likely to experience something of a revival this year, as the Export Lumber Company has a large quantity to go to South America. This trade has been practically dead for a number of years back owing to the troubles in South America and other causes.

A Winnipeg paper says: James Conmee's recent visits to Winnipeg have been with a view of consolidating the various railway companies holding charters covering the territory between this city and Port Arthur. He has at last been successful, and the next move on the part of the amalgamated companies will be to apply to the Local Government for aid. It is said that sufficient Eastern capital has been secured to insure the completion of the road sometime during 1894.

In the Ontario Gazette, published on Saturday, is a notice applying for a charter for the Toronto Glass Company, with a capital of $50,000, divided into 500 shares of $100 each. The applicants are John Clark Malcolmson, superintendent; W. Keegan, Herbert H. Malcolmson, George Morris and William Barrett Griner, all of Hamilton; J. C. Malcolmson, W. B. Griner and George Morris are named as the first directors of the company. The company asks for power to manufacture glass and articles made of glass in all its branches.

A recent German invention for the purpose of preventing smoke when coal is used as fuel consists in reducing the coal to a powder and feeding this to the furnace with an air blast. The coal so prepared ignites at once upon entering the furnace and gives an intense flame. The dust does not fall, but floats in the furnace chamber, and is entirely consumed. There are no ashes, and it is said there is no smoke from using coal in this shape. The fire can be regulated the same as when oil is used, and it can be started or extinguished at pleasure.

The Standard Oil Company have decided to erect this year proper facilities for storing oil in Vancouver. A site has been procured at the corner of Cambie and Robson streets. A tank will be put in, a warehouse will be erected for cans and an office separate from both. Every precaution will be taken to make the building fire-proof, or in case any oil should catch fire that surrounding buildings will be in no danger. When the new buildings are completed there will be practically no more danger from fire there than were the commodity stored pig iron.—News, Vancouver.

The first iron casting made in America was a kettle or three-legged pot, weighing two and a quarter pounds and holding one quart. It was made at the Saugus Iron Works in 1642, and was

claimed as a part of the purchase consideration by the land owner who furnished the site for the works. It has descended as an heirloom from generation to generation, and was recently presented, by a lineal descendant of its first owner, to the town of Lynn, Mass.

G. B. Capel, who represents English capital, has returned from North Hastings, where he has been examining the different mineral deposits. Mr. Capel is a miner of long experience, and has visited most of the important mines in the world. He says North Hastings is the richest mineral county he ever saw, and made offers for several properties in the district.

The Mineral Water Review gives the following reasons why tinned vessels exposed to the action of mineral waters are apt to rust: "Pure tin is not affected at ordinary temperatures, but as soon as a portion of the tin is removed by injury so as to expose even a tiny speck of iron surface, corrosion at once sets in and proceeds very rapidly. The reason of this is of an electrical nature—that is, iron and tin together form what is called a "galvanic couple," which will decompose the water charged with carbonic acid deposited upon them from the air; oxygen and hydrogen gases are liberated, and the iron, having the greater affinity for the oxygen, is the metal attacked, in particular, such corrosion is very rapid when the exposed iron surface comes in contact with water highly charged with carbonic acid, as in a mineral water factory.

Andrew J. Kauffmann, of Columbia, Pa., filed a bill in equity in the United States District Court against the Chestnut Hill Iron Ore Company, alleging its insolvency, and asking for the appointment of a receiver. This company owns extensive iron ore mines near Columbia, Pa., and three iron furnaces in Columbia and iron ore mines in York County, Pennsylvania, and in Carroll County, Maryland, and is the owner of what is known as the Bachman Valley Railroad, a short road in York County, Pa., and Carroll County, Md. The capital stock of the company is $300,000, all paid in. The bonded debt of the company, secured by mortgage, is over $325,000, and its floating debt almost $200,000. At one time this company was one of the largest manufacturers of pig iron in Eastern Pennsylvania, but its furnaces at Columbia have been out of blast for some months.

Mr. Wm. Hood, collector for the McLean Publishing Co., Toronto, who publish five trade papers, came in on the noon train last Saturday to collect $40 due the firm in the usual small sums made up of subscriptions and in half an hour had the whole amount in his pocket. He says that in no other city, town or village on the continent had he a similarly satisfactory experience, and he went away with an exceedingly high opinion of Orillia tradesmen.—Packet, Orillia.

Macdonald's store at Morden was broken into Sunday night. The burglars effected an entrance by a cellar window, then through two doors opening into the store above. Once in the store they made themselves comfortable, ate some crackers and cheese, took off their old shoes and stockings and put on new ones.

Coal was advanced to $5.75 in Toronto Friday. The miners are now said to be insisting rigidly upon cash, and cash only, refusing to take the very safest paper; and the necessity thus imposed has kept the trade very quiet and restricted the number of orders. The depression, however, by lessening the demand for coal, will in all likelihood keep down the price.

The Nelson members of the South Kootenay Board of Trade have now elected their officers for the ensuing year with a view to active work. The Board strongly urges the building of a trunk road from Nelson to New Denver, and the creation of an independent Customs district for Kootenay Lake, reporting directly to Ottawa and not through New Westminster.

PERSONAL MENTION.

W. S. Leslie, of A. C. Leslie & Co., has just returned from a business trip east and west. He reports having done a nice trade in cutlery, particularly in Dickinson's carvers. The prospects for fall trade he considers excellent. Mr. Leslie will in a day or so start off on a couple of weeks' holidays.

D. A. Stoddart, of Clinton, B.C., was in Toronto this week on business.

C. F. Grover, V. E. Ashdown and E. J. White, three of S. H. Howland, Sons & Co's travelers, are in the warehouse this week preparing their lines of samples for the fall trade. They boast that they will have the finest line of cutlery they ever carried.

Mr. Chas. Grist, hardware, of Strathroy, has sold out his stock of goods to Marshall & Mason.

BRUSH-MAKING.

The manufacture of brushes is divided into five different branches, explains House Furnishing Review. The brushes are made of a great many different materials. Branch No. 1 is made of what are called drawn brushes, and consist principally of shoe, scrubbing and blacking brushes. These goods are made of tampico, a vegetable matter that is found in Sicily and Mexico, cocoa, of which mats are made, and rice roots, the latter being used for the better quality of scrub brushes.

In making these goods, the backs being of wood, the holes are first bored, and the material of which it is made is first sorted for sizes, and then made into small bunches and drawn through the holes with wire and securely fastened. The backs are then glued or tacked on or sandpapered. If shoe brushes, handles are put on, the work is varnished and boxed, and it is now ready to clean either the floor, the stove, or a pair of shoes.

The second branch is called "leather work," and comprises horse, cloth and store brushes. These goods are made of bristles of various kinds. The bristles principally used are from France, Belgium and Russia, with some few secured from the American four-legged hog. The best bristles used are those which come from Russia, where the hogs are raised principally for the bristles. In some parts of Russia this is quite an industry, and gives employment to a number of people. The hogs are kept in droves, with a watcher for each drove. In the field in which they are kept small stakes are driven in the ground, and as the animals rub themselves against the stakes the bristles fall to the ground and are carefully collected by the attendants. They are made into bunches and carried to the principal cities, where they are sold to the brokers. This industry is under the protection of the Government, and some of the bristles sell as high as $4.50 a pound in Russia. Some of them will measure five and six inches in length, while the bristles from the American hog average from two and three-quarters to three and a half inches. The American bristle is more chiefly used in the cheaper grades of brushes. In preparing the foreign bristles, they are first thoroughly washed and cleaned, then sorted for quality and then for sizes. When used in the second grade of work they go through the same routine as No. 1, except that the backs are sewed on and the bristles trimmed by machinery. Branch No. 3 is called "set work," and includes painters', dusters, counter dusters, and sweeping brushes.

These are first bored according to pattern, the bristles tied in bunches and cemented in the holes and the bristles trimmed by hand, some being oval and the others flat. Branch No. 4 is painters', whitewash, calcimine and sash tool brushes. In this branch great care is necessary in the selection of the bristles. In the better grade of the imported article each bristle has three separate prongs, or "flags," as they are called, and in sorting them for this grade of work, it is necessary to have these flags curl towards the centre.

When arranged in bunches they are inserted in a ferrule, after which the handle is driven in from the opposite end. In preparing painters' wall brushes, the bristles are placed around the block end of the handle and then bound with leather which is nailed over the butt end of the bristles. Whitewash brushes are made in the same way as are sash and shaving brushes. Branch No. 5 is called the artist department. Here are made all sorts and sizes of brushes suitable for the artist in colors. They are made from camel's hair, from the ears of oxen, different colored sables and badger's ears. The material is cut and combed into different sizes, after which the colors are sorted and made into different grades of brushes.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Aug. 11, 1893.

HARDWARE.

Trade in hardware is quiet, the midsummer dullness ruling now on almost every line. As a natural result there is very little of interest to report. Despite this, however, some business is doing, principally in shelf goods, for which small mail orders continue to dribble in, inducing a moderate business in cutlery, sporting goods, etc., etc. Payments are much the same, but there is usually very little to report in this connection for the month of August. Next month the returns will be a reliable indication of what the fall possibilities are, as the farmers will know pretty well how they stand by that time.

WIRE—A fair trade in a small way is passing, and we have nothing special to report.

NAILS—Makers report that they are busy enough on fall account, so that jobbers are evidently preparing for a good fall trade. The latter report a moderate jobbing demand at the standard prices.

TACKS—Trade is quiet.

CHAIN—There has been further enquiry with regard to logging chain. Otherwise there is nothing special to mention.

TOOLS—All descriptions of tools are quiet.

CUTLERY—Some sorting orders are noted, but the aggregate movement is small.

SPORTING GOODS—Jobbers are getting in supplies, but beyond a few small orders the movement from second hands is not noteworthy.

WARE—An enquiry in a small way for enamelled ware is all there is to note in this line.

BUILDERS' SUPPLIES—Furnish no special change.

BINDER TWINE—There is only a moderate business doing.

METALS.

Trade in heavy hardware and metals is quiet, the only lines which show any activity being tin plates and Canada plates.

PIG IRON—The pig iron market is dull, the volume of business being very small. Summerlee is offered to arrive at $17.50 in the fall, but the price ex yard remains at $19 and $18.50 ex wharf. We quote as follows:—Summerlee, $18.50; Eglinton, $17 to $17.25; Carnbroe, $16.75 to $17; Siemen's No. 1, $18, and Langloam, $18.50.

BAR IRON—Business is of moderate volume with no change in price.

SCRAP IRON—Nothing has transpired in this line of importance.

TIN PLATES—There have been some fair transactions in these for import on the basis of $3.20 to $3 25, with cokes $3.75 to $4.

CANADA PLATES—Several 100-ton lots have been placed for future delivery at $2.40 to $2 45.

TERNE PLATES—Ternes are quiet and steady at $7 to $7.25 according to grades.

GALVANIZED IRON—Makers' agents have been placing quite a few lots of these for future delivery at 4½ to 5¾c. according to grade.

SHEET IRON—There is no change in sheet iron, which rules dull at $2.40 to $2 60. Russian sheets are steady at 10½ to 11c.

HOOPS AND BANDS—There is no new feature to note, and prices are unchanged at $2.35.

COPPER—There is nothing doing in copper of importance, and we quote 11¾ to 12½c.

TIN—Business is small and prices rule steady at 22 to 22½c. Bar tin is quoted at 25c.

LEAD—Continues flat with prices at $2 90 to $3, as before.

ANTINONY—No change, quotations being 10½ to 12c.

SPELTER—Is the same at $4 75 to $5.

ZINC SHEETS—A few small lots have been moving at $5 to $5.50.

CEMENT—There has been an increase in business in cement during the week, but only in a small way. We quote: Belgian, $1.85 to $1.95, and English brands, $1 95 to $2.10. Firebricks are in fair demand at unchanged prices, $13.50 to $19 per 1,000 being still the idea.

NAVAL STORES—A fair demand is to note for naval stores at steady prices. We quote the following:—Turpentine, 47 to 48c.; resins, $2.50 to $5.00, as to brand; coal tar, $3.75 to $4; cotton waste, 5½ for colored, and 7 to 10c. for white; oakum, 5½ to 7½c.; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep-sea line; pure Manilla, 11c. for 7-16 and upwards and 12c. for smaller sizes.

PAINTS AND OILS.

There is nothing particular to note in this line, business ruling quiet both in leads and oils. Linseed oil is steady and fish oils show no particular change. We quote the following:—Choice brands white lead, Government standard, $5; No. 1, $4.75; No. 2, $4.50; No. 3, $4.25; No. 4, $4.00; dry white lead, 5c.; red lead, pure, 4½c.; No. 1, 4¼c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, round lots, raw, 60c., boiled 63c.

GLASS.

The glass market is dull and featureless. We quote the old bases of $1.35 first break and so on. Putty in bulk continues steady at $1.85.

PETROLEUM.

There has been little change in this line during the week, the market ruling dull. We quote at 11½c. in shed in Montreal for Canadian round lots, and 12½c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c in 10-barrel lots, 19½c. in 5 barrel lots, and 19¼c. for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c.; Canadian benzine, 10¾c.; Petrolea, 12¾c. for Montreal.

MONTREAL TRADE NOTES.

The New Glasgow Forge Co. are shipping a round lot of 2000 tons Fenona pig to Montreal. It is consigned to Drummond, McCall & Co., the sole agents of the Forge Co.

W. H. Cottingham & Co. note a ready sale for Blundell's enamel points, for which they are the sole Canadian agents.

H. McLaren & Co. have had several enquiries regarding Magnolia metal.

Painchaud, Squire & Co. have been forwarding several good sorting orders for their Fox cutlery recently.

A. J. Whinby, of Simpson, Hall, Miller & Co., was a prominent figure at the St. Lamberts boating regatta.

Norman W. McLaren is entering into partnership with Mr. T.W. Ness, of electrical

Adamant Steel Ware



A High Grade of ENAMELLED WARE

We have just received a large importation of this superior ware, including Preserving Kettles, Saucepans, Tea Kettles, Teapots, Coffee Boilers, Milk Kettles, Dippers, Pie Plates, Basting Spoons, Etc., Etc. If not supplied, send sample order at once.

AT A MODERATE COST

Satisfaction Guaranteed.

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BUSINESS CHANCES.

Advertisements inserted under this heading two cent per word each insertion.

WANTED—HARDWARE TRAVELLERS with responsible houses, to carry a small side line, not in Hardware line, but useful to hardware trade. Will probably increase trade in other lines and be a convenience to your customers. All communications confidential. Address, W. M. Titus, Box 1092, St. Thomas, Ont.

Sault Ste. Marie Canal.

SEALED TENDERS addressed to the undersigned and endorsed "Tender for Lock Gates," will be received at this office until noon on Saturday, the twelfth day of August, 1893, for the construction and setting in place in working order of five pairs of Lock Gates at the Sault Ste. Marie Canal.

Plans and specifications of the work to be done can be seen on and after the first day of August, 1893, at the office of the Chief Engineer of Railways and Canals, Ottawa, where forms of tender can be obtained.

In the case of firms there must be attached the actual signatures of the full name, the nature of the occupation and place of residence of each member of the same, and, further, an accepted bank cheque for the sum of $,500 must accompany the tender. This accepted cheque must be endorsed over to the Minister of Railways and Canals and will be forfeited if the party tendering declines entering into contract for the work at the rates and on the terms stated in offer submitted. The accepted cheque thus sent in will be returned to the respective parties whose tenders are not accepted.

This Department does not, however, bind itself to accept the lowest or any tender.

By order.

J. H. BALDERSON,
Secretary.

Dept. of Railways and Canals,
Ottawa, July, 1893

A FEW REASONS WHY

You should Keep your Stock fully Assorted With

Boeckh's Superior Brushes

They are always reliable and as represented.
They are guaranteed in every particular by the manufacturers.
They are made of the very best material and workmanship
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They are finished and put up in neat and attractive shape.
They are well known throughout the Dominion and are popular with all classes of consumers.
They are handled by all leading Hardware and Paint and Oil trade.

See that the name "BOECKH" Is on every brush.

Boeckh's Flexible Bridled Brushes.

Practical Painters and all who use Brushes have long felt the need of a first-class adjustable BRIDLE for Round, Oval, and Flat Painting Brushes, etc., and one trial of our Flexible Bridle will convince the most sceptical that our invention is a practical success.

CHAS. BOECKH & SONS

BRUSH MANUFACTURERS,

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GAS, ELECTRIC, AND COMBINATION

Fixtures

Of English, Canadian, and American designs. . .

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Staple Brackets and Gas Fittings. Select stock of above always on hand.

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GREATEST VARIETY
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Every dealer should see our samples before placing their orders. If you cannot wait for our travellers, send for catalogue and price list. We are sole agents in Canada for the CLARK BROS. LAMP CO, of Trenton, who are the largest manufacturers of Vase, Banquet, and Hanging Lamps in the world.

ALL NEW LINES. NO OLD STOCK.

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TORONTO -:- and -:- VANCOUVER

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LIMITED.



LAWN SPRINKLERS,
GARDEN HOSE,
HOSE REELS,
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Business, by selling



"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.



The Gurney-Tilden Co. Ltd.

Successors to The E. & C. Gurney Co.

HAMILTON - - ONTARIO.



MONTREAL Markets Continued.

supply fame. The firm's new title will be T. W. Ness & Co. The firm's business has more than doubled during the present summer, and they can hardly meet the demand for their specialties despite their increased facilities.

Francis, Hyde & Co. note a somewhat better demand for cement during the past week in the way of small sized orders for 20 to 25 cask lots.

The Canada Iron Furnace Co. are having an artesian well bored at their works at Radnor, Que.

Wm. Clendinneng & Son Co. have been placing quite a number of their "Etna" hot water boilers recently.

TORONTO MARKETS.

TORONTO, Aug. 11, 1893.

HARDWARE.

Trade is better than could be expected. It may be said to be even surprisingly good. The travelers are all in the houses, but letter orders are numerous—more so than is even customary—and in this way the shipping rooms are kept busy. The orders however are of course small individually. The frequency of these letter orders is taken as an indication that country stocks are in good shape for the fall trade. Quite a demand for lumbermen's outfits has sprung up during the past week, particularly from British Columbia. Cutlery orders are increasing in a small way. Some good sorting up orders are reported for tacks and a good business is still doing in nails. Orders are coming in fairly well for ammunition, guns and rifles, particularly the last named. Demand for ware is growing less. In plumbers' supplies a little better business is reported and a fair amount is being done in builders' supplies. Payments are much as before, although whatever change there may be is towards an improvement.

WIRE—There is some movement in hay baling wire, but otherwise there is nothing to note.

ROPE—Not much doing and there is no special feature to note.

BINDER TWINE—Occasional orders are being received, but taken on the whole the demand has been about satisfied for this season.

CUTLERY—A good many small orders are reported, and taken on the whole a nice trade in this line is being done.

NAILS—Demand is keeping up well, both in cut and wire nails. Prices are unchanged.

TACKS—Some nice sorting up orders are reported in this line.

CHAIN—Some enquiries are reported and a fair business has been done in the smaller sizes, principally for plowing purposes.

SPORTING GOODS—Trade in amunition, guns and rifles exhibit some increase, particularly in the last named.

WARE—The demand for peerless ware, except it be for kettles, is slackening off. Sales for enamelled ware are also growing less.

PLUMBERS' SUPPLIES—Are in little better demand, a good many old houses being refitted with baths and boilers.

BUILDERS' SUPPLIES—A nice sorting up trade is being done with the country.

TOOLS—There is nothing doing, and the only thing to note is that the Canadian manufacturers of harvest tools have entered into an agreement to fix prices.

METALS.

Business in this line seems to be a little more active, and there is a firmer feeling in regard to iron on account of the coal strike in England. There is a little more disposition to book orders for pig iron, and some sales of 50-ton lots are reported, and a few large round lots of bar iron have been moved at the regular basis. Hoops and bands are not much wanted, but iron pipe is in fair request. Taken on the whole a fair sorting up trade is doing in metals at unchanged prices.

PIG IRON—There is a little more disposition to book orders on account of the expectation that the miners' strike in England will lead to an appreciation of prices. Prices have not been affected here, but iron is likely to be scarce if the strike continues. Sales of 50 ton lots of Carnbroe are reported at $19, and of Carron at $20.50, Toronto freights.

Rogers, Brown & Co., Buffalo, report the Toronto pig iron market as follows: Although generally speaking foundries are not as busy as last year at this time yet there is quite a respectable tonnage being consumed. Stove radiator and heater works are well employed, but everything connected in any way with building operations is dull. Prices rule abnormally low. Furnanes are unquestionably selling at what nets them a loss. We quote for cash f.o.b. Toronto, in bond: IX strong Foundry Coke Iron, Lake Superior ore, $15.20; 2X Foundry Strong Coke Iron, Lake Superior ore, $14.45; 2 Foundry Strong Coke Iron, Lake Superior ore, $14.20; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17.45; Southern Soft 1, $13.60; Southern Soft 2, $13.10.

BAR IRON—Some large round lots have changed hands at the regular basis, namely $1.95.

HOOPS AND BANDS—Demand is not at the moment generally good, although some nice orders have been received on British Columbian account.

IRON PIPE—Quite a nice trade is doing in Scotch pipe at 62½ per cent. off list up to 2 inch, but this price would be shaded for quantities.

CORRUGATED IRON—Not much doing and prices are steady at $4 75 to $5.

GALVANIZED IRON—A nice sorting up trade is reported at 5 to 5¾c. for Queen's Head and Gordon brands.

TIN PLATES—Quiet and unchanged.

TERNE PLATES—There is a little more going out for roofing purposes, but trade generally speaking is quiet in this line.

CANADA PLATES—A large number of orders are being booked and quite a number of deliveries have been made already. Prices unchanged, all dull being quoted at $2.65, half half at $2.75, and all bright at $2.80 to $3 per box.

INGOT TIN—Demand is steady and prices are unchanged at 23 to 23½c. for small lots.

INGOT COPPER—A little more enquiry is heard, and some orders have been placed at 12 to 12½c.



SHEET IRON—A number of orders are being executed in this line at from 2½ to 3c.

ZINC SHEET—The season for this is now drawing near and enquiries are beginning to be made. For small lots, the idea is 5¾ to 6c. for 5-cwt. casks and 6 to 6¼c. for part casks.

SPELTER—Dull and unchanged at 3¾ to 5⅞c.

LEAD—There are enquiries for small lots at firm and unchanged prices; 3½ to 5c. is the idea.

SOLDER—Very little doing. Bar and half-and-half is quoted at 15½ to 16½c., standard at 14½ to 15½c.

ANTIMONY — Local demand has been checked for the moment on account of the arrival of some import orders. We quote small lots at 12 to 12½c. for Cookson's and 11½ to 12c. for common.

PAINTS AND OILS.

As it was announced it probably would, the Ontario Association at its meeting the other day, decided to drop the price of turpentine 1c. per gallon. The price is now 44 to 46c. the latter being for outside points, freight allowed. The general trade is quiet, although probably not more so than is usual at this time. In white lead there is the usual trade doing at this season, which is not a great deal; the basis remains unchanged at $5. Prepared paints are slow and unchanged at $1 to $1.20. Varnishes are quiet. Linseed oil is in active demand with prices firm at 60 to 62c. for raw and 63 to 65c. for boiled. Payments fair.

GLASS.

Trade shows some improvement in this line, a good business being done at the basis of $1.25 to $1.30 first break. Some large quantities of plate glass have been moving at 35 to 40 per cent. discount.

OLD MATERIAL.

Supply continues good but the demand is poor. Prices unchanged. We quote as follows. Agricultural scrap, 60c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 35 to 40c. per cwt.. No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings and turnings, 10 to 15c.

PETROLEUM.

The Petrolia Advertiser in in its weekly report says: The same state of monotonous inaction that has characterized the dealings on 'Change the past couple of months is still apparent, although the price of crude remains firm at at $1.05 without any sellers; $1.07 is freely offered for August delivery. This state of affairs must soon change. With the stock in hand at least 10,000 bbls. less than at this date last year, the consumption quite ten per cent. greater, and the drill practically at a standstill, it does not require any great profit

MARKETS—Continued.

to tell us that prices must soon take a jump. Speculators might do much worse than acquire all the crude obtainable at the present market price for "futures." Refined remains unchanged and may be quoted at 10c. f.o.b. here in car lots.

Business on the Toronto market continues to show some improvement, particularly in burning oils, and present prices are steady. We quote, 5 to 10 bbl. lots, imperial gallons, Toronto: Canadian, 12½ to 13c.; carbon safety, 16½ to 17c.; Canadian water white, 17c.; American water white, 18½ to 19c.; photogene, 22c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—Are quiet. A few car lots are being held at 4¾c. for short-hair fresh hides. No sales at all are reported for long-haired winter hides.

SKINS—Nothing new since our last reports in skins. Prices continue the same. Lambskins, 45 to 50c.; for calf skins dealers are paying 7c.; pelts are standing at 25 to 30c.

TALLOW—Tallow continues slow of sale. At this time of the year good tallow is hard to get, and the factories will not take poor tallow at any figure. Prices are the same, dealers paying 5c. and selling from 5½ to 6c.

WOOL—Wool remains about the same, nothing much doing. Present holders are asking more than dealers are prepared to give. A few lots have changed hands at a basis of 17c. for selected combing.

MARKET NOTES.

Turpentine is 1c. cheaper at 44 to 46c.

A good trade is reported in Lane's hangers by M & L. Samuel, Benjamin & Co.

The Premier Oil Co., Petrolia, has assigned and is succeeded by the Imperial Oil Co.

H. S. Howland, Sons & Co. are offering peerless iron ware at special prices for round lots to clear out stock.

The White Lead Grinders' Association met in Toronto Wednesday. Business was of a routine character, no changes being made in prices.

Large sales are reported in the Rapid and and Lady Stanley carpet sweepers, special lines of which are handled by M. & L. Samuel, Benjamin & Co.

A glass factory is to be started in the west end of Toronto. It will employ 35 men, and will manufacture all kinds of glass ware. A Mr. Witton is the promoter.

H. S. Howland, Sons & Co. have been again appointed wholesale agents in Ontario for Rixford's harvest tools. The trade is advised to place orders early for these goods.

The Gurney Foundry Co. have this week received an order from the Victoria Iron Works for one of their largest Oxford Crown heaters for the Protestant Orphans' Home building at Victoria, B.C.

M. & L. Samuel, Benjamin & Co. say that trade is opening up well for their "Argentine" nickle tea kettle, which last year had such a run on the market. The firm expects a largely increased business in this article.

H. S. Howland, Sons & Co. have a full line of Hartz's steel blocks in stock, single, double and triple, from 4 inch up to 12 inch inclusive. A shipment was made to British Columbia the other day for the vessel trade out there.

H. S. Howland, Sons & Co. are in receipt of a large stock of Baldwin's gun wads, American "Dead Shot" and Schultze's smokeless gunpowder. The firm is now filling orders which were booked ahead. Large shipments have been made to Manitoba, the Territories and British Columbia.

The Magnolia Metal Company, which sells its metal all over the world, extends to its friends an invitation to visit its exhibit at the World's Fair. It can be found at Section No. 10, Column No. E. 53, where all people who are interested in the running of machinery with the least amount of friction are welcome.

The Bowman Hardware & Sporting Goods Co. report that the American wood powder is gaining ground upon other smokeless powders. The wonderful performances made with it at the largest tournments, both on live and artificial birds, commends it to every sportsman. The Bowman Hardware & Sporting Goods Co., of Hamilton, are sole agents for this powder in Canada, and they invite a trial.

The Windsor Patent Brush Co. (Ltd.) have secured temporary quarters in the old furniture factory, Sandwich, and are making brushes, whisks, and brooms, and the firm reports that there will be very little delay in filling present orders, and none at all in filling orders it may now be favored with. The building is fitted up with a 35 h.p. boiler and all the necessary wood-working machinery.

The employes of Frankel Bros., The Toronto Mill Stock Co., and The Toronto Smelting Works held their annual picnic at Long Branch on August 5th. The games were interesting and amusing, especially the foot race, in which every one present took an active part. Through some unfortunate misunderstanding those who did not return on the 7.15 p.m. boat were compelled to walk home, a distance of about eleven miles, and that too in muddy roads.

On another page will be found the advertisement of the W. J. Gage Co. (Limited), wholesale booksellers and stationers. They are also manufacturers of blank books, envelopes and writing tablets. Their line of school blanks, such as composition exercises, scribbling and note books, they claim is the finest produced by any house in America. One great feature in connection with their business is the careful attention which they give to the execution of orders sent them by mail. Dealers who sell any of the lines of goods which they handle will find it to their advantage to put themselves in communication with this firm.

AMERICAN MARKETS.

New York, August 11.

PIG TIN.—The movement in pig tin was on a very moderate scale, but, such as it was, served to show that tin, like other merchandise, is a slow asset, and saleable in round lots only at comparatively low prices despite its comparative cheapness and the possibility of the duty being made to raise prices to a parity with present cost in Europe during the next thirty days. During the forenoon about 35 tons were sold for prompt delivery at 18.45c. net cash. August delivery was 18.55c. bid, at about the same time, and more distant futures were relatively as low, reflecting, upon the whole, a disturbed and rather weak market.

COPPER—The market remains in somewhat ragged condition, and actual market value is exceedingly difficult to determine. On the Metal Exchange there were offers to sell Lake Superior ingot at 9.80c. for prompt and 9 3-4c. for September and October delivery. Still producers' representatives claimed that anything below 10c. was an exceptional price and purely a speculative one. All accounts went to show that the market is a soft one, however, and that business is disappointingly slow, not only in Lake Superior ingot, but in other varieties. The nominal price for electrolytic copper is 9 3-4 to 9 7-8c., and for common casting stock 9 1-2 to 9 5-8c. is quoted.

PIG LEAD.—Moderate quantities of common domestic were offered at 3.30c. Bids of 3.25c. for lots of 100 to 500 tons were refused. Little business resulted. The market, while quiet, thus showed somewhat firmer tone, and afforded reason for the belief that a considerable quantity of metal would have been taken at 3.25c. were sellers disposed to accept that price for current month or October delivery. London cable to the Metal Exchange was £10 2s. 6d. for soft Spanish.

SPELTER.—The demand is still spiritless, but more attention was paid to offers made, and, as far as that goes, the market showed better form. However, ordinary Western brands could have been secured at 3.95c., possibly at 3.90c., landed here, early shipment



ENGLAND'S SMOKELESS POWDER.

The smokeless powder adopted by the English Government is known as cordite. It derives its name from its structure, the powder being made up of strings or cords of various thickness, from 3-100 to 1-2 inch in diameter. The thick cordite is cut in long strips of 14 inches. The cordite used in field guns is cut in strips measuring 11 inches in length. The small-arm ammunition is made up of 60 strands to a load. According to Col. F. W. Burke of the British artillery, the new cordite is a combination of nitro-cellulose and nitro-glycerine. The combination is 37 per cent. gun cotton, 58 per cent. nitro-glycerine, and 5 per cent. vaseline, to which is added a proportion of acetone distilled from wood. The mixture takes on a stringy form. In magazine rifles a charge of 70 grains o black gunpowder gives a velocity of 1,830 feet a second, while 30 grains of cordite gives a velocity of 2,000 feet.

SILICIOUS FIRE BRICK.

The plan which Joseph Khern, the Austrian metallurgist, has introduced for the manufacture of silicious fire bricks, is said to be an excellent one, says an exchange, and the material produced he describes as being much superior to any other refractory product obtainable in Austria.

The chief ingredient employed is quartz, which must be of the highest degree of purity, especial care and watchfulness being exercised to reject all such portions as show any admixture of iron or copper pyrites, carbonate of lime, or even mica, or felspar. This preparation is similar to that observed in the manufacture of Dinas, and the silicious fire bricks made at Stolburg, near Aix.

The quartz, having been selected in the manner described, is heated in quantities of from 12 to 15 tons in a Rumford oven, or a continuous kiln, as for lime, may be used. At the end of 12 hours, having reached a full red heat, it is thrown into water; the best fragments are then selected and afterwards cleaned by a simple jigging process, and then subsequently crushed under a tilt hammer until sufficiently fine to pass through a sieve having 60 holes to the square inch, which leaves the particles coarse and sharp. Two varieties of fat clay are used to bind the closely pulverized quartz the clays differ slightly in plasticity, and are very carefully prepared by thorough weathering, pulverization, under light stamp heads, and fine grinding under edge rollers. A final sifting is performed through a very fine sieve of 600 meshes to the square inch.

The tilt-hammer used for pulverizing the quartz weighs 250 lbs., and is capable of crushing 3 1-2 tons of the burned quartz in 12 hours. In selecting the quartz the purest quality is reserved for the first quality of bricks, which have to resist the greatest temperatures and sudden changes, while the second and third classes of bricks are made for less exposed positions, and are composed chiefly of the remains of bricks which have been once used, and again pulverized and sifted afresh.

The following are the compounds employed for the different classes of bricks: First-class, 16 parts of quartz to 1 of plastic clay, or 14 parts of quartz to 1 of leaner clay; second-class, 16 parts of ground bricks of the first class to 1 of clay; third-class, 8 parts of ground bricks of the second and third class to 1 of clay.

TIN IMPORTS FOR THE YEAR.

The official returns of the United States Bureau of Statistics give the following figures for the fiscal year ending June 30, 1893: Total importation of tin into the United States, 61,076,464 lbs., of which were exported 231,204 lbs., leaving, 60,845,260 lbs.; of which were imported into Pacific ports, 2,680,777 lbs.; leaving a net importation of 58,164,483 lbs.; equal to 25,966 tons, of 2,240 lbs. for the United States, excluding the Pacific ports. According to these figures the consumption of the United States for the year ending June 30, 1893, has been as follows: Stock, June 30, 1892, 3,800 tons; import for year ending June 30, 1893, excluding Pacific ports, 25,966 tons; total, 29,766 tons; stock in the United States, excluding Pacific ports, June 30, 1893, 9,910 tons; consumption for year ending June 30, 1893, excluding Pacific ports, 19,856 tons; imports into Pacific ports during the year, taken as consumed there, 2,680,777 lbs., equal to 1,197 tons; total, 21,053 tons. These figures are brought out as a further proof of the correctness of the monthly statistics compiled by the New York Metal Exchange. The latter, with the beginning of this year, took the consumption of the United States, excluding the Pacific ports, at an average of 1,600 tons per month; the actual consumption appears to have been 19,856 tons for the year, giving an average of 1,655 tons per month.

THE NOISE FROM A GAS ENGINE.

Among the various engineering investigations which for some time have engaged the attention of mechanical experts, remarks a contemporary, is that having in view some ready method for deadening the objectional noise made by puffs from the exaust pipe of the gas engine, but only an indifferent amount of success has hitherto attended these efforts. The most recent contrivance of the kind is a device described in a French journal, and claimed to be simple, and inexpensive. Briefly, a pipe split for a distance of about two metres is attached to the end of the exhaust, with the split end upwards, and, beginning at the lower end of the cut, which may best be made by a saw, dividing the pipe into two halves, the slotted opening is widened out toward the top until it has a width equal in extent to the diameter of the pipe. Under this arrangement the puff of the exhaust spreads out like a fan, and the discharge into the open air takes place gradually, the effect produced depending somewhat on the flare of the tube.

LIGHTING A GIVEN SPACE.

In answer to an enquiry of a correspondent, the Architects' Electrical Bulletin gives the following:

The number of incandescent lamps required to illuminate a given space is arrived at from a computation of the square feet of flooring, allowing one lamp to so many square feet, according to the kind of illumination required.

On this plan it is pre-supposed that chandeliers are employed, and not ceiling work. Chandeliers should depend from the ceiling uniformly at a distance of about seven and one-half feet from the floor in order to get the best results. At this distance it is correct to allow one 16 c.p. lamp to forty square feet for excellent lighting; for good lighting it is customary to allow one 16 c.p. lamp to sixty-four square feet, and for general illumination, one 16 c.p. lamp to one hundred square feet of floor.

In ceiling work which is becoming more and more popular where expense is not considered, lamps may be used ad libitum. In this kind of work no rules can be observed, as height of ceiling, color of decorations, effect intended, and many other things may be taken into account by the artist.

The candle power of arc lights is so variable that their use is limited to big spaces, and the best result from any given light is simply a matter of experiment, and cannot be arrived at by any rules at all. In regard to the cost of the installation of the Interior Conduit system, including wire and labor, it it safe to say that a fair average is $3 a lamp. This does not include fixtures.

From present appearances it would pay to put another vessel on the Canadian-Australian line immediately, as almost a full cargo has already been obtained for the SS. Miowera on her return trip, although she does not sail until August 16th. Besides the 25 cars of machinery coming from Chicago, two cars are now en route from the Massey-Harris Co.'s factory at Toronto, and three more are coming from San Francisco, so that freight is being taken away from the San Francisco line. There are also 1,000 cases of salmon waiting shipment, while there will be further shipments of lime and shingles. All the available room in the cold storage chamber has already been taken. Twenty passengers by this vessel have also been booked.—News, Vancouver.

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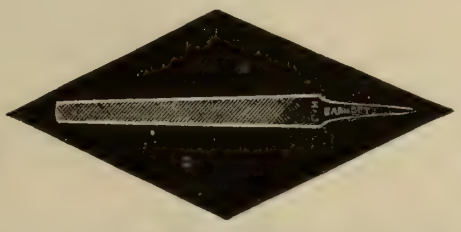
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SHOP INSPECTION OF BRIDGES.

The term inspector is generally applied to the person employed by the engineer or the persons for whom the work is being constructed, having power to reject all work that does not comply in every respect with the specifications. (Such persons may be termed shop inspectors, but not in the sense that the term is used in this paper.) A shop inspector is a person employed by the manufacturers ; his position is in the shops and his duties are to see that all errors due to workmanship are corrected before the material is taken into the field. It is not only his duty to see that the work complies with the specifications, but that the painting is done properly, and that the material is loaded for shipment in such a manner as to be unloaded in the shortest possible time and at the least possible expense.

The methods of inspecting the various parts of a structure will be briefly mentioned. First consider the floor beams and stringers, which are generally the first parts of a contract completed. See that all the rivets are tight. This is accomplished by tapping them lightly with a hammer, generally made for that purpose. If any loose rivets are found, do not have them cut out until their position in the piece has been carefully considered. Notice the plates that are riveted together. If they have been pressed closely together, have the rivet cut out and replaced by another. But if the plates do not appear very close together most likely there is a burr formed around the rivet between the plates. Hence to back out a rivet of this kind would necessitate shearing off this burr, which in many cases proves to be more injurious than the loose rivet. Calking rivets is advisable only in such cases as this. Special care should be taken in the inspection of the riveting in large beams ,especially plate girders, where there are four or five cover plates riveted to the flange angles. If too many loose rivets are found, the foreman of the riveting crew should be notified, since they are often caused by the machine being out of adjustment, or the rivets not being of equal temperature when driven. Every riveted piece of a structure should be thus inspected.

Proceed with the inspection of the floor beam by examining the lateral hitches. See that the pin holes which take the lateral bolts are the right size and the proper distance apart. If the lateral system is composed of angles, be sure that the spacing of the field rivets is correct. Measure very carefully the spacing of the rivets in the web plate, provided the stringers are connected to the web plate, and also the spacing in the end vertical angles of the stringers, and in the filler which goes between these angles and the web of the beam. If these measurements are not satisfactory, and you are not perfectly satisfied that the pieces will fit, you should have the pieces assembled and the holes reamed. Mark the pieces so that the erector may have no difficulty in putting them in the same position when erected. The stringers should be faced so as to make a flush joint with the beam. Measure their lengths ; also apply a steel square at the ends to see that they are perpendicular with the flanges. The length of stringers with faced ends should check within one thirty-second of an inch. If the beam connections are made by riveting to the intermediate posts, their length should check within one-sixteenth of an inch.

A steel square should be used to test all planed surfaces, and also to test the perpendicularity of pin holes with respect to the axis of any section. Pin holes should be calipered and the distances from centre to centre should check within one-sixteenth of an inch without regard to the distance. The four columns in the cantilever span in the bridge across the Mississippi River at Muscatine, Iowa, checked between centres of pins within one thirty-second of an inch in a distance of fifty-seven feet. If the pins are finished at the time you are inspecting the chord members, it is well to fit them into the holes and put on the nuts. Thus you are enabled to inspect both pins and pin holes at the same time, and and also check lengths of pins. Intermediate posts should check within one thirty-second of an inch between pin centres. Distance from centre pins to connection holes for knee braces should be correct ; while the distance from pin centre to substrut or longitudinal strut may vary even as much as one-fourth of an inch and make no difference. Notice that the posts are in pairs with reference to these connections.

It was once customary to assemble all end top chord sections and end posts when the hip pin-hole was bored, and mark the several pieces so that they could be fitted together when the structure was erected. This took considerable time, and has been almost done away with except where the specifications require it. When these pieces are bored separately the bevel should be checked, and the distance from the planed surface to the centre of the pin hole should be measured on a line perpendicular to the planed surface, in both top chord section and end post, to ascertain the opening of the joint. In many cases the end sections of top chord as well as the end posts should be in pairs, the former with reference to top strut and top lateral connections and the latter with respect to portal and bracket connections.

Bottom chord bars and diagonals should check very closely, especially with respect to each other. Probably the best method for inspecting bars of this character is to place two bars of the required size the proper distance apart and have the bars placed on them. By this method the slightest variation in the length of a bar may be detected. All loop bars and rods, such as counters, top and bottom laterals, portal and sway rods, should be carefully examined about the loops to see that they have been properly welded. The lengths are not very important, as they are all adjustable, and a half or three-fourths of an inch either way makes no material difference.

In the inspection of roofs and general structural material the field connections are very important. In roofs where all the trusses are alike, one set of templates is used, and hence if there should be an error in any piece of a truss, it may possibly occur in the same piece throughout the entire roof. This same precaution should be used in the inspection of columns, since many times a great number are made from the same set of templates. It is customary to assemble one truss of a roof before it leaves the shops, thus avoiding all errors in length of pieces.

The painting of the various pieces is not very often considered, since many deem it of so little importance. Yet there are many parts of a bridge, more especially in columns, that are inaccessible to the painter after they have been assembled and riveted. The shoes of a bridge and bases of columns are examples. Hence these parts should be copiously painted when the pieces are being built.

Almost every carload of finished material should be examined. See that the pieces are in such a position with respect to each other that none will be strained by the motion of the train. If there are long sections, and it becomes necessary to load over the ends of the car, the pieces should be placed far enough from the side of the car that there will be no danger, when rounding a curve, of the ends projecting too far over the side of the train. If the pieces are very long and a bearing on two cars is necessary, swinging bolsters are required in almost all cases. Be sure that the timber of which the bolsters are made is of sufficient cross section, so that the ends will not have a bearing on the car when the load is upon them. They should turn freely, since a refusal to turn often results in derailment of the car or the falling off of the load.

In considering what has been said concerning the duties of a shop inspector, it is not to be understood that he must be able to execute all branches of the work himself, but he should have a sufficient knowledge of the various departments to be able to judge whether the work is or is not as it should be. There are many inspectors who have only a knowledge of a drawing, they are able to

tell whether a thing looks like the structure or not, but as regards a knowledge of the workmanship and ability to judge of the quality of work that a shop with certain facilities ought to turn out, they are often deficient. Hence there are many embarrassing positions, not only for the inspectors but for the manufacturers also. It is to be hoped that in the near future the duties of a shop inspector may be considered of more worth than at present so that experienced and competent men may aspire to the position.—C. O. Baughman in Technograph.

AREAS FOR CHIMNEYS.

The old rule about chimneys was that they ought to have the flue tapered to the top, on the theory that, as the hot gases in them ascended, they cooled, and, in cooling, contracted, says an exchange; and that it was important to reduce the size of the flue in proportion to the reduction in volume of the gases, as otherwise cold air from the top would descend to fill the vacancy left by the contraction of the gases, and the draft would be checked. Reasonable as this theory seemed, practice has shown that cylindrical boiler or furnace flues are at least as good as the tapered ones, and within a few years practical engineers and architects of experience in such matters have inclined to make them slightly larger at the top than the bottom, the increase in diameter being, perhaps, half an inch to ten or twelve feet. Recently, a Swiss engineer has made experiments to see whether the facts bear out the old rule or support the more modern practice. To make the test, he built a chimney over a furnace grate, the stack having two flues. One flue tapered upward and the other downward, and the flues opened side by side over the grate, with openings of the same size. On lighting a fire on the grate, with unlimited access of air under it, the smoke was seen to issue nearly equaly from the top of both the flues, but with an unmistakable preponderance in favor of the flue which enlarged towards the top. On partially shutting off the access of air to the fire, the difference became much more marked; the current in the flue tapering upward diminished, and finally stopped altogether, the smoke finding its way entirely through the flue with the wider top.

An important joint circular will shortly be issued to London, Ont., merchants and manufacturers by the C. P. R. and G. T. R. The circular gives notice that, commencing with the first of next month, all credits will be withdrawn. The meaning of this is that shopmen will have to be paid on delivery in place of allowing accounts to run to a settling day. Much inconvenience will be the result, but the railroads claim that the privilege has been abused, and that the new step was rendered necessary in consequence.

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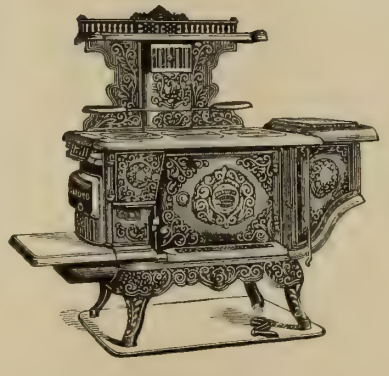


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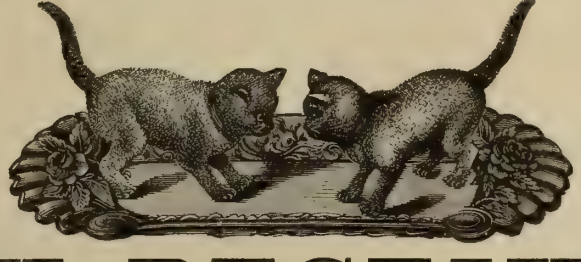
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NEW INVENTIONS AND DEVICES.

A self-locking gate and door hook of which the principal features are safety and convenience. It can not be unhooked from the opposite side through a crack or narrow opening, much less loosened or unhooked by accident, as is too often the case with ordinary hooks. It is readily attached to any gate or door.

A fruit jar wrench and holder to be used in removing or replacing the cap. To tighten the cover of a fruit jar, the wrench is placed over the same, and the handle, on its eccentric pivot, turned to the left, grasps the cover and fastens it tightly in its place. The cover is loosened by simply inverting the wrench and turning to the right.

A swinging pipe, adapted to receive water from the rain spout and deliver it to the cistern and so connected with a counterbalanced lever and an open water receiving vessel that the later will receive the first water washed from the roof, with the dust and dirt which may be washed off at the commencement of a rain, such water being then directed away from the cistern but going to the cistern after the water has become clear.

An improved carpenters' square, having an attached marker connected by a line or tape, so that the marker may be drawn along the edge of the blade in marking work. The tape and marker, when not in use, can be drawn within the handle by a retracting device. This attachment in no way interferes with the ordinary use of the square, as the line and marker, when not in use, are drawn into the mortise or recess of the square handle, with only the handle of the marker blade projecting, so that it can be conveniently grasped.

A fire escape ladder constructed with sides of steel chain, three feet apart, and rounds of the same material fastened at a distance of one foot from each other. When not in use the ladder is rolled up in a box near the roof. A number of these can be placed over the main avenues of escape, the weighty roll resting on a trap door in the box, the latch of which is controlled by an electric current. On pressing a button, the doors open and the ladders roll down in front of the buildings, where they can be used by the occupants or by the firemen.

An appliance said to be a positive preventer of kitchen boiler explosions. The apparatus is claimed to act both as a safety and vacuum valve. In case of extra pressure in the boilers there is rendered impossible an explosion, which may cause loss of life and much damage to property, while, should a vacuum be formed, there is provided an inlet for air, thus preventing the cylinder from collapsing, and the damage and expense caused thereby. The valve can be easily fitted to any cylinder or boiler, and will work equally well in a perpendicular, horizontal, or vertical position, as the valves are worked by springs.

An improved wire mat, the wire netting of which is braced in all directions, the wire meshes being crossed by continuous metal strips whose edges extend beyond opposite sides of the meshes, thereby forming a rigid structure well adapted to resist wear. The metal strips crossing the meshes are of serpentine or zigzag construction, and their edges face upward and downward, thus presenting surfaces which act most efficiently in removing dirt and foreign matter from the boots and shoes of those using the mat. The mat body structure is well adapted for various other uses, such as gratings, fencings, panels, etc.

Among the recent novelties for the well-appointed summer kitchen is an automatic emptying and odorless stew and fry pan. The utensil is stamped from the best cold rolled steel, with an odor flue riveted on the outside. The point is made that the handle is always cool and not in the way, as with a sauce-pan or spider handle, while the fumes of cooking onions are carried up the stove pipe. The lid of the pan is automatically raised by pressing down on the handle, and the reverse motion instantly places the cover again in position over the pan. It is therefore possible to automatically raise the lid by depressing the handle in either direction. When it is desired to pour the contents from the pan, the cover can be raised as indicated, and the handle automatically locked in position. —Stoves and Hardware Reporter.

GOLD MINING.

The Engineering and Mining Journal says:

"The revival of interest in gold mining has extended to the South, and the deposits of Georgia and Alabama seem to be in a fair way of renewing their place as factors in our gold supply by the introduction of new machinery and methods of concentrating and working the sulphurets which constitute a considerable part of the value of the ores. None of these mines have been worked much below the water level, owing to the presence of sulphurets, which prevented them from being treated economically by the ordinary stamp mill and amalgamator. Until very recently the practice there has been very much behind that adopted in the West, but this is likely to be changed in the near future.

"While other States are suffering quite as severely as Colorado from the silver depression, they are taking it much more quietly. The feeling on the silver question in Idaho, Utah, and Montana is naturally strong, but the mining interests there seem disposed to make the best of the situation, to get what profit they can from their silver, and to turn their attention as far as possible to gold. In all the Rocky Mountain States old gold properties are being examined with a view to reworking, and prospectors are hustling for new ones. There are many old mines, abandoned years ago on account of the low grade or refractory nature of their ores, which could now, with modern improved processes, be worked with reasonable hopes of profit, and it is probable that many of these will be reopened within the next year or two.

"The report of the Alaska-Treadwell Gold Mining Company shows what can be done with ores of low grade when there is an abundant supply and an economical system of working. This property is able to pay good dividends on ore yielding less than $3 per ton, in spite of its location at a distant point where supplies are difficult to obtain and fuel has to be brought mainly from a distance; although this is offset to some extent by the fact that water carriage is available. The abundant supply of ore and the good mill practice seem to be the main factors of success. The great mill, with its 240 stamps, was busy throughout the year, and over 237,000 tons of ore were worked. If the yield is small, the expenses are small also, and the reserves in sight are so large that there is no apparent prospect of exhausting the mine for years to come."

IRON RAILS IN ARCTIC REGIONS.

Capt. Wiggins, who originated the idea that the arctic waters of the Kara Sea might be utilized for commerce between Western Europe and Siberia, is going to enter the Kara Sea again this summer on another voyage to the mouth of the Yenisei River, says N.Y. Sun. He is in command of an expedition sent out by the Russian Government to take to the Yenisei two light-draught steamers that have been built on the Clyde to navigate the great Siberian waterway. These vessels will leave England towards the end of this month. They will be carried by the arctic vessels Blencathra and Orestes, and the last named vessel will take as part of her cargo the first consignment of rails shipped by sea to the Siberian railroad. When the Orestes reaches the mouth of the river at Golcheeka the rails will be transhipped to Russian river steamers and taken far south to where the railroad is building. The Blencartha and the Orestes will then return to England, where Capt. Wiggins is expected to arrive about the middle of October.

The rails will form the first cargo of such heavy material that has ever been conveyed by sea to Siberia. Capt. Wiggins has the utmost faith that he will be able to make his way through any ice he may find in the Kara Sea. If the enterprise succeeds, a considerable saving of time and expense will be effected as compared with the long and costly overland journey.

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Is the best in the world. Does not heat and suits all kinds of Machinery.

Our Solder is used by all the leading Plumbers, Roofers and Tinsmiths.

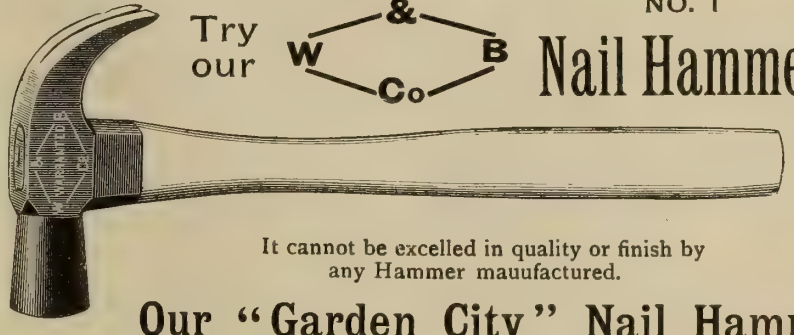
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TORONTO SMELTING and REFINING WORKS

92 and 94 Queen St. E., TORONTO.

THE WHITMAN & BARNES MFG. CO.

Canadian Branch: St. Catharines, Ont.



Try our W & B Co NO. 1 **Nail Hammer**

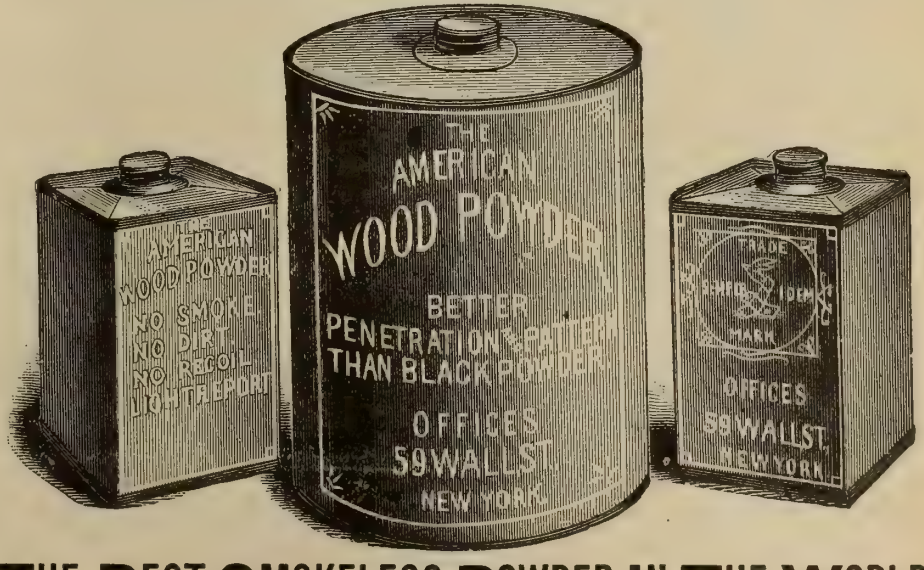
It cannot be excelled in quality or finish by any Hammer mauufactured.

Our "Garden City" Nail Hammer

GET OUR PRICES AND TRY OUR GOODS

Is the best and cheapest "Solid Cast Steel" Hammer on the market. . . .

We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .



THE BEST SMOKELESS POWDER IN THE WORLD

SOLE AGENTS. SEND FOR CATALOGUE.

The Bowman Hardware and Sporting Goods Co., Hamilton, Ont.

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

W. White, builder, Toronto, has assigned to T. L. P. Laing.

J. J. Brown, Barrie, grain dealer, has assigned to O. H. Lyon.

James H. Freeman, blacksmith, Appin, has assigned to W. D. Mass.

Mrs. G. E. Eastland, general store, Apsley, has assigned to Charles R. D. Booth.

J. T. Craig, general merchant, Oxbow, Man., has sold out to W. E Flummerfelt.

Mrs. L. Blackstock, general merchant, Thornton, has assigned to R. Tew, Toronto.

Henry Eckenswiller, general storekeeper, of Clifford, has made an assignment to C. S. Scott.

Brousseu & Tremblay, saw mill, Montreal, are offering to compromise at 50c. on the dollar.

A demand of assignment has been made on Dubrule & Co., general merchants, Richmond, Que.

The affairs of Joseph Hemond & Co., general merchants, Sherbrooke, are being investigated.

Noe Forget, general merchant, Ste. Lucie de Doncaster, Que., has compromised at 25c. on the dollar cash.

S. A. McNabb (Mrs. Donald), general merchant, Woodville, assigned last week to W. Cameron of Woodville.

J. Watt & Co., general storekeepers, Uxbridge, at their meeting at the Queen's Hotel, Toronto, made a composition offer of 70c. on the dollar.

The estate of John Scully, the insolvent dealer in builders' supplies, Toronto, is to be wound up. The statement shows property valued at $75,000. Against this are mortgages amounting to about $50,000, while the unsecured claims are over $10,000.

A petition has been presented to the Court of Chancery at Winnipeg for the winding up of the Northwest Navigation Co. The company was established years ago, but since 1885 there has been a general decrease in business owing to railway competition and to certain portions of the Red and Assiniboine rivers becoming unnavigable.

The direct liabilities of John Burns, the insolvent carriage builder, Toronto, are $2,230; but he has endorsed for his son, J. J. Burns, hotelkeeper, who also failed recently, to the extent of $11,648. The total liabilities are about $21,000. The assets amount to $12,677 altogether. The real estate included in the above is valued at $18,100, but there are mortgages against it to the extent of $9,281.

PARTNERSHIPS MADE AND DISSOLVED.

Ansley & Thom, general merchants, Credit Forks, have dissolved. James N. Ansley continues.

A partnership has been formed by A. Paquin and G. Germain to carry on business in Montreal as plumbers under the firm name of Paquin & Germain.

Nie & Lynch, manufacturers of engines, boilers, etc., Hamilton, have dissolved, R. Lynch retiring. The remaining partners continue under style Nie & Whitfield.

Walter D. and Charles H. Bradford and John J. Payne, have been registered in Montreal to do business as general merchants under the firm name of Bradford Bros. & Payne.

L. H. Senecal, A. Depatie, and H, Rheauni have registered a partnership in Montreal to carry on business as road contractors under the firm name of the Cement & Artificial Stone Co.

SALES MADE AND PENDING.

The stock of J. L. Preville, general merchant, Joliette, Que., has been sold at 61½c. on the dollar.

Mrs. Ainslee Elliott, general merchant, Port George, N. S., is advertising stock for sale to close business.

The stock of Andrew Lindsay, of Southampton, has been purchased by R. C. Struthers & Co. for 73 cents on the dollar.

CHANGES.

Beveridge Bros., furniture, Calgary, are closing out business.

R. H. Richardson, carriage maker, Melita, has sold out to G. Lee.

H. H. Drake, furniture, Hartney, has sold out to J. E. Sparrow and is removing to Sauris.

The Vancouver Wire Mattress Co. of Vancouver, B. C., has been succeeded by the Western Wire Mattress and Furniture manufacturing Co. (Ltd).

FIRES.

J. A. MacArthur, saw mill, Turner's Station, has been burnt out.

The Safety Bay Lumber Co., Norman, has been burned out; loss $8,000.

L. H. Reesor, electric light, St. Mary's, has been partially burnt out.

E. Gaskell, general merchant, Grand Manan, N.B., and W. Watt, in the same line of business at North Head, have both been burned out.

Sullen's brass factory, 119 Richmond street east, and Perkins' boiler works, Front street, Toronto, were both slightly damaged by fire the other night.

Wilson's lead smelting works, Hamilton, has been burnt to the ground. The cause of the fire has not been ascertained, but there is a large amount of inflammable material in the vicinity, which may account for the blaze. The smelting plant was injured to a great extent, and though the damage cannot be accurately ascertained, it will probably run well into the thousands. An empty car on the G. T. R. tracks was also burnt.

DEATHS.

J. S. Morse, general merchant, Bear Island, N.B., is dead.

Francis Dugas, general merchant, Grosse Coques, N.S., is dead.

Charles A. Bradshaw, builder, Toronto, is applying for charter of incorporation.

G. B. Roberts, bookkeeper for the Hamilton Glass Co., died suddenly at 2.30 Saturday morning at his late home, 222 Hughson street north, Hamilton. Deceased had been in poor health and suffering from heart trouble, and had arranged to start on a holiday the day he died. During the night he was taken ill and died a few hours later. He leaves a widow and five children.

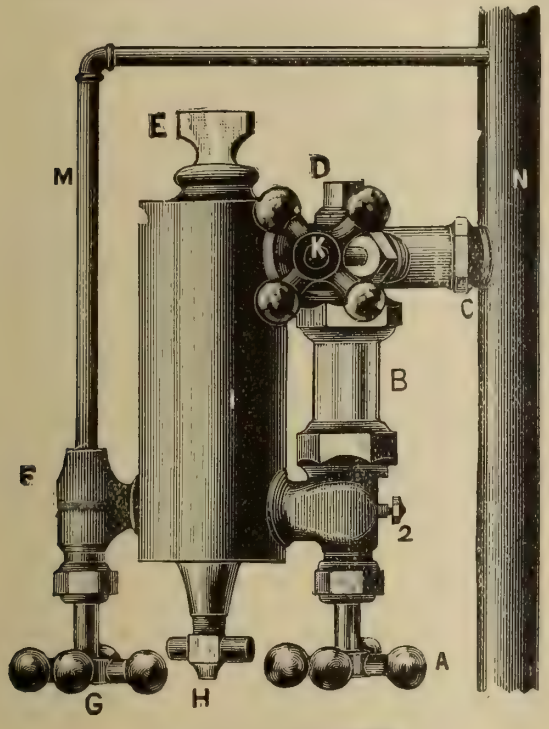
ENGLISH MINERAL STATISTICS.

A serious falling off is shown in the value of the mineral products of Great Britain and Ireland last year when compared with that of the output in 1891. In the earlier year the value of the various minerals raised amounted to £91,238,000, but in 1892 it was only £82,350,000, a decrease in round figures of £9,000,000, or 10 per cent. To seek to explain this loss by pointing out that to a very great extent it is the result of the diminished yield of one mineral only—viz., coal—would scarcely be just, seeing that the mineral in question forms upwards of eight-tenths of the entire production. But however that may be, the value of the coal raised last year reached only £66,050,451, as against £74,099,816 in 1891, a reduction of upwards of £8,000,000. After these figures the remainder drop into comparative insignificance. Leaving stone out of the question, the value of the quantity of which quarried is estimated at £8,667,736, the next most important item is iron ore, the tonnage of which mined last year was 11,312,675 tons, valued at £2,970,632. The value in this instance shows a decline of £385,000, which, considering the stagnation that overshadowed the iron trade last year, cannot be considered extreme. Following the metalliferous minerals, tin occupies the chief position—always excepting iron ore, of course—and the value of the output for 1892 amounted to £734,565, or within £1,000 of the figure for 1891. In the well-nigh fixed character of its production, tin holds quite a different rank from its sister metals—copper, lead, zinc, etc. In the case of the former of these, the value of the production, which in 1891 had already fallen to the extremely low amount of £20,214, reached little more than half that figure in 1892, or, say, £11,953, a fact which seems to presage the very early arrival of a day when copper mining in Great Britain will be a thing of the past. The value of the lead ore raised last year was only £296,484, as against £356,783 in 1891, whilst of zinc ore £104,016 worth was produced, compared with £113,445 worth in the previous year. The statistics of the production of minerals in the different divisions of the United Kingdom show that the value of the production in England was £58,476,040; in Wales, £13,572,812; whilst the value of the output in Scotland reached £9,837,740. Ireland comes a long way behind all her sister countries with a total of £387,128.—Industries and Iron.

THEY WERE WELL POSTED.

Someone asked me one day this week the particulars of a well-founded anecdote relating to two Scotch ironmasters which shows that both knew more about pig iron than Scripture. Mr. Baird, one of them, to the surprise of all who knew him, endowed the Church of Scotland with half a million sterling. The day after the gift was made known, he was met in the streets of Glasgow by another great ironmaster, Mr. Merry, M.P. for Falkirk Burghs. "Why, Baird," exclaimed Mr. Merry, "they tell me you've given half a million to the kirk. I didn't know you were a religious man. I'll bet you five pounds you cannot repeat the Lord's Prayer." The story goes that Mr. Baird accepted the bet, and immediately began to recite the metrical version of the twenty-third Psalm, upon finishing which Mr. Merry said, "Well, I didn't think you could have done it," and handed over the money.

Once, upon buying an estate which included a castle, which contained a large room fitted up as a library, it was represented to Mr. Baird that the shelves ought to be filled with books. He accordingly gave an order to Messrs. Blackwood, the eminent publishers, whose representative said, "I suppose, Mr. Baird, you will have the books bound in morocco." "Morocco!" exclaimed the benefactor of the Church; "no, they must all be bound in Edinburgh!" Mr. Merry ran his friend very close in matters of this kind, and knew more about the Racing Calendar than the Pentateuch. Once, when being heckled during an election, a man suddenly shouted from the gallery, "What is Mr. Merry's opinion of the Decalogue?" The candidate, turning to his agent, whom he always kept handy at such times, asked: "What on earth does the fellow mean by the Decalogue?" The agent explained that the man probably meant something about Sunday trains and Sunday travelling, upon which the candidate replied to his questioner as follows: "I beg to inform my friend in the gallery that so far as I am concerned I would abolish the Decalogue altogether.—Vulcan, in Ironmonger.

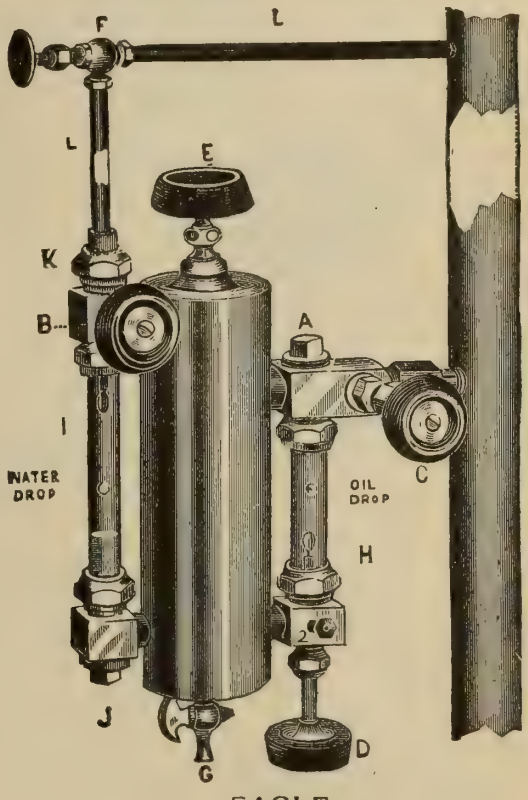


CYCLONE.

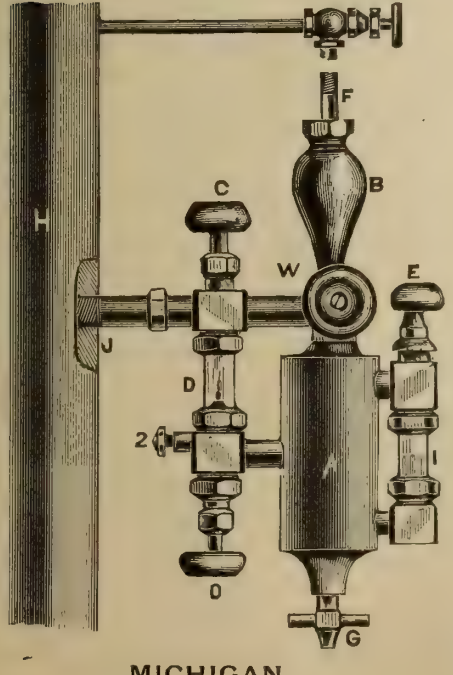
REDUCED PRICES..

OF

Michigan Queen and Eagle



EAGLE.



MICHIGAN.

Sight-Feed Lubricators

SIZE	PLAIN BRASS	NICKEL PLATED
⅓ Pint	$4 50	$5 00
½ Pint	5 00	6 00
1 Pint	8 00	9 00
1 Quart	11 00	12 00
2 Quarts	16 00	18 00

⅓ Pint with Drop Glass only.

Cyclone Lubricator

SIZE	BRASS	NICKEL
⅓ Pint	$3 25	$3 75
½ Pint	4 00	4 50
1 Pint	5 50	6 00

All our Sight-Feed Lubricators have the Patent Drain Valve to draw water off from Sight-Feed Glass.

Hamilton Brass. Mfg. Co.

HAMILTON Ont.

ENAMELLED WARE.

Enamelled ware has been manu actured in Europe for many years, but it is a new industry in this country, says House Furnishing Review. It has been manufactured in Germany over a century, and the first attempt at manufacturing enamelled ware in England was in 1800. A factory was erected to produce this article under a patent granted Dr. Samuel Sandy Hickling, dated December, 1799. The enterprise was a short lived affair, and the establishment was closed for want of due encouragement, owing to the imperfect condition of the enamelling, which would crack and split off. All attempts to manufacture enamelled ware in England were then abandoned until May, 1839, when a patent was granted to Thomas and Chas. Clark for "a method of enamelling or coating the interior surfaces of iron pots or saucepans in such a way as to prevent the enamel from cracking or splitting off from the effects of fire." The specification prescribes the vessel to be first cleansed by exposing it to the action of dilute sulphuric acid (sensibly sour to the taste) for two or three hours, then boiling the vessel in pure water for a short time and next applying the composition. This consisted of 100 pounds of calcined ground flints; fifty pounds of borax calcined and finally ground with the above, the mixture to be fused and gradually cooled. Forty pounds in weight of the above product is to be taken with five pounds of potter's clay; to be ground together with water until the mixture forms a pasty consistency, which leaves or forms a coat on the inner surface of the vessel about one-sixth of an inch thick. When this coat is set by placing the vessel in a warm room, the second composition is applied. This consists of 125 pounds of white glass (without lead), twenty-five pounds borax, twenty pounds soda (crystals), all pulverized together and vitrified by fusion, then ground, cooled in water and dried. To forty-five pounds of this mixture one pound of soda is to be added, the whole mixed together in hot water, and when dried, pounded; then sifted finely and evenly over the interior surface of the vessel previously covered with the first coating or composition, while this is still moist. This is the glazing. The vessel thus prepared is to be placed into a stove, and dried at a temperature of 212 degrees Fahr. It is then heated in a kiln or muffle, like that used for glazing china, the kiln being brought to its full heat, the vessel is placed first at its mouth to heat it gradually, and then put into the interior of the fusion of the glaze. In practice it has been found advantageous also to dust the glaze powder over the fused glaze and apply a second fluxing heat in the oven. The enamel, by this double application, becomes much smoother and sounder.

OLD STORY IN THREE CHAPTERS.

1. Farmer Barker, of Barker's Corners, mortgages his farm for $1,800, and tells his neighbors that he proposes to stock the place with blooded cattle.

2. Farmer Baker, with the $1,800 in his pocket, arrives in New York and negotiates with an affable gentleman, who assures him that the stock in question was printed on plates stolen from the Government and cannot be distinguished from the genuine.

3. Farmer Barker is now hoeing corn at $1 a day for neighbor Smart, who recently purchased the Barker farm at a foreclosure sale.—Boston Journal.

DEVELOPMENT OF THE STORAGE BATTERY.

The development of the storage battery, for various reasons, has been tardy and intermittent, says Age of Steel. With all other appliances that usually crowd on the heels of new departures, the usual retinue has been on attendance on the science of applied electricity. The storage battery has been in the procession. It has had the misfortune of having over-zealous friends, and of suffering from crude and premature statements as to this or that form of efficiency. It has left some dummies and failures in its tracks, and some very decent bones for lawyers to pick and dissect. Various companies have been continually at litigation, and the owners of patents somewhat mixed as to identity, until the decision for the fundamental patents of the battery was recently announced by Judge Shipman, of New York. Since this decision was rendered the storage battery business has made perceptible advance. Indications would seem to be predictive of a promising future.

Public dissatisfaction with the trolley wire system has developed with an insistance on its replacement by more secure and less hazardous methods. Whether or not the public mind has been reasonably or unreasonably exercised in the matter of trolley-wire hazards, makes but little difference in the fact that it is suspected and its removal or limitation in large cities simply a matter of time and the perfecting of better methods. It is, however, more than likely that the storage battery in street or railway traction, as at present developed, is not immediately practical, except in special or limited conditions. Its more immediate promising field is in the central station business. In some parts of Europe this has formulated in a grand success, the result showing an income on the capital invested that has established its economic and commercial value. More than this, and here as elsewhere, the manufacturing interests are insisting on all possible economies to realize even a minimized margin on the profits of production. This demand is incessant and unappeaseable, and it needs no prophet to forecast the place electricity will occupy in solving the present problem There can be no doubt that a vast amount of electrical machinery is allowed to be idle during the day, when it might be used in storing batteries to run lights at night. This system, as adopted in Paris, works satisfactorily both in a practical and remunerative sense. With proper management in its special fields there can be no reasonable doubt that the storage battery has a future in public and industrial service that will be in keeping with its development and efficiency.

CASTING HOLLOW INGOTS.

Two British patents have recently been issued on processes for casting hollow ingots. In one, the inventors proceed as follows: An annular core is first prepared of carbon and treacle or other suitable combining material, which is ground and mixed together and formed in a mold around a metal tube, after it is baked in a suitable oven. The core thus prepared is placed in an ingot mold box, and the ingot cast within the space around the annular carbon core, which at the proper time, has its central tube driven out, and thereby permits the carbon core to collapse on the contraction of the ingot. The carbon core after use can be reground and worked up time after time. When it is desired that the inner face of the ingot should be hard, it is allowed to come into contact with the carbon, whereby a portion will be absorbed. When, however, it is desired that the inner face should be kept soft, the carbon core is nickel-plated, thereby preventing the carbon from combining with the metal.

In the other process an ingot mold is placed upon the bottom plate which has a hole through it similar in size and shape to one end of the opening which it is desired to produce in the ingot of metal about to be made. A tapering iron or steel core, preferably hollow, then has its lower end inserted in the hole in the bottom plate, and after being coated with gannister or other material, has the mould placed around it. When the mould is filled from the top the hot metal is run around the core bar and when sufficiently full the mould may be closed down with sand in the usual manner. As soon as the metal is sufficiently solidified the taper core is forced out through the hole in the bottom plate free thus leaving the ingot for removal. The metal can be run in from the bottom of the mould by means of fire-brick runner bricks if desired, and the core bar may be forced upwards to disengage it from the ingot without departing from the invention.—American Manufacturer.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

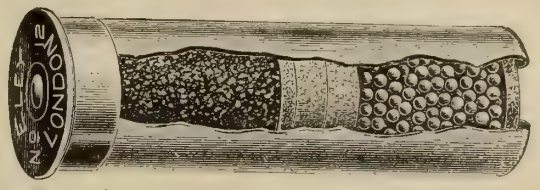
WESTERN BRANCH:

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

. . ELEY'S . .

CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING

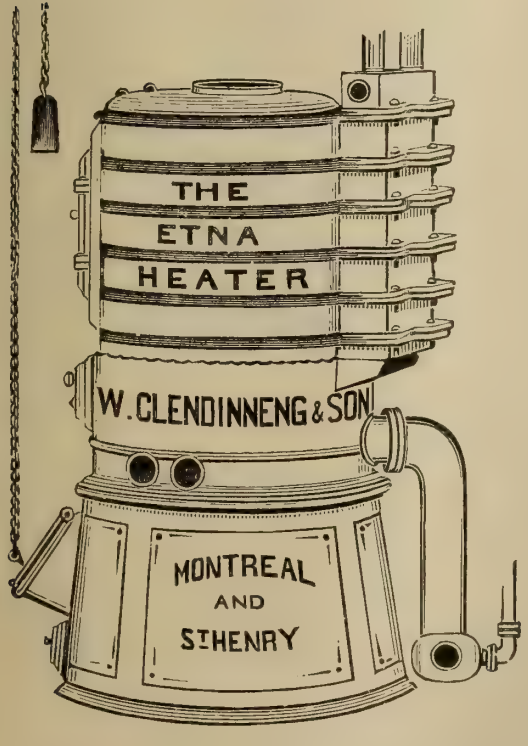


Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. **Wholesale Only.**

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.



THE "ETNA" HOT WATER Boiler

Is perfect

Write for prices and testimonials.

THE "UNIVERSAL" STOVES

The best and cheapest made.

Write for Catalogue and Discounts.

Our assortment of "LEADER" Stoves is always complete

Wm. Clendinneng & Son, 145 to 171 WILLIAM STREET MONTREAL QUE.

Cutlery

SPECIAL VALUE IN

Dickinson's "Damascus Blade" Carvers.
Dickinson's Improved Ivoride Tables, warranted not to shrink or discolor.
Joseph Rodgers & Co.'s best quality Pen, Pocket, and Butcher Knives.

. . . SAMPLES now ready for Fall Trade.

STEEL. Full stock of Jessop's warranted Tool Steel, at lowest prices. . .

A. C. Leslie & Co., Agents
MONTREAL and TORONTO.

You can lose more than we do by not subscribing for this paper.

MUNN'S LIQUID GLUE
IS THE BEST.

THE ART METROPOLE, Agents.
131 Yonge Street, TORONTO.

Clarkson & Cross
ACCOUNTANTS . . .
Established 1864.
26 Wellington St. East, TORONTO

OUR SALES OF
"BURHAM" Portland Cement
For the past 8 months have been
25,499 CASKS.
"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,
McRAE & CO., OTTAWA



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	23½ 24
trip "	25, 25½

Tin Plates—*Charcoal Plates, Bright.*

M.L.S. equal to Bradley	Per box	
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 00	4 25
I.X., "	5 00	5 25
I.X.X., "	6 00	6 25
I.XXX., "	7 00	7 25
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cokley Grade—	
.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6½	6¾
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

-inch	10½c
-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¼ " nd thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2¾, 2¾
26 "	2¾, 2¾
28 "	2¾, 3

Canada Plates.

Blaina	½ bright	2 75 ....
Abercarne		2 75 ....
Lion		....

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4¼ 4¾
" ⅜ " "	4¼ 4¾
" 7-16 " "	4 4¼
" ½ " "	3⅞ 4
" ⅝ " "	3⅝ 3⅞
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 12½	0 13
Lake Superior	0 13	0 13¼

Bolt or Bar.

Cut lengths, round, ½ to ⅞ in	$0 22	$0 25
" round & square		
1 to 2 in	0 20	0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16	0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17	0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26	0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 19½	0 21
" 35 to 45 " "	0 17½	0 18
" 50 lb and above per lb	0 16½	0 17

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21	
Spun " "	0 25	

Wire.

Pure, in coils—		
From 1 to 20 gauge	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20	0 21
" " 27 to 30 "	0 23	0 25
" " 30 and up	0 26	0 28
Sheets, hard-rolled 2x4 ft	0 21	0 23

Zinc Spelter.

Foreign, per lb	0 04½	0 05
Domestic "	0 04⅝	0 04¾

Zinc Sheet.

5 cwt casks	0 05½	0 06
Part casks	0 06	0 06½

Lead.

Imported Pig, per lb	0 03½	0 03¾
Domestic "	....	0 03½
Bar, 1 pound	....	0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04¾	0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¾	0 04⅞

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)	0 15½	0 16½
Standard	0 14½	0 15½
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12	0 13
Other makes "	0 11	0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do. "	4 75
No. 2 Do. "	4 50
No. 3 Do. "	4 25

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	....	$1 20
2nd qualities "	....	1 00
Barn (in bbls)	....	0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb		0 05
Chrome Yellow "		0 11
Golden Ochre		0 06
French "		0 05
Marine Black		0 09
" Green		0 09
Chrome "		0 08
French Imperial Green		0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.cwt	1 35	1 40
" " (J.F.L.S.) " "		2 75
" " Royal " "	1 10	1 15
Venetian Red, (best) " "	1 80	1 90
English Oxides per cwt	3 00	3 25
American " } " "	1 25	1 90
Canadian " }		
Paris Green, per lb	0 13½	0 15
Burnt Sienna, per lb		0 08½
Burnt Umber "		0 05
do pure		0 08
Drop Black "		0 09
Chrome Yellows "		0 12
" " Lemon pure,		
8 lb. tins, per lb		0 19
Chrome Greens "		0 12
Golden Ochre		0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40

Linseed Oil (in bbls)

Raw, per gal	0 60	0 62
Boiled "	0 63	0 65

Turpentine (in bbls)

Selected Packages, per gal	0 44	0 46

Castor Oil.

Best, per lb	0 08	0 08½

Cod Oil.

Cod Oil, per gal.	0 50	0 51

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet	0 13	0 15
White, extra	0 16	0 18
Gelatine	0 20	0 30
Strip	0 16	0 17
Coopers	0 17	0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list
Munn's, dis. 25 to 30 per cent. off list

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads. in ½ lb. bags	0 70
Best thick white card wads. in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 25

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

Standard Keystone

TARGETS

THE BEST -:- -:-
-:- TARGET MADE.



Standard Keystone

TRAPS

THE NEW '93 MODEL -:-
-:- EXCELS ALL OTHERS

AGENTS : BOWMAN, KENNEDY & CO., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   - Basis—50 to 60 dy 2 30
   - 40dy 2 35
   - 30 dy 2 40
   - 20, 16 & 12 dy 2 45
   - 10 dy 2 50
   - 8 & 9 dy 2 55
   - 6 & 7 dy 2 70
2. American Pattern Only
   - from 4 to 5 dy 2 90
   - 3 dy. (lath) 3 30
3. Canada Pattern Only
   - from 4 to 5 dy 2 80
   - 3 dy. (lath) 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American 1 85 3 50

Nail Sets.

per gross
Square, round and octagon 3 38 4 00
Diamond 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross 1 00 4 25
" Carpenter 2 25 3 60

Picks

Per doz 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz 1 35 2 00

Pruning Shears.

Per doz 4 00 5 50

Pulleys

Hothouse, per doz 55 1 00
Axle. 22 33
Screw 27 1 00
Awning 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, 1bs 2 50 2 75

Rail.

Barn Door, per foot 3 3½
Sliding Door, " 3½ 3¾
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9½	10½ 11
¼, 5-16, ⅜ in.....	10	10½ 11½ 11½
Cotton, per lb.....		18 20
New Zealand		9 9½
Russia Deep Sea, per lb..		12½ 13
Jute ..... " ...		08 08½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 to 40 per cent.
Hack, complete, each 75 2 75
" frame only 75

Saw Sets.

Per doz 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz 3 25 4 00
Bench iron per doz 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears!

B. & W., japanned, dis. 75 per cent.
B. & W. N. P., dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen 1 25

Soldering Irons.

Per lb 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons .....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4½ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
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Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
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Tape Lines.

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Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

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Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c

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Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
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Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz 0 35 1 50
Rat " 2 00 4 50

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Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
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" Red cap 0 11½
" Crown 0 10½
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Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

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Hand, per doz 4 00 6 00
Bench, parallel, each 2 00 4 50½
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Pipe, each 5 50 9 00
Saw, per doz 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

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Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
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Broom Wire 6 to 6¾c. per lb.
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Galv. 2 barb, 2½ & 5 in. apart } 4½ 4¾
" 4 " 4 & 6 " "
" Plain twist, 2&3 wires
" Steel thorn and ribbon 4¾ 5
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Galvanized Barb, "Lyman," 2 to 4 points 0 04½
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Ordinary, discount 25 p.c.
Painted Screen, p.100 sq ft 1 90

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Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 .
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Pocket, per doz 1 25 2 00

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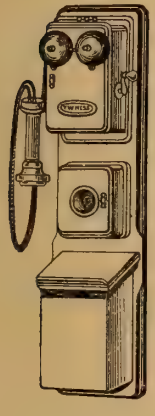
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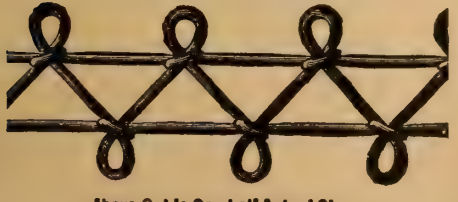
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Pat. Nov. 19, 1889.



Above Cut is One-half Actual Size.

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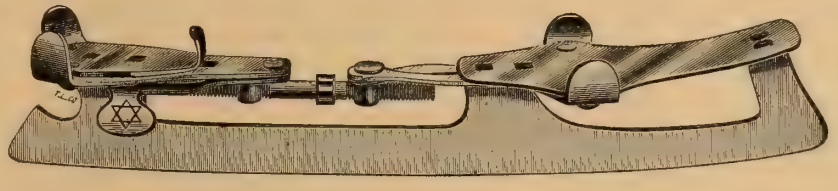
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Nails, Hinges AND Buts

Manufacturers of every description of these goods.

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Is of entirely different mechanism from our GENUINE ACME and is introduced to meet the demand for a cheaper skate than has yet been offered. Made all of first-class steel. Toe and heel clamps simultaneously adjustable to suit any size sole or heel. Holding powers perfect. Quality and efficiency considered, it is the cheapest skate on the market.

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"BUILD TO-DAY THEN, STRONG AND SURE, WITH A FIRM AND AMPLE BASE."
—Longfellow.

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Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.



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Order Now So as not to be too late in the season. Will ship at once.

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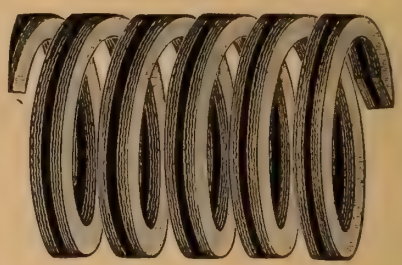
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3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

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CANADIAN
HARDWARE
AND METAL MERCHANT

VOL. V. TORONTO, AUGUST 19, 1893. No. 33.

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—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

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Because they are ready sellers. Every tin sold, sell several more tins. Every one who uses them, speaks of them, so delighted are they with the result. This is not surprising when the reputation of BLUNDELL, SPENCE & CO., the manufacturers, is considered. They are recognized as the largest Paint Manufacturers in the World, and the quality of their goods is well known in every quarter of the globe as the highest.

BLUNDELL'S ENAMEL IS

Brilliant, Elastic, Durable, Quick Drying,
Easily Applied, Surface Resembling Porcelain.

SOLD IN LEVER LID TINS, OR PER GALLON.

Send for Sample Card Showing 54 Beautiful Tints. Send a Postal for this card, it is the most attractive Color Card in the market.

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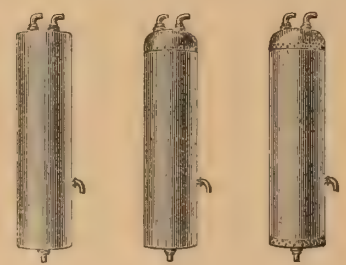
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Best Workmanship.



Test Guaranteed.

IMPORTANT NOTICE.

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This Boiler is known as

"Booth's 27½ Copper Range Boiler,"

and meets the requirements as called for in the specifications of our leading Architects.

Correspondence solicited and Price Lists on application.

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Coppersmiths, 122 Adelaide St. W., TORONTO, ONT

GEO. BOOTH, Proprietor, formerly Booth & Son.

"Perfection" Inside Seam

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STRONGEST, HANDSOMEST, BEST.

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DIFFERENT KINDS

Standard Patent Stove Pipe,
Stove Boards, Coal Hods.

ORDER ALL FALL LINES EARLY.

Kemp Manufacturing Co.

TORONTO, ONT.

GOWANS, KENT & CO., TORONTO AND WINNIPEG

WE ARE and INTEND TO BE for some time to come
THE LEADERS in LAMPS AND LAMP GOODS.



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THE GILES COMPANY LITH. N.Y.

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. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, AUGUST 19, 1893 No. 33

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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The successful merchant is he who keeps step with the seasons. Spring, summer, fall and winter goods are all in their proper time given due attention by him. At the moment guns, rifles, and ammunition are receiving more or less attention from hardware merchants. This season promises to be a good one for this class of sporting goods, and it behoves all retailers who have not yet made their selections to do so without much delay. Fashions obtain in the hardware as well as in other lines of trade. This year there seems to be an increased taste for rifles; and to catch and cultivate as much of it as possible should be every merchant's aim. While looking after rifles for the men, he might with profit also look after rifles for the boys. Where is there the boy that does not love to possess a rifle! By selecting carefully and advertising judiciously merchants could make many a little extra penny in this way. In making a selection of not only rifles but of every style of firearm, the dealer ought not to allow his own tastes to govern altogether. He should aim to make his purchases conform to the whims and desires of his customers. But to learn what his customers prefer in this or any other line requires much time and attention. Smokeless powder is getting the rage now, but in selecting this the merchant needs not only to get a make that can be relied upon, but he should remember that black powder is still extensively used, even by some who use the smokeless article, the practice of some sportsmen being to carry cartridges of black as well as cartridges of the smokeless powder, to be used alternately. Then to make his stock complete in this particular, he must not forget to procure an assortment of cartridges, filled and unfilled, gun cases, cartridge magazines, cartridge belts and bags, game bags, loaders and closers, cleaning rods, extractors and wrenches, gun covers, powder and shot measures, wads, etc.

* * *

The desired stock once possessed, the next thing is to advertise. He should begin to do this even before the goods are in his store. The advertisement to be of any use must be attractive, and of a character that will create an interest in the goods and a desire at least to inspect them. The great secret of successful advertising is to get people interested. The next duty is in regard to window dressing. And the man who cannot make up an attractive and tasty window from a well assorted stock of guns, rifles, and their appurtenances, with a few other articles of a sporting nature thrown in, cannot dress a window with anything else. But even if neither the merchant nor his clerks are artists in this line, they can do their best, and even a poor attempt is better than nothing.

* * *

To expect that everybody would be satisfied with the award of the Behring Sea arbitrators is not surprising. Some people can never be satisfied. It is natural that the Canadian seal hunters should feel sore at the liberty they once enjoyed being curtailed. But what is a surprise is that the award should give such general satisfaction to both parties to the dispute. And this is because each attains the paramount object it had in view. Back of all, what the United States was contending for was the preservation of seal life from annihilation. Where it made the mistake was in the means adopted to accomplish that end. International law it set at nought, claimed that Behring Sea was a closed sea, and that seals, whether one or a hundred miles from shore, were its exclusive property. Furthermore, it arrogated to itself the right to seize the vessels of other nations when found even sixty miles from shore, and confiscate both vessel and cargo of skins. Canada, Great Britain, and, in fact, all nations were more or less interested in preserving the seals from wanton destruction. But when it came to allowing the United States to suspend international law at will and to seize on the high seas vessels of a British colony the Motherland demurred. And in the decision that has just been rendered by the arbitrators we have won on every point bearing on this particular phase of the dispute. The arbitrators have decreed that Behring Sea is not a closed sea; that the United States has no right to protection of or property in, the seals frequenting the islands of the United States in Behring Sea when the same are found outside the ordinary three-mile limit. In order to protect the seals the arbitrators prohibit citizens alike of the United States and Canada from killing them within sixty miles of the Pribyloff Islands, and stipulate that from May 1 to July 31 shall be a close season, while the use of forearms and explosives shall be prohibited at all times. The duty of protecting the seals devolves jointly upon the United States and Great Britain. These are the most important points relating to the award. The clauses stipulating a close season and prohibiting the use of firearms are the ones with which the Canadian seal hunters seem most displeased, the contention being that the one deprives them of the most favorable hunting season and the other of the most effective method of capturing the seals. Be that as it may, we could not expect the award to be to our

suiting in every particular. We have won on all the points we contended for. It is only with the regulations framed by the arbitrators that any discontent is expressed, and these do not create any anomaly, for the citizens of the United States as well as those of the British Empire are subject to them.

It promises to be a long time before the financial situation in the United States can again get into anything like a normally healthy condition. The patient has undoubtedly improved during the last week or so, but there are a concomitant of circumstances that preclude rapid recovery. The repeal of the silver law, in the task of which Congress is now engaged, will undoubtedly do much in the premises, but, even that act performed, it may, like a surgical operation upon an individual, cause a temporary increased weakness. Until public confidence is restored, legislative action cannot do much; although, at the same time, the legislature, by creating new laws or repealing old—the silver law, for instance—can sometimes do a great deal towards restoring the desired confidence. At the moment, confidence is badly needed to pursuade those who are hoarding up currency and making it difficult for railroad companies and and manufacturing concerns to get enough to pay employees their wages to release it. Confidence is half the battle. Gold, it is true, is returning in heavy volume, but the fact that it is large is likely to momentarily check its flow, the Bank of England having already, with that end in view, raised its discount rate to 4 per cent. One fortunate thing for the currency is the low price of government bonds, which has induced the National banks to purchase them and deposit them in the treasury against note issue. The law, it will be remembered, demands that for every 95 cents of notes issued one dollar in government bonds shall be deposited with the treasury, a procedure that is too cumbersome to give that elasticity to the currency that is really needed. Quickness of expansion—similar to that which we have in Canada—is what is wanted; and if we are to judge by the tenor of the U. S. financial and daily press, that is what they will have before a great while.

* * *

Another good thing for our neighbors is that the stocks of grain in store on the other side of the Atlantic are rapidly decreasing, and that the demand from there for wheat of American growth is increasing. During the last couple of weeks there have been sent out from American ports to supply this demand over ten and a half million bushels of wheat. This is larger than has been sent out during the corresponding period for some years. It has been contended all along that wheat on this side was been held too high for export. Now that it seems to be down to the desired point it is to be hoped that our neighbors will do a brisk trade in what has on the whole been a lagging business this year.

* * *

One feature of the situation that is giving a good deal of concern in the United States is the condition of the labor market there. In Chicago alone 200,000 men are believed to be out of work, and in New York another 100,000, while in the country at large idleness is estimated to have been enforced upon no less than 1,000,000 wage earners during the last couple of months. And the end in this particular does not seem yet, for mills and factories continue to close down and business concerns to go up. Even those who are employed have a hard time getting the money they have earned owing to the scarcity of currency, as already stated. With an army of 1,000,000 men without employment, and detachments of it going about the country in bands of two, three, four, and five hundred men, it is not surprising that labor riots should be feared in some of the leading centres of population. We in Canada may not have such a great deal to boast about, but we may be pardoned for congratulating ourselves on the fact that we have plenty of the "needful" for all legitimate business purposes, a good cereal and fruit crop, and good prospects for fall trade; and we have not got a crisis, financial or otherwise, hanging over our heads, nor an abnormal number of unemployed workmen either.

* * *

A business man can in many ways, while helping himself, help others. Particularly is this true with regard to the payment of bills. All slow payments are not the result of a scarcity of the "needful" with which to liquidate them. Procrastination is often no small cause. But the trouble is that the man who has the money with which to make prompt payment and does not injures not only his own credit but for the community at large is more or less affected. Money is to trade and commerce what blood is to the individual. Sluggish circulation is as injurious to the one as to the other. We have an instance of this at the moment in the United States, where, because of the fear of a crisis, so many are withholding money from circulation, making it difficult for large corporations to get enough of the "necessary" to even pay their employees their salaries. But the great consideration for the merchant who meets his liabilities promptly is the discounts, something which in these days of narrow margins he cannot afford to lose.

A PECULIAR STATE OF AFFAIRS.

Turpentine dealers in Canada find themselves in a peculiar position on account of the scarcity of currency in the United States. Heretofore when ordering oil in Savannah it was customary to send a draft on a New York bank. Now, however, checks or drafts are useless, from the fact that they cannot be exchanged for currency. The only alternative is to send the cash; and some of the Toronto houses have been notified to this effect by their agents in Savannah.

"What the outcome of it will be to the trade here I cannot say," remarked one jobber to HARDWARE, as he sank into a chair. "You see it is like this: To-day the price of oil in Savannah may be 30c., but by the time our money reaches there, for we cannot now order by telegraph, it may be 35c. Now should it happen that in the meantime we have made contracts on the supposition that we were going to get our turpentine at 30c., you can readily see that we would stand to lose a good deal of money. Then to get the money here and send it down to Savannah will cost us no small sum. Yesterday I wanted to get a small amount of American money and the bank charged me 5 per cent. for it. The turpentine market," he added, "is lower than it ever was except once just before the American war, but then we could buy on a draft, while now we cannot."

THE FEELING ON TIN PLATES.

The question of how and to what extent the present depression in the United States is going to affect the tin plate market in Wales is, according to our correspondent, beginning to attract some attention from merchants in Montreal. Naturally all are agreed that it will if of any duration, and present indications certainly look as though matters were not going to improve across the lines for some time. Therefore it is allowed that primary markets for tin plate are

likely to reflect this to a certain extent, but what is bothering Montreal buyers is whether it will make itself felt over there sufficiently and soon enough to have appreciable influence when it comes to a question of fall purchases on Canadian account. No one is prepared to make a decided prediction one way or the other, but with the fact in view buyers are disposed to hold back.

With regard to the actual present condition of the markets on the other side they are described as dull. The strike of the coal miners is of course having a certain effect with makers, but it is intimated pretty plainly that they are casting an anxious eye towards the United States. Operators are, it is said, inclined to postpone business as much as possible pending better reports from America, while the low prices which are ruling induces makers to be indifferent sellers, so that the mills are not pressed by any means with work.

Exports in July were 33,000 tons, as against 31,000 tons in July, 1892, shipments to the United States being 22,000 tons for July of the present year, against 24,000 tons for July, 1892. The most recent quotations at Liverpool were 13s. to 13s. 6d. for I.C. Alloway charcoal, 12s. for I.C. Bessemer coke, and 12s. 3d. for I.C Siemens' steel coke.

According to some authorities the stocks of tin plate in the hands of Canadian importers and jobbers generally is not large, the ones who hold this view basing their supposition upon the slow trade which has ruled for importation through the spring and early summer. It is worthy of note in this connection, however, that there has been a considerable quantity of tin plate contracted for recently for importation. Some of the more optimistic brokers in Montreal argue that because the brokers are not rushing things, supplies will not have time to augment sufficiently to have influence soon enough to affect prices for Canada, but this is pure conjecture, and there is yet almost three months of navigation before the Ice King gets in his work on the St. Lawrence.

TO CLEAN TIN WITH ACID BATHS.

Besides muriatic acid it is customary to use diluted sulphuric acid to clean tin plate, explains an exchange. Some tin plate manufacturers use besides these a liquor made of bran which after being mixed with water, becomes thoroughly fermented. The tin is then allowed to soak in it for some time before it is cleansed with diluted sulphuric acid. Sulphuric acid is now used much more generally, as it is much more easy to use than muriatic acid. The strength of the liquor depends on how rapidly the work is to be done, but a mild liquor is preferable, as it does less damage to the tin plate when it is allowed to remain in the acid somewhat longer, while a strong liquor soon dissolves the iron and is apt to leave a layer of carbonaceous matter. A mild acid is especially to be recommended when the tin has been heavily rolled. A bath containing one hundred parts of water and three to five parts of sulphuric acid, is excellent for this purpose, and providing the tin is good and the application rapid, the fluid can contain from eight to ten per cent of sulphuric acid. When the tin, after it has been cleaned from rust, is to receive the second application previous to being dried, it is necessary to soak it in lime water, in order to get rid of every trace of the acid. Subsequently it is to be washed in clean water and then drawn through hot water in order that it may dry quicker.

FLOUR-MAKING MACHINERY.

Ten years have rolled by since a new machine or device of any kind, that is of any material value in the flour-making industry, has been developed or invented, says Mechanical News. The last of any significance to the trade was the centrifugal reel and its various prototypes. It lifted the bolting system out of the rut of centuries, placed it on an advanced plane and made it as cheap and simple, and at the same time as effective as any other part of the flour-making outfit, and so far as it goes bids fair to remain and continue to be the plan for many years to come, there being nothing in sight, either in conception or otherwise, to take its place.

Notwithstanding all that, there is still a work in the same line to be done, or ought to be done. All who know anything about flour making, the practical part of it, know that a large portion of it, perhaps 30 per cent. of the whole product when patent flour is being made, is of an inferior quality and low commercial value, solely because mingled with impurities. The natural quality of this flour is as good as the best, but owing to the peculiar methods of making flour, it becomes impregnated with fine particles of bran and all other impurities, both natural and foreign, that belong to or adhere to the outside of the wheat berry.

What is required, therefore, in the proposed new discovery or invention is a process, or a machine, that will thoroughly separate these impurities from the flour as it now goes into the sack or barrel. This process or machine must do its work without interfering with the operations of the mills, in fact must be an independent operation in every respect in order to be entirely successful and meet the required want.

It does not look like a very easy task, in fact anything but easy, but neither has any of the other great mechanical improvements, that have done so much for the benefit of man in the past century, looked any more promising in the start. More difficult undertakings have been made successful, and there is no good reason why this cannot be done. It would be of untold benefit to the flour-making industry and could not fail to be of great value to the inventor.

FOR THE BREAKFAST TABLE.

The broad field of ingenuity and invention has been covered in most of its hidden nooks and corners and provision has been made for nearly all of our wants and necessities, remarks Stoves and Hardware. But until lately no one has ever attempted to solve a problem that is similar in some respects to that which was illustrated by Columbus when he showed the gathered savants how to stand an egg on end, a hitherto impossible feat which was accomplished by tapping the egg on the table and thus giving it a flat surface on which to rest.

The present problem, and one that confronted the average male biped with a most exasperating persistency, is how to break an egg at the breakfast table so that the contents, the slippery white and the elusive yolk, will not smear his fingers and soil the cloth. This has been solved and in a practical way. Some benevolent genius has invented an egg opener for the awkward. It fits over the egg and cup, and a push button drives a circular knife against the circumference of the shell and, lo! the deed is done. Whether the egg tastes any better is not of any moment. It is sufficient to know that Mr. Awkward, and he is of a numerous family, has escaped the disgrace that attaches to his name and will henceforth live a life of egg-unstained ease. The inventor's name is not known, but it would be a capital idea for him to send a sample of his shell cracker to every hardware store in the country.

WHO INVENTED THE EDISON LAMP?

Henry Goebel, an electrician, of this city, is one of those who have shared the common fate of inventors. In 1850 he had the first incandescent lamp ever made burning on top of his house in this city. The neighbors thought it dangerous, and complained to the police, who ordered it taken down. It was operated by a battery. Mr. Goebel experimented with various carbons, and found that bamboo was the only substance that made good fibres. When Mr. Edison was working on his lamp one of his assistants, speaking to a friend of Mr. Goebel, said the power was all right, but that they could not get a good carbon. The friend told him about Mr. Goebel's success with the lamp. Mr. Edison sent a man to him, and Mr. Goebel showed him the bamboo. Shortly after that he took out a patent on the invention. Mr. Goebel has never received a penny for his lamp, but hopes ultimately to get credit for the discovery.—N.Y. Press.

BUSINESS PRECEPTS.

PRECEPTS FOR EMPLOYER.

Cultivate a cool judgment of men and motives—"There's millions in it!"

A premium placed upon politeness sendeth ill-breeding to flight and bringeth customers.

Spare all praise and spoil clerks and "cash."

PRECEPTS FOR EMPLOYE.

Strict integrity in minutest details fashions a foundation for a business fortress against which nothing can prevail.

Patience under trying situations and when dealing with exasperating customers brings its own reward. It pays.

The desire to not be outrivaled is a laudable ambition. Set thy face steadfastly towards the mark.

FOR BOTH.

Golden rule: As ye would that others should serve you, also serve ye them.—Ex.

THE CRAFT OF PLUMING.

Dr. William Garnett, principal of the Durham College of Science, in an address delivered recently at Newcastle-on-Tyne, England, before the North of England District Council of the Plumbers' Association, offered some practical remarks of great interest in relation to the training of plumbers. We reproduce here from a contemporary extracts from Dr. Garnett's address which contain some valuable suggestions as well as information in regard to the methods of instruction practiced or proposed for adoption in trade educational classes in Great Britain.

In defining the duties of the plumbing craft, the speaker said: "Etymologically, the plumber is a worker in lead. According to the modern meaning of the term, the plumber is one who supplies our houses and other buildings with pure air and pure water. As the chief contaminations both of air and water are those which arise from the waste of animal (and to some extent of vegetable) life, it is essential that the plumber should provide for the removal of such refuse, or, at least, should so protect the air and water supply that contamination is impossible, and this necessitates the withdrawal from the neighborhood of our houses of all decomposing or decomposable material."

Dr .Garnett laid special stress on the importance, to the plumber, of a knowledge of drawing, saying: It will be generally admitted that the essential feature of a craftsman is that he should be a master of his handicraft. In every large piece of work, the pencil, or some substitute for it, must precede the ordinary tools of the workman. Drawing is the first stage of the work, and if the operative is to gain a leading position in his craft he must be able to make his own working drawings; but whatever position he attains, if he is to undertake any responsibility at all, he must be able to read a drawing, and the best way to acquire this art is to learn to make drawings himself. A working drawing is not a picture of the work to be carried out. A photograph of the actual thing would often be of comparatively little assistance to the workman who has to make it. A working drawing is a conventional representation of a solid piece of work by means of plane drawings, each of which represents, in accordance with certain geometrical laws, one aspect of the solid, while in many cases a pure symbolism is used which has almost as little connection with the true form of the solid as has its name when printed in ordinary Roman type. To combine together in the mind plan, elevations and sections, with all their dimensions as marked or represented to scale, and to picture in the imagination the thing represented, is to read the drawing, and this is as much an art as to mentally picture a handscape, or the heroine of a novel, from a letterpress description.

Let us then, said Dr. Garnett, commence the out-of-shop training of the apprentice by teaching him to use his pencil, first by making free-hand sketches of all the tools in his kit; then of various forms of traps and other appliances which he meets with in his everyday work. He will soon find out for himself that freehand sketches of things—as they appear—are insufficient to reveal their hidden constitution, and will probably of himself make sketches of the internal economy of the apparatus which he attempts to describe; that is to say, he will attempt to draw in section. Then he must be shown how to select his points of view for external sketches, and his planes of section for sectional drawings, so as to secure a complete description of the thing represented. Provided with a rule, he should be taught to measure his model and to mark the dimensions properly and systematically on his drawings. For many purposes such dimensioned sketches, if executed with reasonable care, would suffice, but for planning and taking out quantities, accurate drawings to scale are frequently desirable, and for marking off work on the bench a certain amount of geometry is essential. It is unwise at the commencement of his training to attempt to cram an apprentice with Euclid or the ordinary problems of practical geometry. Let him first become conscious of his need of geometry in his every-day work and be interested in his freehand sketches, and then let his geometry gradually grow out of his freehand drawing. The apprentice will very soon appreciate the advantages afforded him by straight-edges, squares, compasses, and scales, and will take pleasure in the solution of a geometrical problem when he has tried in vain to discover it for himself, not because the problem was given him as a kind of conundrum by his teacher, but because it arose out of his own necessities.

Simple problems in mensuration (or workshop arithmetic) will also force themselves on the notice of the apprentice at an early stage, and here I may point out that an intelligent approximation to a numerical quantity is far more valuable than fifteen significant figures all accurately obtained, but with a painful doubt as to the position of the decimal point. It is well to know that the volume of a sphere is represented by four-thirds, but for many purposes it is more useful to know that the volume of a sphere can be found approximately by taking one-half of the cube whose edge is the diameter of the sphere, and adding 5 per cent. to that half; in other words, by taking twenty-one-fortieths of the volume of the cube.

The same general principles of utility and practical applicability should guide us in the teaching of mechanics. In this subject very little should be attempted without experimental illustration, and this, as far as possible, conducted by means of workshop appliances and not with the models of the scientific instrument maker.

Then we naturally pass on to other problems in connection with heat; the expansion of water on freezing, the forces which may be called into play by this expansion, amounting to a pressure of 75 atmospheres or 1125 pounds per square inch for each degree Fahrenheit through which the water is cooled below freezing point. The arrangement of water supply so as to prevent the bursting of pipes through frost, the heat absorbed by water in becoming steam and given out again when the steam is condensed, the heat required to warm a cubic foot of air through any range of temperature, and hence the amount of steam or hot water required to warm the air which forms the ventilation current in our rooms and assembly halls. Then we come to more difficult problems in mechanics, such as pressure and its relation to head of water, velocity due to head, the momentum and energy of a moving column of water, the water seal of a trap when the water is at rest, the conditions under which water seals may be broken in consequence of the energy of the moving water, the waving out of traps and the necessity for after flush, the pressure of the air, the principle of the barometer and the syphon, the action of the different classes of pumps, the pumping of hot water and the effect of the vapor pressure on the suction, the high pressure in front of a moving column, and the low pressure at the side and rear, illustrated by the injector, the ejector, and its modifi-

cation in the Banner cowl, the importance of this action in the arrangement of traps, the syphoning out of traps and the methods of preventing it, the use of the air pipe, shocks due to inertia, the necessity for screw valves on a high-pressure service, the air vessel applied to the force pump or lift pump, and the action of the hydraulic ram. All these points require the mastery of only two or three simple principles, which must be put before the apprentice in the most homely languag , and illustrated by means of the most familiar examples and simple experiments.

The resistance of pipes to the flow of water and air and simple calculations of the flow through a given system of pipes under a given head or pressure should form one of the subjects for the most advanced class when preparing for the masters' certificate.

A little chemistry may will be introduced at an early stage ; the experiments used to illustrate the teaching are sure to attract the student, and few subjects are of more importance to the plumber than an understanding of the most elementary principles of chemistry. Combustion and its products, the effects of combustion and respiration on the air, water and its chief impurities, soft and hard water and their action on the metals used by plumbers, the chemical properties of lead, iron, copper, tin and zinc, the action of dry and moist air and of the products of fermentation on these metals, solders and fluxes, and the methods of purifying solders ; all these subjects may be taught without an undue amount of extraneous matter, and yet the teaching may be firmly based on fundamental principles. To the mind of every practical plumber many other points will suggest themselves, all of which may advantageously be introduced into the teaching of the evening class, because it is impossible to treat them advantageously in the commercial workshop.

But in addition to knowing how to design and carry out his work, it is very desirable that the plumber should understand why all the precautions which he has to take are necessary, and be able to give a reason for everything he does. The object of his work is to maintain the human machine in health and comfort, and he ought, therefore, if only for his own sake as an intelligent being, to know something of the construction and mode of working of the machine itself. The elementary principles of physiology, especially with respect to respiration, the composition of pure and refined air, the analogies between an animal and a steam engine, and the points of difference, the quantity of air required to secure healthy conditions, the heat produced by combustion within the animal body, the nature of ferments, and of zymotic diseases, the natural history of germ poisons and the influence of contaminated air and water on the spread of disease, are subjects which, if the plumber is to be a man and not a machine, must be of vital interest to him. The same remark applies to the history of the materials which he uses in his every-day work. The ores of lead, copper, zinc, iron, tin, etc., and the methods of obtaining the metals and preparing them for the market, are subjects in which every apprentice should be interested, and which he may fairly claim to be taught in the technical class.

The chief point to aim at in the training of the plumber is, however, not the introduction into his memory of so much information, but the formation of those habits of thought which will lead him to look at a question from every possible point of view, and even consider what will happen under contingencies which may be very remote, though possible. This habit of mind is the highest aim of education, and the chief problem of the teacher is how to best produce it. For this purpose it is doubtful whether any other method is equal to a well-designed system of class teaching. A sketch of some arrangement which is faulty, but the faults of which are not at once obvious, is shown to the class and the members are asked to point out the defects. If they fail to discover them the teacher helps them by leading questions, taking care only to guide their thoughts to the discovery and not to reveal the answer. In this way the apprentices are led to think of what will take place under every condition to which the proposed arrangement may be exposed, and a habit of looking at a problem from all sides gradually grows in the pupils' minds. Erroneous views expressed by members of the class only afford opportunity to the teacher to guard his students against such errors, and frequently open up new fields of discussion. To make such a class successful the teacher must be equal to any occasion that may arise, and if questions are asked which he is unable to answer he must honestly say so. It is far better to postpone a question for consideration after further study than to give an answer which the students at once perceive to be shallow and evasive. There must also be the greatest confidence between the teacher and his class, and perfect freedom of speech, with only such discipline as is necessary to avoid waste of time.

In the majority of cases it has been deemed desirable to associate with the lecture or class-room teaching a certain amount of practical work in a shop connected with the educational institution in which the class meets. In this workshop the teaching can be illustrated in a way which is impossible under the conditions which govern a commercial establishment, and special attention can be given to those operations in which the apprentice finds his greatest difficulties. For practical work, the class meets for, perhaps, only three or four hours a week during the winter, but the teaching thus provided may be made of very great value for the illustration of the ordinary class teaching, and as supplementary to the regular workshop training. Isolated from this it is valueless, and may be pernicious. As a rule it takes a young plumber four or five years of continuous work at something like 54 hours a week to become even moderately proficient in his craft, and even then he cannot rank as a first-rate operative. This being so, it is obviously absurd to suppose that the handicraft can be taught in a practical class which meets for only a few hours during the winter session. Possibly by such attendance a boy may be taught to wipe a joint ; but to let loose upon the world a number of men who can pronounce that shibboleth of the plumber's craft, but are ignorant of the principles of sanitation, and of all the other branches of handicraft necessary to make a complete plumber, is a sin against society, and one fraught with the greatest possible danger to the public health.

A NOTABLE KEY.

At the recent inauguration of the Imperial Institute in London, the key which was presented to Queen Victoria wherewith to perform the opening ceremony, was in its form and composition entirely unique, and well worthy of mention. The gold, silver and jewels of which it is made were contributed by the several Colonial Governments under the British Crown, and by India, so that the different portions of the Empire are represented by its various component parts. The head of the key is formed of gold from South Africa, the silver in the star ornaments of the handle comes from the Broken Hill Mine, Australia ; the stem is formed of gold from British Columbia, while the bitt and wards are composed of the precious metal from Queensland mines. The stem of the key is enriched by a rib-band in red gold and a wreath of laurel leaves in green gold, both obtained from Victoria. The key and ornaments are set with diamonds from South Africa, rubies from Burmah, and pearls from Ceylon. The object is of beautiful and rich design, the head being circular, with the royal and imperial crown on the summit, and the Maltese cross with fleurs-de lis forming the outer border. The centre of the key head displays on one side the jewelled star of the Colonial Order of St. Michael and St. George, and that of India on the reverse side. The national emblems—the rose, shamrock and thistle—surround the arms of Great Britain at the top of the stem. The stem and wards are decorated in accordance with the rest of the key, the wards forming the initials, I. I., of the institute. The key was the work of Chubb & Sons, of London.

POINTERS ON ADVERTISING.

The publisher of the average trade journal would have a most happy existence were all business men fully aware of the great benefits to be derived from judicious advertising of his wares in such mediums. Anyone interested in statistics will find much food for thought in the contemplation of the causes that have led to the failure of firms or individuals, which to all ordinary appearances were enjoying a profitable share of trade, until at some totally unexpected time these shells have toppled over totally ruined. And why? Simply because of the want of business enterprise that dictates a liberal use of printers' ink.

It is safe to assume that at least sixty per cent. of such miserable failures are directly traceable to this niggardliness or total ignorance of the true value of letting the public know what they have for sale. There are some, as has been pointed out in one of our issues, who are so consumed with self-conceit as to imagine that all the world knows of their existence, and, therefore, it would be simply throwing money away to place their names in public print. Unfortunately, these men who "know it all" are quite numerous, and, strange to relate, their names are often brought unwillingly into public notice through the medium of a sheriff's sale poster or in a list of assignments. Then and then only do they become known and quickly return to well deserved oblivion. If they had to pay for this involuntary publicity their kicking powers would put to shame the ablest efforts of their long eared quadrupedal prototypes.

A writer in the Washington Star gives in the following well chosen words some sound advice to both the non-advertiser and to those who have always recognized the utility of using the advertising columns of first-class mediums:

Why will merchants waste money by bad (injudicious) advertising? Why should you not look upon the expenditure of money in advertising as a cold matter of business and not sentiment?

Why should you shut your eyes, firing money away foolishly in the forlorn hope of bagging game, instead of firing at the bull's eye of success intelligently and judiciously, with your eyes wide open?

No shore is strewn with more shipwrecks than that which lines the almost boundless sea of advertising.

There are merchants in every city who appear to have an irresistible impulse to go into all kinds of schemes. Their names are to be found in the dials of railroad clocks, hotel blotters, club directories, thermometers, country fences, rocks, trees, in entertainment journals, cook books, programmes, "Christmas Chimes," "Holiday Guides," and other spasmodically issued and sparsely circulated periodicals, but never, or rarely ever, in the legitimate trade journal.

When I hear that a merchant has been successful without any or little advertising, I cannot help deploring what that merchant has lost, and thinking what a success he would undoubtedly have achieved had he advertised.

The success arrived at without advertising is not half as lasting as that achieved by a constant and judicious expenditure of printers' ink.

Statistics prove that successful non-advertising have been frequently and easily supplanted by the advent of live, progressive advertising firms, and the ground so lost by none-advertising firms is seldom, if ever, regained, even with advertising.

What not to do is not as good advice as what to do, so I advise all to stick as closely as possible to legitimate trade journal advertising.

Make up your mind how much you can afford to spend monthly at the start, with a view of increasing the expenditure as your increased trade will warrant. Secure space in the best and most widely circulated trade book, and edit it carefully and interestingly.

Have something to say of interest.

Don't advertise an article that can be bought anywhere for the same price. Remember, prices sell goods.

The fault with most manufacturers is, they either have nothing to advertise, or lack the tact to cull something worth advertising.

The best method of advertising is where an instant or early demand is created, and in no other manner can this be done so well as through a well conducted trade medium.

A dry goods merchant once advanced the theory that if he advertised a certain article under price people would come for that article alone, and buy nothing else. This may be true, but that merchant is not looking far enough ahead. You may advertise six articles—one for each of the six days in the week—and only sell certain customers these six items, but you are laying a foundation which will ultimately secure their permanent patronage, for they need other goods, and will naturally give you the preference. Your reward will come in the shape of a steadily increasing business.

Never advertise unless you have something to say; then say it tersely, interestingly and intelligently.

Don't expect immediate results. Corn planted in the spring is not harvested until fall, and that it will yield a good return for the outlay of time, labor and money is not half so certain as that judicious advertising will bring ultimate success.

You cannot expect to secure your competitors' customers at the first asking. Your competitors have earned their patrons' goodwill, and they will not leave them without good reason or greater inducements offered by you. Why should they?

Don't expect advertising to do impossibilities; "it won't wash clothes," nor will it make a poorly conducted store succeed. Nineteenth century business methods are as necessary as good advertising.

A manufacturer with a clean, well-selected stock, a good location, and sense enough to make a "drive" by losing a little money on an article occasionally, cannot fail to make money. If he doesn't become rich in time, it is because he is either extravagant, intemperate, or a poor manager. As a rule manufacturers get exactly what they deserve.

Trade doesn't come simply for the asking, in corroboration of which you are referred to the fable of the spider and the (shrewd) fly—not the one that went in and got caught. If that fly had ever gotten out it would have given that parlor a wide berth thereafter. So will dealers fight shy of manufacturers who have once "sold" them.

Get your goods right, and then advertise, doing it gradually and judiciously, expanding as trade warrants, and wealth is yours in proportion to your enterprise and thriftiness.

ASBESTOS PORCELAIN.

The name of asbestos porcelain is given to a newly invented French material, possessing, it is asserted, some special advantages over ordinary porcelain, explains an exchange. The fibres of asbestos are exceedingly fine. French measurements show the diameter to vary between .00015 and .0002 millimetres, an exceedingly fine powder being consequently obtainable from them. If it were possible to amalgamate such small particles without the addition of any foreign substance, it is evident that a material could be obtained, though porous in nature, the pores of which would be so fine as to be hardly visible under the microscope. The substance in question is formed by pulverizing the asbestos, from which powder a paste is made by mixture with water, and this paste is kneaded, diluted with water, dried and kneaded again, and then moulded into the desired form. By heating the latter in a crucible to a temperature of 1,700 degrees C., a porcelain is obtained with a translucency comparable to that of ordinary porcelain; or, if heated for eighteen hours at a temperature of 1,200 degrees, porous asbestos porcelain results, of a light yellow or white color, if the asbestos powder be washed without sulphuric acid. Tests made with vessels produced from this kind of porcelain show a decided superiority of the article for certain chemical uses.

H. S. HOWLAND, SONS & CO.,

37 Front Street West, Toronto

Orders . .
Solicited . .

Wholesale Hardware

PINE TAR

In tins. Sizes Nos. 1 and 2.

14, 16, 18 and 20
Pearl Street,
TORONTO, ONT.

The Toronto Lead and Color Co., Limited

LAYS ITS OWN TRACKS.

The influx of visitors brings to Chicago inventors innumerable, remarks an exchange. This class of people, who are radical progressionists, do not always receive the honor or attention they merit, at any rate not until success compels a recognition of their worth to the community and to the world. A correspondent of this journal fell in with a character in this line a few days ago, and was shown by him the model of a machine or vehicle, which is so distinctly and entirely new and novel in principle and operation as to excite wonder and astonishment at its ingenuity, if not respect for its practicability. It can be described in a word as a passenger vehicle intended for street use, to run on iron rails, which it carries with it, the object being to furnish a smooth and even track for the coach to run upon. This is to be accomplished, as shown in the model, in the folowing way' An endless chain carries a line of wheels from end to end of the vehicle in the in the centre, the wheels running its length over the top and down in front; then as these wheels come in contact with the ground they bring into use wide feet or risers, which simply walk along the ground, a succession of these footed wheels supporting the weight and carrying the coach forward, the suspension, however, resting upon the smooth rails upon which the wheels above rotate. Rubber-tired balance wheels at the side, elevated above the ground, are used to keep the vehicle in balance, these coming into use only when the vehicle sways to one side or encounters a declivity. The machine thus furnishes and lays its own street car track as it goes along. It is claimed that the vehicle will run smoothly at little cost for propulsive power.

ONE WAY TO DRAW CUSTOM.

Window dressing has been reduced to a science, and its practical value as an advertisement can very often be measured by the standard of dollars and cents, remarks Stoves and Hardware Reporter. It may or may not be a guide to all that is on sale within the store or shop, or it may even be an illustration of the natural desire to put the best foot forward, even if the other lags a little in consequence, but the point to be observed is that it attracts passers-by and that this often induces custom.

A demonstration of this was shown the other day in this city and is certainly worth recording. A retail dealer in bicycles had received a new line and was evidently anxious to place them before the pedal-pushing public in the most attractive way. So he mounted one of them on a standard in a big bulk window and had rigged up a dummy rider, who was then seated in the saddle in the correct attitude for moderate-paced riding. The motive power was furnished by a hidden mechanism, and Mr. Dummy went spinning along, apparently just as if he was training for a league tournament. That exhibit of the practical workings of a wheel drew crowds, and, it is safe to say, also drew custom. It was attractive, novel, and instructive, and the purpose of the dealer was accomplished.

What is true in St. Louis is also true everywhere else and in other lines than bicycles. Attractiveness in window or store displays always returns a big dividend on the investment, whether in a commercial centre or a small town, and where this attractiveness is associated with novelty the returns are doubly great. It costs but little if any more than the labor, and this can always be spared. In fact, it could not find more profitable employment.

ARTISTIC IRON WORK.

Artistic iron work, says Age of Steel, is finding a wider sphere in modern industries as the public taste for such production develops. The modern eye is being educated in this direction, and with the hammer and the mould, as with the pencil and the painters' brush, the highest types of excellence are in increasing demand. This is observable from the ornamentation of a cooking stove to the adornment of a viaduct or a public building. In a fork or a spoon, in a tea pot or a door knob, the same artistic influence is at work, and thus the services of the metal worker broadens out in new and profitable directions. In older nations this process antedates our own, they having long ago passed the cruder conditions of development. In the formative period of American history the most directly serviceable and the less elaborate has been both a rule and a necessity. Time has been too precious, and the work to be done too vast for either the leisure or the wealth requisite for artistic effects. These embryonic conditions have largely passed away, and it is one of the surprises of the traveler to see scattered all over this wide country a series of edifices and constructions that in design and beauty, as well as practical service, are models of their kind. These examples continually multiply, and we accept the movement not as a temporary fad or a caprice of fashion, but simply the beginning of what will be a national characteristic. It is the inception of an industry that will expand, as the higher lines of civilization broaden on the American canvas. In fact, in all our industries the same influence will make itself felt as we get away from the crude and gross to the mature and refined.

The specimens of hammered iron exhibited at the World's Fair is in evidence of a revival of interest in this department of industry. In the Italian, French, Austrian and German sections there are splendid examples of this art. It is exhibited in stair railings, andirons, lamps, gates, etc., and, while varying in merit, is in unanimous evidence of what can be done in these lines. National differences and characteristics are of course displayed, in some showing that while real art is put into the work, it is not always in adjustment with the nature of the metal used, while in others we have less elaborate but better suited productions, where the strength and durability of iron are the desired qualities. We are less fanciful and more directly practical in this regard, and art in iron is an accessory to architecture in its broadest feature of service. Expert designers and high-grade artizans are to be found in American workshops, and the increasing demand for their productions is in favor of a considerable and increasing home trade in artistic iron work.

HOW GUNS HAVE ADVANCED.

An English writer says that the improvement of firearms in the course of the present century almost equals the progress from cross-bows to flint-lock muskets. The trumpet-shaped musquetoons of the fifteenth century could be used only at close range, but their chief defect was their liability to miss fire altogether. As late as 1752 Marshal Saxe pardoned a deserter because everyone of the six muskets in the hands of the firing squad had failed to explode its charge, and the delinquent was considered a protege of Providence. Imagine the chances of that soldier if the six marksmen had used rifles of the Mannlicher pattern, with cartridges warranted to explode 499,995 in 500,000 shots.

THE BINDER TWINE SITUATION.

The binder twine situation is a peculiarly mixed one. With much of the winter wheat harvested, the yield being on the whole certainly not over an average one in point of bushels and the straw being admittedly light, large supplies of twine in sight and everything being of the most bearish nature, we do not hear of very many first-hand transactions being actually made. One would naturally suppose that the quantity of twine available for the season's use would make all manufacturers anxious as to the outcome, and willing to sell at almost any figure that was offered in order to save themselves from carrying over their present stocks. But while prices which float around are almost ruinously low, manufacturers do not, it must be admitted, appear to be as willing to ship out the remaining portion of their stocks as the situation prevailing would ordinarily make them. These manufacturers apparently figure that it is better to run the risk of carrying over their twine than ship it out to jobbers and dealers at the prevailing low prices, and take the chances of being compelled, through failures of their customers, to accept from 10c. on the dollar upwards. If much of the twine that is used this season has been sold by manufacturers at the present range of prices it means no profit, or, as in some instances, a loss to them. * * * The domestic season is now drawing to a close, and after the last hope in that direction is gone manufacturers who have any stock on their hands will attempt to sell what they can for export. This kind of business is very satisfactory in spite of the fact that low prices must be made to effect sales. Prompt cash is the rule for settlements of such transactions; hence manufacturers who now hesitate to ship twine to Western dealers at 7c. a pound on the usual credit will doubtless be only too glad to sell their surplus for cash to exporters at from half a cent to a cent a pound less.—Cordage Trade Journal.

HOW THE TROLLEY WORKS.

The following simple and elementary description of the way the trolley works is given in an electrical exchange: Fie, for shame, Brother Jimmison, We thought you were more intelligent. We overheard you trying to explain to your little Willie how the trolley works, and, gracious, what a woful mess you did make of it! For the benefit of William we would say that papa's explanation was a trifle rocky. This is how she works: The fluid comes from the power house where it is made, and goes through the long copper tube and then into the car. While it is in the car it spreads along the bottom and sets the wheels agoing. This produces friction, which, controlling the motion of the truck, maintains a decided leverage on the cam, which, in turn, controls the commutator. Motion is now transmitted from the bushings to the generator, and thence to the involute gearing. As soon as the mechanical equivalent of the heat thus produced is enough to satisfy the motorneer that the pole pieces are in close enough proximity to the rheostat he throws the switch which is attached to the ampere-meter and the wheels revolve. This, Willie, is the way "the wheels go wound." Although we were perfectly sure of our knowledge, "to make assurance doubly sure" we asked the man at the power station and he told us. Now, Jimmie, old fellow, ain't you ashamed of yourself? Brush up a little on electricity.

In Kent the early bean crop is large, and the wheat for the most part will be a splendid crop.

THE ONTARIO TACK CO.

MANUFACTURERS OF

WIRE NAILS

TACKS, SHOT NAILS, ETC.

Hamilton. Ontario.

8P

RAZORS, SCISSORS

POCKET KNIVES



TABLE KNIVES

BUTCHER'S KNIVES

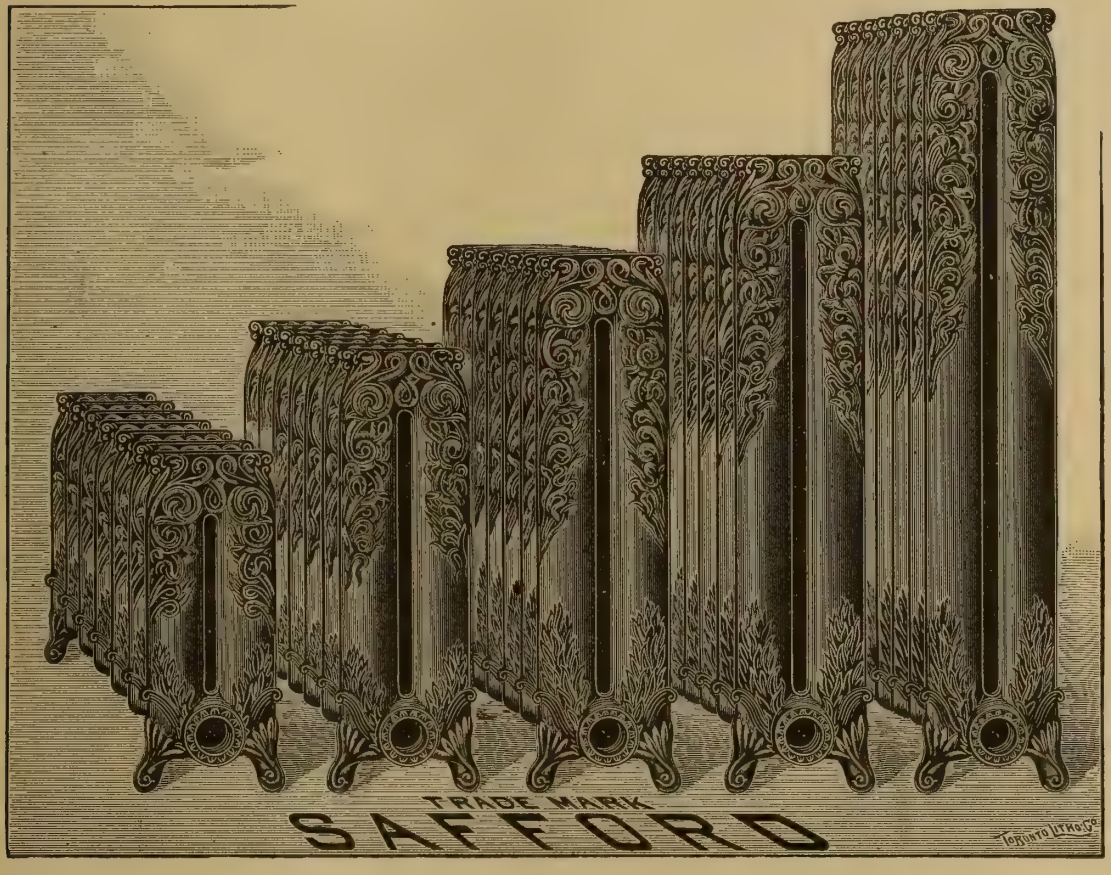
CANADA'S BEST!

Safford Radiators

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HOT WATER or STEAM

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MANUFACTURED ONLY BY

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A NEW IDEA IN FOUNDRY WORK.

The Great Western Stove Works, Leavenworth, Kan., have adopted a novel system of operations for moulders, says American Manufacturer. The floors are a little larger than common. They have a gang of men who stake out the flasks, trim the castings and cut the sand for the moulders. One man does the work for about an average of 7 floors. The moulders pay these men themselves, and the expense runs from 75 cents to $1.50 a week for each floor. The work takes the men about 7½ hours. The blower is started about 3 p.m. and by 5.15 the heat is poured off, while the molders have all quit work by 5.30. As soon as pouring off begins, the shaking out starts in and by 10 in the evening the work is all done, ready to cut the sand. The moulders can put in about 1 hour more work in moulding each day by this plan, and the extra work pays the cost of a man to fix up the floor for them. The moulder is usually tired out by the time the pouring off is finished, and he is in no condition to get at the hard and hot work of shaking out and trimming up his day's work. It was an innovation when started, but the moulders now would be almost induced to strike if an attempt was made to return to the old method.

VIEWS AND INTERVIEWS.

There is alleged to have been some cutting done on horseshoes recently. "Yes," said one jobber, "there has been some cutting done and it is being investigated. If proven the firm, which is a local one, will have to forfeit the rebate. You know by an agreement with the manufacturers we are to get a rebate if we sell at a certain figure, but here has the firm in question been selling at $3 25, the actual cost. As a result the retail trade here is stocked right up."

* * *

"Yes, we are doing a big trade with Manitoba and the Northwest," said a wholesaler. "They are taking a good many harvest tools. But business is very quiet with British Columbia."

* * *

"I think it is a shame the prices we are getting here for glass," indignantly remarked a jobber to me Thursday. "Here are the Montreal fellows getting $1.35 first break, while we in Toronto are only getting $1.25, and that notwithstanding that we're paying 7s. 6d. a ton freight. The fact of the matter is that we are cutting each others throats and are afraid to ask a fair price."

* * *

A correspondent recently wrote: "Don't you think mineral wool might be applied to cook stoves? It would be a god-send to the women who have to do their own cooking, and might enable others to keep their cooks longer. If all but the top could be covered less fuel might be used and there might be movable covers of wool for even the top except where the pot or kettle is."

I asked Mr. W. H. Carrick, manager of the Gurney Foundry Co., what he thought of the suggestion, and he replied: "Well, it could be done, but the great obstacle would be the cost. And then you know in the winter time people want the stove to give out heat. But we are making steel ranges nearly the whole of the outsides of which are lined with asbestos mill board to prevent radiation of the heat. Mineral wool could of course be used, but it would vastly increase the cost of the stove."

* * *

"O, yes, we're selling a lot of hay-baling wire these days," remarked a jobber to me as he rubbed his hands with satisfaction. "You see there is such a demand for Canadian hay in Great Britain. That is the reason for it."

BYSTANDER.

CANADA'S GREAT FAIR, TORONTO.

Though not a World's Fair, Canada's Great Industrial Fair, to be held at Toronto from the 4th to the 16th September, will be very much the same in every respect, except as to extent, and will be equally as important to the people of Canada. This year's fair will, it is predicted, excel all former ones, both in point of exhibits and in the attendance of visitors. The space in all the buildings has already been applied for. New stables and new cattle sheds have been erected at a cost of over $100,000, and can pass through all the buildings and view the animals under cover at all hours of the day. The grounds have also been drained, new roads constructed, and many other improvements made. The special attractions are promised to be greater and better than ever and will embrace many new features. A very small proportion of the Canadian people are going to the World's Fair at Chicago, the masses being intent on taking in the Toronto Fair, of which they all feel justly proud.

MISPLACING THE BLAME.

This is the season when the ice-cream freezer is called on to do its best work, but it sometimes happens that this work is apparently not of the right kind, remarks Stoves and Hardware Reporter. Cases are occasionally reported where people have been taken seriously ill after taking the frozen lacteal compound, and the conclusion is at once arrived at that the freezer is to blame. This has developed tyrotoxican, whatever that may be, they say, and this insidious attack upon the public is ascribed to a fault in the apparatus. It has been shown by scientific investigation that, under certain conditions, elements are developed in the cream before it reaches the apparatus that are not eliminated by the process of freezing and which have an injurious effect upon the consumer. This is not the fault of the freezer, and to claim otherwise is merely an illustration of the risk to the supposed cause which is nearest at hand.

Manufacturers of freezers have their reputation at stake and most certainly will not and do not put material into their work which, in combination with the cream or some constituent thereof, will produce hurtful results. Not only consumers but all honest and conscientious dealers are interested in this question, and a proper explanation of the unseen dangers which lurk in the cream would relieve the freezers of responsibility.

STEAM-MAKING POWER OF COALS.

Some weeks ago a test of two days' duration was made at the Richard Borden mills at Fall River, Mass., to find out if a saving could be effected by changing the kind of coal used under their boilers, says Power. They were using a standard grade of coal, but the test showed very clearly that all good coals are not equally economical. In this particular case it was found that, pound for pound, one coal would evaporate 10 per cent more water than the other. That means, one coal gave 10 per cent. more power, or, to show it more clearly as being a matter of dollars and cents, 10 tons of the one coal did the same amount of work as 11 tons of the other. Here is an important point for every manufacturer using steam power, and when two standard grades of coal show as large a difference as this, what would a test show where a poor grade of coal compared with a good coal. The result given above is almost startling when a little figuring is done. Merely assuming that the poorer grade cost $3 per ton, the better coal would be cheaper by 5 cents a ton if offered at $3.25. If one salesman could have offered these two coals to the trade, saying that one coal would cost $3 a ton and the other $3.25 a ton, would not ninety-nine out of a hundred have taken the coal costing $3 a ton? The man buying the coal would have figured on saving just 25 cents a ton on all the coal he would use, while as a matter of fact his coal bills for a year would amount to more than had he taken the coal costing $3.25 a ton. Without carrying this any further, is it not very evident that this matter of saving in the cost of power worth looking into? There are many different qualities of coal. Everyone wants the best, but it is safe to say they are not all getting it. There are cases without number where it would be money in pocket to figure out the coal bills for a period of three to six months, and make a change in the source of coal supply and see how the coal bills for an equal period would compare with the original. The actual amounts spent in such periods are often so large that even a small percentage represents a considerable saving.

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

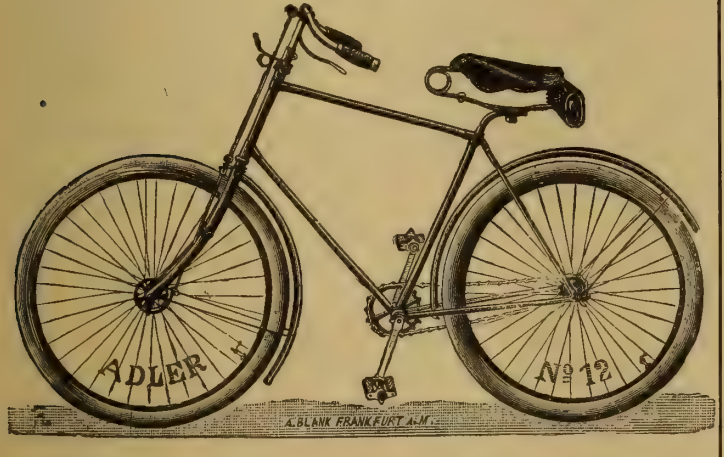
Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friend against misrepresentations. There is no other, Belgian or English, equal in quality to this make.



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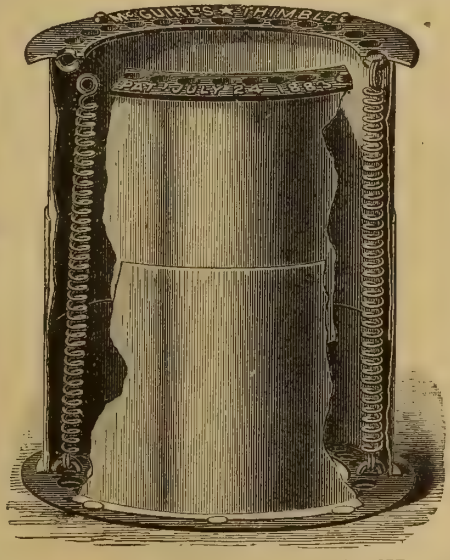
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DIAMOND EXTENSION

STOVE PIPE THIMBLE



Best, Cheapest, and Most Durable

The heads are connected by Spiral Steel Springs, whose tension adjusts them to any thickness required.

Made for Six and Seven inch pipes.

Supplied either complete, or Castings and Springs only, as required.

SEND INQUIRIES AND ORDERS TO

THE JAMES SMART M'F'G CO. LIMITED
BROCKVILLE, ONT.

EXCLUSIVE MAKERS FOR CANADA.

WEIGHING WITHOUT SCALES.

A simple way of determining the weight of sheet iron without putting it on to the scales is thus described by the Ironmonger: "It has been found by experience that a square foot of iron plate one-eighth of an inch thick weighed almost exactly 5 pounds, and this forms a basis for a very simple and easy rule. As a square foot of iron one-eighth of an inch thick weighs 5 pounds, a square foot of ¼-inch iron will weigh 10 pounds, and we can say that the area of any sheet iron (or plate iron) in square feet multiplied by the thickness in one-eighths and multiplied by five will give the weight of the piece.

BOTH SIDES OE THE COUNTER.

There has been considerable said and written regarding the amenities of the retail trade, and much advice offered, chiefly to the inside of the counter, as to the proper and especially the profitable treatment of possible customers, which doubtless has resulted to the moral and financial advantage of those dealers who "live to please" because they must "please to live." Perhaps the outside of the counter may have been neglected too much in the distribution of trade pointers, and this may warrant our acceptance of a mental call to sit judicially "on the counter" with words of wisdom (?) for the parties interested, but bearing in mind, as above stated, the proportion due to each. We have to accept the fact of an irrepressible conflict between buyer and seller which does not exactly accord with the teachings of the Golden Rule.

This manifests itself in a sort of diplomacy which is lie-able to deceive, but does not always show itself in oral prevarication, and is likely to hide selfish motives behind words which at best are but half truths.

We may infer that Solomon the Wise was, by reason of his extensive feminine connection, quite familiar with outside-the-counter remarks, and his "It is nought, it is nought, saith the buyer, but when he is gone his way then he boasteth," was a record of experience which has been and is now common to all. Mrs. Solomon—in the plural—was an antitype of many of the present generation who will not purchase even a a necessity without condemning the seller's goods in order to get a reduction in price. When Mr. and Mrs. Skin Flynte are obliged to put a new stove in place of the old inherited and played out one their minds are made up, or at least hers is, to get the "Cream of the Kitchen," because that is highly recommended by sundry sisters, cousins and aunts. In vain do Rostem & Co. talk of the merits of their wares. Mrs. F. will have none of them, and is firm in the belief that a seller of stoves knows less about them than a user. Having found the only place in their locality where the "C. of K." may be procured, they (Mr. and Mrs. F.) immediately compare it unfavorably with "that one we saw at Rostem's" which was of the same price, but "better looking and a leetle bigger." Of course the stove is bought as was intended, and its merits extolled to visiting neighbors, with the self-approbative remark that "I made him throw in a poker, and a rattlebox for the baby."

We think a little of "put yourself in his place" would be good for both sides of the counter; the buyer realizing that the fact of carrying a stock of goods for him to select from warrants a profit on their sale, and the dealer feeling that the same fact gives him a right to so-called patronage. As a rule, the inside of the counter is the most humble servant of the outside, and to be waited on implies a servile acquiescence in all the unwarranted demands often made upon the dealer's time, patience and temper. Sometimes the airs that patrons put on are resented, as in a case that comes to memory. It was in a country store where a general stock of assorted merchandise was kept. One day when trade was extra good a man asked the boy clerk to give him change for a $5 bill, to which the clerk objected, saying that the little in the cash drawer would be needed for customers. "What is the price of that?" said the man, pointing to an article. It was immediately laid on the counter with the answer, "fifty cents." "I will take it," said the man, "and now," (with an oath) "you will have to change the bill." "Hold on," said the proprietor, who had seen and heard the transaction, "we don't have to do anything of the kind under compulsion. The article is not for sale to you, and we won't change your bill." Of course that man's present and prospective patronage was lost but not regretted.

It has been said there are no friendships in trade, but it does not follow that there may not be mutual confidence, although as that is a plant of slow growth it will be a long time before it flourishes across the counter, replacing the prevailing distrust which makes small trades a skirmish and larger ones a campaign. Both parties may be free from direct deception, yet each will allow the other to make self-injuring mistakes, with the after comment that "I look out for myself and others must for themselves." A lady came to a dry goods store with a sample of cloth she wished to match, which the clerk could do in color but not in quality, thus losing the sale. The boss said, in reprimanding the clerk, "Why did you show the best piece first?" "Because it was most like her sample." "Next time begin with the coarser goods and afterwards show the finer and better, which will then appear more so to a customer." Will the reader please estimate the moral,—not mercantile—value of that advice.—F.S.L. in Metal Worker.

WARMING AND VENTILATION.

Ventilation consists of two operations the removal of the foul and the introduction of fresh air. It is inconvenient to consider the two separately, as neither operation can go on without the other going on at the same time, but the principle on which these two arts, "Warming and Ventilation," depend, are so mutually involved that it is almost necessary to consider them together.

Much of the heat is conveyed away through various fissures and openings, and where ventilation is considered and attended to, there is further loss by the outflowing currents of vitiated air. To renew this constantly disappearing heat is the object of contrivances for warming. The necessity of ventilation arises from the vital importance of having pure air to breathe, but as impure air does not effect the senses so directly as a falling temperature, more precaution is needful to guard against it.

In our court-houses, churches, school-houses, theatres, and halls, the subject of ventilation has been too often entirely overlooked. We have seen some of the best men of our country suffering from the effects of pent-up, effete air without being aware of its character or the cause of their indisposition. The selection of a furnace, therefore, is a matter of the utmost importance in warming and ventilating.

There are not a few but will fill the requirements of temperature, but the quality is bad; they have too little radiating surface above the fire-pot for the absorption and radiation of the heat from the fire. And in all such cases the consumption of fuel is greater because of having to crowd the fire in order to heat these small surfaces sufficiently to produce the required amount of warm air for the building to be heated.

The good health of our families, of the children in our schools and of the people that are wont to assemble in churches or halls, is chiefly dependent upon the pure air they breathe.

The agent employed in removing the air from apartments of buildings is the draft of ascending currents, which is produced by the difference of temperature.

Wherever there is a vent flue in connection with a chimney there is the best means of removing foul air. In rooms moderately lofty and spacious where the ventilation is opened into vent flues there will be but little danger of vitiated air.

Where a house is to be built new, we recommend putting in a special ventilating flue connected with the chimney and separated from it by a partition, so that the air may be heated and an ascending current produced.—From "Comfortable Homes," issued by Schwab & Sercomb, Milwaukee, Wis.

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Envelopes, Note Papers, Foolscap,
or Stationery of any description

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Stove Boards

Maple Leaf, Crystallized, and Embossed.

Stove Pipe

(Patent.)

STOVE PIPE ELBOWS, 1, 4, AND 6 PIECE

Stove Pipe Polish, Paste, and Varnish

STOVE PIPE COLLARS AND STOPPERS

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

The Russell Company, of Ottawa, has obtained a charter of incorporation.

The Wanderer Cycle Co., of Toronto, is applying for a charter of incorporation.

A charter of incorporation has been obtained by the Toronto Lumber and Manufacturing Co.

Naylor & Sons, plumbers, of Halifax, have opened a branch store in McDonald's building, Dartmouth.

The latest idea in bicycles is to make th etire a trifle larger and inflate it wit hgas. This bught to make a light machine.—Ex.

The Minister of Railways and Canals states that he expects that the Canadian Sault Ste. Marie Canal will be open for traffic on May 1st, 1894.

A good cure for the blues, says a witty exchange, is a big piece of ice-cold ripe watermelon. A good cure for the watermelon can be had of any practising physician.

The Rathbun Company, Deseronto, has orders from Great Britain and South Africa sufficient to keep 175 men in the factory working full time for three months.

J. Abner Holt, of Toronto, was on Tuesday fined $20 and costs, with the alternative of 30 days in jail, for using cancelled stamps from which the marks had been erased.

The Brown Mfg. Co., of Belleville, this week shipped two girders, each 101 feet long, requiring the length of three cars, t oToronto, t obe used by the C.P.R. bridge at that place.

The City Travelers' Association has issued a neatly printed program for its Promenade Concert and At Home to take place on the steamer Chippewa on Monday night, Aug. 21. Glionna's orchestra has been engaged for the occasion.

The Tilsonburg Stove factory was offered for sale by public auction, and was purchased by Weston, for the sum of $50 for buildings, and the same amount for patterns, the town still holding a mortgage of $3,000 on the foundry.

George A. Spotswood, M.E., Kingston, shipped last week to the World's Fair a sample of pure galena from the Frontenac lead mine that weighs 214 lbs. When taken from the mine it weighed over 300 lbs. of mineral, but in handling and transportation it was broken down to its present weight. It is without doubt the finest specimen of galena ever taken from a Canadian mine.

A new postage stamp of the value of 8c. is now being put into circulation. This stamp will be available for the prepayment of registration fee and postage combined or of postage only. The 5c. registration stamp is to be withdrawn when the present supply is exhausted.

A lady from Belgrave was the other day charged with sending a letter containing money in a newspaper contrary to the law. She pleaded guilty, and a fine of $10—the lowest that could be imposed under the Act—and costs were inflicted. Assistant Post Office Inspector Maloney, of Stratford, was complainant.

The Hamilton Powder Works, of Northfield ,have just forwarded three more carloads of black powder and dynamite to West Kootenay for blasting purposes, making fourteen carloads already sent thither this summer. The powder works are this year having an unusually busy time.

The Richelieu & Ontario Navigation Company announce that a new boat will be put on between Hamilton and Montreal on September 1 to run till the close of navigation. The company is in too much of a mad, wild hurry about this thing. It ought to wait until the middle of January.

It is an economic fact that when the iron and steel industry is in a depressed condition, no other branch of manufacturers is in a flourishing one. It is the industrial barometer which marks th e healthfulness or the reverse of nearly every other department of industry. —New York Recorder.

An advice from New York says that that port has been blocked with Canadian hay sent there in bond for export to Europe. The same advice says that while Canada has been sending forward unusually large quantities and virtually supplying England and France, the holders of hay in the United States are hanging back and will not be satisfied with less than $40 a ton.

There are no trades unions in India. The workmen are, however, said to have in many instances a common understanding, an unnamed and unwritten bond of union peculiar to themselves, by which the labor remuneration in various trades is generally regulated. No strikes or lockouts of general importance have occurred in India, and nothing in the nature of disputes involving organized action on a large scale between capital and labor.

A Keewatin despatch to the Winnipeg Tribune says the saw mill companies have been insuring their employees against accidents this season. Tuesday last was payday, and seventy cents were kept back from each man to cover insurance. The men thought this an infringement on their rights, and struck in a body Wednesday morning. All mills are therefore closed down. There are some prospects that amicable arrangements will be arrived at, and work resumed this afternoon, or anyway in a day or two.

A cement or glue that can be used to good advantage for cementing the wood and iron axle-beds together is composed mainly of India rubber cut in small pieces, dissolved at a slow heat in a closed copper kettle with mineral naptha, until the rubber is completely dissolved, and twenty parts of shellac. During the process of mixing the mass must be stirred at intervals. To use, it must be softened by heat and applied quickly, as it hardens readily. It is also valuable for cementing in bottom boards to bodies, as it resists moisture.

It is learned that in packing houses, tanneries, and hide warehouses where salt or ammonia are used in quantities, the destruction by rotting of the insulation on electric light wires takes place, so that the danger from fire is greatly increased. It is suggested that in such places the wires be covered with hard rubber or some other hard substance to prevent the hazard. The matter will probably be fully discussed at the Electric Light Congress, which is to be held in the rooms of the Chicago Fire Underwriters' Association on August 17.

Wire nails, it seems, are in growing favor with Chinese carpenters in the province of Hankow, supplies reaching them from America via Shanghai. Specimens bought by Consul Gardner have been forwarded to the Foreign Office, and can now be seen at the Chamber of Commerce Rooms, Birmingham. The consul opines that, as the native craftsmen come to realize the superiority of such nails to the clumsy articles of Chinese make, the demand will rapidly develop, and he suggests that British manufacturers should cater for the business, seeing that they are, undoubtedly in as good a position to supply the market as the Americans.—Ironmonger.

A Hamilton despatch says: One of the members of the Morehouse syndicate was in the city to-day on business connected with the establishment of the proposed smelting works. The syndicate is meeting with opposition by reason of the extortionate demands of the owners of the property through which the switch connecting the new works with the G. T.R. is to run. It is stated that one owner wants $5,000 for 200 feet of right-of-way, while another refuses to sell any, if not the whole, of his property, for which he asks $10,000. The contracts for building cannot be let until the switch is arranged for, as the material must be brought that way. There is

a rumor to the effect that the syndicate is arranging with the G.T.R. to expropriate the property necessary for the switch, in which case the grasping landowners will be left out in the wet.

The steamer Mowera sailed for Australia Thursday, her departure being delayed by the non-arrival of the Pacific express with the mails owing to an accidents. She has 26 saloon and 30 second-class passengers. The cargo consists of 1,200 tons, the vessel being completely full. For Honolulu she has 27,823 feet of lumber, 359,000 shingles, 707 bundles box shooks, 110 barrels dried fish. For Brisbane 200 cases salmon, 140 barrels salt salmon, 508 barrels frozen salmon. For Sydney, 980 cases agricultural implements, 60 barrels salt salmon, 43,625 feet lumber, 12,000 pickets, 1,213 bundles laths, three bundles shingles, samples of whiskey, stationery, biscuits, ore, confectionery. For Melbourne, 735 cases salmon, 661 packages machinery, 135 packages agricultural machinery, 296 fresh salmon, 130 barrels salt salmon.

The pig iron markets at both Glasgow and Middlesborough have, according to S. W. Royse & Co.'s report, been quiet throughout this month. No heavy amount of business has been passing, the holidays interfering with business at Glasgow, and shipments from Middlesborough are not so large as might be expected. Still the tone has been good and prices have slowly advanced until they are now 9d. per ton higher than at the beginning of the month. This is largely due to the troubles in the coal trade, which are causing more enquiry for pig iron, though not to the extent that might be expected, and not much business is being arranged as sellers are naturally chary of giving quotations under present circumstances. The manufactured iron works in the Midlands are fairly busy on old orders, and any new business now done is only for early delivery. Lead has secured a good advance, and is at present steady at a slight decline from the highest point touched during the month. Copper continues to ease slowly. Tin has lost ground somewhat, but is at present steady, though not strong. Spelter, after easing, is firmer again.

A DOUBLE SASH MOVEMENT.

A simple mechanical contrivance is being adopted by English builders by which window sashes may be given two movements, the one upward or downward and the other inward. Practically only one action is required to effect the change says a London writer,, from an ordinary sash to a casement window. By dropping a catch at one side of the sash the cord is secured, the window frame being released from the sash, and slipping into pivot hinges, when it can be opened as a casement and keys itself in so doing ; when closing, the sash again engages with the cord, which runs in a groove in the pulley slide and serves as one of the guides to keep it in its place when working up and down as a sash. In this arrangement the beading which is generally used to guide and separate the sashes is entirely dispensed with, the sashes being guided by suitable tongues working in grooves on the right or hinge side. On the left side, the sash, when closed for use as a lifting window, engages with a metal block attached to the end of the weight cord, which serves to guide it on the frame, the sash being also so arranged that it cannot possibly come off the hinges except when closed.

PERSONAL MENTION.

Mr George Bertram, of Bertram & Co., who has been away on a brief pleasure trip, has again returned to business.

Mr. G. W. Rogers, with S. H. Howland, Sons & Co., has returned from a two weeks' fishing trip on the Rideau. His heart was delighted and his appetite satisfied with the many black bass he caught. He cannot be persuaded to tell any fish stories however.

Mr. H. S. Hergert, with Samuel, Benjamin & Co., is taking his holidays this year with friends near Berlin, Ont. His respite from business began yesterday.

James Chalmers of St. Mary's, A. D. Carley of King, and M. Padget of Padget & Hay, Unionville, were in Toronto this week on business.

THE CANADA PAINT CO. AGAIN WINS.

In the Superior Court, August 11, Judge de Lorimeier delivered judgment in connection with the injunction recently passed restraining William Johnson & Sons, limited, from doing business under that name. A motion to quash was put forward and debated on Friday, the 4th, and yesterday Judge de Lorimier dismissed the motion and adhered to the injunction. In delivering judgment His Honor explained that the court had duly considered the power of jurisdiction which was questioned in the motion and found that otherwise there was nothing in the statements made which would warrant the court to interfere with its action under the petition.—Montreal Gazette, August 13th.

A METAL THAT HARDENS STEEL.

The reason why the mixture of tungsten with steel gives the latter so great a degree of hardness that it readily scratches glass and quartz, seems to be revealed by a discovery recently made in Germany, says Exchange. A definitely crystallized compound of iron and tungsten has been discovered, the crystals being so hard as to scratch topaz. Tungsten is a brittle white metal, almost as heavy as gold. The crystals, remarks the Paper Trade, are formed by its combination with iron, in proportion of one atom of iron to two of tungsten, are silver gray and very brilliant. It is thought that when tungsten is alloyed with steel some of the compound just described is formed in the mass, thereby producing the remarkable increase in the hardness of the steele. This is an interesting example of the value that one metal may lend to another ; for, until the discovery that it could be used in hardening steel, tungsten, although it occurs in considerable abundance was practically useless and without value.

BUSINESS IN RUBBER GOODS.

Jobbers are awakening to the expediency of closing their contracts without further delay, to be sure of seasonable delivery, and are sending forward more detailed orders. Still they are chary of assuming obligations they may possibly find it difficult to meet. It is the same with rubbers as with leather goods. There is so much uncertainty that everybody is conservative. Some of the companies were fortunate enough to close large blanket orders early in the season, and on the subsequent detailed orders have been enabled to make and forward a great many goods. As freight rates advanced on August 14, all the companies are trying to forward as many goods as possible prior to that date. The American Rubber Co. received mail orders for 4,000 cases by one mail recently. A great many staples are being made and will be applied to orders later on, but as none of the specialties can be made up ahead of orders it will surely create some confusion in the fall months —Shoe and Leather Reporter.

A FAST STEAM YACHT.

The steam yacht Fiseen (Flying Arrow), to make at least 30 miles an hour, has been built after designs by Gardner & Mosher of New York. She is 78 feet over all, 9 feet 6 inches beam, and draws about 3 feet of water. The hull is built of mahogany, brightly polished. She is modelled very much like the Norwood. Her stem is straight and sharp, with very little freeboard, and the stern is flat so as to prevent squatting when going at full speed. She has good interior accommodations, and promises to be useful for cruising as well as for speeding. The engines are the most interesting part of this boat. They were built by Lysander Wright of Newark, from designs by C. D. Mosher, and are of the quadruple-expansion type. The cylinders are 9½, 13½, 18 and 24 inches in diameter with a 10-inch stroke. In constructing the engine lightness combined with strength has been the chief consideration, and it is said to weigh less than 3,600 pounds. It occupies 14 square feet of floor space, and, it is said, will develop 600 horse power. The boiler, a tubular one, is of the Mosher type, and will stand 250 pounds pressure.—Iron Age.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Aug. 18, 1893.

HARDWARE.

The week has not furnished any special features and business as a general rule in hardware is dull. Travelers are not on the road at present, and what business that is doing is due to letter orders which with some of the houses is said to be better than for the corresponding period last year. Its aggregate value is small, however,, and the market is quiet. There has been some enquiry from Ottawa for axes, chains, etc., presumably on lumbering account, but what has transpired in this connection is not very heavy. The fact that there is enquiry, however, is taken to mean that supplies are not large, and for this reason an enlarged movement of business is looked for shortly. In nails, tacks, etc., makers here state that the orders are not so frequent as they were but they have booked a good share of them previously, so that a lull is not surprising. Cutlery has furnished a fair sorting-up trade, and sporting goods have contributed their share also in this respect. Plumbers' and builders' supplies are quiet. Payments remain as last noted.

WIRE.—There is nothing very special to note in this line, business ruling quiet.

NAILS.—Makers state that orders are not so frequent as they were, but up to very recently they had booked quite a fair lot, so that a lull is not surprising. Jobbers are not doing much in this connection at present.

TACKS.—A few small orders are reported, but demand as a rule is not brisk.

CHAIN.—Further lots of logging chain, etc., have been moved, but otherwise there is nothing to note.

TOOLS.—Harvesting tools are now out of it, and other lines do not exhibit much activity, except in the matter of enquiries regarding axes, etc., and other implements to be used in the coming winter's lumbering campaign. These enquiries are regarded as a portent of better things to come in this connection.

CUTLERY.—A few small sorting orders is all there is to report in this line.

SPORTING GOODS.—The same is to remark about these, some fair parcels of shot guns having been sent forward during the week. They, however, represented orders which had been placed some time ago.

WARE.—Business in this line rules quiet and furnishes nothing specially worthy of mention.

BUILDERS' SUPPLIES, ETC.— The movement in plumbers' and builders' supplies is hardly worth mentioning.

BINDER TWINE.—There is only a very moderate demand to note.

METALS.

There has been no improvement in the demand for metals, and heavy hardware is rather duller if anything than formerly, with less business doing between makers' agents and importers than was to note a fortnight ago. Values generally show no actual change, but have an easy tendency, there being a notable drop in tin on the other side during the past week.

PIG IRON.—The market continues dull, the only transactions of importance being some round lots of Summerlee at 17.50 net cash. Advices from the other side reflect no particular change in tone. We quote as follows: Summerlee, $18.50; Eglinton, $17 to $17.25; Carnbroe, $16.75 to $17; Siemen's No. 1, $18, and Langloam, $18.50.

BAR IRON.—The market shows no change, and hardly a single transaction of importance has been put through. The standard price is maintained.

SCRAP IRON.—Business is conspicuous by its absence and prices are nominal.

TIN PLATE.—We have nothing particular to note in this line, but importers are not doing quite as much. We quote as before, coke $3.20 to $3.25, and charcoal $3.75 to $4.

CANADA PLATES.—No round transactions are spoken of, the market ruling quiet at former prices, viz., $2.40 to $2.45.

TERNE PLATES.—There is no special feature to note in this line. One order was booked for importation during the week on the basis of previous quotations. We quote $7 to $7.25 as to grade.

GALVANIZED IRON.—Makers' agents not doing quite as much as a week ago, and business generally is quiet. We quote as before, 4 1-2 to 5 3-4c.

SHEET IRON.—Business is dull and prices unchanged at $2.40 to $2.60. Russian sheets 10 1-2 to 11c.

HOOPS AND BANDS.—Without feature at the former price, $2.35.

COPPER.—The tone is easy, and we quote prices rather off at 11 1-2 to 12c. Demand dull.

TIN.—There has been a big drop in tin on outside markets, and although 22 1-2c. is still quoted as an outside figure, business would be done at 22c. Bar tin may be quoted 24 to 25c.

LEAD.—Is flat and unchanged at $2.90 to $3.

ANTIMONY.—Business is very small, but prices are the same at 10 1-2 to 12c.

SPELTER.—There is no change in spelter, which rules at $4.75 to $5, with enquiry moderate.

ZINC SHEETS.—No business of importance to note during the week. We quote $5 to $5.50.

CEMENT.—There has been a moderate volume of business during the week in small lots. Freights still keep low, and this means the probable shipment of some good lots as ballast, so that the tone is easy, but there is no actual change in price. We quote: Belgian, $1.85 to $1.95, and English brands, $1.95 to $2.10. Firebricks are in fair demand at unchanged prices, $13.50 to $19 per 1,000 being still the idea.

NAVAL STORES.—There has been a fair volume of business in this line. We quote turpentine, 47 to 48c.; resins, $2.50 to $5, as to brand; coal tar, $3.75 to $4; cotton waste, 5 1-2c. for colored, and 7 to 10c. for white; oakum, 5 1-2 to 7 1-2c. and cotton oakum, 10 to 12c. Cordage—Sisal, at 9 3-4c. for 7-16 and upwards, and 15c. for deep sea line; pure manilla, 11c. for 7-16 and upwards, and 12c. for smaller sizes.

PAINTS AND OILS.

A fair business is doing, considering the season, in leads and paints at the advance previously quoted. Linseed oil continues firm, but demand is slow and business small. We quote the following: Choice brands white lead, Government standard, $5; No. 1, $4.75; No. 2, $4.50; No. 3, $4.25; No. 4, $4.00; dry white

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The Gurney-Tilden Co. Ltd.

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HAMILTON - - ONTARIO.

lead, 5c.; red lead, pure, 4 1-2c.; No. 1, 4 1-4c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, round lots, raw, 760c., boiled, 63c.

GLASS.

The glass market is very dull and the position unchanged. We quote as before on the basis of $1.35 for first break. Putty in bulk is quoted at $1.85.

PETROLEUM.

The market is very dull, but prices are nominally unchanged. We quote at 11 1-2c. in shed at Montreal for Canadian round lots, 12 1-2c. for five barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c. in 10-barrel lots, 19 1-2c. in 5-barrel lots, and 19 3-4c. for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c.; Canadian benzine, 10 3-4c., Petrolea, 12 3-4c. Montreal.

MONTREAL TRADE NOTES.

Advices from England at the close of last week state that the linseed oil market had an upward tendency.

Tin dropped over £2 in the speculative markets on the other side last week.

Warrants in Glasgow have shown considerable variation recently, with an upward tendency owing to the coal strikes, etc.

Painchaud, Squire & Co., have sent forward several good sized lots of Dumoulin Freres fire-arms during the week on orders placed some time ago.

W. H. Cottingham & Co. note that Mander's paints and varnishes are meeting with more and more encouragement from coach builders and carriage makers generally.

The handsome new catalogues got up by the Toronto Radiator Mfg. Co. are attracting attention from the trade.

TORONTO MARKETS.

TORONTO, Aug. 18, 1893.

HARDWARE.

Nothing particularly new has developed during the week. Some of the travelers are taking the road again, but the greater part of them are either in the house or holidaying, and business remains in the same quiet and uninteresting condition. There is absolutely no predominating feature to note. The business doing is general, and one line seems to be receiving no more attention than another. Some shipments are being made to Manitoba and the Northwest, and the trade is now putting in hand fall orders booked some months ago for tinners' use. Hay baling wire is still selling well, and there is quite a demand for rope of certain sizes. In binder twine there is scarcely anything doing. For nails the demand seems to be well maintained, but in tacks there is not much doing. Enquiries are being made for apple parers and orders are being filled for skates. The only thing to note in harvest tools is a demand from the Northwest, business in that line here being over for the season. Payments, if anything, continue to show improvement.

WIRE—Trade is quiet, except in haybaling wire, the demand for which is brisk.

ROPE—There is quite a demand for ½, ⅝ and ¾ inch rope, and business in this line may be expected to increase as the fall approaches.

BINDER TWINE—Business is limited, the great bulk of the trade being over for the season.

CUTLERY—Large shipments are being received and orders are coming in nicely.

NAILS—Demand continues good for small quantities at unchanged prices.

HORSESHOES—Not much doing. Complaints are heard regarding cutting prices.

TACKS—There is not a great deal doing, and there is nothing of special interest to note.

CHAIN—Not much doing and prices are unchanged.

SPORTING GOODS—Guns, rifles and ammunition continue to go out well.

APPLE PARERS—In spite of the expected shortage in the apple crop business in this line is reported fair.

SKATES—Orders are now being filled for these.

WARE—Trade continues to slacken off, and the little that is being done is of a sorting up character.

PLUMBERS' SUPPLIES—Trade continues quiet in this line, although it is no worse than it has been.

TINSMITHS' SUPPLIES—Orders booked some months ago for stove boards, elbows, stove pipes, dampers and similar lines of tinners' ware are now being put in hand. The quantity booked for this particular line does not seem to be as large as for the corresponding period last year.

BUILDERS' SUPPLIES—Very little doing, and there is no feature to note.

TOOLS—Orders are being filled for harvest tools on Northwest account, and by this means surplus stocks here will be reduced.

METALS.

About the only thing to note specially in metals is an advance in lead. In pig iron there is scarcely anything doing, but in bar iron some good lots continue to move. Galvanized iron is in good demand and advancing in England. Black sheets are moving well, but there is not much doing in terne plates yet. A moderate business is being done in Canada plates, and ingot tin is going out quite freely.

PIG IRON—The market is dull and featureless.

Rogers, Brown & Co., Buffalo, report the Toronto pig iron market as follows: There is really no market to report. An occasional carload order keeps the record above the statement that there is absolutely no business doing. Producers of iron have met the situation in like form, and to-day only one furnace making coke iron is running in the State of New York, and that one expects to shut down soon. Prices quoted in the schedule below are really nominal, f.o.b. cars Toronto, in bond: IX Foundry strong Coke Iron, Lake Superior ore, $15.20; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14.45; 2 Foundry Strong Coke Iron, Lake Superior ore, $14.20; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17 45; Southern Soft 1, $13.60; Southern Soft 2, $13.10.

CORRUGATED IRON
ILLUSTRATED CATALOGUE FREE
METALLIC ROOFING Co.
MANUFACTURERS TORONTO

BAR IRON—Some good lots have been sold during the week at the $1.95 basis, and further enquiries are heard.

HOOPS AND BANDS—The usual trade is being done at unchanged prices.

IRON PIPE—Stocks are getting broken up, but fresh supplies are expected every day. Scotch pipe is quoted at 62½ per cent. off list up to 2 inch, but this price would be shaded for quantities.

CORRUGATED IRON—Some enquiries are heard for this article, and prices are unchanged at $4.75 to $5.

GALVANIZED IRON—Is going out quite freely. In England prices are advancing, makers there charging 7s. 6d. per ton more. On this market prices are as yet unaffected, 5 to 5¾c. still being the idea for Queen's Head and Gordon brands.

TIN PLATES—Some large orders have been taken during the week, but at low prices. A good deal of black sheet iron is selling.

TERNE PLATES—Not much doing, it being rather early for trade in this line.

CANADA PLATES—Import orders for this line are being delivered. This is rather earlier than usual. It has been found necessary to fill some local orders from stock, buyers being unable to wait the arrival of their import orders. Prices unchanged, all dull being quoted at $2 65, half half at $2.75, and all bright at $2.80 to $3 per box.

INGOT TIN—Some good sales are reported; 23 to 23½c. is still the idea for small lots.

INGOT COPPER—Some good sales are reported at unchanged prices, 12 to 12½c. still being quoted.

SHEET IRON—It is going out in moderate quantities at 2½ to 3c.

ZINC SHEET—Stocks are arriving and business in this line is improving, and from this out is likely to do so. For small lots the idea is still 5¾ to 6c. for 5-cwt. casks and 6 to 6¼c. for part casks.

SPELTER—This article continues quiet and unchanged at 3¾ to 5¾c.

LEAD—Orders that were booked a little earlier for pig lead are now being delivered. We quote 3½ to 5c. as before.

SOLDER—There is the usual demand for this at unchanged prices, namely bar and half-and-half, 15½ to 16½c., standard 14½ to 15½c.

ANTIMONY—Nothing doing, and we quote small lots as before at 12 to 12½c. for Cookson's and 11½ to 12c. for common.

PAINTS AND OILS.

Trade continues as before and without any change in price. The usual quiet seasonable trade is being done in white lead at the basis of 5c., although some buyers claim they can buy below this figure. Prepared paints are scarcely receiving any attention. The same remark apply to varnishes. Turpentine is dull and unchanged at 44 to 46c., the latter price being for outside points, freight allowed. Local dealers in turpentine are somewhat disturbed by the fact that nothing but spot cash will now be received in Havana, drafts

MARKETS—Continued.

not being acceptable owing to the scarcity of currency in the country. Linseed oil is in good demand at 60 to 62c. for raw and 63 to 65c. for boiled. Trade is keeping fair in glue at unchanged prices. Payments fair.

GLASS.

Glass in good demand at $1 25 and stocks are pretty well broken up.

OLD MATERIAL.

Trade does not show any improvement and prices are as before. We quote as follows. Agricultural scrap, 60c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 35 to 40c. per cwt.. No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings and turnings, 10 to 15c.

PETROLEUM.

There has been no material change on the Toronto market, trade being fair and prices as before. We quote: 5 to 10 bbl. lots, imperial gallons, Toronto: Canadian, 12½ to 13c.; carbon safety, 16½ to 17c.; Canadian water white, 17c.; American water white, 18½ to 19c.; photogene, 22c.

HIDES, SKINS, TALLOW, WOOL.

WOOL—There is little or nothing doing in wool. The mills seem to be well supplied and many of them are waiting to see if wool will not be lower in price. Indications favor this policy, and factories with cash can buy wool lower now than they have done for years. For fleece wool buyers are paying 17c. for selected combing, and 18 to 20c. for clothing. Foreign wools are deemed by some mills to be more profitable to manufacturers than Canadian wools.

SKINS—Calfskins are more nominal, although prices have a downward tendency, with stocks accumulating. Dealers are paying 6c. for No. 1 and 5c. for No. 2. Pelts and lambskins are scarce and are being rapidly taken up at outside prices. The prices paid are 45c. for lambskins and 30c. for pelts. Our large dealers say there has been an importation from Chicago of over 5,000 lambskins and pelts, and if this continues it will have a disastrous effect upon the local markets.

HIDES—Hides are quiet and the market weak. There has been a large quantity sold in Canada of Western hides at low figures. These sales have completely demoralized our local markets, and dealers are paying 4c. for No. 1 local hides, which is about 50 per cent. below their actual value, in comparison with the cured hides bought on the Western market.

MARKET NOTES.

Galvanized iron is 7s. 6d. dearer in England, but there is no change here.

M. & L. Samuel, Benjamin & Co., report a good demand for the "Star" corer and slicer.

Jobbers are doing a good trade with the Northwest, and a good many harvest tools are being shipped there.

H. S. Howland, Sons & Co are in receipt of a special line of Thomas Ellin & Co.'s pocket cutlery. Every knife is warranted by the makers to be of the best quality of crucible cast steel, and is wrapped in a seperate paper together with the maker's guarantee. The knives are highly finished.

W. J. Jeandron of No. 3 Wellington street east, Toronto, is now representing H. R. Ives & Co. of Montreal in the west.

A shipment of fish carvers, fish eaters, and desert sets in pearl has just been received by H. S. Howland, Sons & Co.

The Gurney Foundry Co. have issued a neat little circular in colors of their new Countess of Oxford baseburner and Duchess of Oxford range.

M. & L. Samuel, Benjamin & Co. are sending two carloads of general hardware to the Northwest this week and another will follow next week.

A nice trade is reported by M. & L. Samuel, Benjamin & Co., in the Hudson or "racking table" apple parer. The trade is urged to place orders early, as delay in filling them may ensue owing to the financial crisis in the United States.

Our private advices, says Metal Market Report, from the Northwest, covering the Couer d'Alene and silver and lead districts tributary to Spokane, Washington, show almost a practical suspension of mining. A falling off of 70 per cent. in production is noted, owing to low prices of silver and lead. From the Slocum country in British Columbia only 300 tons of ore have been shipped this season, notwithstanding all the "blow" we have heard regarding that section.

Reports from all iron consuming sections of Eastern Pennsylvania shows, according to Metal Market Report, a continuation of unprecedented features of depression. Notwithstanding the enormous decrease in the production of raw iron, which occurred in July, stocks increased approximately sixty thousand tons, and values show a further falling off as a consequence. Prices for pig iron of all description may now safely said to be at "rock bottom," and at the first sign of improvement in the financial condition of affairs a general demand from consumers will spring up, which in the present depleted condition of their stocks cannot fail but bring about a rapid advance from present low values.

AMERICAN MARKETS.

New York, August 18.

PIG TIN.—The situation is practically unchanged. That is to say, consumers are buying very sparingly, while speculation is as narrow as it has been at any time during the past three or four weeks. Prices show rather weak tone, particularly on distant futures, with the difference between spot and prompt delivery lowered to about 0.15c. on private negotiations. Thus September was offered at 18.35c., against about 18.20c. for spot and August. Of the latter ten tons were sold at the price named. Straits shipments during the first half of the month were advised as having been 1,000 tons to Great Britain and 800 tons to the Continent, against a total of 2,025 tons for the corresponding period last year. London prices dropped to 79.26 for prompts and 79.5 for three months' futures.

COPPER.—There was no sign for any turn for the better in the market, and prices are still very uncertain, with 9 3-4c. apparently full value for Lake Superior ingot, and 9 1-4 to 9 1-2c. quoted for other kinds. Merchant bars in London declined to 41 2-6c. for prompt and 41 1-10 for future delivery.

LEAD AND SPELTER—Demand from all sources continues very moderate, and the market is weak as well as dull. Lead is quoted at $3.30 here and $3.12 1-2 in St. Louis. Spelter is about $3.80 to $3.85 here, and $3.50 in the West. London cables were £10 for soft Spanish lead, and £17 1-10 for ordinary merchant spelter.

ANTIMONY.—Business continues to be of retail character, and the demand is very slow. Prices rather weak, at about 9 3-4 to 9 7-8c. for Hallett's, 10 3-8 to 10 1-2c. for LX and similar brands in round lots.

TIN PLATE.—The situation stands the same as it was at the close last week. Orders are light, with the call invariably for small parcels, and prices are weak, particularly for ordinary cokes.

JUST AS HEAVY.

The lecturer with the stereopticon had a couple of heavy metal retorts for holding the gas for the machine, and in one of the country towns he hired a man to take them to the railroad station, says the Detroit Free Press.

"They're right heavy," remarked the man, as he got them into his wagon.

"Yes," coincided the lecturer.

"Anything in them?"

"They're full of gas."

The man didn't say anything, but took them along, and after the lecture he was on hand to take them away. He caught hold of one of them as if he were going to pick it up like a jug. But somehow it wasn't that light, and after a tug or two he let go in surprise.

"What's the matter?" enquired the lecturer.

"Why, dad bob it," replied the astonished teamster, "you've been using gas out of them things for two hours and they're just as heavy as they was when I carried 'em in here. That's what's the matter," and the lecturer had to explain the imponderability of gas before the man would take hold again.

Of course, everybody knows just why business is dull and money is scarce. But the trouble is that there are a hundred different opinions. Very few people, though, have thought it out for themselves. They hear or read somebody's explanation and then go echoing it around as gospel truth. One prominent personage will declare his views and all the little fellows of his party or society will straightway look very wise and tell you just what's the matter.—Ex.

MANUFACTURING OF STOVES.

Stove manufacturing requires two materials, the iron of which the stove is made and the sand that forms the mould into which the molten iron is poured, explains House Furnishing Review. In getting ready for a mould the sand, which must be of the finest, is first prepared, and by mixing it with water it is made of the proper consistency for handling. What is called the "follow" board is now placed on the floor and the pattern on top of it. The "drag," which holds the sand together, is then placed on top of the follow board. The sand is now sifted into the space until all the interstices are filled after which the drag is filled with sand, which is rammed or tramped by the moulder, and the surface smoothed over with a straight edge. At this point the moulder, whether an Irishman or not, commits what, for the time being appears to be an "Irish bull," by placing the "bottom" board on top of the surface which has been smoothed off. It is now securely clamped and turned over, after which the follow board is removed and "parting sand" is sprinkled on the drag. This sand is secured from the castings, and is perfectly dry when used. The "cope," which is the top part of the mould, is now put in place, and the "gates" are closed. These are small pieces of wood about an inch in diameter, and used to make the holes into which the metal is poured. These are left in place until the ramming is done. The cope is now thoroughly rammed with sand, the gates removed, the top of the flask is carefully brushed off and the mould is now ready for lifting, which is done by separating the cope from the drag. The pattern is now "swabbed," so that the edges may not crumble or drop off. The pattern is then "rapped" to insure the coming away from mould without destroying it, and then the pattern is carefully drawn. If the pattern is in good order the impression is perfect, if not the moulder must supply the deficiency by "slicking" it. Now, a continuation of the gates is cut into the moulds with a cutter; this is done to enable the liquid metal to have a free run before it begins to harden. At this point a blacking bag is brought into requisition, and a preparation with which it is filled is sprinkled over the surface. This is done to prevent the iron from sticking and at the same time give it a richer color. The pattern is now replaced and rapped as before so the blacking may make an impression, after which the pattern is again removed, and with a small hand bellows the moulder removes any small particles which may not have adhered. The mould is now closed and clamped and is ready for the metal. In the meantime the cupola tender has been preparing the metal for pouring, and when ready the moulder, armed with a ladle holding from 40 to 50 pounds, secures a portion of it and pours it into the gates leading to the moulds. A moulder may have upon his floor twenty-five or thirty "flasks," each of which he fills as he moves along, and by the time he reaches the end of his floor the first flask is ready to be "shook out." This is done, the castings are removed from the sand heap and placed in a pile at the head or side of the floor. The sand heap is then watered and thrown together, and the next day it is ready for the same work over again. When the pieces are sufficiently cooled they are wheeled to the cleaning room where they are placed in a mill along with innumerable small pieces of iron, the mill is closed tightly and with a lever is set revolving. This serves to clean all the parts, and when done they are taken to another department where the holes are drilled. From here they are taken to the mounting department where the parts are assorted and put together, and the different names assigned to the coal annihilators, and they are now ready for the wholesale or retail buyer, as the case may be.

HINTS TO ADVERTISERS.

A scheme which many ironmongers might profitably inaugurate is—making up kitchen hardware in complete sets for those about to commence housekeeping, says Ironmonger of London. How does a young housewife make up her list of kitchen requisites at present? She sits down with paper and pencil, and out of her past experience, or, more likely, inexperience, jots down slowly and meditatively what she thinks she will require. She misses, doubtless, some very necessary articles, and about many others she is quite at sea as to cost and as to improved appliances. She has, it may be, so much money to spend on this department of the new home, and when she visits the ironmonger's to make her purchases she finds her wants outrunning her means, and she is introduced to so many things she had overlooked that confusion and doubt lead to still greater perplexity. Now, if an ironmonger were to spare her all this initial trouble and subsequent annoyance, how would that work? Let him, with the aid of an intelligent assistant, make up kitchen utensils into sets, varying in quantity, quality and price, beginning at the bottom of the scale with one embracing only the absolutely necessary articles, and these of medium quality, and so rising to a collection that would be suitable for the mansion of a wealthy customer. The range, however, should be kept within the limit of the probable needs of the class of customers served. Having, then, arranged these sets so as to allow prices for the several sets to be fixed with a gradual rise, the dealer must make his scheme widely known. A circular would be necessary in the first place; but this could be prepared without much expense by saving repetition. That is to say, the lowest priced set should be set out in full, each article comprising it being named; the set next higher in price would be announced as containing "all the above articles, and also —," naming then the additions, and so on. A striking advertisement for the local paper might read—

ARE YOU ABOUT TO FURNISH?

— SAVE —

TIME, TROUBLE AND MONEY,

BY BUYING ONE OF

JOHN SMITH'S

Sets of Kitchen Hardware.

—:o:—

Set "A," Price £—, Contains

1 Coffee Pot	1 Wash Hand Basin
1 Tea Pot	1 Soap Tidy
1 Frypan	1 Gridiron

&c., &c.

Another week advertise another set, and so go through the list. And what an attractive window show might be made! Display a full set neatly arranged in the window, with a japanned trunk behind, and a large ticket inscribed—

THIS COMPLETE SET OF

KITCHEN UTENSILS

PACKED IN THIS TRUNK

AND SENT TO ANY ADDRESS

For £——.

Advertise them as wedding presents also, for while it is not now customary to buy kitchen hardware for this purpose, a complete set neatly packed in a box would be most suitable and appropriate, as well as welcome to the recipients.

PAWNED A $20 BILL FOR 75c.

A man entered a pawnbroker's shop in the Bowery, and, laying down a 20-dollar bill, asked if he could be accommodated with a dollar on it. The pawnbroker was an excellent judge of money, and saw at once that the bill was genuine. So he turned and said to the stranger, shoving the bill toward him as he spoke, that he was in no mood for nonsense. But the stranger shoving the bill back, rejoined in earnest tones that he meant business; that he couldn't get any conductor on a horse-car to change the bill; that he had already been put off three cars; that his boots were awful tight, and that unless he could get a dollar on the bill he would be compelled to walk to the Battery. Well, the pawnbroker couldn't but feel that the stranger meant what he said. So he took up the 20-dollar bill, toyed with it a few moments, and then said to him: "Well, my friend, I'd like to accommodate you, but owing to the financial stringency I can only give you 75 cents."

H. D. SIMMONS & CO.

Manufacturers' Agents,

85 York St., TORONTO

REPRESENTING

PECK, BENNY & CO, MONTREAL.
J. L GOODHUE & CO., Leather Belting, etc., DANVILLE, QUE.
ALEX. McARTHUR & CO., Tarred Felt Building Paper, etc., MONTREAL.
BELGIAN SYNDICATE, Cement, Iron Beams, etc.

GALVANIZED CLOTH

For Evaporators, Apple Drying, Etc.

Perforated Zinc and Hardware Grade Cloth FOR FANNING MILL .·. REPAIRS . .

Manufactured by — Write for Catalogue.

The B. GREENING WIRE CO. Ltd

HAMILTON, ONTARIO.



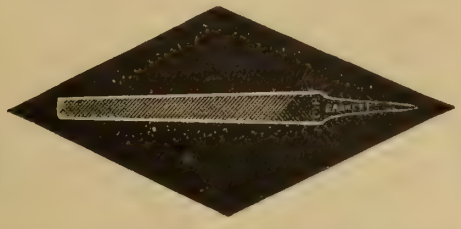
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HESPLER, ONT.

- Blacksmiths' Tools
- AND
- Tube Expanders

Send for Catalogue and Price List

BLACK DIAMOND FILE WORKS,



21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

—MANUFACTURERS OF—

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
CLIMAX SAWFILES. LIGHTNING SAWFILES.

—AND—

EVERY OTHER DESCRIPTION OF SAW FILES.

STRENGTH

Is what a Hardware Merchant requires in his paper. He gets it when he buys . . .

THE E. B. EDDY CO.'S

Hardware - - -
Heavy Manilla -
Brown Wrapping

PAPER

THE HIGHEST QUALITY. THE LOWEST PRICE.

TORONTO BRANCH : 29 Front St. West.
MONTREAL BRANCH : 318 St. James St.

MAMMOTH WORKS : HULL, CANADA

HARDWARE BUSINESS PROFITS.

In these days there is no branch of business in which competition is not sharp and aggressive, but in some lines of trade it is much more severe than in others, says W. H. Maher in Metal Worker.

For instance, the average man supposes because he is a consumer of groceries that no special experience is required in buying and selling groceries over a counter. Hence men start in that business without experience and with little capital. How little is evidenced by an incident coming to my knowledge within a few days, where application was made by a man and his wife for credit for a stock of groceries. It developed that they had $50 in cash and no experience in business, but considered themselves well equipped for starting a small grocery. They were advised to wait awhile until their capital was larger, but the chances are that they found a salesman who proposed to have that $50 and the trade of this pair of merchants.

Every man believes that he can weigh out and do up sugar, draw molasses and vinegar as well as any other man. The consequence is that men start a grocery and cut prices to draw trade, fail, and are succeeded by other ambitious and equally ignorant men.

The dry goods trade is constantly recruited from its own ranks, usually from men who have been heads of departments. They have been permitted to buy their own goods, and, to a very large extent, have also had influence in making prices at which the goods shall sell, and they are firmly convinced that they know the dry goods business from A to Z.

The general expenses of running a store are a mystery to them. The acquaintances they have made in the way of business they look upon as personal, and their trade a tribute to their own popularity. They impress their acquaintances with their supposed popularity and ability, and induce their friends to help them into a store of their own.

Finding that the people who formerly traded at their counter do not follow them, they are obliged to offer inducements by cutting prices, and there is so much of this that the dry goods business of the country has become one of small profits, and to be successful must be backed by ample capital and command large sales.

The drug business is one that demands long apprenticeship, if the owner of the store would be independent of his clerks. The druggist must be a chemist to make his prescription business profitable, yet his worst competion is from druggists who are without experience, and who depend upon clerks for all the technical knowledge needed in the business.

Aside from this, what was formerly the most profitable part of the drug business, patent medicines and proprietary articles, are to-day made leaders and baits in department stores, and they will probably continue to be so used, for extensive advertising creates a demand for them, and the regular prices are so well known that a cut price is at once understood by the public.

The hardware business is not one that attracts the majority of young men. It is not of itself a stepping stone into "society." It offers no inducements to the dudish young man who thinks more of his clothes than of his brains. It does not attract the superficial man who is more exercised about the wages he receives to-day than the position he will have a few years from this.

Competition in the hardware trade is rather one of brains and ability than one where men simply expect success by underselling each other.

There is no special rush of men into the hardware trade in any given locality. When a man who has been a hardware clerk prepares to start in business for himself, he has learned that capital is necessary and that business is not created in a day.

The young man who is about to select a business should consider his own tastes and adaptability, the position any given trade occupies as a money-maker, and the means it offers of gaining the acquaintance and goodwill of his fellow men.

He will see that a very large percentage of the customers of a dry goods merchant or grocer is composed of women and children. The hardwareman deals as largely with men. His principal trade is with farmers, builders, mechanics and manufacturers. These are the men who make a village or city. These are the men whose personal acquaintance is of value in business and helpful in social and political life.

When one compares the stable character of a stock of hardware with the unending changes of fashion in a dry goods store, or the great loss from perishable goods in the grocery store, the business commends itself because of this. Ninety-five per cent. of the stock in a hardware store is as saleable today as it was a year ago, and will be just as merchantable a year hence.

The expenses of running a hardware store are, proportionately to the business done, much less than in other lines. The store needs not to be located on a principal street, clerks are not required to wait upon shoppers, for a hardware store does not tempt that class; and customers, being mostly men, generally carry their purchases away with them.

The hardware business is pre-eminently a business for men. It is a manual training school for an intelligent boy or young man. The salesman who would be successful in selling tools and machines must know how, when and where they are used. He must be able to take apart and assemble any machine, tool or weapon that he sells and educate purchasers to do this. This will be conceded by any one who has knowledge of the business, and, being conceded, it is one very strong reason why the hardware trade is not sought by the mass of men who are looking after easy places.

To the young man who is seeking a field that will pay him best in money profits, as well as bring him into intercourse with the best men in his community, it can be said, with the confidence born of both observation and experience, that the hardware business offers the most hopeful outlook and the greatest measure of success.

ODE TO CAMPBELLTON, N.B.

A representative of HARDWARE had occasion to visit the town of Campbellton, N.B, recently on business. His mission was to secure advertisements and subscribers for the paper. But in the midst of his peregrinations he was pounced upon by a minion of the law and served with a notice to appear before the local magistrate on a charge of infringement of a by-law which stipulated that pedlars of books must take out a license before they can do business in the town. In vain did HARDWARE'S representative plead that he was not a book pedlar but the representative of a trade newspaper, and before he was set at liberty had to contribute $1 and costs to the town treasury. HARDWARE has several subscribers in Campbellton and they were indignant. A Halifax traveler felt the same way, and sitting down he reeled off these verses:

Campbellton's streets are grassy,
Its visitors are few,
And those whose business takes them there
Their journey well may rue.

Their journey well may rue,
If their case is like to mine,
For I could not book an order there
Until I paid a fine!

Yes, I had to pay a fine,
Because a stranger there
Must help to swell the treasury
And stand before the Mayor!

The Mayor is an autocrat,
Whose word goes down as law;
His sentence is, "One dollar, sir,"
And do not slack your jaw.

And when I paid my dollar there,
I soon did quit the town,
And eastward roamed in search of rest,
Far from that Mayor's frown.

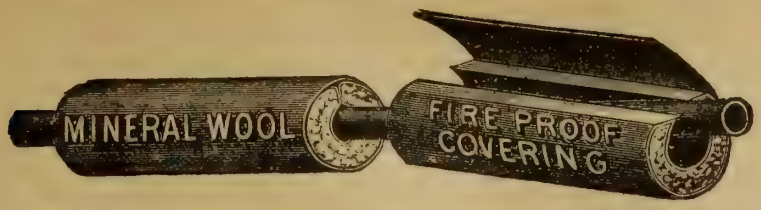
And judge ye then of my surprise,
When down by Charlo's shore,
I soon did meet the Mayor bold
With half a dozen more!

Who in the style they did affect,
Both haughty and severe,
Did hold thereat a high old time
On fish and ginger beer.

And though I'd paid my dollar good
They never looked at me,
Nor asked me in to take their cheer
At Charlo by the sea.

So all who sojourn down this way
A warning take by me,
And skip the town of Campbellton
Or skinned you sure will be.

Charlo, Aug. 1st, 1893.



A GREAT LOSS?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

SEALED TENDERS addressed to the undersigned and endorsed "Tender for Hot Water Heating Apparatus, Drill Hall, Toronto, Ont.," will be received until Monday, 28th August, for the construction of a Hot Water Heating Apparatus at the Drill Hall Toronto, Ont.

Plans and specifications can be seen and form of tender and all necessary information obtained at this Department and at the office of R. C. Windeyer, Esq., Architect, Toronto, Ont., after Monday, 14th instant.

Persons tendering are notified that tenders will not be considered unless made on the printed form supplied, and signed with their actual signatures.

Each tender must be accompanied by an *accepted* bank cheque, made payable to the order of the Honourable the Minister of Public Works, *equal* to *five per cent.* of the amount of the tender, which will be forfeited if the party decline to enter into a contract when called upon to do so, or if he fail to complete the work contracted for. If the tender be not accepted this cheque will be returned.

The Department does not bind itself to accept the lowest or any tender. By order,

E. F. E. ROY, *Secretary.*

Department of Public Works, Ottawa, August 11, 1893.

TENDERS FOR STEEL RAILS

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Steel Rails," will be received up to noon on Tuesday, 12th September next, for the supply of—

1,000 Tons of 50-lb. Steel Rails to be delivered C.I.F. on the Prince Edward Island Railway wharf at Summerside, Prince Edward Island,

300 Tons of 56-lb. Steel Rails to be delivered C.I.F. on the Intercolonial Railway wharf at Richmond (Halifax), Nova Scotia.

5,000 Tons of 67-lb. Steel Rails to be delivered on the Intercolonial Railway (Princess Pier) wharf at Levis, opposite Quebec.

All the above to be delivered in month of June, 1894.

Specifications, Conditions, Forms of Tender, and all other information will be furnished on application at this office, or at the office of the High Commissioner for Canada, London, England.

By order,
JOHN H. BALDERSON,
Secretary.

Department of Railways and Canals, Ottawa, 8th August, 1893.

MUCH LIKE A **WORLD'S FAIR**

WILL BE

Canada's Great

Industrial Fair,

TORONTO

Sept. 4 to 16, 1893.

Excelling All Others

New Stables, New Cattle Sheds and Many Other Improvements

Special Attractions.
Greater and Better than Ever.
The People's Greatest Annual Outing.

Cheap Excursions on all Railways.

J. J. WITHROW, President. H. J. HILL, Manager, Toronto

New..

Designs

IN EVERY LINE OF OUR MANUFACTURE



No. 160. Napkin Ring.

THE TORONTO SILVER PLATE CO.,

MANUFACTURERS OF

Sterling Silver and Electro Silver Plate.

Factories and Salesrooms, 570 King Street West, Toronto, Canada.

E. G. GOODERHAM, Manager. - - JNO. C. COPP, Sec.-Treas.

A Course of Training at the

CENTRAL Business College

TORONTO AND STRATFORD.

Opens up the road to success in business life. Thousands of former students are now enjoying handsome salaries in many of the best business houses in Canada and the United States.

Why don't you Follow their example?

Fall Term begins MONDAY, SEPT., 4th.

Write for Catalogue.—

SHAW & ELLIOTT, Principals.

NEW. CLEAN. GOOD.



Meat - Cutter

WHITE ENAMELLED

inside, and Brown Japanned outside.

H BOKER, Manufacturer. | For Sale by Leading Wholesale Houses.



All kinds of Office and Store Fittings and Furnishings



C. C. HARRIS

Manufacturer of Solders and Antimonial Alloys.

Cor. Wickson Ave. and Yonge St., Toronto.

E.O.W.

CEMENT FOR STEAM PIPES.

Another cement of specially valuable properties for steam pipes, in filling up small leaks, such as a blow hole in a casting, without the necessity of removing the injured piece, has been compounded. The cement in question is composed of five pounds Paris white, five pounds yellow ochre, ten pounds litharge, five pounds red lead, and four pounds black oxide manganese, these various materials being mixed with great thoroughness, a small quantity of asbestos and boiled oil being afterwards added. The composition, as thus prepared, will set hard in from two to five hours, and possesses the advantage of not being subject to expansion and contraction to such an extent as to cause leakage afterwards, and its efficiency in places difficult of access is of special importance.—Scientific American.

PROPERLY INSURING STOCK.

In the pages of a Transatlantic trade contemporary, says London Ironmonger, the question of the insurance of hardware stocks and fixtures is raised in a manner which possesses some interest for many of our readers. It is represented that dealers are less critical of the terms and scope of their fire-insurance policies than they ought to be, and that, as a natural consequence, they are continually running the most serious risks without being aware that they do so. A case is cited which pretty fully supports this contention. A "merchant" (equivalent to our retailer) insured his stock with three of the best companies represented by the local agent, and a clause permitting the sale of gasoline and the exhibition of gasoline-stoves was incorporated in the policies. When the policies were delivered the insurer read them carefully and found them correct. At the end of the year new policies were brought round by the agent, and these were put away in his safe by the merchant without being examined. At the end of the second year the insurance was again renewed, but this time the merchant resolved to read the policies over carefully. To his surprise the permit for gasoline had been omitted by the agent, consequently the merchant had been in a most hazardous condition during the whole of the previous year. Had there been a total or partial loss by fire the insurance companies would probably have attributed it to the presence of gasoline, and, as gasoline was being kept on the premises without permission, the insurance would have been valueless under those circumstances. In order to obviate this danger one of the correspondents of our contemporary has drawn up a sort of schedule or form in which he enumerates (in a summary way) everything on the premises, with the amount of insurance apportioned to each. Thus, he has the building itself; the shelving, counters, fixtures, etc.; the plate glass front; the general stock of hardware, cutlery, etc.; the tools and machinery; the store and office furniture; the safe and showcases; a special permit to keep in stock a given quantity of gunpowder and benzine stove-polish, as well as a given quantity of gasoline; and a lightning clause, on the company's own form. It is claimed that the use of such a schedule serves to remove any doubt as to what is or is not insured, as well as all uncertainty as to what is covered by insurance. Whether such a schedule would be admitted by British insurance companies is doubtful, but it cannot be wrong to be explicit and clear before any trouble occurs. In this country the companies take care to exact premiums from ironmongers which are apparently quite up to, or even more than, the risks incurred. On their own part, therefore, ironmongers would do well to look over their policies in the most critical manner in order to see whether they are fully covered, or whether there may be such room for doubt as may lead the insurance company to seek to minimize their liability in case of the premises or stock being wholly or partially destroyed. Fire is a very serious matter; and no tradesman has anyreasonable excuse if he neglects the precaution of being fully covered by the terms of the policy before anything takes place of the nature of a conflagration.

BOILERS AND THEIR CARE.

Although much has been written concerning boilers and the proper method of handling and caring for them, yet it is a matter of such importance affecting life as well as property that too much cannot be said on the subject. That this is the case is amply attested by the ever recurrent explosions, the frequency of which fully demonstrates the ignorance or carelessness of those responsible for their safety, while for every one that explodes there are probably twenty that undergo extensive and expensive repairs that might in many cases have been avoided by judicious and intelligent care. This seems especially true of saw-mill boilers whose explosive tendencies are a matter of current comment in mechanical papers.

While it may not be possible to prevent all explosions, some of which occur from causes that the most careful scrutiny would fail to detect, or the most intelligent care fail to prevent, yet marine practice has demonstrated that boiler explosions may be reduced to a minimum which would be a small percentage indeed of the present number. If boilers 14 to 18 feet in diameter can be constructed to safely withstand pressures ranging from 150 to 175 pounds and even higher, which is now the case in some of the more recently built vessels, it would seem to be a comparatively easy matter to secure almost absolute safety in boilers of the relatively small size and moderate pressure demanded in average land practice. Notwithstanding this, explosions are almost unknown in ocean vessels, while land boilers let go of things earthly and sail heavenward with entirely unnecessary frequency.

The first and easiest step to take towards remedying this state of things, of course, is the securing of safe boilers. It is easy because there are many boiler makers who can and do make good and safe boilers, and who will gladly furnish them to anyone willing to pay the cost of a first-class article, which is necessarily higher than that of an inferior one. The second step is the proper setting of the boilers and the third is the securing of judicious and intelligent care for them.

It may be stated that the strains to which a boiler is subjected due to pressure are not by any means the greatest it is called upon to withstand, those due to unequal contraction and expansion being the most severe, and also hardest to entirely prevent, although covering with some good non-conductor, and a rigid avoidance of open furnace doors so far as possible, will do much toward remedying this evil. It may also be stated in this connection that cold water should never be used for feed water, as its use will almost invariably be followed by fractured plates.

In piping boilers for feed water, a pump and heater should be provided, with an inspirator or injector as a reserve, so that in case of accident to the one the other can be brought into service, thus avoiding or at least greatly reducing the possibility of an interrupted feed water supply. The independent piping of pump and inspirator or injector to the source of supply would also tend to reduce the chances of interruption from obstructions in the piping or of breaks in the same.

But after every care has been taken to secure good boilers, to properly set them, to furnish them with the best attachments in the way of gauges, safety valve and other appliances, much must still depend on the intelligence and fidelity of the one who has them in charge, and the best man attainable is none too good for the purpose. Another safeguard in the care of boilers is the inspection of some reliable boiler insurance company, with a financial interest in the safety of the boilers insured; they are apt to keep a sharp eye for defects and order needed repairs to be promptly attended to, while the advice and suggestions of one who comes yearly into contact with hundreds of boilers, and keeps in touch with the most advanced practice in their management and care is worth all the insurance costs.

There is no reason why with good boilers, good care, and close inspection, boiler explosions should not become as rare as they are now plentiful, although some will still occasionally give way.—Age of Steel.

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,
Agents.
MONTREAL AND TORONTO.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.
Keene's Coarse, Parian and Superfine Cements.
SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.
FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,
CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.
Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

FIRE!

McCAUSLAND & SON

Beg to inform their customers and friends that they are in a position to fill all orders with promptness and dispatch, notwithstanding the recent fire in their premises. . . .

72 to 76 King St. W.

READY MIXED PAINTS

TRADE 

MARK

Don't place your Spring orders without seeing shades and testing the quality of

UNICORN BRAND We back them against the World

Manufactured by **A. RAMSAY & SON**
MONTREAL

Canada Iron Furnace Co., Ltd.

Manufacturers of
CHARCOAL PIG IRON
MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

STOP!

Do not turn another page before we have told you what we can do for you.

OUR HERCULES METAL

Is the best in the world. Does not heat and suits all kinds of Machinery.

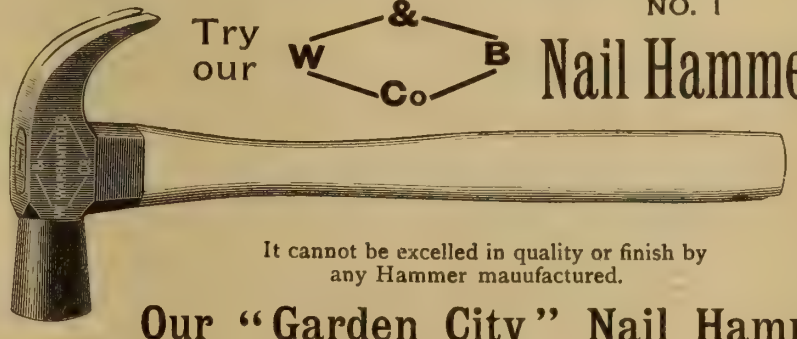
Our Solder is used by all the leading Plumbers, Roofers and Tinsmiths.

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THE WHITMAN & BARNES MFG. CO.

Canadian Branch: St. Catharines, Ont.



Try our W & B Co NO. 1 **Nail Hammer**

It cannot be excelled in quality or finish by any Hammer mauufactured.

Our "Garden City" Nail Hammer

GET OUR PRICES AND TRY OUR GOODS

Is the best and cheapest "Solid Cast Steel" Hammer on the market. . . .

We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .



THE BEST SMOKELESS POWDER IN THE WORLD

SOLE AGENTS. SEND FOR CATALOGUE.

The Bowman Hardware and Sporting Goods Co., Hamilton, Ont.

BUSINESS CHANGES.

ASSIGNMENTS, DIFFICULTIES, COMPROMISES.

Lewis A. Wilson, blacksmith, Halifax, has assigned.

T. A. Greig, tinsmith, Pickering, has assigned to J. F. Paxton.

Angus Curry, general store, East Bay, N.S., is offering to compromise.

James H. Freeman, blacksmith, Appin, has assigned to M. D. Moss.

Melville C. Crowdis, general merchant, Margaree, N.S., has assigned.

Louis Nadeau, general merchant, etc., Adamsville, Que., has assigned.

J. E. McAulay, general merchant, Millstream, N.B., is offering to compromise.

J. J. Harris, boots and shoes, Simcoe, has made an assignment to D. Dengate.

Dennis Daniels, coal and wood dealer, Toronto, has assigned to J. B. Boustead.

R. B. Holland, general store, Dungannon, has assigned to Henry Barber & Co., of Toronto.

Gilbert Bedell, general storekeeper, Tecumseth, effected a settlement with his creditors at 75c. on the dollar.

Mrs. L. Blackstock, general storekeeper, Thornton, is offering to compromise with her creditors at 35c. on the dollar.

SALES MADE AND PENDING.

John Fummerton, general merchant, Fall Brook, is advertising business for sale.

The stock of Charles Bawden, of the Kingston Auction Co., has been sold at 50c. on the dollar.

PARTNERSHIPS FORMED AND DISSOLVED.

J. Devine & Co., plumbers, Montreal, have dissolved.

Charles Tafer & Co., general merchants, Bradalbane, P.E.I., have dissolved.

James H. Gardner and Arthur W. Gardner have registered a partnership in Montreal to carry on business as plumbers.

Norman J. Halden has been registered proprietor of the firm of N. J. Halden & Co., importers of oil, etc., Toronto.

James McShane and James Devine have registered a partnership to carry on business as plumbers, under the style of J. Devine & Co., Montreal.

James G. Mills and Gordon Fraser have registered a co-partnership at Spring Hill, N.S., to carry on business as general merchants under the style of Mills, Fraser & Co.

T. W. Ness, manufacturer of electrical supplies, has admitted as partners P. H. Davidson, J. E. Adams, J. L. Rankin and N. W. McLaren under the style of T. W. Ness & Co.

CHANGES.

John Muncaster, general merchant, Walford, has sold to Frank Thornton.

Salem Snyder, blacksmith and wagonmaker, Huntsville, is out of business.

Goodwill Douglas, stoves and tin, St. Andrews, N.B., has closed business and removed to Quebec.

FIRES.

J. B. Abbott, carriage maker, Ottawa, has been burned out.

The oil refinery of Keenlyside & Co., London, has been burned.

Leger & Co., furniture manufacturers, Montreal, have been burned out.

The storehouse of Touchburn & Preston, grain dealers, Bethany, has been destroyed by fire.

J. W. Green & Sons' saw mill, Kingsville, Ont., together with 150 cords of wood, was destroyed by fire Tuesday; loss $2,000, insured for $400.

The carriage and blacksmith shop and dwelling house of Walter Hall, Merlin, Ont., was destroyed by fire Wednesday. Loss $3,000, insurance $500.

DEATHS.

Archibold McKillop, sr., of A. McKillop & Sons, lumber and bending factory, West Lorne, is dead.

TELEPHONING WITH GAS PIPES.

M. G. Mareschal, having observed that by connecting the gas and water mains near his house through a galvanometer he obtained a current of electricity, was led to try whether these pipes would not serve as telephone lines. Accordingly he fitted up a telephone at his own and a friend's house, the connecting wire being replaced by the pipes. He was not only able to converse with his friend quite well, but he was able to hear music in several other houses en route. Moreover, he was able to overhear the Morse signals on a neighboring telegraph wire. "Tapping the wire" is an offense in this country, where it is sometimes done for fraudulent purposes, but if the gas and water pipes of a house lend themselves so easily to the practice it will be difficult to find the culprit.—Cassell's Magazine.

BEGAN AT THE WRONG END.

The duties of a credit man in a large house are usually onerous, calling as they do for a high degree of skill, wide experience and considerable familiarity with human nature, but often the humors of the cases with which he has to deal relieve the position of much of its burdensome care and anxiety, says a contemporary. Not long ago a credit man connected with a hardware firm had to pass upon the personal application of a new customer for credit. The retailer was a poorly dressed, unshorn, rough-looking hayseed, and upon being asked for his statement of assets, standing, etc., he started on a long rigamarole, enumerating among other things several rowboats which he possessed—his place of business was in a seaside town—a couple of damaged and ancient wagons and other odds and ends, all of which he described with an exasperating devotion to detail until finally the credit man's patience gave out. "How much cash capital have you?" asked the latter. "I have $20,000 in bank, $10,000 out on mortgages on good real estate, and—" "Hold on, that's enough," cried the credit man; "why didn't you say so at the start, instead of describing all those old chattels?". "Why," was the reply, "I thought you wanted a full statement, and I gave it."

WHAT A PATENT MEANS.

Four systems now in force for the granting of patents, explains a contemporary. The American, in which the patent is granted after rigid examination into novelty. The British, in which the invention is advertised and the grant is subject to opposition. The German, a sort of compromise between the American and British, involving both an examination and an appeal to opposition. The French, which involves neither an examination nor public opposition, but a registration merely. All the patent grants of the world can be included in some one of these systems or can be made to partake of their features.

FREAK OF ELECTRICITY.

A railroad exchange reports a curious freak of electricity which has been discovered in connection with a leak in the mains of the Indianapolis Gas Company. In Illinois street, buried 4 feet deep, is a main that has been down for 52 years. It was abandoned 22 years ago because of its size, but the pipe is still in an excellent state of preservation. When the Citizens street railway company sunk their trolley-line poles in the ground, they were placed close to this abandoned main; some of them were flattened and rested against the pipe. The insulation wore off the top of the pole, and the iron became charged with electricity. The current ran down the pole into the ground until it came in contact with the cast iron main, against which the pole rested. At that point the current burned a hole through the post and through the cast-iron gas-pipe. The current ran along this cast-iron pipe for 200 feet north, where it came in contact with a 1 1-2-inch wrought-iron service pipe that crossed the old artificial main. At the junction of these pipes the current again showed its power by burning large holes in both pipes, and the melted metals formed into small globules, like shot, perfect in size and form, and these dropped into the old pipe. The gas, released from the service-pipe, followed south on the old main until it reached the electric post, and entered into the tube through the hole burned out by the current. The post was soon full of gas. A car passing made a spark that set it on fire, and the flames burst from the top of the pole. An examination of the service pipe and the old main found them to be in excellent condition.

None Genuine without this Brand



Stamped in head of Every Package.

TORONTO CUTLERY CO.,

65 and 67 Yonge Street, Toronto

M. MAYER, Propr.

NON-XLL

Cutlery

WARRANTED

And the Most Complete Lines of Cutlery of all descriptions.

FRANCIS HYDE & CO.

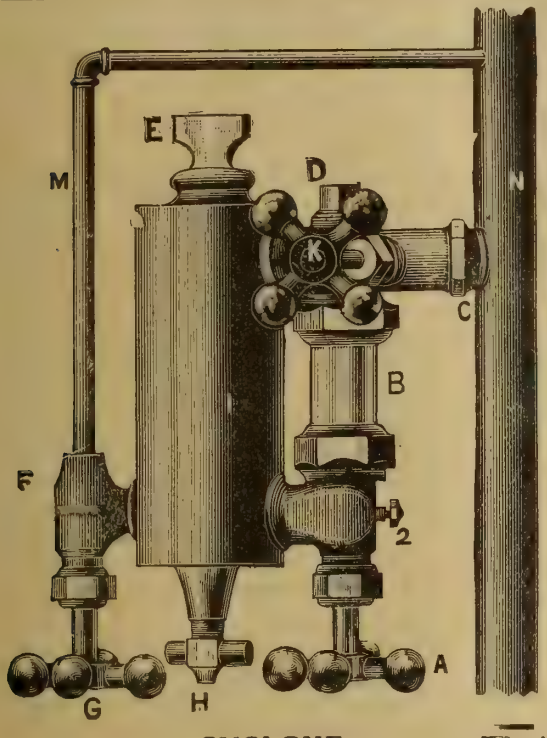
Builders' Supplies

We make a specialty of **Fire Clay Sewerage Pipes**, and all kinds of Fire Clay goods of best quality.

Best brands of London Portland Cement. Agents for Glenboig Union Fire Clay Co., etc.

STORES AND YARDS:

King, Queen and Wellington Sts., Montreal

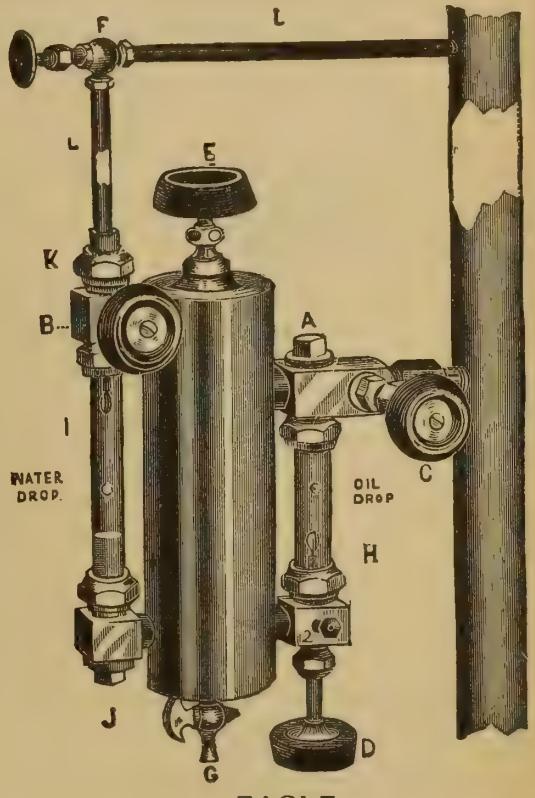


CYCLONE.

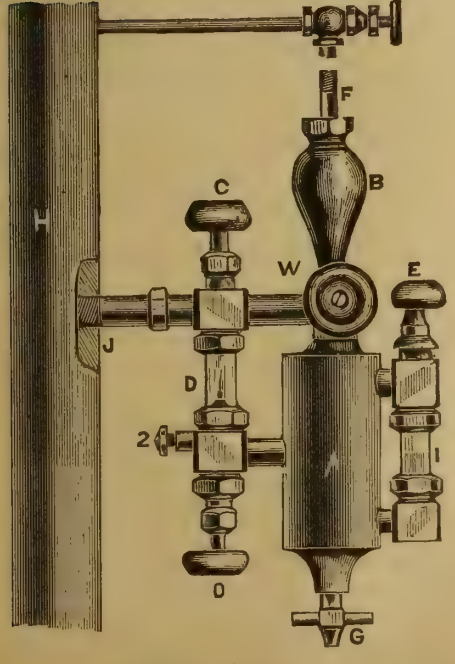
REDUCED PRICES..

OF

Michigan
Queen
and
Eagle



EAGLE.



MICHIGAN.

Sight-Feed Lubricators

SIZE	PLAIN BRASS	NICKEL PLATED
⅓ Pint	$4 50	$5 00
½ Pint	5 00	6 00
1 Pint	8 00	9 00
1 Quart	11 00	12 00
2 Quarts	16 00	18 00

⅓ Pint with Drop Glass only.

Cyclone Lubricator

SIZE	BRASS	NICKEL
⅓ Pint	$3 25	$3 75
½ Pint	4 00	4 50
1 Pint	5 50	6 00

All our Sight-Feed Lubricators have the Patent Drain Valve to draw water off from Sight-Feed Glass.

Hamilton Brass. Mfg. Co.

HAMILTON
Ont.

ON THE UP GRADE.

"Down in Middle Tennessee the other day," said a drummer, "as I came out of the store where I had finished my business, I saw one of the small farmer class sitting on a nail keg. His clothes were ragged, his face was thin, his shoulders fell forward, he was utterly spiritless, and altogether the most forlorn specimen I had met in a month. We struck up an acquaintance. I asked him about the crops, and he answered dolefully. He asked me where I was from. When I told him Texas, he said:

: "Mebbe you know Bill Russell of Kaufman County?"

"I said I did. He wanted to know how Bill was doing and I told him.

"'Well,' said he, 'when you get back to Texas and see Bill, tell him you met his brother Pete in Bolivar. Tell him I'm doin' mighty porely; couldn't be wuss off. The crops is bad. I hain't able to get money enough to send the children to school or to get the old woman a dress. The place is mortgaged, and I don't know how we're goin' to live through this comin' winter. Times never was so bad and I'm jest clean tuckered out. I would leave Tennessee to-morrow ef I could.'

"'Partner,' said I, 'let's take one.'

"He poured down a full glass of whiskey. We stood around chatting a few minutes. I said I must go to dinner. As I left him he said, with a little more life:

"'Don't forget to tell Bill you saw me in Bolivar. Tell him I'm pegging along just about the same as ever. Things is only so-so with Pete and family."

"I went to dinner. About the middle of the afternoon I met my friend the farmer, and we had another drink. As we came out of the saloon he said:

"'I'm powerful glad I came up with yo', Colonel. It's almost as good as a visit to see someone who knows brother Bill. Now, don't you forget to tell him what I told you fore dinner. Tell him you saw Pete. Tell him we're getting along comfortable, no great shakes, you know, makin' a decent livin', with bunnets now and then for the girls and a dress for the old woman, something in the house to eat, and the crops jest middlin'. Ain't no use of misleadin' Bill and makin' him think we're better off than we air, ye know.'

"I saw the farmer once more. It was just before train time. His head was up. There was light in his eyes. This time he insisted I should join him, and I did. As he set down the empty glass he said with a ring in his voice, laying his hand on my shoulder:

"'When yo' get back to Texas yo' see Bill and tell him yo' met Pete. Tell him we're doin' well. Tell him the crops is promising, and that Pete is goin' to clean off the mortgage on the place this year, and have something right smart ahead. Tell him if he wants anything to drop on Pete fer it.'

"The farmer gave me a slap on the shoulder and went off towards the hitching-rail with shoulders thrown back, his hat over his right ear, and the tread of a man with a bank account."—St. Louis Globe-Democrat.

RECOGNISING FAITHFUL SERVICE.

Among the important elements which go to make success or failure for a manufacturing or mercantile enterprise is the service rendered by subordinates. Intelligent, earnest, or faithful service on their part goes very far toward the success of the enterprise. On the other hand, stupid, half-hearted and disloyal work will often render null the ablest endeavors of the executive head. Doubtless it is the appreciation of the truth of these facts that has led the proprietor of the New York Herald to treat the faithful workers upon his publication with the marked consideration that he has always, and that led him last week to publicly outline a plan which he intends to put into practice in the near future, that will not only acknowledge the services rendered by his subordinates, but will give the latter very substantial evidence of the fact that at least one utilizer of the labor of other people recognizes and appreciates the value of faithful service on the part of his employees, who, in his large and comprehensive view, are considered co-workers or co-partners. In brief, Mr. Bennett proposes to form a co-operative society for the sole benefit of members of the Herald staff, (which Mr. Bennett considers to include "the General Manager, city editor, news editor, night editor, all editors, correspondents, reporters, artists, cashier, clerks, foreman press and composing rooms, proofreaders, compositors, printers, exchange readers, shipping clerks, telegraph clerks, advertising clerks, messengers, porters, firemen, machinists—for they are all members of the Herald staff, are they not?" This is one of the most enlightened recognitions of the value of faithful service that has ever been made; and in fact it is far in advance of previous actions in a similar line. It cannot be denied that such action on the part of Mr. Bennett will inure to his own benefit, and be one of the best investments that he ever made.

We have given space here to an outline of Mr. Bennett's scheme, because it conveys a lesson to the head of every manufacturing and mercantile establishment reached by the Cordage Trade Journal. Too often has the important fact that faithful service is a jewel of rare value and profit been overlooked or ignored. We know of concerns that have secured (inadvertently, perhaps) the services of some of the very best men in their particular line in the business, and that have profited by their faithful services to the extent of many hundreds of thousands of dollars. Yet the heads of these houses showed little appreciation of the value of these faithful workers. No encouragement was given to them; their remuneration was kept down to the lowest possible point. The result has been that the faithful servants have been secured by more appreciative concerns. The houses which might have retained the services of these most desirable men by anything like a fair division of the proceeds of their labor now have, in some cases, some very indifferent servants, and will continue to have so long as they continue their present policy. Such desirable men that they may now have in their employ are likely to be tempted to leave their present employers by promises of a better reward.

It is a very short-sighted business policy to attempt to run a business without regard to the proper cultivation of a loyal spirit between the employer and the employed. Thousands of dollars may be lost annually by those who think that they can afford to ignore this matter. Whatever attention is paid to cultivating the goodwill of employees is sure to result in a many fold profit.—Cordage Trade Journal.

WHEN ACCOUNTS ARE DUE.

The prompt settlement of indebtedness will, in times like the present, do much to prevent disasters and check further depression of trade, remarks Merchants' Review. When money is hard to borrow except at exorbitant rates of interest, even on the best of collateral, neglect to settle accounts may inflict injuries that are so wide spreading in their effects that not only every branch of trade must suffer but the consumer—the wage-earner—eventually be reached, through the shutting down of factories, the restriction of building and mining operations, etc. It therefore behooves the consumer, the retailer and the jobber to meet their obligations as promptly as possible, not only for the general good but to prevent injury to themselves from the boomerang tendency of such evils. When accounts are due it is poor policy to let them run on if one has the requisite funds in bank, and especially is this true of times like the present when banks are closing their doors all over the country. A dry goods jobber of this city recently received a letter from a delinquent customer stating that he wanted more time to meet his obligations, as a local bank had burst, locking up for the time being, possibly wiping out, his deposit of $1,500, all the cash he had at his disposal. The retailer's indebtedness to the jobber, by a strauge coincidence, amounted to exactly the sum locked up in the closed bank, and he had been dunned repeatedly. Some men hate to let money go when once they get a grip on it, and this retailer evidently belonged to this class. In reply to his request he received a little lecture from his creditor on the folly of holding back remittances needed by the creditor, when he was well able to settle the account, and his attention was drawn to the fact that if he had met his obligations promptly the failure of the bank could not have hurt him, while his credit would have been much better. The dealer has learned a lesson which he probably will not forget in a hurry. In future, when accounts are due, he will hardly procrastinate if his bank balance admits of prompt remittances to the creditors.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

WESTERN BRANCH:

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

. . ELEY'S . .
CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING

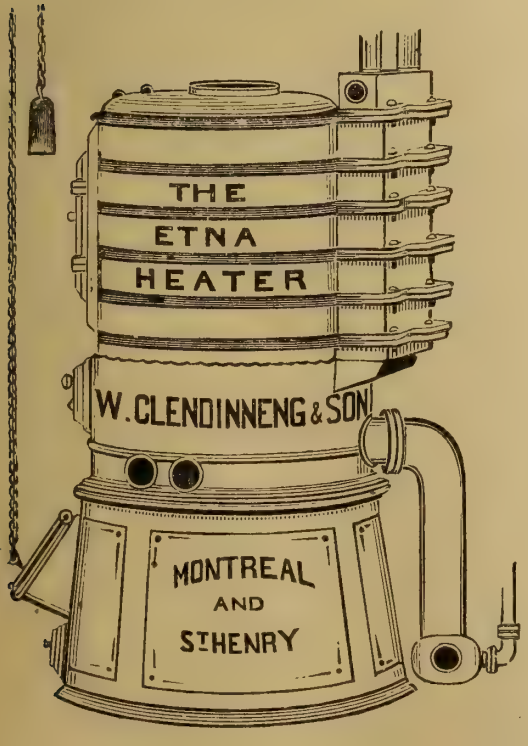


Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. **Wholesale Only.**

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.



THE "ETNA" HOT WATER Boiler

Is perfect

Write for prices and testimonials.

THE "UNIVERSAL" STOVES

The best and cheapest made.

Write for Catalogue and Discounts.

Our assortment of "LEADER" Stoves is always complete

Wm. Clendinneng & Son, 145 to 171 WILLIAM STREET MONTREAL QUE.

Cutlery

SPECIAL VALUE IN

Dickinson's "Damascus Blade" Carvers.
Dickinson's Improved Ivoride Tables, warranted not to shrink or discolor.
Joseph Rodgers & Co.'s best quality Pen, Pocket, and Butcher Knives.

. . . SAMPLES now ready for Fall Trade.

STEEL. Full stock of Jessop's warranted Tool Steel, at lowest prices. . .

A. C. Leslie & Co., Agents
MONTREAL and TORONTO.

You can lose more than we do by not subscribing for this paper.

MUNN'S LIQUID GLUE
IS THE BEST.

THE ART METROPOLE, Agents.
131 Yonge Street, TORONTO.

Clarkson & Cross
ACCOUNTANTS . . .
Established 1864.
26 Wellington St. East, TORONTO

OUR SALES OF
"BURHAM" Portland Cement
For the past 8 months have been
25,499 CASKS.
"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,
McRAE & CO., OTTAWA



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—		
56 and 28 lb ingots, per lb	23½	24
trip "	25,	25½

Tin Plates—*Charcoal Plates, Bright.*

M.L.S. equal to Bradley	Per box	
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 00	4 25
I.X., "	5 00	5 25
I.X.X., "	6 00	6 25
I.XXX., "	7 00	7 25
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

Oakley Grade—	Per lb.
.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6¼	6½
26 "	6⅜	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¾ " nd thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2½, 2¾
26 "	2¾, 2¾
28 "	2⅞, 3

Canada Plates.

Blaina	½ bright 2 75	
Abercarne	2 75	
Lion		

Iron Pipe.

Wrought 62½ and 5p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5¼
26 gauge, "	5¼, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5¼
26 gauge, "	5¼, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅝ 5
" 5-16 " "	4½ 4⅝
" ⅜ " "	4¼ 4½
" 7-16 " "	4 4¼
" ½ " "	3¾ 4
" ⅝ " "	3½ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 12½ 0 13
Lake Superior	0 13 0 13½

Bolt or Bar.

Cut lengths, round, ¼ to ½ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 19½ 0 21
" 35 to 45 " "	0 17½ 0 18
" 50 lb and above per lb	0 16½ 0 17

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—		
From 1 to 20 gauge	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20	0 21
" " 27 to 30 "	0 23	0 25
" " 30 and up	0 26	0 28
Sheets, hard-rolled 2x4 ft	0 21	0 23

Zinc Spelter.

Foreign, per lb	0 04½ 0 05
Domestic "	0 04⅝ 0 04¾

Zinc Sheet.

5 cwt casks	0 05¾ 0 06
Part casks	0 06 0 06½

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04¾ 0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04⅜ 0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)	0 15½	0 16½
Standard	0 14½	0 15½
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 13
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do "	4 75
No. 2 Do "	4 50
No. 3 Do "	4 25

Prepared Paints.

(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red, (best) " "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " " "	1 25 1 90
Canadian "	
Paris Green, per lb	0 13½ 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure, 8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 44 0 46

Castor Oil.

Best, per lb	0 08 0 08½

Cod Oil.

Cod Oil, per gal	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list
Munn's, dis. 25 to 30 per cent. off list

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 99 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 8 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

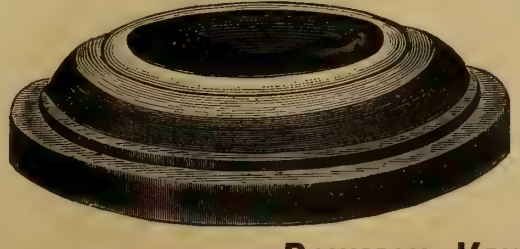
Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

Standard Keystone
TARGETS
THE BEST -:- -:-
-:- TARGET MADE.



Standard Keystone
TRAPS
THE NEW '93 MODEL -:-
-:- EXCELS ALL OTHERS

AGENTS: ❀ BOWMAN, KENNEDY & CO., London, Ont.

Wrought Hooks and Staples, Amer- dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   Basis—50 to 60 dy..... 2 30
   40dy..... 2 35
   30 dy..... 2 40
   20, 16 & 12 dy..... 2 45
   10 dy..... 2 50
   8 & 9 dy..... 2 55
   6 & 7 dy..... 2 70
2. American Pattern Only
   from 4 to 5 dy 2 90
   3dy. (lath)..... 3 30
3. Canada Pattern Only
   from 4 to 5 dy 2 80
   3 dy. (lath)..... 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, 1 lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9½ 9¾	10¾ 11
¼, 5-16, ⅜ in.....	10 10½	11½ 11½
Cotton, per lb.....	18	20
New Zealand.....	9	9½
Russia Deep Sea, per lb..	12½	13
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 to 40 per cent.

Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen..... 1 25

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 50
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.

Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S. & W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9 00

Twines.

Bag, per lb..... 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 50
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

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Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

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Amer., per doz. 8, 10 & 12 in. 3 38 6 00

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Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
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Clothes Line Wire, 19 gauge, per doz coils 3 95

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Galv. 2 barb, 2½ & 5 in. apart } 4½ 4¾
" 4 " 4 & 6 " "
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point .... 0 0[illegible]
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... .... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

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Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
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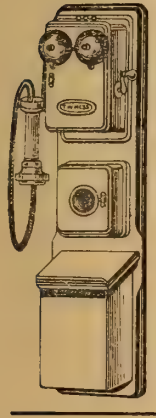
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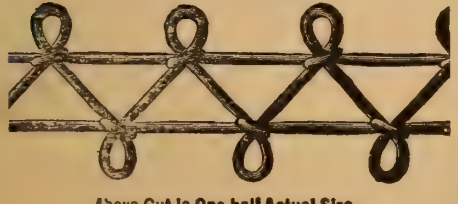
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Pat. Nov. 19, 1889.

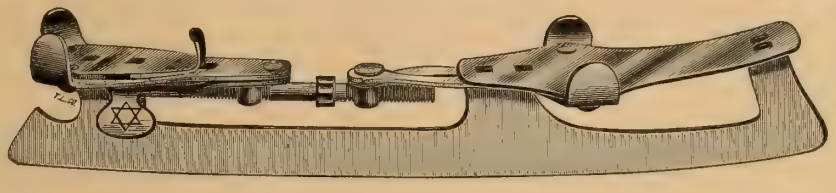


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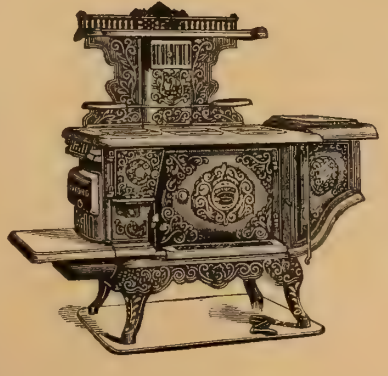
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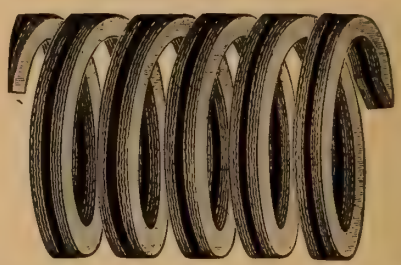
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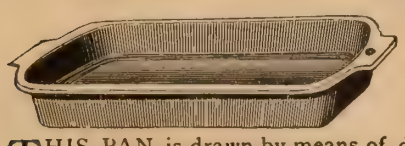
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THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

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3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

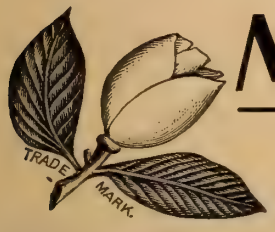
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CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, AUGUST 26, 1893. No. 34.



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BEST ANTI-FRICTION METAL FOR

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Published Weekly. $2.00 a Year.

Vol. V. TORONTO, AUGUST 26, 1893 No. 34

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

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The country roads and city streets of the future will be big improvements on those of the present day. And much of the thanks of it will be due to the bicycle. Bicycling is becoming more and more a means of locomotion. Already the streets of large cities are crowded with men and women flitting about on the flying steed; but in another few years the proportion of people going about on wheels to those on foot will be much more marked, particularly when the price of machines get more within the reach of the great mass of working men and women. With the arrival of that period will come a demand for better roads that will be irresistible. Well-kept pavements and roadways mean less wear and tear on bicycles as well as on vehicles in general. The voice of the people is sovereign; and as in the years to come bicyclists will form such a large portion of the population it must be obvious to everyone what their influence will be in the matter of securing better streets and roadways.

The shipping industry on the upper lakes has not by any means escaped the general depression that has settled down upon the United States. Vessels everywhere are being tied up, the laying up of the Chicago lumber fleet alone throwing 2,500 men out of employment. In all between 100 and 150 vessels are estimated to be lying at their docks with nothing to do, while most of those employed are reputed to be losing money; and this in spite of the fact that the employees have had their wages cut down 20 per cent. While the cause for this unsatisfactory condition of affairs is largely due to the general depression of the country, it is not altogether. Over production in the ship building yards has contributed no small share. Since 1886 the new tonnage has exceeded 50,000 tons annually, and in some years has gone above 100,000 tons. No less an authority than the secretary of the Lake Carriers' Association recently declared that there were eleven vessels for every ten cargoes. But whether there be too many vessels or not it is evident that when one of them does get a cargo it is at such a low freight that ordinarly money must be lost instead of made in accepting it. For instance, coal is carried from Buffalo to Chicago, a distance of 800 miles, for 30 cents a ton. Wheat between the same points is 1½c. a bushel, and from Duluth to Buffalo, 1,200 miles, the same figure obtains. Ore is brought down from Ashland, Wis., and Duluth to Cleveland and Ashtabula for 50 cents. Iron ore, which usually figures so high in the carrying trade of the lakes, has this year dropped to a comparatively insignificant position, it being estimated that it will not exceed 3,000,000 tons against 8,000,000 tons last year. With trade depressed, freights below a living basis and too many competitors for the little there is doing the only wonder is that more boats are not tied up.

* * *

A merchant complains in the columns of a contemporary that he has decided to give up business because "he cannot put up with the quality of clerks as they are at the present time." Poor man, he is to be pitied—and blamed too. A young man does not become a first-class clerk solely by his own volition. Much depends of course upon his own natural aptitude and the heed he gives to the instruction of others. But at the same time he needs some instruction in the A B C's of a clerk's duties just as does a child who is taking its first steps in the rudiments of learning. His instructors are his employers. If, therefore, good clerks are so scarce it is obvious that merchants must to some extent share in the responsibility of being the cause.

Merchants should be honest with their clerks. This is about the first thing necessary. Every young man is not intended for a clerk, but a good many are allured into the belief that they are. Such as these seldom amount to much. Square blocks do not conform to round holes. When, therefore, a merchant has a young man in his employ who is desirous of becoming a clerk, but who is totally unsuited for such avocation it is his duty to tell him so in a friendly way, and to, if possible, direct his attention to what he may be best suited for. But even those who have in them the material for good clerks are spoilt through improper training. Merchants should enjoin upon their clerks square dealing, attention, system and quickness. If a merchant allows his clerks to represent a thing to be what it is not or to give anything less than 16 ounces to the pound or 36 inches to the yard it cannot be expected that they will be true to themselves or to any body else. Civility is something no clerk can be without and be a success. When a customer enters the store the clerk should not wait till he comes to him. The clerk should go to the customer, and that promptly. Nothing is more annoying to a customer than to be kept aimlessly gaping about in the store with the clerks paying no attention to him. And yet it too often occurs. Sometimes a clerk is engaged in reading a newspaper when a customer enters. Instead of dropping the paper immediately a clerk here and there will be found who thinks the finishing of a certain paragraph or article of more importance than waiting upon the customer. Such conduct is reprehensible; and young clerks should be trained to look upon it as such. The importance of training a clerk to be systematic can scarcely be over-estimated.

It is invaluable to the merchant, for the clerk who is systematic can accomplish much more work ; and it is better for the clerk himself, for not only does he spend less energy but he can command a better salary than he who is unsystematic. Quickness is another thing that should not be overlooked in a young clerk's training. Customers loose patience with the slow clerk, and if there is no other clerk in the store will not infrequently transfer their patronage to where it does not take—to them at least—an age before the article they want is procured and properly parcelled.

* * *

The present system of renting telephones is not equable. Nearly everybody will acknowledge this. Gas is paid for by the thousand feet and water by the gallon. A telegram we pay for by the word. For riding on the railway we are charged so much per mile. At the restaurant we pay for what we eat or for what we drink. But when we come to the telephone there is no discrimination. Every body is put upon the same footing whether the 'phone is used once or one hundred times per day, it is all the same. True—a difference is made between the factory, office, or store, and the private dwelling house, but even in the latter instance there is the same want of discrimination. It is obvious then that under the system now in vogue some are contributing more than their share towards the maintenance of the telephone companies while others are not paying enough. It is like a tailor taking a roll of goods and making it up into a dozen suits, ranging in sizes suitable for fifty-pound boys to 250 pound men, for which he makes no difference in price, great and small being charged alike. Of course the one who frequently uses the telephone does not require a more costly telephone or necessarily a greater length of wire than he who only uses the instrument less frequently, but he demands more of the time and the attention of the operators, and that is practically the same as if he consumed more material.

* * *

Whether the telephone companies were disposed to discriminate between the big and small users or not, it would, under the existing conditions, be both a difficult and expensive task to keep a record of the number of times a telephone was used. There is now, however, a probability of this difficulty being overcome if certain German advices can be relied upon. These advices state that an instrument has been constructed under the auspices of the government telephone department of that country by which the desired object is to be obtained. It is called the telephonemeter, and registers automatically each conversation from the ringing up of the central office to the ringing off signal. One of the beauties of this instrument, if it proves efficient, is that the merchant will have a good opportunity for refusing the use of his telephone to outsiders who are ever troubling him for the loan of it, or at least an excuse for charging them for its use. With the telephonemeter or some other time-registering device attached to the 'phone less idle talk would be transmitted across the wires, while there would at the same time be more economising of time. And thus, with some such register in use would at one stroke be abolished an anomaly and the means created for regulating, if not removing, the "may-I-have-the-use-of-your-telephone" fiend.

* *

Census Bulletin No. 17 has just been issued by the Agricultural Department at Ottawa. It deals with the educational status of the population except 55,401 Indians. The aggregate of all ages in the Dominion who can read is 3,383,793, or 70.83 per cent. In making an analysis it it found that of persons between the ages of 20 to 29, 89.83 per cent. can read ; between 30 and 39 years, 86.66 per cent.; between 40 and 59 years, 82 64 per cent.; between 60 and 74 years, 74.21 per cent.; from 75 years and upwards, 66.32 per cent. It will thus be seen that of the adult population the youngest group shows a great advance over the older groups, evidencing the spread of educational facilities during the last twenty years. Those who can both read and write number 3,176,667. Of the adults 80.34 per cent. can both read and write. Including children as well as adults the percentage is 66.50. The banner province in the ability of its adults to write is Manitoba with a percentage of 93.1. Ontario is second with 90.4 per cent. Then comes, in the order named, the Northwest Territories, Nova Scotia, New Brunswick and Prince Edward Island (equal) and Quebec. In the matter of writing Canada stands sixth among the nations of the world. Taking 100 as the standard of perfection Scandinavia stands first with about 97, Germany and Switzerland next with 95 each, the United Kingdom third with 90, Holland fourth with about 87, France and the United States fifth with 85, and Canada sixth with 80. The lowest in the scale is Russia with 15.

* * *

A number of the National Banks of the United States reduced their circulation last spring. Then there was no anticipation of a scarcity of circulation. Now some of them are desirous of increasing their circulation, but they have struck a snag in the shape of a clause in the law which says that "no National bank which makes any deposit of lawful money in order to withdraw its circulating notes shall be entitled to receive any increase of its circulation from the period of six months from the time it made such deposit."

A PLATE GLASS ASSOCIATION.

Although no official confirmation of it can be had the Montreal correspondent of HARDWARE learns from pretty good authority that all the plate glass dealers in Canada with a single exception have associated together, and, henceforth, instead of competing against one another, will pool issues on the entire Canadian trade in plate glass.

The matter has been under consideration for some time and application has been made, it is understood, for incorporation under the title of the Consolidated Plate Glass Co., the firms interested being as follows: Ramsay & Son and Mojenais Beauviu, & Co., of Montreal, Cobban Mfg Co., Toronto Plate Glass Co., and Jas. McCausland & Son of Toronto ; Hobbs Hardware Co., of London, and Wm. Howe of Ottawa. The capital represented by the new project cannot be learned but it will be large.

How the business is to be divided and worked is not exactly known by outsiders yet, but it is presumed that the interests of each party to the agreement will be figured out upon the business they have done during the previous season, and the total business transacted under the new arrangement so divided. Henceforth, therefore, instead of there being one or more sellers of plate glass in each of the big centres above mentioned there will only be one, that is so far as the firms connected with the new consolidated company are concerned. A salesroom is to be opened at all suitable points, and a representative of the company will have charge of all sales made from goods received by the different firms interested in the new departure.

With regard to future success opinions differ. Of course the concentration of business proposed will mean that it can be carried on with less cost, but the fact that one of the largest importers and dealers in plate glass, the Messrs. Pilkington, have positively refused to join the association, it is thought, will operate against its success. People imagine that this action of the latter firm indicates the possibility of a fight between the two, and the future course of the new venture is anxiously awaited by the trade generally in Montreal.

WHY IRON IS DULL.

In conversation with the representative of one of the big iron manufacturing concerns in Montreal the correspondent of HARDWARE elicited an interesting opinion with regard to the prevalent quietness in heavy iron that has ruled generally throughout the present season.

"Iron is dull," said the gentleman, "because no one cares to go into any heavy contracts in the way of importation with uncertainty hanging over them in the way of prospective tariff changes. That this impression prevails the nature of the business that we have experienced clearly proves. Lines on which there is no possibility of a change intervening, such as tin plates for instance, which are free, have been quite active, in fact while those on which a duty is imposed have shown the exact reverse, being exceptionally dull. There is no denying the fact that everyone anticipates a modification of the iron tariff during the coming session, and as the impression prevails that the nature of this modification will be in many respects important, traders are reluctant about buying. Consequently the course of trade has been as I outlined.

"I don't look for a very active business in iron this fall, therefore, in any of the lines likely to be affected by tariff revision, for buyers will get along with what they absolutely want and nothing more, which is bound to restrict the volume of trade. Accordingly stocks of many lines are likely to be light next spring, and it would not be surprising to see a decided change then as compared with last spring if the present crop prospects in Canada pan out as anticipated, These are my impressions of the situation and HARDWARE is welcome to them."

IRON INDUSTRY IN NOVA SCOTIA.

The development of the iron business in Pictou county should prove an incentive to those interested in iron in Cape Breton. Only a year ago the extensive iron works at Ferrona, Pictou county, were established, and to-day there is one of the finest enterprises in Canada located at that place. Ferrona is reached by the I. C. R., and is some five or six miles from New Glasgow. After leaving the I. C. R., the railway of the New Glasgow Iron, Coal & Railway Co., the company owning and operating the industry, is taken up to the iron works. The railway of this company is 15 miles in length and taps the valley of the East River, one of the finest farming localities in the Maritime Provinces. The New Glasgow Iron, Coal & Railway Co. gives employment to some 500 men in connection with their magnificent plant at Ferrona. This company uses 300 tons of coal each day for coking purposes, 200 tons of ore and 100 tons of limestone, coming from the deposits which this railway taps further up the East River. Passenger trains run over the line, which has half a dozen different stations on the road, and is of incalculable benefit to the farmer, in affording means of access to a lucrative market. The splendid plant at Ferrona strikes the observer as almost occupying the position of a town itself. The furnaces, the stock-house, the coke ovens, the engine house and the offices of the company cover indeed quite an acreage. The furnace turns out about 90 tons of pig iron each day. There are four casts in the 24 hours. When the cast is running out the molten matter finds its way into the pigs all ready for its reception, and when cooled and culled adds one more tier to the pig iron ready for transportation and manufacture into steel. The moving mass of fire as it seeks its prepared abiding place is one of the most attractive features of the whole work, because, for one thing, it is the climax—the practical outcome of all the previous material and labor—the production of man's art and thought as it comes in touch with the arranged elements of nature. The furnace is charged with the regulation quantities of ore, limestone and coke. There is a coal-washing plant where all the coal is purified before being coked, being thus eliminated of sulphates, phosphates, &c. There are 50 coke ovens at Ferrona into which the coal thus purified is dumped and made. This coke plant is one of the finest in America. It is of German design and is managed by Mr. Zirker, who formerly held a responsible position in the famous Krupp gun works in Germany. There are all the modern improvements of utilizing the waste gases from the blast furnace, and coke ovens for generating steam and heating the hot blast stoves. At one time this hot gas was belched out and lost, but it is now utilized, no coal now being used for generating steam. There is a laboratory on the grounds, in which Mr. J. D. Fraser, son of Manager Graham Fraser, is the chemist, and who analyses the iron ores, limestone, coal, coke, pig iron and slag for the furnace. All these things are necessary so as to know what is being done. Everything to-day in this business is told by analysis, not by rule of thumb. The New Glasgow Steel Works obtain their pig iron for manufacturing into steel from Ferrona. This home supply of pig iron is something never before accomplished in Canada. Heretofore all pig iron was imported from Scotland, Norway, Sweden and Spain. As a result of the supply from Ferrona, the steel works at New Glasgow is certain to more than double its present capacity in the course of a year or so, being no longer obliged to depend upon the importation of pig iron. Instead of one blast at Ferrona, there will soon be three or four. The steel works at New Glasgow employ about 500 men, and thus the iron and steel works combined give labor to more than 1,000 men. These two immense enterprises are under the same vigorous manager, Mr. Graham Fraser, to whose energy, courage and foresight is due the great iron development of Pictou county. Mr. Harvey Graham is the energetic secretary of the Ferrona Iron Works, whose place during part of this season, during the former's absence in Upper Canada on business connected with the works, has been efficiently filled by Mr. Frank Rice, a Cape Breton boy. The accountant at Ferrona is Mr. F. M. Pauley, who will be remembered by a number of old time friends in North Sydney. The splendid condition of the iron industry in Pictou has many lessons for the people of Cape Breton. There is every evidence of there being iron in large workable quantities in this county. It now remains for our friends here to seek for means for developing these rich resources of ours, and by every possible manifestation of push and courage on our own part be enabled to invite push, courage and capital from abroad.—N. Sydney Herald.

AN ADVANCE IN GLASS.

Prices of plate glass are about to be reduced and it is announced that the manufacturers have authorized their selling agents to make a cut of 5 per cent. whenever foreign competition shall make this step necessary, says a United States paper. Importations during the last few months have increased to a considerable extent and the reduction is contemplated in order to check the competition thus enforced upon the manufacturers. The French and Belgian manufacturers, who formerly enjoyed a practical monopoly, have, it is said, been importing and selling plate in this country at cost, in order to drive out the home manufacturers wherever an opportunity offered, and this policy has been followed in part by the foreign makers of the more ordinary window glass.

A leading manufacturer is quoted as saying that "a reduction in the present tariff duties is the only contingency that will make it possible for foreign rivalry to win out finally. The present rate protection is believed to be high enough and if it is let alone the American producers are confident they can soon make other people tired of selling goods without a profit. The possibility of changes, however, adds an element of uncertainty to the situation which is giving the manufacturers more uneasiness than they admit, and if it is realized they say they will have to either reduce the wages of their employes or go out of business." At present, wage reductions are not regarded as a necessary part of the fight for the control of the markets.

A great deal has been said by the anti-tariff press against the monopoly of the glass manufacturers, but it would appear from this that the monopoly was on the other side of the water before the present schedule went into effect and that if this is lowered the immediate consequence will be a reduction in the price of labor, since just enough protection is now afforded to keep out foreign goods at cost, and if this is partially withdrawn a lessening of cost, of which labor is 70 per cent., at least, must necessarily follow.

TRAVELERS IN THE MOONLIGHT.

The gods favor the city travelers. At least they have lately. A few months ago the new quarters of the association was opened with an At Home, and it was a success. Next they held an excursion to Niagara Falls, and a more delightful day or time could scarcely have been had. On Monday night they held a moonlight excursion on the steamer Chippewa, and there was the same result.

Old Props had early in the day issued threatenings of unpropitious weather. But he was either miscalculating or lying, for a more delightful night for a moonlight excursion could scarcely have been imagined. Luna was just old enough to be appreciated, and not a cloud flitted across the sky to vail her face or the thousands twinkling stars that winked at each other as if to say: "Looks as if the travelers are having a pretty good time down there." And they were, thanks to the committee as well as to the weather.

The main deck was given up to the dancers, and, in order that there might be an equable distribution of music, Glionna's band of 30 pieces was divided into two parts, each playing simultaneously. In the ladies' cabin a vocal and instrumental concert was given, presided over by R. M. Corrie. Selections were given by the Harmony quartet—Dinnock, Gorrie, Adamson, Verral; the Harmonic Quartet—Theaker, J. Simms, A. Toms, J. F. Howitt; saxaphone solos by J. H. King, comic songs by E. B. Piggot, piano solos by E. J. Hogben and G. F. Beard, vocal solos by Gorrie, Dinnock and others. W. T. Harrison was accompanist. The card players and smokers took possession of the spacious smoking room, and a harp and a violin player were detailed to entertain them. For those who preferred to stroll about the boat, in addition to the strains of dance music they could catch, was provided a banjo and guitar club, whose weird music in the fore part of the boat attracted a good deal of attention.

There were about one thousand persons on board, and that without any advertisements being placed in the daily papers. What it would have been had the usual advertising methods been resorted to is obvious. But the promoters wanted a select party, and they got it.

It was almost nine o'clock when the Chippewa steamed slowly through the western gap out into the lake, where for nearly three hours she sailed now in one direction and then in another, or described big circles, like some lazy monster of the deep that had nothing to do but bask in the moonlight and enjoy itself. And those on board did enjoy themselves, and that right royally. Even yet they are singing praises.

The City Travelers' Association is to be congratulated upon not only the success that attended the excursion, but upon the fact that one of the most enjoyable and best moonlight excursions that ever went out of Toronto harbor was that under its auspices on Monday night.

These composed the committee: J. Owens, chairman; W. F. Daniels, secretary; A. M. Piper, treasurer; W. Bremner, R. Maxwell, Ben Dack, S. H. Moore, W. Soper, F. Gallow, J. A. Dickson, J. A. McGuane, W. H. Steele, S. G. Martin, J. Mortimer, R. M. Corrie, R. C. Morrison, L. J. Barwick, J. F. Smythe, C. F. B. Spencer, Charles Dinnock.

THE WORLD'S MONEY SUPPLY.

Acting Director of the Mint Preston has prepared a table of the monetary systems and approximate stocks of money in the aggregate and per capita in the principal countries of the world. This table shows that the aggregate stock of gold is $3,582,605,000; the aggregate stock of silver is $4,042,700,000, and the aggregate uncovered paper is $2,635,873,000. The stock of gold possessed by the principal countries is given as follows: United States, $604,000,000; Great Britain, $550,000,000; France, $800,000,000; Germany, $600,000,000; Russia, $250,000,000.

The silver stock of these same countries is given as follows: United States, $615,000,000; Great Britain, $100,000,000; France, $700,000,000; Germany, $211,000,000; Russia, $60,000,000.

This stock of silver is divided by Mr. Preston into full tender and limited tender. The United States has $538,000,000 full tender and $77,000,000 limited tender; Great Britain, no silver full tender, $100,000,000 limited tender; France, $650,000,000 full tender, $50,000,000 limited tender; Germany, $103,000,000 full tender and $108,000,000 limited tender, and Russia $22,000,000 full tender and $38,000,000 limited tender. The ratio prevailing in nearly all the principal countries between gold and legal tender silver is 1 to 15½. This is the ratio in France, Belgium, Italy, Spain, Netherlands, Russia, Central and South America. The ratio between gold and limited tender silver is as a rule 1 to 14.38. The respective ratios in the United States are 1 to 15.98 and 1 to 14.95. The various monetary systems as divided among the several countries are as follows:

Gold and Silver—United States, France, Belgium, Italy, Switzerland, Greece, Spain, Netherlands, Turkey and Japan.

Gold—United Kingdom, Germany, Portugal, Austria, Scandanavian Union, Australia, Egypt, Canada and Cuba.

Silver—Russia, Mexico, Central and South America and India.

Of the uncovered money South America has $600,000,000; Russia, $500,000,000; the United States, $412,000,000; Austria, $260,000,000; Italy, $113,000,000; Germany, $107,000,000; France, $81,000,000, and Great Britain, $50,000,000.

The per capita circulation of gold is: United States, $9 01; United Kingdom, $14.47; France, $20.52; Germany, $12.12; Russia, $2.21.

The per capita of all classes of money is: France, $40.56; Cuba, $31.00; Netherlands, $28.88; Australia, $26.75; Belgium, $25.33; United States, $24 34; United Kingdom, $13.42, and Russia, $7.16.

STOVE REPAIRS.

Already the dealers in stove repairs, as well as the stove manufacturers, can detect unmistakable signs of a large demand in this direction, remarks Metal Worker. The last winter played no unimportant part in creating this demand, as its severity taxed all kinds of domestic heating and cooking apparatus beyond what is usual, and left them in no fit condition to do service under similar conditions. Another important factor is the prevailing idea that money will be more scarce before it is more plenty, and instead of expending the sum necessary for a new stove, a tithe of it will be spent on necessary repairs. Following the same line of thought brings up the old question of stove construction, which frequently a corresponent will notice by saying that little consideration is given by the maker to the man who repairs a stove. Bolts and nuts are placed out of sight and out of convenient reach As a result there is trouble over the price charged for a few small castings which have taken a considerable time to put in place. It is useless to worry over this question, and the proper thing for the repair man to do is to provide a complete set of tools and devices to enable him to surmount his difficulties quickly.

"AD." MIXTURE.

Keen "ads." cut prejudice and purse-strings.

Dull ads., like dull salesmen, are wet blankets to business.

If your logic leaks your ads. won't "draw.

The seeds of success often lie in some happy catch phrase connected with an ad.

A magnetic ad. will cling about the reader's mind like the closing counsel of a dead uncle.

The recoil of ads. loaded with lame logic often breaks the backbone of business.

A verbal "wiggle" to a "business bait" will often catch the eye and interest of a very cautious "fish."

It takes two to make a bargain, but one persuasive ad. well circulated will often make a market.

An appetizing ad. leaves a taste in the reader's mouth which often ripens into a hunger for the thing advertised.

A peculiar verbal twist in an ad. often helps it to draw the cork of pent-up prejudice.

A business boom, loaded with convincing logic and shot through the columns of a mighty medium, will knock piggish prejudice higher than Gilroy's kite.—Jed Scarboro in "Business."

ACCUMULATION OF OLD STOCK.

The following was awarded the first prize for the best essay on "Preventing the accumulation of old stock" offered by Ironmonger, London: "The accumulation of old or unsaleable stock is one of the greatest difficulties an ironmonger has to contend with, as in many cases it leads to failure in business, owing to the amount of capital locked up, and the depreciation in the value of the stock. I will endeavour as briefly as possible to point out the principal causes that lead to the accumulation of bad stock, and then suggest a remedy by which it can be prevented.

The methods that I now advocate are not mere theoretical and untried ideas, but are thoroughly practical, and based on sixteen years' experience of the trade; and if carried out in an ironmonger's establishment the accumulation of old or unsaleable stock will be reduced to a minimum, if not entirely prevented. The following are the chief causes, viz.:—Careless buying, without carefully considering the requirements of the customers you are catering for, and the qualities and patterns best suited for the district in which you are trading; ignorance of the improvements that are being constantly introduced in nearly all kinds of domestic appliances, agricultural implements machinery, etc.; a disregard of the great importance of stock-taking; careless handling of the stock, by allowing it to get into a dirty and rusty state, and neglecting to replace in time any parts of machinery, etc., that have been sold, damaged in transit or in stock; ordering goods without having a detailed list of the stock before you, giving full particulars of the size, price, and quantity in stock; neglecting to advertise your business, and bring season goods and specialties prominently before your customers. Ironmongers know from experience that the most careful buyer will sometimes make an error in judgment, and purchase articles that may prove to be unsaleable. As soon as the error is discovered a special effort should be made to dispose of them (even at a greatly reduced price). If the goods cannot be cleared off in this way, and if they are not long in stock, the maker or factor who supplied same should be asked to take them back at a reduced price—say, 5 to 10 per cent.—or else instruct his traveller to procure a customer for them in some other town. I know from experience that makers' and factors' travellers are always happy to oblige their customers in this way should their services be so required. In ordering goods, such as spades, shovels, grates, ranges, farming-implements, &c., it is absolutely necessary that you should know the patterns, sizes, and particular makes that are used in your district. It is a risky and tedious matter to induce customers to depart from the old patterns and particular makers' goods that they have been accustomed to. In some cases it is a good plan, before ordering any newly-invented tools, machinery, &c.. for stock, to get the opinion of a local practical man. Don't leave yourself entirely in the hands of the man whose business is to sell the goods.

You must be a constant reader of the Ironmonger, and be fully "up to date" in your knowledge of the improvements that are being introduced from time to time, and keep yourself well posted as regards the market value of goods. A careful reader and keen observer will soon discover if any of the new inventions are real improvements, and will regulate his stock accordingly. I would strongly advise every ironmonger to study his weekly trade journal, aud the man who neglects this excellent means of educating himself in business matters will find that he is heavily handicapped, and more likely to have old stock accumulating than his brother tradesman who is thoroughly "up to date" and conversant with all the latest novelties and improvements. Every ironmonger should take stock regularly—once a year at least—as it affords a splendid opportunity for examining the goods and detecting any patterns that are selling slowly and likely to accumulate. The stock-sheets should be very carefully made out, giving full particulars of the goods in each department, stating, quantity, price and sizes, so that the employer or buyer can see at a glance if any department is overstocked, or the goods badly assorted. If you find when going over the stock-sheets that the stock is not in a healthy state, the salesman in charge should be handed a list of the goods that are overstocked, and have his attention drawn to any patterns not selling freely, and get special instructions to push the sale of same, and keep the list before him in his special order-book or other prominent place until the stock is reduced. I would recommend employers, in certain cases that require the salesman to make a special effort in introducing and selling unsaleable goods, to encourage him for his extra work by allowing a commission of 1¼ or 2½ per cent. Drapers find this system to work well, and I see no reason why ironmongers should not adopt the same method, provided the goods are not in any way misrepresented, or any undue pressure brought to bear on the customers in effecting a sale—a mistake sometimes made by junior salesmen. which often proves to be detrimental to the best interests of the employer.

When marking off goods it is a good plan to put on the initials of the maker's or factor's name and date of invoice (thus: J. C. P., 27.5. 93), so that you can always know where to send a repeat order, can easily refer to the invoice if required, and can see at a glance how long the goods are in stock. Some ironmongers' shops present the appearance of a marine-store by allowing the goods to get into a dirty and rusty state, or from over-exposure in the sun. Polished iron or steel goods, cutlery, tools, moulding on ranges and stoves, or other bright-steel goods exposed to the air should be cleaned up occasionally and coated with vaseline. Fine cast register-stoves, ranges, chimney-pieces, &c., should be japanned with cheap black varnish. It greatly improves the appearance and prevents rust. Electroplated, Britannia-metal, and polished-brass goods are easily tarnished, and they should be kept under glass in an airtight case, if possible. Garden or farming implements, lawn-mowers, churns, &c., should be repainted or polished if they have been in stock for any considerable time, or present a faded appearance.

Goods are often rendered unsaleable for want of being complete. If part of a set of cutlery, lamp, bicycle, machine, &c., has been sold to a customer it should be replaced at once. It is important that all heavy goods, such as machinery, grates and ranges, and general castings, should be carefully examined when received, and before they are signed for, as they are frequently damaged in transit. If any parts are found to be broken they should be taken off, if detachable, and returned to the works at once, as the broken parts are generally carried free both ways, and replaced or repaired by the makers at a nominal charge.

When ordering goods it is essential to have a list before you giving full particulars of what you have in stock in the particular department you are buying for, stating size, price, quantity, &c. In the case of bolts, nails, hinges, ranges, locks, cutlery, &c., it is most important, as it is quite possible to have large stock of each, and yet be sold out of some of the best selling sizes or patterns. With regard to season goods, such as cycles and fittings, wearing-parts for mowers and reapers, wire netting, &c., the stock should be examined at least once a week. When new goods arrive the old stock should always be brought to the front, so as to be first sold, as, if this is not attended to the old goods will accumulate. You should remember when catering for your customers to supply them with what they want in preference to your own taste or choice. If you wish to add on a new department to your business, or introduce new goods or novelties not usually known or sold in your district, it is advisable before buying a stock to distribute illustrated and descriptive lists, which can generally be had from the makers gratis. If the goods are really useful and are sure to "take on" you will soon have inquiries that will guide you as to the extent of your purchases. Also try and procure a sole agency for your town and neighborhood, as a really good and useful specialty is a splendid advertisement, draws trade and prevents the cutting of prices caused by local competition. The old saying, "Goods well bought sre half sold," is still true; and, as a business is generally made or marred in the buying department, it cannot receive too much attention, especially in these days of fierce competition. You must

have a thorough knowledge of the goods to be bought, known the wants of the business, and be well posted as to the markets. Some classes of goods, such as buckets, brushes, hollow-ware, etc., are always safe to buy, because they are sure to sell, but some are bad to keep in stock for various reasons, and the sale of others is uncertain. It is difficult to give advice on this point, but any business man who considers the amount of capital at his command, the extent of his trade, and the requirements of his customers, will always know the best course to adopt with regard to purchasing goods of uncertain sale. Good buying and good stockkeeping must be followed up by judicious advertising. Let the public know by means of advertisements in the local papers, handbills, and circulars sent per post what you are selling, and thus meet and anticipate the wants of your customers.

Circulars for season goods should be sent out regularly. This also affords a good opportunity for drawing attention to special lines, or to any articles that have been reduced in price for clearance. Fashions change often in the drapery trade, and as the goods must be cleared off at any price, annual clearance sales have become a general institution. As a general rule, ironmongers in small towns are opposed to clearance sales, as many articles of good stock have to be reduced in price while the sale lasts, whereas they would be getting their full value but for the cheap sale. I believe that extensive ironmongers in large towns would find it a great advantage to have a clearance sale occasionally. In order to make a basis for a cheap or clearance sale it is a good plan to secure a number of special lines or job lots. One great advantage of a cheap sale is that it draws a number of customers to your shop who are likely to buy other goods at regular prices before leaving. For my own part, I am more in favor of the "bargain counter," as advocated in The Ironmonger (Spring Issue, March, 1891). I can say from experience that it is an excellent way to attract customers, and also clear off any goods that have been reduced in price. Any goods intended for the bargain-counter should be ticketed, showing the original and the reduced price. Should any old stock remain on hand after every effort has been made to dispose of same as suggested then the only course to adopt is to sell by auction at one of the monthly sales held in most towns of any importance. On several occasions I have adopted this latter method to clear off second-hand bicycles, grates, damaged ranges, etc., and the result was most satisfactory.

The Sandwich Council will offer the Canada Brush Company free water and taxes for ten years if they decide to locate in the town on condition that half the men employed shall reside in Sandwich.

TRADE AND PROFITS.

The present time has been designated the era of industrial consolidation. In every trade and every branch of business the struggle for existence is telling its own tale by showing many of the weakest in the struggle to be beaten, the stronger still holding their own in the fierce strife of competion. We are told that competition has been the mainspring of civilization by spurring men on to put forth their utmost energies. It has also been the means of cheapening production, and as all are consumers all must have been benefitted by being able to buy cheaper. Notwithstanding, those surviving are anxious to protect themselves from being beaten by other competitors stronger than themselves, hence they are forming unions, confederacies, pools, trusts, etc.

Many of these unions expect to be able to fix prices at which their goods shall be sold, to accomplish which they aim at restricting production. But competition will, sooner or later, assert its power, and force prices down to the average level, and production will also be forced to meet the requirements of consumers. But it is abnormal competition that begets unions and combinations, and were it not for outside capital and skill ever seeking one another in order to gain a premium, trusts and pools might count upon permanent success.

Outside capital and skill, however, are certain to come together, and at a point, too, where they can unite to the best purpose. The late Walter Bagehot said that "capital runs as surely and instantly where it is most wanted, and where there is most to be made of it, as water runs to find its own level." It is much the same with skill. A capacity for controlling and directing business thoroughly must make itself known. History and experience corroborate the fact that, capital seeking investment, and business talent seeking employment, competition is certain to manifest itself.

And then we have inventions frequently revolutionizing the world, and upsetting the best schemes of business at the time existing. Nor can anyone anticipate the changes contingent upon the relationship between foreign countries and our own. One thing is beyond dispute, that the firm, no matter in what department, which intends to hold its own, must keep to the fore in cheap methods of management.

Profits.—What is the outlook in the future? Will tradesmen be able to earn better profits in the future than at the present time? Indeed, our leaders and guides in such matters say "No." So far from the future offering chances of realising better profits on average business, there will, in all probability, be no profits at all. The best man may secure interest and wages for directing labor, or for wages of superintendence, as it is mostly called, but of pure profits there will be none. Many years ago Professor Sidgwick said "that the average rate of that part of an employer's profits which represents his wages of management will be reduced so low as only to exceed the wages of ordinary labour by an amount just sufficient to pay for the extra anxiety of his work and the extra expensiveness of his training." Of course, he was speaking of large employers of labour. But the operations of economic laws are rapidly bringing large and small wholesale and retail firms to similar means of gaining or losing profits.

In speaking of profits we ought to bear in mind the true meaning of the term as defined by proper authorities. The wages of directing business is a preferred claim which must be made from the price or prices of goods sold before we can speak of profits. Ordinary wages constitute another claim, interest another, cost of materials, insurance, taxes, and incidental expenses further claims. What remains when all these claims have been secured is pure profit. The process by which profit is realized is a mercantile process. It is distinct from every kind of labor and from every kind of interest on any capital involved in the business. "Pure profit," says Professor Clark, of the United States, "is the return of simple ownership. It is free from all admixture of wages and of interest. It accrues to him who simply extends the ægis of his civil rights over the elements of a product, and then withdraws it in order that the product may pass into other hands."

The prices for which goods are sold must bring to the owner or seller more than the cost of all the elements of which they are composed. There is the difficulty. The cost of the chief elements of the product are not entirely under the control of the man of business. Wages, for instance, are fixed at certain rates agreed upon, and must not be altered merely at the bidding of an employer. So also is interest a fixed rate. It is the case also with the prices of raw materials, at least so as to be beyond the will of an employer or producer. The wages of directing labor, or of management, are subject to greater variation, but tend to a certain degree of uniformity. The prices of what he offers for sale his goods depend upon the state of the market, which he cannot control, but which must be accepted, often at a loss. How, then, are profits to be secured, especially when fixed expenses in plant, machinery, etc., are heavy? One plan is open to all, to accept what can be obtained, and to endeavor to live within their means. —J. Sharp in Grocers' Review.

The Canadian Pacific Railway announces still another cut between Pacific coast points and the east. To Toronto from Westminster the fare is now only $34.30, to Montreal $41.65, and to all other eastern points in the same proportion.—Free Press, Winnipeg.

GUN POWDER

American Dead Shot. Schultze Smokeless.

H. S. HOWLAND, SONS & CO.,

Sole Agents for Canada. 37 Front Street West, Toronto

PINE TAR

In tins. Sizes Nos. 1 and 2.

14, 16, 18 and 20 Pearl Street, TORONTO, ONT.

The Toronto Lead and Color Co., Limited

TREATMENT OF CUSTOMERS.

One of the most valuable assets of the ambitious and enterprising business man is the ability to maintain a pleasant manner in waiting upon customers, and to bear with their whims and eccentricities without showing the slightest irritation. Courtesy in business is not sufficiently appreciated by retail merchants, notwithstanding the gallons of ink that have been shed by trade editors in pointing out its importance. Perhaps if retailers would make it a practice to visit other stores, in localities where they are unknown, they would more readily perceive the truth of the above statement. We do not mean to infer that the average merchant is not sufficiently alive to his own interests to treat customers pleasantly upon all occasions, but that proper care is not always exercised in order to insure a courteous reception of customers by the clerks. Who can estimate the annual loss of trade to merchants that is directly caused by insolence or surliness of store assistants? Yet the increase of competition in retail trades makes it more and more necessary every year that all available means should be employed to draw and hold custom, and politeness to patrons becomes more and more essential to success. Courtesy, such as every customer has a right to expect from merchants with whom he spends his money, is within the power of every dealer to exhibit. Indeed, the small merchant with a single clerk, over whom it is more easy to keep a constant, careful supervision than the army of assistants in the biggest stores, has in this respect the advantage, and can make courtesy a most powerful weapon as against his biggest rivals.

Some retailers, and jobbers as well, make a considerable difference in the treatment of well-dressed and poorly-clad patrons. This is a very common trait of human nature. The well-dressed man, even if he hasn't a dollar in his pockets, can depend upon receiving greater consideration in places of business and public resorts, than can the shabby fellow with ample means. Often, of course, the most prosperous individual's trade is far better worth cultivating, but not always, nor is his money always as readily collected as that of the man whose appearance prevents him from obtaining credit. Many dealers overlook these points, and injure their business prospects by discriminating against people whose trade is really valuable. A daily newspaper relates the following incident:

The old man had given his son a very fair education, and after graduating he took him into his store. The young fellow was over nice about a great many things, but the father made no comment. One day an order came in from a customer.

"I wish to goodness," exclaimed the son, "that Jones would learn to spell."

"What's the matter with it?" inquired the father cheerfully.

"Why, he spells knife with a N."

"No, does he? I never noticed it."

"Of course you never did," said the son pettishly. "You never notice anything like that."

"Perhaps not, my son," replied the old man gently, "but there is one thing I do notice, which you will learn by and by, and that is that Jones pays cash."

The father was right. Jones might spell as badly as he please, yet the fact that he was a cash customer outweighed all deficiencies of education. Similarly, if his apparel had been shabby and his appearance against him his ability and readiness to pay cash, like charity, covered a multitude of sins, and would have rehabilitated him in the eyes of a prudent, sagacious merchant.—Merchants' Review.

NEED OF NERVE IN BUSINESS.

The subjoined article is from the N. Y. Journal of Commerce. It was of course intended for the people of the United States, but Canadians will loose nothing by pondering over the principles therein enumerated.

There is a degree of prudence, remarks our contemporary, that is almost as dangerons as reckless speculation in business, and it is now time for some bankers and merchants to ask themselves whether their caution is not overreaching itself. If nobody will trust anyone business must come to a full stop, but it is not the best policy for the individual or the community to precipitate the worst merely through fear that the worst will come. It is not at all probable that the worst will come unless it is brought about by the excessive precautions taken against it. A man can only starve to death at the worst, and he is not showing great sagacity if he stops eating while he still has money in the savings bank, merely because he is afraid that when that money is gone he will then suffer the pangs of hunger.

It is not for the interest of the banks that their customers should fail, nor is it for the interest of the wholesaler that the retailers should be driven out of business. It is of the utmost importance, not only to the community, but to the individual bankers, merchants and manufacturers who make up so essential a part of the community, that business should be kept in motion. The people have not stopped buying, and they have not yet suffered greatly in their ability to buy. If their ability to buy should be seriously reduced it would be because so many enterprises have closed in anticipation of something that has not yet happened. The large capitalists are upbraiding the small ones for taking their money out of banks and locking it up in safes, but they are doing much the same thing themselves in stopping their mills and discharging their workmen, or in holding on to the money in their vaults to the grave peril of the mercantile community.

Some months ago a thrill went through the business world because the $100,000,000 gold reserve in the Treasury had been impaired, but the thrill passed off and no disaster befell the Treasury, and that reserve might have been depleted much more without endangering the credit of the Government. The reserve of the New York banks has been reduced below the legal limit, but that reserve was required to provide for emergencies, and an emergency is most emphatically here. The reserves are performing the work for which they were provided, and they might be applied in a still larger measure to meet the emergency without any greater danger than is incurred in refusing to do so. The public has been urged to abandon its pernicious course of hoarding and to deposit its money in the banks, but all this urging is in vain so long as people who have money in the banks cannot get it. The banks themselves are hoarding, and if there be danger in disbursing the money they hold there is also danger in holding on to it.

The manufacturers whose employees are no longer earning wages have in most cases stopped their mills in anticipation of something that may happen. But people still go to the retail stores and buy goods, and unless they are impoverished by a general stoppage of business they will buy about as much as usual next fall and winter. The retailers are not buying ahead so freely as the solicitation of drummers has led them to in recent years, but they have neither shut up shop nor stopped selling. Collections are not so good as sometimes, but they are not very bad. In many lines of production orders are fairly good. Congress is not acting with precipitate haste, but the probability that it will stop the silver purchases before another month is reached is a very strong one. Breadstuffs are going abroad rapidly, and a large amount of gold has come and is coming to this country in payment for them, or as loans on the securities that will be popular again in Europe when the danger of their being redeemed in silver has passed away, and a large addition has been made and is being made to the circulation of the National banks.

What is needed now is courage, pluck, confidence, not more in business men than by business men. These are essential in business at all times. The circumstances that interfered with mutual confidence are passing away, and there is no reason now why it should be entirely withheld and every man act as if disaster had already befallen the country.

The prudent mariner takes in sail when a gale approaches, but he does not strip his spars and let his vessel roll in the trough of the sea.

COPPER SMELTING IN RUSSIA.

At the Bozoslovsk Works in Russia, purchased from the Crown by the present proprietor, Mr. Polovtzof, about 10 years since, the converters in the Bessemer shops are arranged in 2 groups of four, each group having 2 reverberatory smelting furnaces, explains a contemporary. When in use one converter is blowing, a second is under repair, a third is cooling, and the fourth warming up. The operation is performed in two stages ; in the first the coarse metal, by the elimination of sulphur and iron, is reduced to fine metal, and in the second the sulphur in the latter is oxidized, bringing it to the state of blister copper. In the first operation 32 cwt. of coarse metal, with 20 per cent. of copper, melted in a reverberatory furnace, is run into the converter and blown for 25 or 30 minutes. By the burning of the sulphur and iron the temperature rises rapidly, and a yellow flame, with violet edges and filled with very bright sparks, issued from the mouth of the converter. As the iron decreases the flame drops, and finally becomes green, when the operation is finished and the charge is poured into the moulds, where the slag and regulus separate in cooling The latter averages about 64 per cent. of copper.

In the second operation the white metal of the first blowing is remelted and blown to blister copper ; this requires a longer time and is less easily affected than the first con version, as the only combustible constituent, sulphur, gives such a small amount of heat that there is danger of the charge setting. It is, therefore, necessary at times to raise the temperature by throwing in charcoal and 2 men are continually engaged in keeping the tuveres open with iron prickers. The blow lasts from 1 to 1½ hour, and is considered to be finished when no unchanged regulus is found in the projections, collected on a shovel inserted into the converter. The flame, which is at first green, changes at the end to a reddish-yellow. The slags, containing 5 to 6 per cent. of copper, are poured out first, and afterwards the blister copper, which is refined in the reverberatory furnace in the usual way.

In the same converter 3 or 4 consecutive blows for white metal are followed by 2 for blister copper, and 2 or 3 more for white metal, the object of the alternation being to remove any masses of copper adhering to the lining. The average assay of the blister copper from the converter is 96 per cent. In 1890, 5013 tons of 19 per cent. coarse metal were converted in 3835 blows into 1549 tons of white metal, and the latter by 887 blows into 746 tons of blister copper.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOT NAILS, ETC.
Hamilton. Ontario.
SP

RAZORS, SCISSORS
POCKET KNIVES


TABLE KNIVES
BUTCHER'S KNIVES

VIEWS AND INTERVIEWS.

"Well, the cutlery business is not now so good as it was in July," remarked the manager of the cutlery department of a leading jobbing house. "But that is only to be expected. September and October, however, we expect to see it brisk again. Oh, yes, the prospects are fairly good."

• • •

Mr. W. H. Carrick, manager of the Gurney Foundry Co., Ltd., told me Wednesday, that his firm was rather busier than is usual at this time of the year. "But then, you know," he added, "it may be owing to the fact that we have been making some special lines for I know that the stove trade generally is quiet. Our busy season begins in another month or so."

• • •

"Yes, there have been quite a few more country customers in the warehouse this week than last week," replied one of Samuel, Benjamin & Co.'s travelers to a query of mine. "But I think it is the attraction of the military tournament that has brought them in principally, for their orders have been largely of a sorting up character. One man told me he was going to keep his stock low because he believed there would be a drop in prices in the American market."

• • •

"My, but what a big change there has taken place in the price of Portland cement during the last twenty-five years," remarked a retired builder to me the other day on the Yonge street wharf as he threw a leg over one of the many scores of barrels that were standing there. "In 1867 I had to get my cement from New York, and the price I paid was $10 per barrel. Later on it began to arrive in Montreal, and I remember getting it from there at $5 per barrel. That was cousidered a great thing, but now it is down to something like $2.50 per barrel.

• • •

"Well, I can't say that there is much news," said a traveler to me Saturday. "But hold on! I did hear by-the-bye that a traveler of one house on the street had a laughable experience the other day. It seems that he was asked to take part in a ladies' aid social in a town where he happened to be one day. That evening, in his hurry to get through business in time for the social he undertook to cross a stream on a plank. He wasn't a Calverly, for when he got to the centre of the stream he lost his balance and over he went sprawling into the creek. He was, of course, wet through to the skin. Instead of gracing the social that night he went to the hotel and to bed, while his clothes were hung up in the kitchen to dry."

BYSTANDER.

SEALED TENDERS addressed to the undersigned and endorsed "Tender for Hot Water Heating Apparatus, Drill Hall, Toronto, Ont.," will be received until Monday, 28th August, for the construction of a Hot Water Heating Apparatus at the Drill Hall, Toronto, Ont.

Plans and specifications can be seen and form of tender and all necessary information obtained at this Department and at the office of R. C. Windeyer, Esq., Architect, Toronto, Ont., after Monday, 14th instant.

Persons tendering are notified that tenders will not be considered unless made on the printed form supplied, and signed with their actual signatures.

Each tender must be accompanied by an *accepted* bank cheque, made payable to the order of the Honourable the Minister of Public Works, *equal* to *five per cent.* of the amount of the tender, which will be forfeited if the party decline to enter into a contract when called upon to do so, or if he fail to complete the work contracted for. If the tender be not accepted this cheque will be returned.

The Department does not bind itself to accept the lowest or any tender. By order,

E. F. E. ROY, *Secretary.*

Department of Public Works,
Ottawa, August 11, 1893.

TENDERS FOR STEEL RAILS

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Steel Rails," will be received up to noon on Tuesday, 12th September next, for the supply of—

1,000 Tons of 50-lb. Steel Rails to be delivered C.I.F. on the Prince Edward Island Railway wharf at Summerside, Prince Edward Island.

300 Tons of 56-lb. Steel Rails to be delivered C.I F. on the Intercolonial Railway wharf at Richmond (Halifax), Nova Scotia.

5 000 Tons of 67-lb. Steel Rails to be delivered on the Intercolonial Railway (Princess Pier) wharf at Levis, opposite Quebec.

All the above to be delivered in month of June, 1894.

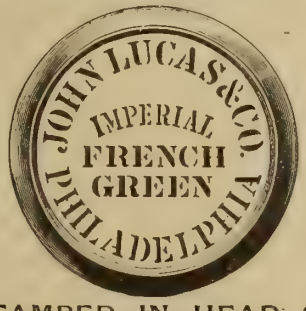
Specifications, Conditions, Forms of Tender, and all other information will be furnished on application at this office, or at the office of the High Commissioner for Canada, London, England.

By order,

JOHN H. BALDERSON,
Secretary.

Department of Railways and Canals,
Ottawa, 8th August, 1893.

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EVERY PACKAGE

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E. G. GOODERHAM, Manager. - - JNO. C. COPP, Sec.-Treas.

SULPHUR IN CAST IRON.

In a paper before the International Engineering Congress, Mining Engineers' Division, at Chicago recently, W. J. Keep, of Detroit, takes the ground that writers upon the evil effects of sulphur in cast iron have charged to this element more than properly belongs to it, says the Journal of Commerce. It is a matter of common belief among founders that a small amount of sulphur in the fuel will work great damage, and that a cracked casting or anything out of the ordinary way is to be laid to sulphurous fuel. In following up his enquiry into the subject, Mr. Keep corresponded with users of sulphurous iron ores, and they answered, without exception, that but a small percentage of sulphur could be made to remain in carbonized iron; that it was difficult, if not impossible to introduce sulphur into grey cast iron, or into any carbonized iron.

Mr. Keep made a number of tests, details of which are given in his paper, showing that whether the results which have always been ascribed to sulphur are produced by some other cause, or directly by the sulphur in the fuel, they are not more to be feared than many accidents of foundry running. "They do not indicate that the iron has taken up sulphur to a damaging extent, and the evil can be prevented, or can be overcome next day by adding enough silicon iron to replace the silicon that has been driven out."

One of the tests consisted in melting 25 pounds of Swedish gray charcoal pig iron containing 1.249 silicon and 0.187 manganese, and feeding slowly eight pounds of brimstone, keeping it as closely covered as possible. When the operation was completed, there was at the bottom about five pounds of silver-white iron covered with a very rich sulphide of iron. The white iron showed 0.58 sulphur—conclusive proof that a carbonized iron could not artificially be made rich alone in sulphur. Messrs Weston & Smith, Mr. Keep adds, found it was difficult to cause cast iron to take up sulphur. The conclusion derived from all the tests was that sulphur, if present to any extent in cast iron, "tends to increase shrinkage and to turn the iron white;" but to prove this tendency it was necessary to add percentages of sulphur never found in commercial pig iron. In white iron, it is agreed, not more than 0.75 per cent. of sulphur, in mottled iron not more than 0.25 per cent., and in gray foundry ore not more than a few hundredths of one per cent. can be found. In conclusion, Mr. Keep affirms that pig iron will never contain more than .10 per cent. and probably not one-half that amount of sulphur, and in his closing paragraph says:

The depth of chill does not seem to be influenced by these small percentages of sulphur, and there is no testimony to show that there is any relation whatever between the sulphur-content and the strength in pig-iron or in ordinary castings

In fact, it is generally accepted that one brand of Swedish pig-iron owes its strength and adaptability for gun construction to sulphur-ore added in the furnace.

If we have succeeded in dispelling the superstition regarding the influence of sulphur in the fuel upon the castings produced, we shall hope to be able, at a future time, to propose an explanation of the production of inferior castings from time to time from a uniform mixture of pig-iron.

This promise is one that foundrymen will hope to see fulfilled at an early date, and we suggest that the Western Foundrymen's Association will be glad to pre-empt Mr. Keep's answer to the chief perplexity of the foundrymen's existence.

A MACHINE GUN FEEDER.

Dr. R. J. Gatling, whose revolving machine gun has attained a world-wide reputation, has applied a feeder for the gun, which renders it still more convenient and useful than ever, says the Hartford Times. It seems to be a perfect machine gun now. On a strip of tin are placed twenty smokeless powder cartridges, each held in place by bits of tin that are turned up for the purpose. These slips are put into a horizontal opening, and as they are drawn through the cartridges are stripped off and placed in position to be placed in the chambers. The motion is positive, and there is no failure in any part of the movement. The old plan was to drop the cartridges into a vertical opening and they were carried by gravity to their proper position. It will be seen that by this old method the gun could not be used when pointed upward or downward except to a moderate degree. But with the new invention the cartridges are held in place in whatever position the gun is held, horizontally or perpendicularly, or at any angle. Each of the old feeders cost $2.50. The new tin strips cost but 2 cents each. The new system shields the cartridges from the rain.

There is another advantage: The strips with cartridges attached, can be compactly packed, and a much larger amount of ammunition can be carried with the gun than by the old way. The gun can be fed with these strips with the greatest rapidity. With them it has been fired 3,120 times a minute; and when turned by a little electric motor attached to the breech, it can be fired 5,000 times a minute.

The ingeniously contrived movement of this revolving gun works as easily and smoothly as the simple rolling of a wheel. It is a wonderful piece of mechanism, wonderful for its simplicity and accurate movements—superior to all other machine guns in its principle of revolving cylinder and revolving barrels and locks—at the same time moving with such exactness that in firing over 3,000 charges in a minute there is no accident, no failure in the working of the cartridges. If a cartridge is imperfect (something that does not occur once in 10,000 shots), the gun works on just as accurately as if the miss-fire had not occurred.

The small bullets used in this gun, with smokeless powder, have been fired through 41-inch boards. They can be fired two miles and then have force enough to pass through the body of a man. Dr. Gatling recently exhibited one of his newly perfected guns before the United States army board of examiners at Springfield, and they were delighted with it. Eighteen of the new guns were ordered by the War Department, each having this remarkably advantageous improvement in the feeding.

The improved feed referred to was developed and applied to the identical gun used in the United States Government test, in the shops of the Dwight State Machine Company, Hartford, Conn. The patents are in the names of two of their employees, and will be assigned to the Gatling Company. They are now engaged in adapting an electric motor to operate the feed. The electrical part of same made by the Eddy Electric Co.

FIRE-BOX STEEL.

At a recent meeting of the Northwest Railroad Club Mr. William McIntosh, of the Chicago and Northwestern railway, offered a brief paper on the question as to how much can railroads afford to pay for good fire-box steel, and can it be procured at any reasonable price. After stating that the expense of renewing fire-box sheets is so great that railroad companies can afford to pay much more for this steel than they are now paying if by so doing they could procure material that would give longer service. Mr McIntosh said: "The question now arises, where are we going to obtain this good steel; is it in the market, can it be manufactured? My knowledge of the manufacture is limited, and I will not undertake to do more than say that I think such quality of steel can be procured at the figures now quoted, or even at a less cost. The quality of fire-box steel has either deteriorated during the past 10 years, or the conditions of service have so radically changed that it is destroyed much quicker. I draw these conclusions from observations during that period; and as an illustration I will say that I have taken out fire-boxes within the past few years that had been in service from 8 to 10 years, and I have recently removed fire-boxes that have been in service for 4 years.—American Manufacturer.

A reputation for truthfulness is indispensable to permanent and satisfying success.

One thing in particular should be impressed upon clerks—the necessity of careful attention to small customers

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

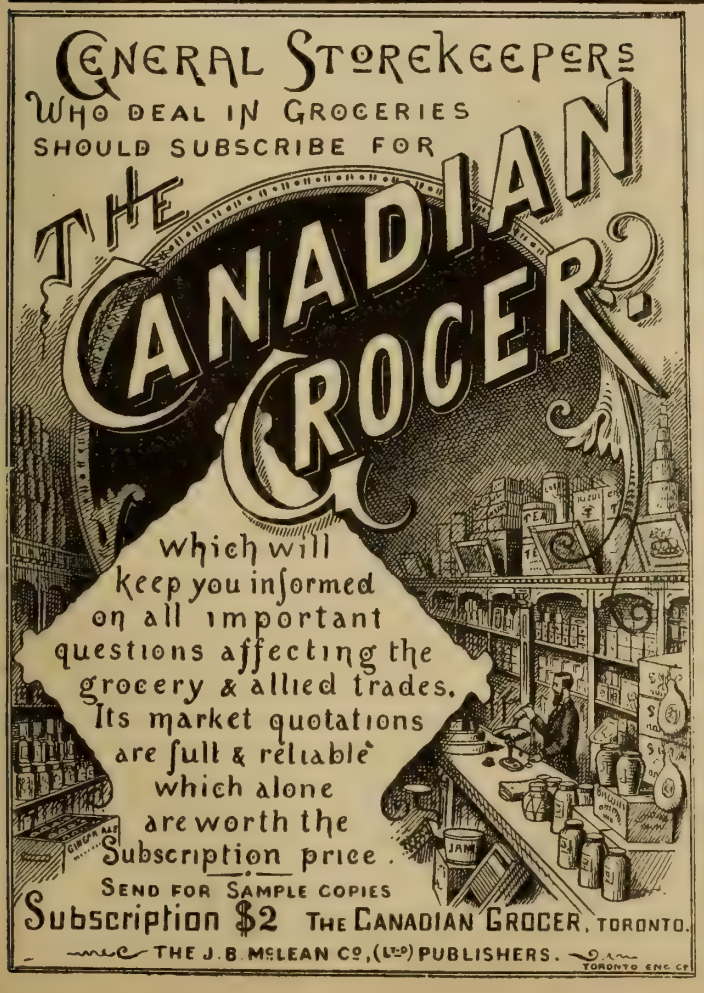
"Pilkington Bros."
"St. Helens,"
"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friend against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

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which will keep you informed on all important questions affecting the grocery & allied trades. Its market quotations are full & reliable which alone are worth the Subscription price.

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SHEPARD'S PATENT EXCELSIOR STOVE PIPE DAMPERS.



FOR STYLE, FINISH, DURABILITY and CONVENIENCE, Positively Unequalled. Will always Maintain its Tension on Pipe.

ADVANTAGES OVER ALL OTHER DAMPERS.

No springs to burn out or become worthless by having temper drawn out by heat.

Spindles held in by new method and do not get loose by warping of damper plate.

Friction on outside of pipe, at both ends of spindle.

Acorn tip at end of spindle not only ornamental, but covers hole in pipe that is punched for spindle.

Spindles flat and do not turn in plate.

The shoulders or damper plate are made more flaring than usual, so as not to rub against the fin or rough edge around the hole made in pipe for spindle.

Nickel Plated or Japanned, "Always Cool" Ventilated Handles, substantial and ornamental, and unlike wood handles do not drop out.

☞5, 6, or 7 inch.

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EXCLUSIVE MAKERS FOR CANADA.

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

Not a single pound of pig tin was received by the United States from abroad during the month of July.

The grasshoppers have done considerable damage to crops, especially oats, in the vicinity of Deseronto as elsewhere in the bay district.

The Rathbun Co. have chartered the steamer Antelope to run between Gananoque and Brockville, calling at Rockport. She makes three trips a week.

The natural gas was lighted up the other night at the well on Barton street, Hamilton, and flamed up 40 feet in the air at times. Large crowds witnessed the illumination.

A Kingston letter says that a sale of iron ore from the Calabogie iron mine has been made to a furnace in Pennsylvania. The mine has not been worked for three years.

A coal syndicate, of which Rembler Paul, A. McKinnon and Eric E. Knight are the principal members, has been formed at Regina and will control the sale of Alberta Anthracite coal from Regina to Winnipeg.

The Deseronto car works have received orders for two passenger combination coaches and several box cars. Two fine new excursion cars have just been sent out to the Ottawa and Gatineau Valley Railway.

The rust has attacked the spring wheat and oats in some sections about Perth. Apples will be a poor crop, owing to the worm on trees not sprayed in the spring. Potatoes promise to be a fair crop and of good quality.

The smallest holes pierced by modern machinery are one one-thousandth of an inch in diameter. They are bored through sapphires, rubies and diamonds by a machine which makes twenty-two thousand revolutions per minute.

The wife of one of our hardware merchants wanted her hubby to bring a few yards of wire cloth to make Johnny a pair of pants ; but the unfeeling wretch remarked that it was only used for bathing dresses.—Hardware Program.

Sunday night the general store of W. H. Crooker, Waterdown, was broken into and several razors and knives and a quantity of ready-made clothing were stolen. The thieves cut out the sash of a window and entered the store that way.

A boiler at Baird's foundry, Woodstock, exploded between seven and eight o'clock Tuesday morning, but fortunately the damage was not serious. The boiler was left in charge of a boy, and it is supposed that the accident was caused by improper management.

A new glass, which is nearly impervious to calorific rays, is described in Dingler's Polytechnic journal. It consists of a plate ⅓-inch thick only allowing about 11 to 12 per cent. of the total heat from a bat's wing burner to pass. The glass is made from 70 parts of sand, 34 of soda, and 25 of China clay.

Mr. Fortier, the ex-Winnipegger, now in charge of immigration work at Ottawa, says that as an instance of the Northwest lands being well advertised, he has just received a letter from India asking for full information about the country, as two or three parties from there intended taking up land in Canada early next year.—Free Press, Winnipeg.

Some time ago the Ontario Malleable Iron Company, Oshawa, which employs 300 men, discharged all their union moulders, over 100 in number, and announced that the works would be henceforth operated as an "open shop." A large number of apprentices have been taken on, together with a part of the old staff.

Thieves last week entered Foster & Hobbs' hardware store, Tilsonburg, by taking a pane of glass out of the back window. They took four revolvers, a quantity of No. 32 cartridges and some jackknives, the total value of the articles being $25. The burglars went out through the front door, leaving it open. The work is evidently that of novices.

According to the Iron and Coal Trades Review there were on June 30th in Great Britain 744 blast furnaces, of which 384 were in England outside of the Cleveland district ; 144 in the Cleveland district, 103 in Wales and 113 in Scotland. During the half year 2 furnaces were pulled down ; no new ones were completed, but 5 are under construction. On July 1st 345 furnaces were in blast and 399 idle.

"My idea of Heaven," said a prominent steel manufacturer to a Pittsburg divine some time ago "is Bessemer plant in full operation." To which the clergyman responded that this would more closely fit the popular conception of hades. Whatever we call it, there will be no trouble in agreeing that the amount produced by a Bessemer plant in full operation is not enough these days to make a very satisfactory heaven or a very lurid hades.—Ex.

The Tobique Valley Gypsum Mining and Manufacturing Co., Ltd., with a capital stock of $50,000, has been incorporated "to acquire by purchase, lease or otherwise gypsum and other mineral lands, to develop the same, and to manufacture land plaster and other fertilizers ; to manufacture barrels, shingles and such other articles of which wood shall form a component part as may be necessary for the carrying on of the operations of the company, also to construct such mills, wharves, tramways and other works as may be necessary for promoting the objects of the company which are to be carried on throughout the Dominion of Canada."

Business men of Oshawa have suffered many small losses of wares and money from their stores for some time past, and the miscreants were at last discovered in the persons of two youths, Frank Mitchell and Aaron Cameron, whose ages would not be greater than 10 or 12 years. They were found upon examination by Magistrate Grierson to be intractable, and were sentenced to two years in the Penetanguishene reformatory.

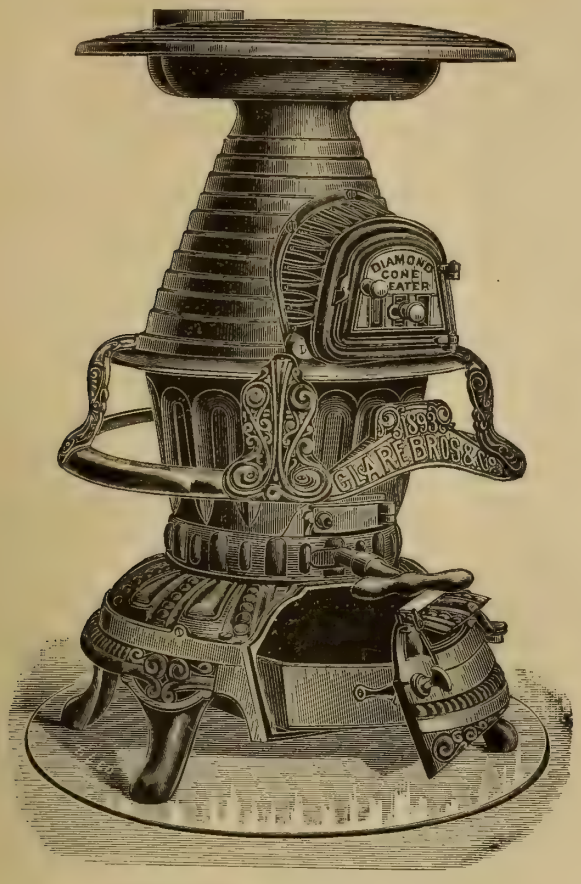
The post office department has notified postmasters that any envelope coming under their observation indicating that it is from a bad debt collecting agency or a "collecting and detective agency," must be sent to the dead letter office if addressed to any person in the United States, as under a recent act of congress postal matter of this kind is not allowed to go through the mails on the ground that it may be defamatory to the person to whom addressed.

The importation of iron ore from Cuba promised to be very large when the Pennsylvania Steel Company established vast works at Sparrow's Point to save the railroad haul of imported ore, and the Bethlehem Company and one or two concerns in Cleveland purchased Cuban mines. It is now announced, however, that the Earn Steamship Company, which has been running steamers between Philadelphia and Santiago de Cuba, is unable to get ore cargoes and is seeking European charters.—N. Y. Journal of Commerce.

Canadian manufacturers of farm implements have just closed a successful year's operations, says Bradstreet's. The annual output of their foundries have been closely sold up, there having been an unusually good demand. Ontario, Manitoba and the Northwest were the best customers, though Eastern Canada bought liberally, and a comparatively large quantity of machinery found a foreign market. The condition of the crops throughout the country indicates that collections during the approaching autumn will be rather above the average.

The old idea of constructing a boat to skim the surface of the water instead of ploughing through it has been revived by Hiram Maxim, the well-known mechanician. Mr. Maxim's experiments with aeroplanes, which proved that a considerable weight can be supported in the air by an inclined plane driven forward through it at a moderate velocity, have doubtless suggested to him the possibility of effecting something similar on water.

As a substitute for cast iron a contemporary suggests the adoption of wrought iron or steel. The use of the latter material is now general for such purposes, but the suit-



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Have you seen the new cuts of our Combination furnaces. - - - - -

Dealers who handle the **Preston Furnaces,** control the business in their sections.

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164 Fenchurch St, London, E. C.

Stove Boards

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Stove Pipe

(Patent.)

STOVE PIPE ELBOWS, 1, 4, AND 6 PIECE

Stove Pipe Polish, Paste, and Varnish

STOVE PIPE COLLARS AND STOPPERS

ability of wrought iron is, to say the least, questionable, considering that the relative resistance to crushing offered by cast and wrought iron is as 48 to 17. So that according to these figures a column of wrought iron would require a sectional area of metal nearly three times as great as one of cast iron.—Ex.

Amateur burglars last week entered Christie & Agar's hardware store, Owen Sound by a window, and pried off the lock of a cash-box containing some funds belonging to the Sunday-school of the First Methodist church, of which a member of the firm is treasurer. The amount secured was small, only about $5, nearly all the money belonging to the school having been banked. This is the fourth burglary here within a short time. In every case the work was evidently that of amateurs.

The record of closing mills is occasionally interrupted by something pleasanter to read. Rolling mills at Springfield, Ill., that have been idle for several weeks, have started up. Several factories in New Brunswick, N.J., have started or are soon to start, and several manufacturing concerns in Middletown, Conn., are active. Some are running on full time, and others are taking on new hands, though others are running on reduced time or not at all. The merchants of the place are reporting large cash sales and easier collections than usual.—N. Y. Journal of Commerce.

The Manitoba Government has just issued its official bulletin regarding the crops. The estimated yield per acre in wheat is a trifle over 22 bushels, oats at 40, barley 31, flax 16. The eastern portion of the province appears to be the most favored district, wheat there averaging nearly 25 bushels to the acre. The sample in all sections is reported excellent. The probable yields are: Wheat, 22,000,000 bushels; oats, nearly 16,000,000 bushels; barley, about 4,000,000 bushels, and flax, 150,000 bushels. Harvesting is now in full swing, but harvest hands continue to be very scarce.

The Collecter of the Port of Milwaukee was Saturday last obliged to store large quantities of tin plate because the importers do not come forward and pay the duties. The duties on that now in store at this point amount to about $35,000. The consignments are principally to two manufacturing firms. The reason assigned by Ferdinand Kleckhefer, of the Kleckhefer Brothers Company, the heaviest importers, for the accumulation, is that Congress is sure to take the added duty off tin plate soon, and if he holds on until that time he will get rebate equal to the reduction, which will amount on the present lot to about $10,000.

A letter received in Montreal from a prominent New York financier reads as follows: "The end cannot be far away, as in the last two weeks we have imported gold the extent of $24,000,000; new currency issued, $8,000,000; treasury disbursements for receipts $7,000,000; total 39,000,000. We have a prospect for much new money in the next two weeks. This must soon quench the flame. The repeal of the Sherman law is of small consequence now. What we want is more money and plenty of it. You Canadians have a much better currency system than ours, although you have but little gold. Our people are shoemakers rather than financiers, but we are travelling a hard road now and learning something,"

The new match factory of the British Columbia Match Co., on Lulu Island, New Westminster, has now made a modest beginning under the management of Mr. R. C. Lowery, and the establishment promises well. The initial capacity of the factory is 4,000,000 matches daily, and several hundred thousand are now being turned out daily towards meeting a demand, which in this Province alone is estimated at 2,000,000 a day. The wood used is British Columbia spruce, which burns as well as the cedar used in the California factories, and the labor mostly Chinese. Some fifteen hands are at present employed, but the number will probably soon be increased.—B. C. Commerce.

SOME NEW WRINKLES.

Small meat cutters for the use of aged people, invalids, children and cripples, are sold abroad, and for the purpose for which they are intended they are very convenient. Meat in them can be kept heated by previously immersing the machine in hot water. They will cut fine, discard all sinews and gristle, are sometimes silver plated costing as much in the latter case as $50 and are a very sightly article on the dinner table. An invalid's meat press for similar purposes will extract all the juice from a very small piece of meat.

Powdered sugar is often difficult to obtain in a pure shape. Small machines that will grind one pound into fine powder in two minutes, are a novelty in some localities.

Cinder sifters are now made so that the ashes from the furnace or range are simply emptied into a receptacle practically enclosed, the cinders passing into the proper place without further effort on the part of the servant.

Garden rollers are made with rounded edges. They turn readily and do not leave sharp paths in their progress over the grass.

Potato clipping machines cut that vegetable into ⅜-inch squares very expeditiously. They are specially adapted for hotels where "French fried" is demanded.

Champagne taps are now made of heavy silver plate at a cost of $1.75 each.

A Californian is placing upon the market a device intended to supersede the ear trumpet, which we all know is an unsightly affair. It is upon the same principle, but is much smaller, and as a flexible tube supersedes the long, thin affair in the old style, it is very compact and can be carried in the pocket. It is made of bell metal.

Sad iron holders lined with asbestos and plated with nickel are now offered for use in the kitchen.

Steak beaters are made of porcelain and in many respects are better than those of hard wood and not costing as much.

A novelty in lamp fillers is to have the spout bent far enough so that it can act as a siphon in case of overfilling. This obviates all "mess" in such cases.

A novelty has been introduced in Paris, and consists of curtains of glass for windows or beds. The glass is colored and set in zinc frames. The different parts are fastened, one with another by hooks, which allow the glass to be readily lifted or parted the same as an ordinary curtain.

The electrical stoves, which are now coming into use more and more, give out a damp heat, unlike that of combustion, which is dry. The damp heat preserves the juices of meats. These stoves are lined with asbestos, and have switching arrangements which transfer the heat from point to point. These are simply for roasting, otherwise each utensil has its particular wire. A higher order of talent than the ordinary cook is required to manipulate these electrical devices. It is a very cleanly way of cooking, and naturally convenient. A single iron will do for all day in the laundry, and one can eat and cook at the same table.—Ex.

PERSONAL MENTION.

Mr. Moore, of Bowman & Moore, Hamilton, was in Toronto this week on business.

Capt. Allen, of J. W. Allen & Co., hardware merchants, Newmarket, was in Toronto this week to see the military tournament and on business.

Mr. Travetie, of Montreal, was in Toronto this week. He is en route for the World's Fair and is combining business with pleasure, although from what he says he is getting but little of the former.

T. B. Alcock, secretary of the Gurney Foundry Co., is back from a three months' trip through the Northwest and British Columbia. He reports trade quiet, particularly on the Coast, but judging from his appearance and increased avoirdupois, the trip has agreed with him

There have been quite a number of country merchants in Toronto during the week, and among them were noticed Henry Jones, of Uxbridge, T. Carey of Goodwood, A. Lamont of Mount Forest, J. Lorentz of Baden, John L. Drainie of Fergus, J. N. Kennedy of Georgetown, R. J. Doak of Millbrook.

No young man can possibly have mistaken his calling who finds in it what the world wants done

Restore goods to their proper places as soon after using as possible

MOVING THE CROPS.

The crops are coming forward, and they will have to be carried to market in some way, remarks the N. Y. Journal of Commerce. The farmer cannot afford to sell his crop on credit ; he has bills to pay. The railroads cannot afford to haul the grain on credit ; they have to keep their men paid and their obligations met. The annual demand for an exceptionally large volume of currency is coming on while the country is still suffering from widespread and persistent hoarding. How is the farmer to be paid for his wheat and the railroad to be paid for hauling it to market before the consumer has received and paid for it? The St. Paul "Pioneer Press" approves thoroughly of a plan proposed by a gentleman whose name is not disclosed, but who is described by the editor as "a clear-headed banker of wide experience." It is that the banks of Minneapolis and St. Paul perfect their organization on the lines of the New York Clearing House, and then issue Clearing House certificates in denominations of $5, $10, $20 and $50, to be loaned to the grain buyers, who would pay them out for wheat and freights. It is pointed out that if the jobbers will agree to accept these certificates from the country merchants, the latter would accept them from the farmers, and the farmers in that case would not refuse to take them from the grain buyers. The success of the plan involves also the consent of the railroad companies to accept them in payment of freight. The Pioneer Press sees no objection to this plan and declares that it, or something like it, will have to be adopted, but it points out that there is no time to lose, and the banks, the jobbers and the railroad officers should confer on this vitally important question at once.

From the Pacific Coast comes complaint of another difficulty in the way of moving the crops. A ship from Calcutta with 6,000,000 bags is fifty days overdue. Penitentiary workshops contain 1,250,000 bags, but the law permits their sale only for cash, and the cash cannot be obtained until the grain is sold ; without bags the grain cannot be got to market.

SET ON FIRE BY LIGHTNING.

A Stellarton correspondent sends the Halifax Chronicle the following : On Tuesday there had been at noon a thunder storm and copious rain, which cleared up, but left the air close and heavy. About three o'clock the storm returned and a flash of lightning struck the flag staff on the Drummond colliery general office, wrecking the gable of that tall building, but it did not hurt the occupants who were on the ground floor. At the same time it entered the Scott pit, a working on the second seam, and produced an explosion which blew to atoms the wooden cupola over the fan pit and shot out the ladders from the travelling slope as from a gun. Fortunntely no one was in or about the pit at the time. Of the injury done below nothing can be said, as the coal was set on fire, heavy black smoke rolling out of the pit immediately after the destruction of the cupola, necessitating the prompt covering over of the openings. This work was done so promptly that the fire could not have got a strong hold of the coal, and it may be expected that in a short time an examination can be made.

BENGAL LINSEED AND JUTE CROPS.

The export of linseed during May and June, remarks a Calcutta paper, "Capital," was the largest on record for any two consecutive months, the total shipments to all ports having been about 600,000 quarters, as compared with 439,000 quarters exported during the same two months of 1892, which, up to that period was the largest on record. Since the commencement of the season, say March 1, the export has been about 810,000 quarters, and for July the clearances are estimated to be 180,000 quarters. If an average crop available for shipment be taken at, say, 1,366,000 quarters, the balance remaining for shipment up to the end of next February will not exceed 400,000 quarters, say about 65,000 to 70,000 tons, during seven months. "As two-thirds of the crop," adds the Calcutta paper, "will have been exported at the end of July, shippers had better avoid entering into large freight engagements for forward shipment. The dealers, having disposed of the largest portion of their stocks at very remunerative prices, will doubtless hold the balance off the market unless they obtain their rates. The remarkable feature regarding the export of linseed during the above two months is the great increase in the quantity sent to the Continental ports. It looks as if the new crushing mills at Dunkirk and Amsterdam, with their latest improvements in machinery, are producing a larger percentage of oil and of better quality than the old mills are able to turn out in England. In former years a large quantity of linseed was sent to Liverpool for crushing purposes, but the trade now appears to have almost left that port." Calcutta advices say that in the jute market the official forecast of a 16 anna crop is generally accepted as correct. Rain had stopped business to some extent. Quality was said to be poor, but color should be good owing to the heavy rainfall and consequent ample supplies of clean water for steeping. There was more enquiry, and prices were 2 to 3 annas higher in Calcutta, advices from Serajgunge also showing a strong demand and rising market there. In jute fabrics there had been little or nothing doing. The total clearances of jute, including rejections and cuttings, during the eleven months to June 30 were 3,072,748 bales, against 3,395,582 in the bumper year 1890-91.

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Meat - Cutter

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H BOKER, Manufacturer. | For Sale by Leading Wholesale Houses.

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DO YOU?

WISH THUS TO BUILD, an advertisement in the CONTRACT-RECORD, TORONTO will bring you tenders from the best contractors.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Aug. 25, 1893.

HARDWARE.

The week in general hardware has presented features much the same as during the previous one. A fair sorting up trade has been done, principally in sporting goods, cartridges, shot, caps, etc., but small goods, also of other classes, have furnished some movement. In nails makers report business quiet, but jobbers do not appear to be very busy. Tacks are quiet also. Binder twine furnishes no feature, being inactive. The trade in harvest tools is over, as we have already noted. In heavy hardware dullness is the rule. Leads and paints are very quiet, while cement and naval stores furnish nothing of particular interest.

WIRE—There is nothing doing in wire, which rules quiet and steady.

NAILS—The nail market is dull, and makers report dissatisfaction in so far as orders for new business goes. The jobbing movement is small and unimportant at present. Prices remain as before.

TACKS—There is nothing doing in tacks, and the discount lists are unchanged.

HORSESHOES—Some sorting orders have been received, but although cutting is complained of in the west the wholesalers here say that they are selling at steady prices.

CHAIN—Not much doing this week.

CUTLERY—Some small sorting orders have been received during the week, the aggregate of which is unimportant.

SPORTING GOODS—There has been quite a movement in a small way in various lines of sporting goods, cartridges, shot cases, shot and caps being turned over to quite an extent in the aggregate during the week. Guns and rifles of course benefit in the demand which transpires for amunition, for the one generally goes with the other.

TOOLS—The movement in tools is practically nil, and we have nothing to note this week.

BUILDERS' SUPPLIES, ETC.—These are dull, in fact duller than is expected at this season, which fact is attributed by many dealers to the Provincial tax on sales and transfers of property, which tends to restrict real estate transactions, and this of course tends to cut down the call for building supplies.

BINDER TWINE—The market is practically a blank as far as this article is concerned, and we have nothing special to report this week.

WARE—Demand has fallen away materially, in fact there has been nothing doing since our last.

NAVAL STORES—Business rules quiet and values generally are unchanged. The only change of importance is a drop in the price of turpentine, which we quote 2c. lower. Resin continues in fair demand at firmer prices. We quote :—Turpentine, 45 to 46c. ; resins, $2.50 to $5.00, as to brand ; coal tar, $3.75 to $4 ; cotton waste, 5½ for colored, and 7 to 10c. for white ; oakum, 5½ to 7½c.; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep-sea line ; pure Manilla, 11c. for 7-16 and upwards and 12c. for smaller sizes.

METALS.

In iron and heavy metals dullness continues to hover over the situation. A large consignment of domestic Lower Province pig iron, to which we have previously referred, imparts if anything an easier tone to the pig iron market and other lines. Buyers do not show much disposition to operate.

PIG IRON—The feature of the pig iron market, a heavy lot of domestic Lower Province, which is being offered on the market at $17 four months, which tends to soften the tone of the market even more. In Scotch pig there has been very little of importance to note, the sale of a round lot of Summerlee at $18 being the most important. We quote: Summerlee, $18.50; Eglinton, $17 to $17.25; Carnbroe, $16.75 to $17; Siemen's No. 1, $18, and Langloam, $18.50.

BAR IRON—Makers do not appear to be doing much, and neither do jobbers. We understand, however, that a round lot of stock changed hands on Thursday at $1.90.

SCRAP IRON—There is absolutely nothing to say in regard to this article.

TIN PLATE—Tin plates are dull and unchanged at former prices—viz., $3.20 to $3.25 for coke and $3 75 to $4 for charcoal.

CANADA PLATE—These continue much the same, there being no business of importance transacted during the week. We quote $2.40 to $2.45 as before.

TERNE PLATE—No new business is to note in terne plate and the jobbing movement is small. We quote $7 to $7.25, as to grade.

GALVANIZED IRON—Rules quiet and unchanged at 4½ to 5¾c.

SHEET IRON—No business doing and values as before, $2.40 to $2.60. Russian sheets, 10½ to 11c.

HOOPS AND BANDS—Furnish no feature and are quoted the same at $2.35.

ANTIMONY—Business unimportant and prices steady at 10½ to 12c.

SPELTER—Spelter is quiet, with quotations unchanged at $4.75 to $5.

ZINC SHEETS—There is no change to note and we quote $5 to $5.50.

TIN—This article continues easy and prices would no doubt be shaded on last week's quotations. In fact we quote 21 to 22c. for ingot, bar 23 to 25c.

COPPER—The easy tone noted last week is accentuated if anything, and we quote price ¼ to ½c. lower, at 11¼ to 11½c. for large lots, with an advance in the case of a small quantity.

CEMENT—The demand is fairly good, low prices inducing more enquiry. We quote : Belgian, $1.85 to $1.95, and English brands, $1 95 to $2.10. Firebricks are in fair demand at unchanged prices, $13.50 to $19 per 1,000 being still the idea.

PAINTS AND OILS.

Business in paints and leads has been dull during the week. Linseed oil is steady, at 60c. for raw and 63c. for boiled, with of course a concession in the case of a big lot. We quote : Choice brands white lead, Government standard, $5 ; No. 1, $4.75 ; No. 2, $4.50 ; No. 3, $4.25 ; No. 4, $4.00 ; dry white lead, 5c. ; red lead, pure, 4½c. ; No. 1, 4¼c.; zinc white, pure, $7; No. 1, $6 ; No. 2, $5; linseed oil, raw, 60c., boiled 63c.

GLASS.

There is no change in the glass market, which rules dull. Prices are unchanged on the basis of $1.35 for first break.

Adamant Steel Ware



A High Grade of ENAMELLED WARE

We have just received a large importation of this superior ware, including Preserving Kettles, Saucepans, Tea Kettles, Teapots, Coffee Boilers, Milk Kettles, Dippers, Pie Plates, Basting Spoons, Etc., Etc. If not supplied, send sample order at once.

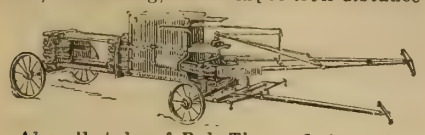
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DEDERICK'S PATENT STEEL SHELL HAY PRESSES.

Made of Steel—lighter, stronger, cheaper, more power, everlasting, and competition distanced.



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Manufactured by BOYD & CO., Huntingdon, Q.

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LAMPS LARGEST STOCK GREATEST VARIETY and Lowest Prices in Canada.

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ALL NEW LINES. NO OLD STOCK.

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THE IMPROVED FLEXIBLE BRIDLED **BRUSHES**

Patented in Canada, April 27, 1892
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All sizes and all qualities kept in stock. **THE CHEAPEST BRUSH, WHY?** Because the paint circulates; **the stump never hardens**, and you can wear your brush down shorter; therefore it will last much longer.

This brush never fails and wears to an even chisel edge.



OF THE FUTURE.

You can take this bridle off and replace instantly, can cut it down to suitable length and find the stump always soft and pliable.

Can you possibly work with a brush like this ?



OF THE PAST.

To re-bridle this brush you require to go through the long operation with a fresh piece of twine and if not done frequently the stump becomes hard and unfit for use.

Do not put your brushes in water before using.

Manufactured by CHAS. BOECKH & SONS, TORONTO, Proprietors of Patents.

MONTREAL Markets Continued.

PETROLEUM.

The market is quiet and steady, with a fairly good enquiry. We quote at 11½c. in shed at Montreal for Canadian round lots, 12½c. for five-barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c in 10-barrel lots, 19½c. in 5-barrel lots, and 19¾c. for single barrels, 2 per cent. off for cash ; American benzine, 23 to 25c. ; Canadian benzine, 10¾c. Petrolea, 12¾c. Montreal.

MONTREAL TRADE NOTES.

Francis Hyde & Co. report some considerable shipments of their special lines of fire clay.

The receipts of cement in Montreal last week were 8,000 barrels, all of London brands.

Advices from England cite the market for linseed oil as firm at the recent advance quoted a fortnight ago.

Wm. McNally & Co. note that the lower prices have induced a rather better demand for cements than formerly.

H. McLaren & Co., of Craig street, sent forward a heavy shipment of Safford radiators to Ottawa this week.

The trade here are all discussing the new plate glass arrangement, the particulars of which are referred to in another column.

Frothingham & Workman say there is a steady demand in a sorting way for ammunition, etc., the aggregate movement of which must be considerable.

Building supplies, generally, are dull at the moment, but W. H. Cottingham & Co. note the receipt of quite a few city orders for Mander's house varnishes.

A round lot of bar iron was taken in Montreal during the week by a western manufacturer, the price being $1.90, but what the agreement was in the matter of discounts, etc., no one could say.

Painchaud, Squire & Co. have forwarded several good lots of guns and rifles on fall account, and note with satisfaction that orders have been repeated a second time by mail in many cases.

The Adler safety bicycle is meeting with favor wherever tried. Messrs. E. Heuser & Co., the agents, point to the fact that the winner of the recent American championship race rode one of the machines of which they are the agents.

Some 1,600 odd tons of Lower Province pig iron are at present on the Montreal market and offering at a comparatively low figure, viz., $17. It is of the shipment to which we referred to some time ago as coming from Ferrona blast furnaces at New Glasgow.

Meetings of the various iron trade associations will be held here early in September, commencing on the first Monday in the month. Mr. Hardy, the secretary of the different branches, was in town this week in connection with them. It is not considered likely that any important alterations in the list will result.

TORONTO MARKETS.

TORONTO, Aug. 25, 1893.

HARDWARE.

Another week has passed without there being any specially new developments in trade. Business has been much the same as during the past three weeks—seasonably quiet. Cheap excursions and the attractions of the military tournament have brought a larger number of country customers in town than is usual at this time of the year, but it has not made any appreciable difference in trade, their buying being merely of a sorting-up nature and characterized by a good deal of caution. Much activity in trade is not expected for another month or so. The demand for wire has dropped off altogether for all lines. Both wire and cut nails continue to go out in good quantities, and amunition, guns and rifles are beginning to move nicely. The demand for preserving kettles is confined to Manitoba and the Northwest. Crosscut saws are going out in fairly good quantities. Payments, both in the city and the country, show some slight improvement.

WIRE—Nothing doing, the little inquiry there was for hay baling wire having fallen off.

ROPE—Trade in this line is of a sorting up nature, and is confined to an odd coil now and then.

BINDER TWINE—There is still a little enquiry in this line, but the trade is practically over for the season.

CUTLERY—A moderate sorting up trade is being done, but of course much business will not be done in this line for some weeks. yet.

NAILS—There is a continued good demand for small lots of both cut and wire nails, without any change in price.

HORSESHOES—A fair trade is being done on country account, but in the city there is practically nothing doing.

TACKS—The market remains without special interest in this line.

CHAINS—Very little doing. Owing to the coal strike in England those dealers here who have already got their supplies, particularly of cow chain, consider themselves fortunate, as there may be some difficulty in getting them in the future.

SPORTING GOODS—Ammunition, guns and rifles are beginning to move nicely, although it is rather early in this season yet.

APPLE PARERS.—Trade continues fairly good in this line.

WARE—Tinware is dull, nearly everybody having been supplied Some good orders from the northwest for Peerless ware, but otherwise trade in this line is dull. In enamelled ware there is nothing doing.

PLUMBERS' SUPPLIES—Not much doing, and there is nothing special to note.

TINSMITHS' SUPPLIES—There is a fairly good movement in bright wire for tinsmiths' use, but otherwise business is quiet.

BUILDERS' SUPPLIES.—A fair trade is going with the country, but in the city there is not much doing.

TOOLS.—Except it be for a continued demand from the Northwest for harvest tools, there is nothing doing in this line.



METALS.

Metals are not occupying much attention. Pig iron is as dull as ever, but bar iron is selling fairly well. The same applies to corrugated iron. Canada plates are also doing fairly well. Ingot tin and ingot copper are week, although there appears to be a fair business doing in them. Demand continues to improve for zinc sheet and some round lots of lead have been moving.

PIG IRON—Scarcely anything doing, and the little that is moving is in mixed lots, and directly from the mills.

Rogers, Brown & Co. report the Toronto pig iron market as follows : The market continues lifeless under a very light demand. Prices remain stationary because the transactions are all small. There is an impression prevailing that the spot cash buyer could have things his own way, but as there are none in the field there is no opportunity of judging how susceptible to pressure the market really is. Curtailment of production is the order of the day. We quote on the cash basis f. o. b. cars Toronto, in bond: IX Foundry strong Coke Iron, Lake Superior ore, $15.20 ; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14.45 ; 2 Foundry Strong Coke Iron, Lake Superior ore, $14.20; Jackson County Silvery 1, $17.55 to $18.50 ; Jackson County Silvery 2, $17.05 to $17.80 ; Lake Superior Charcoal, $17 45 ; Southern Soft 1, $13.60 ; Southern Soft 2, $13.10.

BAR IRON—Some good lots have changed hands, and enquiries for large lots are heard. The basis is unchanged at $1.95.

HOOPS AND BANDS—Dull and unchanged at $2.50 to $2.60 for 1 in. and upwards.

IRON PIPE—Stocks are broken, but they will be replenished in a few days, as supplies are arriving. Galvanized pipe in small sizes is scarce.

CORRUGATED IRON — Some large lots have been moving in this line; $4 75 to $5 is the idea for small lots, but quantities could be had at lower figures. The "Owl" brand is quoted at $3 to $4 per square for patented and $4.25 to $7 for galvanized according to guage.

GALVANIZED IRON—Stocks are full, and the trade look for a brightening up in this line in a week or so. Queen's Head and Gordon brands are still quoted at 5 to 5¾c. for small lots.

INGOT TIN—The market is weaker in sympathy with the other side, but trade keeps fair for one, two and three ton lots ; 23 to 23½c. is still quoted for small lots.

INGOT COPPER—Some small lots are going out at 12 to 12½c., but the market is weak and these prices would be shaded for quantities.

SHEET IRON—There have been some good sales in this line during the week at 2½ to 3c. for small lots.

ZINC SHEETS—Business is brightening and quite a nice sorting up trade is being done. For small lots the idea is still 5¼ to 6c for 5-cwt. casks and 6 to 6¼c. for part casks.

MARKETS—Continued

ZINC PLATES—Trade is fair only and unchanged prices.

TERNE PLATES—There is not much doing and prices are as before.

CANADA PLATES—Some large orders have been filled during the week and prices are unchanged, all dull being quoted at $2.65, half-half at $2.75, and all bright at $2.80 to $3 per box for small lots.

SPELTER—Remains dull and unchanged at 3¾ to 5¾c.

SOLDER—The market is active and prices unchanged, at 15½ to 16½c. for half-and-half and 14½ to 15½c. for standard.

ANTIMONY—Business is still dull in this line and we quote in small lots as before—namely, 12 to 12½c. for Cookson's and 11½ to 12c. for common.

PAINTS AND OILS.

Trade is quiet, although for the season fair. No complaints are heard regarding payments. White lead is still in good demand in spite of the recent advance, which put the base price up to 5c. per pound. There does not seem to be any business on speculative account. Prepared paints are about as dull as ever. In dry colors there is the usual seasonable trade doing. Varnishes are quiet, but without any special feature to note. A good business is still being done in linseed oil at 60 to 62c. for raw and 63 to 65c. for boiled. In turpentine there is none selling to speak of, and prices are unchanged at 44 to 46c. Castor and cod oils are quiet. Seal oil is quiet at 55c. In glue there is a fair trade doing at unchanged prices.

GLASS.

Trade is beginning to pick up a little, and stocks generally are complete. Prices are unchanged at $1.25 to $1.30 for first-break. A good trade is reported in plate glass.

OLD MATERIAL.

There is practically nothing doing in old material, prices are unchanged. We quote as follows: Agricultural scrap, 60c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 35 to 40c. per cwt.. No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings and turnings, 10 to 15c.

PETROLEUM.

The Petrolia Advertiser in its weekly report says: There are no transactions on 'Change and consequently we may say that there is no official price. We understand that some large producers are getting $1.10 from the Imperial Oil Co., regularly. This price, of course, is for crude delivered in the Company,s own tanks. The legitimate market, however, appears to be entirely at a standstill. We cannot but feel that this direct delivery business is a very grave error for which the producer alone is responsible. Refined remains unchanged, and may be quoted at 10c. in car lots, f. o. b. here. An increasing trade is reported in burning oils on the Toronto Market, and prices are unchanged. In lubricating oils a seasonable trade is being done. Seal oil is quiet at 55c. We quote: 5 to 10 bbl. lots, imperial gallons, Toronto; Canadian, 12½ to 13c.; carbon safety, 16½ to 17c.; Canadian water white, 17c.; American water white, 18½ to 19c.; photogene, 22c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—The trade in hides is weak, and there is no change since our last report. The large quantities of Western hides sold in Canada have caused a dead drop in these markets. Dealers are paying 4c. for No. 1 local hides, 3c. for No. 2

SKINS—Skins are much the same as last week; no change worthy of note. Lambskins are 45c., pelts 30c. Calfskins are more plentiful, although prices are low, dealers paying 6c. for No. 1 and 5c. for No. 2.

TALLOW—No change in tallow, and business is almost at a standstill, price for rendered being 5¼ to 6c. according to quality.

WOOL—Wool is quiet and prices are unchanged. Dealers are paying 17c. for selected combing and 18 to 20c. for clothing.

MARKET NOTES.

Fox & Wickett, general store, Sterling, have assigned to J. M. Redmond, Toronto.

Samuel Rogers & Co. report that they are having a big run this season on their Peerless oil.

A new combined twine and bag holder is being placed on this market by a Hamilton manufacturer.

M. & L. Samuel, Benjamin & Co. are busy this week arranging job lines for the Exhibition trade.

The arrival of another large shipment of star and double diamond glass is reported by Stewart & Wood.

H. S. Howland, Sons & Co. report that they have had large sales of "Dead Shot" powder during the week.

Mr. & L. Samuel, Benjamin & Co. report a nice trade in "Racer," "Maple Leaf" and "Lumberman's Pride" cross cut saws.

Rice Lewis & Son say that "Amberite" smokeless sporting powder is rapidly gaining in popularity It is its second season on this market.

The Metallic Roofing Co. report business brisk in corrugated sheets. The firm sells "Owl" brand direct to the retailers at $3 to $4 per square for painted, and $4 25 to $7 for galvanized, according to gauge.

The Metallic Roofing Co. report that they have about completed their contract for rust proof Eastlake steel shinges for the new buildings at Exhibition Park, Toronto. Large shipments of these shingles have recently been made to Newfoundland and to Manitoba.

AMERICAN MARKETS.

NEW YORK, August 25, 1893.

PIG TIN.—There was further depreciation in value of the metal in the London market to the extent of about 5s per ton on prompt and 12s 6d on future deliveries. Per contra, New York prices were moved somewhat higher, without bringing out tin in any considerable quantity. The speculative manoeuvring thus becomes more complex, with indications that the English market prices are gradually nearing a point at which tin may be shipped thence to this point to some advantage. The progress in that direction is slow, however, and a margin of about 2¼c per pound remains in favor of local holders. To meet prices current in this market at the present time, London must necessarily depreciate a great deal more. While the changes are working the supply on this side of the Atlantic steadily, although rather slowly, diminishes, and as yet local operators seem indifferent to London weakness. During the early part of the day there were bids of 18.70c for spot tin in 25-ton lots.

COPPER.—There have been some settlements of contracts latterly between sellers and a number of consumers who were not inclined to take up copper delivered on old contracts. Those settlements were on the basis of about 9½c for Lake Superior ingot, 9¼c for electrolytic and 9c for common casting stock. Getting rather wide circulation, the settling prices were made to figure as being actual market value, and therefore had at least superficial depressing effect. For the time being there is merely routine demand and more or less reserved offering, and prices are nominal in a great measure, with producers' agents, as a rule, quoting 9¾c for Lake Superior ingot and 9¼ a 9½c for other varieties.

PIG LEAD.—Prices moved slightly higher, about 300 tons of common domestic lead having been placed at 3.40 a 3.45c, chiefly at the latter price. Private advices early in the day noted a rise to 3.15 a 3.17½c bid in St. Louis, as against 3.12½c quoted on the Metal Exchange bulletin, while latest wires were to the effect that it was difficult to purchase in the West at less than 3.22½c. The strength of the market is due chiefly to light supplies in the East and small surplus stock, as well as very moderate outturn at the primary sources of supply. Last London cable was £10 for soft Spanish.

SPELTER.—The demand for domestic spelter continues exceedingly slow. The offering is rather more urgent and somewhat freer. In short, the market is a weak one from all points of view. Ordinary Western brands could have been secured easily at 3.70a 3.75c in carload or larger lots, delivered here or at common point, during the balance of the year. St. Louis wire to the Metal Exchange was 3.50c. London cable £17 7s 6d for good merchant brands.

ANTIMONY.—The market is unchanged. business being moderate and prices barely steady. Current quotations are 9¾ a 9⅞c for Hallett's, 10⅜ a 10½c for LX and similar brands, and 10½c for Cookson's, in round lots.

TIN PLATE.—Slightly more inquiry was noted for both spot goods and future deliveries. In some instances buyers and sellers came very nearly together on prices, but, as far as could be learned, no important trades were consummated.

CANADIAN AND MARYLAND COAL.

The question of bituminous coal is now occupying the attention of the New England press. The annual consumption of soft coal in the factories of that section is six million tons, and the theory there is that the tariff of 75c a ton adds just that much to the cost, namely, that for the protection of the coal industries of Maryland, Pennsylvania and West Virginia the New England manufacturing industry is taxed $4,500,000 each year. Recently a company of American capitalists, with headquarters at Boston, has acquired the ownership of the extensive coal fields of Cape Breton Island and Nova Scotia, and it is the expectation of this syndicate to develop a great trade with the United States. This, it is expected, will be promoted by adopting better and cheaper methods of mining and transportation and by removing the tariff barrier. New England is peculiarly interested in this subject because the Canadian coal can be conveyed to Boston at a much lower rate than that of the mines of Maryland, Pennsylvania and West Virginia. The mines of Maryland are 200 miles from the seaboard, and those of the other two States still further.

In Cape Breton, the mines extend to the shore and under the water, and the coal can be run from the pit's mouth and put into the holds of vessels at a cost of 5c. a ton for the transfer. With a cost of 50c. for mining, and the same sum for royalty, the total cost on board would be $1.05 a ton. The price of George's Creek coal on board at Baltimore is $2.50. This is 70c. higher than the Canadian coal with the tariff adopted. The quality of the George's Creek coal is said to be far superior to that of Canada, but it is difficult to see how it can compete in New England with the tariff removed unless there is some very marked reduction in the cost of producing and delivering the Maryland coal.

The Providence "Journal" gives the price of Canadian coal in Montreal, which is the same distance from the mines as Boston, at $2.85 a ton, and the price of coal of the same grade at Boston at $3.75. At the present time freighting is very low, and Maryland coal can be delivered on the wharf at Boston at $3.35.

Canada has also a tariff of 75c on bituminous coal, and it is believed that she will readily repeal it in response to similar action by our Congress. Manitoba and the whole of Canada eastward to the eastern end of Lake Ontario imports its bituminous coal from Pennsylvania, finding it cheaper, after paying the tariff, than a land haul of Canadian coal. In 1892, Manitoba imported a million and a half tons, one-half of which was bituminous.

The Cape Breton mines, which are just now attracting so much attention, occupy about a hundred and sixty square miles. The coal crops out in many places and is easily accessible, and the seaport of Louisburg is within the area. Louisburg has an ample harbor, never closed by ice. From the Nova Scotia mines there is a short haul by rail to Pictou, and a longer one to Halifax when the harbor at Pictou is closed by ice. The total annual output of the mines of Nova Scotia and Cape Breton is about two million tons.—Baltimore Sun.

A CANADIAN BANKER'S IDEA.

President Weir, of the Ville Marie Bank, one of the oldest Canadian bankers, addresses an open letter through the press to President Cleveland and the Congress of the United States on the financial situation, in which he expresses the opinion that the National Bank Act of the United States is the principal cause of the present financial trouble. He suggests as a measure of immediate relief that Congress pass an amendment to its bank acts proving that all chartered banks in the United States whose capital and surplus amount together to $1,000,000 and upward shall be declared to be banks of issue and be authorised to issue circulating notes of denominations of $5, $10, $20, $50 and $100 to the extent of half of their capital, and the surplus of such issues to be the first lien upon the assets of the bank in case of its suspension, the issue to be free from any Federal or State tax, but to be liable to assessments of not more than 1 per cent. per annum should such be required to redeem notes of a suspended bank. Banks of issue to be obliged to keep one-half their cash reserves in Treasury notes of the United States. That is to say the Treasury note reserves shall always be equal to the gold and silver reserve of such banks of issue. This latter obligation, which exists in Canada in a modified form, would add largely to the gold reserves of the United States Treasury without in any way impairing the strength of the banks of issue.

THE ELECTRIC LIGHT PATENT.

Henry Goebel, who claims to be the inventor of the incandescent electric light, invented before Thomas Edison was born, is at the Grand Pacific Hotel, Chicago. Mr. Goebel, says Journal of Commerce, is a gentleman, speaking with a strongly-marked German accent despite his forty years' residence in America. He is in Chicago in conference with a number of Western electric companies, now being prosecuted by the Edison people for infringements on the Edison patents, and his evidence is expected ultimately to set aside the Edison claims. Mr. Goebel in speaking of his invention said he had always been a student of electricity, and in 1848 he believed that continuous artificial light could be produced by electricity. "In 1850," he continued, "I had the first lamp completed, and put it in operation on the top of my house in New York City. The neighbors complained that the light was dangerous and the police made me take it down. It was operated by a battery, and of course too expensive for commercial use. I regarded it as a toy, and an index of great possibility. I experimented with various carbons, turned to vegetable fiber, and early in the fifties I discovered that the bamboo was the only substance that made a good carbon. When Mr. Edison was working on his lamp, one of his helpers, in speaking to a friend of mine, said that the power was all right, but that they could not get a carbon that would meet the requirements. My friend told him that I had an electric lamp that would burn for days without the renewal of carbons. The man sought me out. I explained the use of bamboo to him and showed him my lamps. Shortly after that Mr. Edison took out his patents on my invention. I have never received one penny from the lamps, but I hope that ultimately the world will accord me the credit of my discovery."

The relatative position of the tramway and gas and water companies here and in the United States is very curious, remarks Industries and Iron. In this country, if the gas and water pipes are laid down first, they must not be disturbed in the least, whatever that immunity costs the public. In America the tramway people corroded the water and gas pipes. It was, however, considered a matter quite of personal kindness when the traction managers were good enough to meet the gas authorities and advise them how to protect their pipes from further corrosion. It was hinted, however, that this kindness was not purely disinterested, as the tramway people were also corroding their own conductors.

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A feather duster disperses but does not remove the dust from the store.

"There are geniuses in trade, as well as in war or the state, or letters; and the reason why this or that man is fortunate is not to be told. It lies in the man."—EMERSON.

DEPARTMENT OF RAILWAYS AND CANALS

NOTICE.

Sealed tenders for general supplies, comprising timber, lumber, coal, hardware, etc., required on the Beauharnois, Lachine, Chambly, St. Ours, Carillon, Grenville and St. Anne canals during the fiscal year 1893-94, will be received by the undersigned until the 26th AUGUST, 1893. Each tender must be endorsed, "Tender for Supplies."

Forms can be obtained at the Chief Engineer's office of the Department of Railways and Canals, Ottawa; at the Lachine canal office, Montreal, and at the offices of the canal superintendents.

This Department does not bind itself to accept the lowest or any tender. By order

ERNEST MARCEAU,
Acting Sup. Eng.

Lachine Canal Office,
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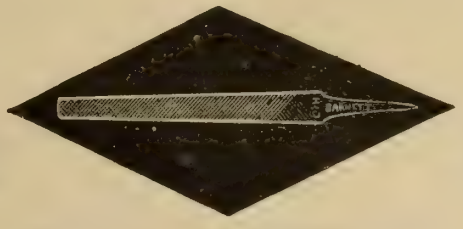
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THE SINS OF MANUFACTURERS.

Before commencing this series of articles on the "Sins of Manufacturers," say a writer in Ironmongery : I have glanced over the admirable papers which have just closed on the "Sins of Ironmongers," and refreshed my memory on some of the points there taken up, from a manufacturer's point of view, although I have no intention of debatting the subject, or entering into a war of words in replying to the many grave charges made on us poor ironmongers ; still, it may be necessary to mention some of the points by way of counter charges, and in some measure to refute the grievances there mentioned, and probably to show that some of the sins complained of are but a reflection of greater sins (from an ironmonger's point of view) on the part of the manufacturer, who ought to have first remedied the errors he had made before visiting the consequences on the head of the suffering ironmonger. I may, however, confess that most of the "sins" there so well explained, and in such a courteous manner, too, are, sad to relate, far from being unsubstantial—especially with the small struggling country ironmonger, on whose behalf I would say, that if the manufacturer or commercial traveler were to exchange places with him for a few weeks, probably the sins would melt away, and our friends would look to the "beams" before casting out the "mote." In taking up this subject, I feel the difficulty of treating it fairly to be very great, especially after reading the articles from a maker's outlook, the whole question of those papers and these being so obviously a one-sided one from the two different standpoints from which they are written.

However, I am glad to have seen our faults so clearly and lucidly described,and hope our brethern will mend their ways ; and I would venture to hope our manufacturers would also view their short-comings with the resolve to alter their methods of procedure and office routine in a fair spirit, and to look for once at the other side, and endeavor to alter and amend their business arrangements where they now clash with their customers' interests, that both buyers and sellers may be one ; their interests certainly should be. With a little mutual giving and taking, I think a closer bond can be formed, and both will be the gainers.

I purpose dividing these articles into five Cardinal Sins, and treating each of them separately, picking up the minor ones on the way. The first that will occur to most of my readers will naturally be the one that forms the starting-point of all our transactions, and the one that more than all vexes the soul of the not too-patient ironmonger, namely, orders — the execution of them, or, I may more correctly say, the non-execution of them. I am quite ready to admit that orders are frequently sent off in haste and without a full description, and hence many of the frequent mistakes. But surely the first duty of a manufactnrer should be to ascertain, before entering in his order book, the exact article required. Depend upon it, this is the keynote to prompt and correct execution of orders ; and to do this he must have a full knowledge of his customers, a knowledge of the business, a knowledge of the district, and lastly, a knowledge of local requirements and local terms and manners. All these are most essential, and it is, untortunately, in the largest and most business-like houses that the manufacturers in this most essential preliminary fail. If the order is once fully described and entered correctly, ten chances to one that sooner or later it will be executed—of this later I will speak further on, for, unfortunately, it is too frequently later than sooner. Of course, I do not wish to make the sweeping assertion that all makers are ignorant, and that all orders are on principle delayed or executed in a far from satisfactory way. I gladly bear testimony to the prompt and expeditious way in which some houses serve their clients, and to the care with which they study their friends' interess,very frequently putting themselves to great and inconvenience to supply unprofitable orders, and in everyway in their power showing they are alive to the fact that they who serve others well, best serve themselves. I know, from varied experience in nearly all branches of the trade, that there are such, and these are known and remembered, and in their respective trades not forgotten when orders of importance or special urgency are wanted.

I would remind our friends—factor, maker, and all wholesale vendors—that in these days of easy and constant supply—cheap postage, telegraph, and telephone—the general orders sent home by the travelers are getting fewer and fewer, and it is to the prompt and careful attention to orders by post or wire that the makers must rely for the bulk of their trade. I would mention, in passing, that where telephonic communication is established with the great centres of commerce, a new era has begun. A "three minutes" talk with the principal, or chief man in charge, does more to bring about the prompt execution of orders, and to put the manufacturer in touch with his clients, than whole volumes of letters and wires. This is fast being extended to the smaller towns, and when complete, which it doubtless will be in a few years,—in the same way that the telegraphic net has spread over the land—then, I believe, the times will change ; sellers will be daily, if necessary, brought in touch with the buyers, and the oral conversation held, and verbal details given, will be better understood, and the country ironmonger will really feel he is at last in contact with the works ; and you may depend upon it, it will be useless for our friend to dictate a letter of excuse and lean back in his easy chair, "thanking goodness he has put that man off for a couple of days, at any rate." We shall not fail to use our "call-bell" to some purpose then.

But to return to the question of non-execution and delay, and to my reiterated belief that the main root of the evil is the want of correct description in the first instance. Travelers will admit the necessity of understanding their customers, and the wants of each respective district ; and they doubtless, in proper trade terms, and in a brief, business-like communication, forward their order-sheets. Our ordinary ironmonger has neither time, nor has he often at hand books of reference to fully and quickly give all information he would like ; oftentimes his orders are written in a hurried manner after a hard day's work—working frequently far harder than his assistant, to say nothing of the anxieties he has to carry all day on his shoulders without a murmur, a smiling face often covering an anxious heart, heavy with care ; and, likely enough, short of capital, which may prevent him buying to the best advantage. Can it, then, be wondered at that orders are short and couched in brief terms, which ought to be understood by the makers? Sometimes, it is true, the terms are not too plain, and the names of articles are somewhat local ; but it must be remembered that he is living daily in the midst of local names and terms, and although he may well know the correct term, it is far more natural to write for goods by the names he is constantly hearing them called ; indeed, it is almost like a foreigner thinking in one language and speaking in another. Probably, many makers would be surprised if they new the local terms of many productions.

Now, as to the reception of orders. Our merchant, or his "sub." who opens correspondence, hands all orders over to a clerk to enter up ; and these, if the warehouses are large, will get re-copied and handed to their several departments. Here, I think, the point comes in. A junior clerk is frequently employed for this, one who knows absolutely nothing of the trade, to say nothing of the district, and this want of knowledge of local terms will often land him in mistakes, fearful and wonderful.

I remember writing for 100 gross of skives, and although I had previously bought many of the same articles (an article used in the

mill district in the making up of mule tins), a few posts later I received a letter asking what kind of skins I wanted ; and once having sent an order for glass eyes (an article used in silk mills), I was asked to state if the eyes were for dolls or some kind of animal. So again, shooting, mentioned in "Fun in the ironmonger's shop," recently as a rarity, is a common name in the West of England for spouting, and would be far more natural for an ironmonger in that district to order than spouting or eave troughs. I once ordered some galvanized furnace pans, sending correct sizes, and had a reply back asking for quantity of contents.

Again, these defects in an order are often not discovered until its turn comes for execution. When the ironmonger has, perhaps, written several times, he receives a letter or post-card, asking for fuller particulars, often of a trifling nature. The grievance may be remedied by the employment of a more competent clerk for letter orders, or a personal oversight of the principal. As I have before remarked, many of the smaller houses whose principal has oftentimes been a traveler himself, may generally be relied on for understanding the wants of the country ironmonger best. Now, granted that all this is fully understood and clear, may we not justly complain of the delay, oftentimes, in the execution of small orders, trifling in themselves, but of immense importance to the ironmonger, who is probably waiting only for this small item to complete a country order. Tho goods have frequently to be sent miles away, and to make two journeys would eat up all the profit. If makers will not see the importance of prompt attention to letter orders, they may most assuredly mark that in carelessness to these they are singing their own downfall. A few days ago the writer ordered a lock to size, with twelve keys to pass, and was kept waiting for it two weeks, although ordered from a maker who could have had it made in a day at most. It was only another instance of putting off the evil day, etc. The consequence to me was vexing, and perhaps losing altogether the customer, who could not be brought to see that the sin lay at the door of the manufacturer. Numbers of similar cases could be given of vexing delay. The plan adopted by some large houses of taking orders in rotation, as received, may be all very well ; but this, like all other rules, has its exceptions, this even more than others. I will give only one instance, the force of which will be felt. Where would the coffin trade be if they did not give precedence to letter orders, and prompt attention to special urgent cases, too? Many may say this is a most exceptional case, but it is not. True, it is more important than others ; but only in degree. Tact and discrimination must be given to the selection of urgent orders that seem to require special attention, and by this course manufacturers will be more than repaid for any extra trouble or expense they may incur, and secure for themselves customers who will send them their large orders when they find small ones are promptly and well attended to.

"BUSINESS BY RULE."

Among the toasts at a recent convention of wholesale grocers was one entitled : "Business by Rule." It was responded to by Mr. Albert F. Remy, of Mansfield, O., who, in part, according to a contemporary, said :

"I will readily admit that in arithmetic two twos make four every time, yet when we apply rules to business we do not always obtain the same result. Why, gentlemen, if business could be done by rule, I could be as great a business man as any of our leading wholesale traders; all that I would have to do would be to learn the rule.

"There are certain underlying principles that we all must observe if we would be successful merchants, but to do business by rule would put us all on an equal footing without regard to ability, and would entirely eliminate competition, which result I claim is not desirable, for competition must be recognized as the life of trade, although I am aware that unlimited competition is frequently the death of it. And how to maintain friendly and reasonable competition is a very important condition that can be brought about more readily by our coming together and rubbing against each other, than by enacting a whole volume of 'rules of practice.'

"You must not understand that I am against all rules, for I am strongly in favor of selling both coffees and sugars on the Equality plan, and am very anxious that some satisfactory arrangement should be made by which plug tobacco can be sold at a profit ; furthermore, I think that there are a number of other staples that ought to, and will be, so adjusted that we will be fairly remunerated for handling them ; but further than this, however, I think that the establishment of schedule prices would be a detriment to our Association.

"To my mind the matter of collections is a more important one than the selling of either coffees or sugars upon the Equality plan, and I firmly believe that it will not be many years until the system of making collections through traveling salesmen will be regarded as a relic of barbarism. If salesmen were not allowed to make collections a great deal of 'cutting' could be stopped, and, while I believe in educating our salesmen so that they will sell goods at a profit because it is a correct business principle, yet I am not one who thinks that all the blame for cutting prices should be saddled on the salesman, for many times, when profits are not satisfactory the blame rests entirely upon the head of the house, and when we are looking for the fellow that needs a 'blowing up,' he would be plainly visible if we would step up to a looking-glass.

"Business is being done very differently now to what it was a generation ago, but it is not going to the bow-wows by any means. We have all made money, and I believe the wholesale grocery business is more firmly intrenched now than ever before, and all that is necessary is that we conform to modern methods and customs, but stick to true business principles. I believe in aiming high, in fact holding up as a pattern for both salesmen and proprietors a perfect ideal.

"In everything the perfect ideal is held up to us so that we can fasten it in our mind and strive toward perfection—not that we can attain it. Improvement in all lines of business is going on continually, and why should we, as wholesale grocers, not 'strive towards perfection,' and elevate our business? Let us try to sell goods at a profit, because it is a correct business principle, and not because our 'rules of practice' compel us to."

THE DEALER AND HIS STOVES.

It would be a good thing for the dealer in stoves and ranges if he would study the details of construction in every line that he handles, and become so thoroughly acquainted with the working parts and the best manner of handling them, that he can in turn impart the benefits of his knowledge to his customers, says Stoves and Hardware. In other words, the dealer should know how to obtain the best results from each particular make, and, so far as this necessary branch of his business is concerned, he should know how to cook.

Fault is often found with a stove after purchase and use. The average dealer knows from his own experience that the trouble is often not so much with the stove itself as with the user, through ignorance or from a neglect of proper precautions in the way of setting up, and the dealer also knows that this could have been avoided had the required instructions been given before the stove left the store. Perhaps he forgot about it, or, what is still more probable, he did not posess a sufficient knowledge of detail and so was unable to impart it to the buyer. By this neglect, he may have injured his trade and most certainly created a distrust of some particular make in the mind of the purchaser who had not been taught how to use the stove or range, and, accordingly, placed the blame where it did not belong.

Nearly if not all the makers print in their catalogues a course of instructions intended to show how to use the several lines. These do not involve a mass of technical terms and details, but are plainly and simply written, so that no one need have any difficulty about comprehending and then in explaining them to a customer. They were placed in the catalogue for such a purpose, and the dealer that neglects the opportunities there presented has only himself to blame if he does not study them and take care that the buyer understands them before the stove or range leaves the store. A great deal of trouble and annoyance can thus be avoided and a great many dollars saved.

WEIGHTS AND MEASURES.

Those who believe in a more uniform and simpler system of weights and measures will appreciate the following from the N. Y. Journal of Commerce :

"It is one of the insoluable mysteries," it says, "that a people so little devoted as we are to the merely traditional, and so much given to experiment, and especially to devices for economising time and labor, should adhere to our inherited assortment of unsystematic weights and measures. Commercial usage would acconnt for the transmission of this heterogeneous mass of discordant tables from the days of English domination, but for the fact that about the first use we made of our national independence was to provide ourselves with a monetary unit and a decimal monetary system wholly unlike that of Great Britain. The "shilling" and the "penny" still survive in colloquial language, and provincial price lists, as the "guinea" survives in English price lists of fashionable purveyors. But the tenacity with which the shilling and the penny adhere to the common vocabulary never interfered with, or even delayed, the substitution of cents, "dimes," as they were at first spelled, and dollars for pence, shillings and pounds. If we could change the monetary unit and learn a new financial multiplication table, why did we continue to drag about a ponderous retinue of quarts, pecks and bushels, of grains, ounces and pounds of several varieties, of yards, rods and miles, of hundredweights and tons complicated in late years by the introduction of "short" hundredweights and "short" tons, and of gallons of various dimensions according to the fluid to be measured in them? The Iron and Steel Association has abandoned "short" tons and gone back to "long" ones in its statistical tables. An effort to give some definite meaning to the term "bushel" has thus far only resulted in leaving it a matter of some doubt whether "bushel" is a unit of weight or of capacity, but if it be the former it is a unit of different weight for every grain to be measured by it. What could be more confusing than to have the bushel signify a number of pounds instead of a number of cubic inches, and then signify a different number of pounds for wheat and for corn and for oats? Only one thing could add to the confusion, and that we have in variations between State laws.

"We did not hesitate to adopt a monetary unit from Spain, and give it a name borrowed from Germany ; why should we have hesitated to borrow units of weight, dimensions and capacity from France which had just provided herself with an admirable decimal system for the use of which our adoption of a decimal monetary system would have been a perfect preparation.

"At the time the French adopted the metric system the Federalists were dominant in this young conntry, but that did not last long. It has always been popular politically in this country to abuse England and make much of France, and we have uncommonly good reason to remember with gratitude the course of France during our Revolutionary War. Yet the French system of weights and measures has never found acceptance here. It is authorized by law but business men won't use it, although they all admit its simplicity, uniformity and accuracy. Statisticians can tell accurately how much of an average man's life might be saved for other and more useful purposes if he would use decimal tables ; he admits it frankly and goes on reckoning in bushels of thirty-two quarts and two or three different capacities in cubic inches, in tons which weigh 2,000 or 2,240 pounds, and in miles which, on land contain 1,760 yards, and on sea are of variable length. He always has to tell what kind of a pound he means, and in some branches of trade he finds himself buying by one table and selling by another.

"As every one admits the superiority of the metric system, and yet no one can conveniently use it unless all use it, it might be desirable to have Congress make the use of the metric system in Custom houses, and in purchases for the Government obligatory. If that were done twelve months would be sufficient to efface from the recollection of Americans the distinctions between troy and avoirdupois, wine measure and beer, long and short weights, and schools would be robbed of half its terror for the young.

"Were this accomplished there might be some hope of an international system of coinage weights and measures, which would be a boon to mankind. He is a bold man who predicts any change of usage in England, but a good deal could be accomplished without her. The franc is in wide circulation. Unfortunately Austria has adopted a crown which is intentionally slightly divergent from the unit of France and Italy, but it is not yet in general circulation. The dollar is known all over the Western Continent, and while not of the same weight everywhere, it does not vary widely from five francs. The British pound, which is reverenced the world over, does not differ much from twenty-five francs. It would require no great changes to assimilate the franc, the dollar and the pound, but as the two former are too small to be made of gold and the latter too large to be made of silver, the international system of coinage will have to wait at least till the problem of bi-metallism is solved.

"That an international system of weights and measures would benefit foreign trade cannot be doubted, and that England and America are losing trade which the Continent is gaining, is very probable. The London Daily News quotes the following from a letter from an English engineer living in Brazil : Engineers here, he says, will not take the trouble to convert our hodge-podge mixture of weights and measures into the metrical system. They do not understand them, and have no basis of comparison with Belgian and French goods. Brazilians say to me, 'We like your English goods very much. We believe them to be the best and probably the cheapest in the long run, but we find it impossible to estimate from your measures.'"

CLARE BROS. & CO.'S FOUNDRY.

Clare Bros. & Co., manufacturers of hot air furnaces, etc., Preston, have just issued a new catalogue. It is named "Our Furnace Book," contains 122 pages without the cover, and is liberally illustrated with the many styles of furnaces, registers, etc, which the firm manufacture. A feature of the catalogue is some 67 pages of opinions of agents and testimonials of patrons regarding the furnaces. In the introduction of the catalogue it says that the Preston Stove Foundry was founded in 1853 by the late John Clare, and that since 1881 it has been carried on by the present firm—George A. Clarke, Henry C. Hilborn and Fred. Clarke.

The firm announces that, among others, they have received these contracts for heating during the past month : County buildings at London, Public schools at Strathroy, Meaford, Barrie, New Hamburg, Berlin, Belmont, Huntingdon, Que., and Maple, R. C. Orphanage at St. Agatha, English church at Wingham and at St. Catharines, Baptist church at Waterford, Presbyterian church at Fort Erie, R. C. church at Formosa, Imperial Hotel at New Hamburg, and new opera house at Charlottetown, Que.

INVENTOR'S RECORD.

The following list of United States Patents granted to Canadian Inventors, August 1, 1863, is reported expressly for HARDWARE, by James Sangster, Solicitor of Patents, Buffalo, N. Y. : Robert Abercrombie, Meaford, assignor of one-half to John A. Rose, Essex, Sack-Scale ; Robert S. Anderson, Toronto, Embossing Machine ; Thomas Crompton, Midland, Tea-Blending Machine ; Henry E. Moebus, Woodstock, Vehicle Hub ; Geo. E. Norris, Berlin, assignor, of one-half to Fred H. Norris, Troy, N. Y. ; Machine for folding Collars and Cuff Blanks ; Percival W. St. George, Montreal, Dirt and Garbage Receptical. Total issue including Patents, Designs, Trade-Marks, and Reissues, 480.

A Montreal despatch says that there is something brewing in the Canadian Pacific syndicate. There have been consultations and whisperings about a new entrance into the States, and the talk on the streets has reference to the Boston and Maine Railway. Ever since the McIntyre syndicate, which means the principal shareholders of the Canadian Pacific Railway, acquired control of the Grand Trunk, it has been rumored that they would try to extend their powers in the United States.

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,

Agents.
MONTREAL AND TORONTO.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.
Keene's Coarse, Parian and Superfine Cements.
SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.
FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,
CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co

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McCAUSLAND & SON

Beg to inform their customers and friends that they are in a position to fill all orders with promptness and dispatch, notwithstanding the recent fire in their premises. . . .

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UNICORN BRAND We back them against the World

Manufactured by **A. RAMSAY & SON**
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Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

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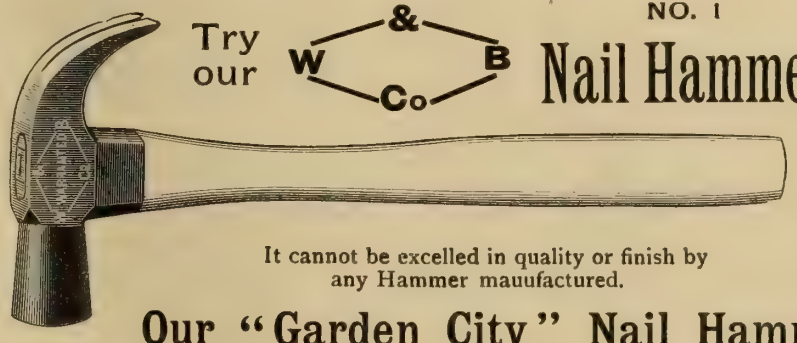
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THE BEST SMOKELESS POWDER IN THE WORLD

SOLE AGENTS. SEND FOR CATALOGUE.

The Bowman Hardware and Sporting Goods Co., Hamilton, Ont.

FUTURE OF ALUMINIUM.

"The probable future of aluminium is," says the London Spectator, "one of the most eagerly discussed questions of the day. The present cost of aluminium, though still higher than any of the cheap metals, has brought it within the range of everyday life. It is for use at sea that its most marked quality of lightness obviously fits it. The marine engineer and the naval architect, who are already looking in this direction for a reduction in the weight which is inseparable from a loss of efficiency, whether in speed or cargo, cannot neglect the possibilities of a metal which, when mixed in the proportion of 1 to 50, gives to aluminium-bronze a hardness and toughness which makes it almost as reliable as steel, and which, if the proportions could be reversed, and the strength preserved, would reduce the weight of ships and machinery alike by two-thirds. This is a problem which awaits the metallurgists for solution. The reduction in cost, judging by analogy, can only be a question of time and research. The best steel now costs little more than ½d per pound; while aluminium is fifty times that price. But aluminium exists in far greater quantities than iron, is more widely distributed, and neither the limits of time nor the history of metallurgy forbids us to conjecture that, as the world has seen its age of stone, its age of bronze, and its age of iron, so it may before long have embarked on a new and even more prosperous era—the age of alumiinum,"

MAGNETIZATION OF STEEL RAILS.

M. Vinot, a French engineer has contributed to the Industrie Electrique the results of some experiments made by him in regard to the magnetization of steel rails. M. Vinot took for his experiments a portion of the line of the Compagnie du Midi between Bordeaux and Cette, the left-hand track serving for the trains coming from the latter town, while on the right-hand track the trains run in the opposite direction. On the experimental section chosen the rails were laid in a direction perpendicular to the magnetic meridian, or, in other words, from west to east, and it was found that when a pocket compass was placed on one of the joints of one of the lines of rails of the left-hand track, the needle pointed exactly in the direction of the line of rails, the north pole being turned toward the town of Cette. With the same compass similarly placed on the right-hand track the needle again pointed in the direction of the line of the rails, but the north pole this time was turned towards Bordeaux. The distances between the rail ends varied from about 1-10 to ½ inch producing a very perceptible shock on the passage of trains, due to the respective depressions and elevations of the ends of the rails and their influence on the car wheels, and these shocks, it was concluded, developed a south polarity in those rail ends in which the concussion took place.

REDUCING NAVAL STORES OUTPUT

The Savannah Morning News says: The decision of the naval stores operators to do no more work on old timber this season is a wise one It is believed that this decision will have the effect of reducing the output of naval stores for this year as much as twenty per cent. The operators are making no money now, and have not been for some time. Indeed, many of them have been conducting their business at a loss. The prices of spirits of turpentine and rosin have fallen below the profit line. Two things have contributed to bring about this condition of affairs. One is over-production and the other stringency in the money market. The supply of naval stores is really greater than the demand, and has been for a considerable time. The industries which make the market for naval stores have been suffering from hard times, like all other industries, and consequently have not been able to take as much of the raw material as they otherwise would. The naval stores manufacturers have adopted the only course left open to them. It would be folly for them to continue to manufacture more spirits and rosin than they could sell. The effect would be to still further depress prices.

TO COLOR COPPER BROWN.

The following method, according to an exchange, was invented by Dr. N. Kaysar. As a corrosive, a liquid is used which is produced as follows: Ten portions by weight of spirits of ammonia mixed with an equal amount of vinegar so that a piece of blue litmus paper dipped into it will be colored red, and to this mixture which is acetate of ammonia are to be added five parts of verdigris and three parts of ammonia. By means of this mixture large objects that you wish to color should, after being carefully cleaned of grease and rust, be painted with a soft brush and then left to dry in a warm room. By repeating this applicatiou with the brush you can get the brown in any shade you like. Small objects should be boiled in the liquid and during the boiling should be stirred with a tin or copper spoon. After securing the desired color they are to be washed in hot water and subsequently dried in sawdust.

STEEL RAILWAYS ARE DOING IT.

The supply of rails and other materials for street railway enterprises has been an important factor in the maintenance of industrial activity in several of our iron and steel works, says Age of Steel. The magnitude of product can only be estimated by figuring the mileage of track laid by the different systems of street car transit. Statistics at the close of 1892 show that the mileage of roads operated by horse power were 4,400; electric, 5,939; cable, 646; steam, 620 miles, making a total of 11,645 miles. It will be seen that the mileage of electric railroads exceeds that of all other street railways combined. The latter system has developed as if by magic, and has been almost spontaneous in widely separated sections of the entire country. As an instance of the ever-changing phases of industrial development it is simply one of the repeated evidences of the new uses for raw and manufactured material, that, in a series of successions, have come to the rescue of the iron and steel trade. This process of recuperation is by no means gone out of business, and will continue to be a trade vitality in the future as in the past.

SHE WAS A DAISY.

"I want to use your telephone," said a stylishly dressed woman, with a haughty air, entering a Lexington avenue drug store.

"Certainly, madam," said the clerk courteously.

The woman called up another drug store three blocks away.

"Is this Pestle & Mortar's?" she asked. "It is? Well, this is Mrs. So-and So of 26th street. You understand? Well, I want you to send around, right away, a bottle of that tooth-powder I use. Do you hear me? And two pounds of castile soap. Got that down? And some soothing-syrup for baby; yes, soothing syrup. And a half-dozen two-grain quinine pills—yes, quinine pills, I said. Are you deaf? And—that's all! Send them around immediately—don't forget!"

And she hung up the receiver and started from the drug store which she had been using as an ordering depot for a rival concern, without as much as "thank you." At the door she stopped to say in withering tones to the clerk:

"You ought to have that telephone fixed. It works miserably."—New York Times.

Prices of Canadian hay have declined in London from £6 10s. to £5 5s., and in Liverpool from £6 to £5 14s. This decline tends to check immediate export trade. Quebec is reported to have gathered a heavy crop of new hay, and the yield in Ontario will also be large. Farmers are warned not to bale their hay before it is perfectly cured, as fodder of that quality is not wanted in the London market.

An agitation in favor of early closing has been started in Vancouver, B. C. "Since being in the city," writes a correspondent of News-Advertiser, "I have often wondered how it is that there is no early closing day here and no association of wholesale and retail traders, especially the latter. Would it not be possible for such an association to be formed and to have one day a week when all the stores would agree to close say at 2 o'clock, and so enable all the assistants as well as the proprietors themselves to get half a day's leisure for any form of relaxation from the cares and anxieties of business that each one thought most suitable."

BUSINESS CHANGES.

ASSIGNMENTS, DIFFICULTIES, COMPROMISES.

R. Buckley, general merchant, Allenford, has assigned.

Meir & Co., general storekeepers, of Kingsville, have assigned to J. Piper, of London.

Edmond Duckett, general merchant, Point de Maskinonge, has compormised at 60c. on the dollar.

A liquidator has been appointed to wind up the estate of the Ideal Washer, Churn and Wire Mattress Co., St. Thomas.

McGuire & Bird, plumbers, 120 York street, have made an assignment for the benefit of their creditors to F. Barton, of Samuel, Benjamin & Co. The assets and liabilities are small and nominally the same.

At a meeting of the creditors of the Gildersleeve Bros., the offer of 10c. on the dollar by C. F. Gildersleeve was accepted by a majority of the creditors. It is expected the others will come into line and the business will be closed up.

The statement presented at the meeting of Dennis Daniels, the insolvent coal and wood merchant of Toronto, showed liabilities of $13,840 and assets of $11,858. The principal creditors are the Bank of Commerce for $2,500, Molsons Bank for $3,419, Ontario Bank for $1,000, and F. V. Clisdell for $2,950. The estate will probably be wound up.

PARTNERSHIPS FORMED AND DISSOLVED.

Angus Cameron & Son, general merchants, etc., Sherbrooke, Que., have dissolved.

Johnston & Loos, blacksmiths and carriage makers, Clifford, have dissolved. Thomas Johnston continues.

J. B. Matson & Son, builders, Toronto, have dissolved, H. W. M. Matson continues under the style of Matson & Son.

Samuel Rogers, J. P. Rogers, and D. Robertson have been registered in Montreal as proprietors of the Samuel Rogers Oil Co.

Thomas F. G. Foisy and Stanislas Paquette, of the firm of Foisy & Paquette, sash and door manufacturers, Montreal, have dissolved partnership.

Narcisse Major and Joseph Leroux will do business together as partners under the firm name of Major & Leroux, brick dealers, contractors and builders, Montreal.

J. V. Ingraham and A. G. McLean have registered a co-partnership to carry on business as general merchants in Sydney, N.S., under the style of Ingraham & McLean.

Alexander Coallier and Louis Gauthier, both of Boucherville, have become partners in the contracting and building business under the firm name of Coallier & Gauthier.

A new firm, the Metropolitan Plate Glass Insurance Co., has been registered in Montreal, with A. de Liguor Quesnel general partner, Charles Cochrane Corneille, C. A. Sharpe, Jas. Gauthier and Ovid Gauthier, special partners.

SALES MADE AND PENDING.

The hotel of A. McQueen, Simcoe, is advertised for sale.

E. Barbeau, tobacconist, etc., Toronto, is advertising his business for sale.

D. Defoe, blacksmith, Siloam, Ont., is advertising his business for sale.

Wm. Leak & Co., lumber, coal and wood, Toronto, are advertising coal and wood business for sale.

The stock of Gervais & Jasmin, grocers, Montreal, is advertised to be sold by auction on the 28th inst.

The bankrupt stock of J. J. Brown & Co., of Barrie, has been bought by James Wilkinson at 60c. on the dollar.

The bankrupt stock of Guenther & Smith, Milverton, has been bought by Alfred Guenther. He paid 70 cents on the dollar.

Mr. Connolly, of Yarker, has bought Mr. Charles' bankrupt stock for 30¼ cents on the dollar. Mr. Connolly was buying for Mr. Charles.

The stock of Arthur Heagauton, plumber, Montreal, is advertised for sale by the bailiff. A like announcement is made regarding A. Sicotte & Co., in the same line of business in the same city.

The goods and chattels of George Schneider, a Waterloo shoe merchant who failed recently, have been sold by public auction. The shoe stock was purchased by Jacob Uffelman at 50¼c. on the dollar; a $2,500 brick house by George Suggitt for $1,500, and the book accounts by Geo. Keil.

CHANGES.

W. E. Wisner, stoves and tinware, Qa'Appelle, has sold out to Wm. Johnstone.

C. Ryckman has bought O. W. Otton's stock of hardware, Clinton, and will take possession in a day or two.

DEATHS.

Thos. F. Gillespie, foundry, Chatham, N. B., is dead.

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Canada's Great
Industrial Fair,
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Sept. 4 to 16, 1893.
Excelling All Others
New Stables, New Cattle Sheds and Many Other Improvements
Special Attractions
Greater and Better than Ever.
The People's Greatest Annual Outing.
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FIRES.

Walter Hall, blacksmith, Merlin, has been burned out.

John Gardner, hardware, Dundalk, has been burned out.

Patrick McGin, wagon maker and blacksmith, Fredericton, N. B., has been burned out.

A. J. Chenard, merchant, Caraquet, N.B., has been burned out. J. J. Burgeois, in the same line of business at Moncton, has met with a like fate.

The Oxford roller flour mills and elevator of Norwich, buildings and contents, were destroyed by fire on Tuesday. The property is a total loss, and was valued at $40,000, and was insured for $22,000.

Halifax was visited by a big fire Monday morning. It started in the wholesale and retail hardware store of Stairs, Son & Morrow, nearly all of whose $85,000 stock was destroyed. They are partially insured. Among the other sufferers, the greatest was C. H. Harvey, wholesale grocer. The latter's stock was nearly all gotten out, more or less damaged, the roof scorched and the whole building flooded by water from the top story down.



THE FIRST THING THEY DO.

Whipper—Did you see that little article about me in HARDWARE.
Snapper—No.
Whipper—That's funny. You have had the paper for the last half hour.
Snapper—I know it; but I haven't got through reading the advertisements yet.

ECCENTRIC ARCHITECTURE.

Building, says Metal Worker, is a matter in which eccentricity is very apt to show itself on the part of individuals who are otherwise supposed to be in complete possession of their senses. Instances are numerous in ancient and modern history in which persons have set to work to build odd dwelling houses, or other erections, embodying some extraordinary ideas of their own, in design, construction, or decoration. Occasionally the thing is done purely for notoriety, but more often it is the outcome of some mental kink on the builder's part. Such objects are, in fact, usually the work of "cranks." The late Duke of Portland, one of the wealthiest of English peers, was a remarkable case in point. This individual expended immense sums and gratified his mental twist—for he was undoubtedly insane on this point—in the construction of a great suit of subterranean chambers and galleries in his beautiful estate of Welbeck Abbey. The work included magnificently appointed stables for some hundreds of horses, and a vast riding school, the whole being illuminated by gas. Why he should have wanted to burrow underground when he had hundreds of broad acres on which to build, and a splendid old mansion above ground, no one but himself could tell. But there the excavations remain to this day, a monument of wasted time, labor, and treasure—of no earthly use or advantage.

The latest thing in architectural oddities, however, is announced as being in course of construction in this country in the shape of a mansion constructed almost exclusively of steel and glass, which is to cost, not counting the decorations, the sum of $1,500,000. According to accounts given in the press, a retired diamond mine owner from South Africa, said to be worth $25,000,000, has purchased a 500 acre tract in the Temescal district of California, where he purposes erecting for himself a lordly pleasure house which is not to contain a foot of timber or wood in any shape, and in which even the use of stone is to be restricted to a few marble and onyx sculptures and decorations. The material to be used will be iron, steel, aluminum, brass, bronze, copper, platinum, silver, glass, concrete and cement, the foundations being of steel and concrete. The building, as described in an architectural journal, will be about 230 feet long by about 100 feet wide. At one end it will be surmounted by a tower 115 feet high, at the other end by a similar tower, but of lesser size and height. A striking feature will be the sides below the cornice, which slope to the ground with a curve at an angle of about 45 degrees. In the sloping sides are set huge oval windows 12 feet long and made to conform to the line of the sides or walls. The roof will be a huge gable extending the entire length of the building and terminating in another gable at right angles, in which are placed immense stained glass windows, one of which will be 50 feet long and 30 feet wide. The roof is to be made of copper and the walls or sides of comparatively thin steel sheets. One would think this building would be intolerably hot in summer weather, while hail storms, which are not infrequent in that part of the country, would play havoc with the glass and cause a lively rattling on the metal roof and sides. On the whole, we should think a good old-fashioned frame house, costing but a small fraction of the sum mentioned for this mansion, would give a better return in solid comfort. Perhaps, however, the builder may be a crank on the subject of fires, in which case he might feel more at ease in such a thoroughly fire-proof fabric.

WHAT MAKES SUCCESSFUL MEN.

The most successful merchants and manufacturers to-day are those who served a conscientious apprenticeship in their chosen business. The successful man of to-day was not the shirk of twenty-five years ago. He was the young man who made himself useful and invaluable, who filled his place so well that a week's absence made such a vacancy that he was missed from his post. The successful man of to-day was not the young man who tried to kill time, who tried to earn his salary by the least exertion, and who did not have the interest of his employer at heart.

There are hundreds of practical illustrations of the above assertions. We might mention one of the most successful paper manufacturers in New England, who died some years ago one of the wealthiest men of Fitchburg, who worked while a lad for two brothers who had formed a partnership in the paper manufacturing business at Franklin, N.H. He was a quiet, industrious, conscientious lad, who had been well brought up. He did not share in the levity and nonsense of the other boys about the mill. He attended church regularly on the Sabbath and behaved himself every day in the week. When the other boys would guy him about his church-going habits, and even steal his shoes and hide them, he would go on just the same, barefooted. He turned neither to the right nor the left from his path of duty. What was the result?

After he had been in this employ for several years, one of the brothers came to him and said: "Young man, my brother and I do not get along well together, and we have decided to dissolve partnership, and I should like to buy out my brother's interest and sell it to you, making any reasonable terms for payment, and you and I will build up a large business." The young man said he felt complimented at this manifestation of confidence and would take the matter into consideration.

The very next day he was called aside by the other brother, and was told that existing relations between the two brothers were not exactly what they should be, and that he had formed the idea of either buying out the entire plant or starting elsewhere, and would like to have the young man join him in the enterprise, the member of the firm agreeing to furnish the capital, and make easy terms of payment. The young man was somewhat bewildered by the two offers, and, feeling that it might result in some embarrassment to him to accept either of them, he gave reasonable notice and left the employ of the firm at Franklin, going to Fitchburg, where he soon worked his way up as a manager and owner of paper mills, and finally as one of the most successful paper manufacturers in New England.

Such instances are not rare, and should serve as examples to the rising generation so to inspire them to work for the best interests of their employers, feeling sure that if their present employers do not fully appreciate their services, they are attracting the attention of other manufacturers, and, at the same time, educating themselves for higher positions in other concerns. The young man who fools away his time, who fritters away his opportunities, is cheating himself. This is a crime, equally as well as that of cheating his neighbor. Real worth never fails of appreciation.—American Cultivator.

MINING WITH THE STEAM SHOVEL.

When the Mesabi range was first exploited, remarks American Manufacturer, all sorts of estimates and talk of cheap mining were indulged in by its exponents. Some proclaimed that the older ranges would not be in the race with the new discovery, and that the latter would have its own way in the iron ore business. Stripping with the steam shovel, and actual mining therewith were pointed to as among the chief reasons for cheaper winning of the ore. All these claims, of course, brought out expressions of opinion from the older ranges in contemptuous rebuttal of the charges that they would be "shelved." Perhaps the steam shovel claims received more of their attention than any other feature, and the idea was ridiculed that this method of mining should be at all generally feasible on the new range.

While no doubt some wild and unsubstantial claims were made about the cheapness of mining which was to rule on the Mesabi, it seems as if the steam shovel is to be a factor of no little importance, at least on some of the properties, particularly on the Biwabik, where it has proven quite successful even though the covering there is heavier than at any other place where the plan has been attempted. Some figures are given by the Mesaba Range, which feels pretty good over the result, and we reproduce its calculations here. At the Biwabik it is known that there are 20,000,000 tons of ore in sight. It is known that every yard of earth removed will uncover 5 tons of ore. It is known that this stripping can be removed for less than 50 cents per yard—say 40 cents on an average. This cost divided makes a cost of 8 cents for stripping a ton of ore. It is confidently expected that as soon as the system is perfected one shovel can easily load 1,000 tons per day—some claim as high at 2,000 tons. A steam shovel requires an average of 30 men to operate it and keep it in cars. Make due allowance for costs of mistakes, for incidental expenses, for accidents—for extravagance if you will—and still the cost will figure up less than half the cost of the cheapest old-method mining.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

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MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

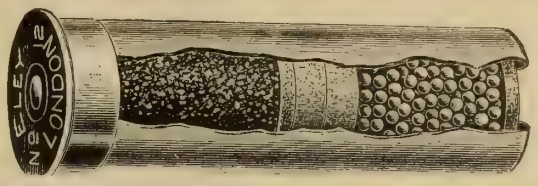
WESTERN BRANCH:

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

. . ELEY'S . .

CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING

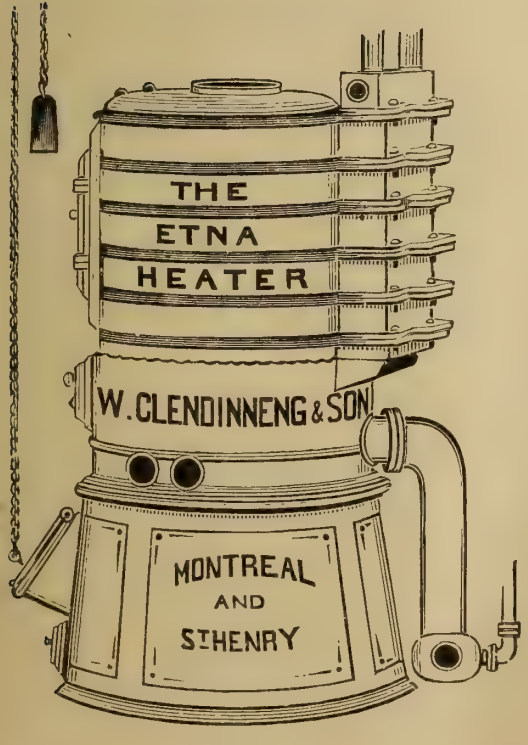


Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. **Wholesale Only.**

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.



THE "ETNA"

Is perfect HOT WATER Boiler

Write for prices and testimonials.

THE "UNIVERSAL" STOVES

The best and cheapest made.

Write for Catalogue and Discounts.

Our assortment of "LEADER" Stoves is always complete

Wm. Clendinneng & Son, 145 to 171 WILLIAM STREET MONTREAL QUE.

Cutlery

SPECIAL VALUE IN

Dickinson's "Damascus Blade" Carvers.
Dickinson's Improved Ivoride Tables, warranted not to shrink or discolor.
Joseph Rodgers & Co.'s best quality Pen, Pocket, and Butcher Knives.

. . . SAMPLES now ready for Fall Trade.

STEEL. Full stock of Jessop's warranted Tool Steel, at lowest prices. . .

A. C. Leslie & Co., Agents

MONTREAL and TORONTO.

You can lose more than we do by not subscribing for this paper.

MUNN'S LIQUID GLUE

IS THE BEST.

THE ART METROPOLE, Agents.

131 Yonge Street, TORONTO.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—
56 and 28 lb ingots, per lb .. 23½ 24
trip " 25, 25½

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
M.L.S. equal to Bradley		
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 00	4 25
I.X., "	5 00	5 25
I.X.X., "	6 00	6 25
I.XXX., "	7 00	7 25
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets ..	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.	....	13 00
" " I.X.	....	16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
I.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6½	6½
26 "	6¾	7
28 "	7½	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb ..	$1 95	....
Refined " " ..	2 35	2 65
Horse Shoe " " ..	2 60	2 75
Band " " ..	2 50	2 60
Hoop " " ..	....	2 60
Swedish " " ..	4 00	4 25
Sleigh Shoe Steel	....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets...	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¼ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2½, 2¾
26 "	2¾, 2¾
28 "	2¾, 3

Canada Plates.

Blaina	½ bright	2 75 ....
Abercarne		2 75 ....
Lion		....

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head
16 to 24 gauge, per lb 5, 5½
26 gauge, " 5½, 5¾
28 " " 5½, 5¾
Gordon Crown—
16 to 24 gauge, per lb 5, 5½
26 gauge, " 5½, 5½
28 " " 5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb.....	6	6 3-5
" ¼ " "	4⅞	5
" 5-16 " "	4½	4¾
" ⅜ " "	4¼	4½
" 7-16 " "	4	4¼
" ½ " "	3¾	4
" ⅝ " "	3⅜	3⅝
" ¾ " "	3	1-5
Trace, per doz. pairs	$3 60	5 90
German coil, per 100 ft	1 65	2 70
Jack chain, iron, single, per doz yards	0 13	0 50
Jack chain, double, per doz yards.....	0 15	....
Jack chain, brass, single, per doz yards	0 20	1 10

Copper—*Ingot.*

English B.S "	0 12½	0 13
Lake Superior	0 13	0 13¼

Bolt or Bar.

Cut lengths, round, ½ to ¾ in .	$0 22	$0 25
" round & square		
1 to 2 in	0 20	0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16	0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17	0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26	0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb..	0 19½	0 21
" 35 to 45 " " ..	0 17½	0 18
" 50 lb and above per lb	0 16½	0 17

Boiler & T. K. Pitts.

Plain Tinned per lb.....	0 21	
Spun " "	0 25	

Wire.

Pure, in coils—		
From 1 to 20 gauge.....	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20	0 21
" " 27 to 30 " ..	0 23	0 25
" " 30 and up.....	0 26	0 28
Sheets, hard-rolled 2x4 ft...	0 21	0 23

Zinc Spelte .

Foreign, per lb.....	0 04½	0 05
Domestic "	0 04⅝	0 04¾

Zinc Sheet.

5 cwt casks.....	0 05½	0 06
Part casks	0 06	0 06½

Lead.

Imported Pig, per lb.....	0 03½	0 03¾
Domestic "		0 03½
Bar, 1 pound		0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04¾	0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04⅝	0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)...	0 15½	0 16½
Standard	0 14½	0 15½
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb .....$	0 12	0 13
Other makes "	0 11	0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do..... "	4 75
No. 2 Do..... "	4 50
No. 3 Do..... "	4 25

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 20	
2nd qualities "	1 00	
Barn (in bbls)	0 65	

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb.....	0 05	
Chrome Yellow "	0 11	
Golden Ochre	0 06	
French "	0 05	
Marine Black	0 09	
" Green	0 09	
Chrome "	0 08	
French Imperial Green	0 19	

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35	1 40
" " (J.F.L.S.) " "		2 75
" " Royal " "	1 10	1 15
Venetian Red, (best) " "	1 80	1 90
English Oxides per cwt	3 00	3 25
American " } " "	1 25	1 90
Canadian " }		

Paris Green, per lb	0 13½	0 15
Burnt Sienna, per lb.....		0 08½
Burnt Umber "		0 05
do pure		0 08
Drop Black "		0 09
Chrome Yellows "		0 12
" " Lemon pure,		
8 lb. tins, per lb.....		0 19
Chrome Greens "		0 12
Golden Ochre		0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage ..... "	1 30
Gold Size Japan ..... "	1 00
Pure Orange Shellac.... "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40

Linseed Oil (in bbls)

Raw, per gal	0 60	0 62
Boiled "	0 63	0 65

Turpentine (in bbls)

Selected Packages, per gal	0 44	0 46

Castor Oil.

Best, per lb.....	0 08	0 08½

Cod Oil.

Cod Oil, per gal.	0 50	0 51

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet.....	0 13	0 15
White, extra	0 16	0 18
Gelatine.....	0 20	0 30
Strip.....	0 16	0 17
Coopers	0 17	0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list
Munn's, dis. 25 to 30 per cent. off list

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per 1 b
Best thick white felt wadding, in ½ lb. bags.....	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges.....	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge.....	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge....	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ...
" Sewing, " .... } 7 25 8 00

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each..... .... 2 00 5 00

House

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc, and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c:

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.

st break	$3 65
2nd "	3 90
3rd "	4 60
4th "	4 95
5th "	5 40
6th "	5 90
7th "	0 50

Picture Glass.

Pilkington's ordinary.

1st break	4 0
2nd "	4 70
3rd "	5 40
4th "	5 90
5th "	6 50
6th "	6 90
7th "	7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

. . NEW ARRIVALS . .

30 Cases Cutlery and Guns

ALL NEW GOODS.

Finest Finish. Best Value.

20 casks Cattle and Trace

CHAINS

10 tons Coil Chain

. . NEW ARRIVALS . .

Five Cars Window Glass

Bowman, Kennedy & Co., London, Ont.

Wrought Hooks and Staples, Amer- dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Finamiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy.....	2 30
40dy.....	2 35
30 dy.....	2 40
20, 16 & 12 dy.....	2 45
10 dy.....	2 50
8 & 9 dy.....	2 55
6 & 7 dy.....	2 70

2. American Pattern Only

from 4 to 5 dy	2 90
3 dy. (lath).....	3 30

3. Canada Pattern Only

from 4 to 5 dy	2 80
3 dy. (lath).....	3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Star, R & L Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33½ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9½	9¾ 10½ 11
¼, 5-16, ⅜ in.....	10	10½ 11½ 11½
Cotton, per lb.....		18 20
New Zealand.....		9 9½
Russia Deep Sea, per lb..		12¾ 13
Jute ..... " ...		08 08½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D, dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 to 40 per cent.

Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P,, 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, " 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen..... 1 25

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " " 21 00 .....
Table " " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.

Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9 00

Twines.

Bag, per lb	0 12½	0 20
Wrapp'g, mottl'd, pr. pack.	0 50	0 60
" cotton, per lb ..	0 18	0 20
Mattress, per lb	0 33	0 45
Staging "	0 27	0 35
Broom "	0 30	0 55
Binding, flax, per lb	....	.....
" jute "	....	.....
" Blue ribbon	.....	0 12½
" Red cap.....	.....	0 11½
" Crown.....	.....	0 10½
" Silver Composite	0 09	

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " "
" Plain twist, 2&3 wires } 4½ 4¾
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04¾
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 0
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR HOLLOW WARE.

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

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SEWER PIPE
WATER PIPE
INVERT BLOCKS

Canadian, Scotch or American

Write for Prices to

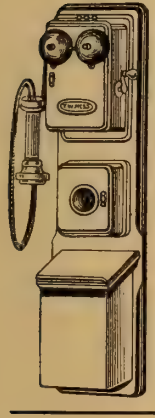
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44 Price Street, TORONTO

Also for Fire Brick, Fire Clay, Gas Retorts, Gas Works Supplies, Portland Cement, Keen's Cement, Roman Cement, Mortar Colors.

Phone. 3763 Mention this Advt

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Purchase your instruments direct from the manufacturers.

ELECTRICAL SUPPLIES

of every description.

Watchman's Clocks,
Time Recorders,
Fire Alarm Systems

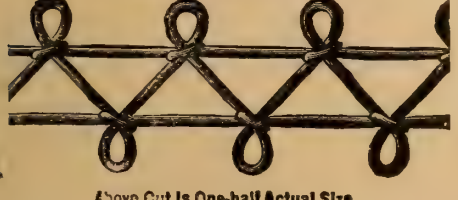
Send for quotations.

T. W. NESS & CO.

749 Craig St., Montreal.
106 King West, Toronto

THE HATHEWAY PATENT FENCE WIRE.

Pat. Nov. 19, 1889.

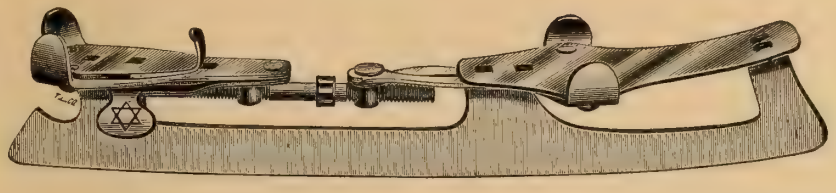


Above Cut Is One-half Actual Size.

The Hatheway Patent Fence Wire, the most popular fence wire throughout the United States, and fast gaining that position in the Dominion of Canada, as it contains all the requisite qualities of a fence wire, being handsome, strong, visible—seen at a long distance; will not sag or get out of shape; allowance for contraction and expansion, heat and cold; being broad, requires less strands to make a complete fence; easily put up, splices itself; will not injure stock. Put up in spools of 120 lbs. each. For sale by all the leading hardware stores in the Dominion.

Manufactured by THE COLLINS MFG. CO., 81 Adelaide st. E., Toronto.

The Star Skate



Is of entirely different mechanism from our **GENUINE ACME** and is introduced to meet the demand for a cheaper skate than has yet been offered. Made all of first-class steel. Toe and heel clamps simultaneously adjustable to suit any size sole or heel. Holding powers perfect. **Quality and efficiency considered, it is the cheapest skate on the market.**

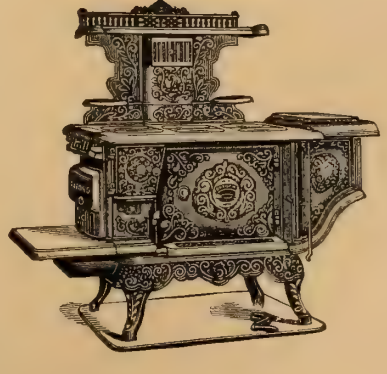
The Starr Mnfg. Co., Ltd., Halifax, N.S.

SOLE MAKERS OF

GENUINE ACME SKATES : Hockey and Racing . . . **SKATES**

1893 DUCHESS of OXFORD

PUT THIS STOVE



On your floor and you will command the whole of the stove trade in your district

If you have not our Catalogue you should send for one at once

Our Warm Air Furnace Price List

Is just out. **SEND FOR ONE**

When you visit the Industrial Exhibition do not fail to call and see us at our building on the grounds, or at 500 King Street West.

The Gurney Foundry Co. Ltd.

TORONTO

Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St, Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 x 4 Barb
Plain Twist and
Strip Fencing

And Staples for same.

Write for Prices and Discounts.

ESTABLISHED 1860 INCORPORATED 1883 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.



LAMPS

In all Sizes and Styles

HANGING
BANQUET
VASE and
PIANO

No old stock, all new lamps, decoration the prettiest

Order Now So as not to be too late in the season. Will ship at once.

Gowans, Kent & Co.,

Wholesale Dealers

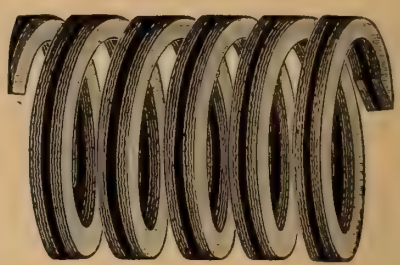
TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

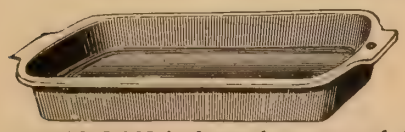
Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., Toronto.

"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

CANADIAN

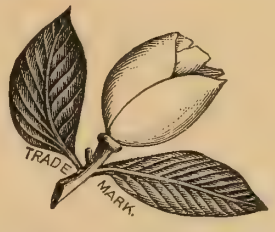
HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, SEPTEMBER 2, 1893. No. 35.



MAGNOLIA METAL



—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

MAGNOLIA METAL CO.,

London Office: 75 Queen Victoria St.
Chicago Office: 41 Traders Building.
Montreal Office: H. McLaren & Co., Agents

Owners and Sole Manufacturers,
74 Cortland Street, NEW YORK.

EVERY HARDWARE STORE SHOULD HAVE IN STOCK

BLUNDELL'S ART.. Enamel PAINTS . .

WHY ?

:-: :-: Because they are ready sellers. Every tin sold, sell several more tins. Every one who uses them, speaks of them, so delighted are they with the result. This is not surprising when the reputation of BLUNDELL, SPENCE & CO., the manufacturers, is considered. They are recognized as the largest Paint Manufacturers in the World, and the quality of their goods is well known in every quarter of the globe as the highest. - - - - - - - - - - - - -

BLUNDELL'S ENAMEL IS

Brilliant, Elastic, Durable, Quick Drying,
Easily Applied, Surface Resembling Porcelain.

SOLD IN LEVER LID TINS, OR PER GALLON.

Send for Sample Card Showing 54 Beautiful Tints. Send a Postal for this card, it is the most attractive Color Card in the market.

- - SOLE AGENTS FOR BLUNDELL, SPENCE & CO., Ltd., IN CANADA: - -

Walter H. Cottingham & Co., Fine Paints, MONTREAL

Sporting Powder

Curtis's & Harvey's

F. FF. FFF.

4 6 DIAMOND GRAIN

Pat. Brown. Basket.
Tower Proof Rifle.



CLYDE MILLS CO.'S . .

SMOKELESS

In ½ lb. 1 lb. 12½ lb. 25 lb.

. . PACKAGES . .

RICE LEWIS & SON, Ltd.

Sole Wholesale Agents . . . King St., TORONTO

Copper Cider Kettles

(BRAZED AND HAMMERED.)



PLATE 237.

PRICES ON APPLICATION. CORRESPONDENCE SOLICITED.

MANUFACTURERS OF

Brewers, Distillers, Confectioners . . . Varnish Makers Plumbers and Marine **Copper Works**

The Booth Copper Co.

Formerly BOOTH & SON. 122 Adelaide Street West, TORONTO

"Perfection" Inside Seam

ELBOWS.



STRONGEST, HANDSOMEST, BEST.

16

DIFFERENT KINDS

Standard Patent Stove Pipe, Stove Boards, Coal Hods.

ORDER ALL FALL LINES EARLY.

Kemp Manufacturing Co.

TORONTO, ONT.

HARDWARE

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, SEPTEMBER 2, 1893 No. 35

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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NEW YORK OFFICE: Room 41, Times Building,
Roy V. Somerville, Manager.
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Canadian Government Offices,
17 Victoria St., London, S.W.
R. Hargreaves, Manager.
John Cameron, General Subscription Agent.

Unsatisfactory indeed is the iron ore situation in the United States. No line seems to be sharing more largely in the depression that is hanging over the country than does it. Those who claim to be competent to speak say that the iron ore trade has not been in such a condition for twenty years. Much of it is due to over-production. This has been particularly so during the last five years, although for a decade the development of the industry has been going on rapidly. During the last five years it is claimed that half a million more tons than was wanted were mined annually. This meant the tying up of large amounts of money. A New York authority places it at $1,500,000 for each year of the five. When navigation opened this year it was estimated that over five million tons of ore was lying at the mines and on Lake Erie docks. Then the ore shipped by lake this season will, it is estimated, not be much more than one-half what it was in 1892. The result under such conditions is obvious. Many mines have been compelled to shut down altogether, while others have found it necessary to reduce their staffs of workmen, until to-day some twelve thousand men are idle in the mining districts. Even those who are employed are getting 20 to 33 per cent. less wages than a year ago, while the best grades of ore are from 10 to 15 per cent. lower than last season. In ten years the fall in certain classes of ore has been as much as 30 and 40 per cent., causing many properties to be stranded.

* * *

As in about nearly everything else, none but concerns heavily backed by capital can now hope to succeed in the iron mining industry, for not only has the price of ore decreased, but the necessity for expensive machinery has increased. The plants of many of the mines, it is said, are now worth tens of thousands, where thousands sufficed a decade ago, thus effectually shutting out the smaller miners. Probably one of the greatest menances to most of the iron miners is the wonderful productiveness of the Messaba range. Here there is no need as yet to dive down in the bowels of the earth for the ore or to use the pick-axe and shovel. What they do is to set a ponderous steam shovel and a track eight or ten feet in the ore bed. By this means no less than 300 tons of ore per hour can be scooped up and loaded on to the railway cars standing alongside. This means that a train of twelve cars is filled every hour and an enormous reduction in the cost of mining. This method of producing ore, aside altogether from the depressed state of the country, is sufficient in itself to cause the closing of some of the mines.

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Turkey seems to be progressing. At any rate such would be inferred from the fact that a demand is arising in that country for modernized agricultural machinery, such as steam threshers and winnowing machines; also for hydrolic oil presses and mill machinery. Already England and Germany are reaching out to appropriate it, and manufacturers in the States are being urged by their press to try and secure a slice. Why cannot Canadian manufacturers also make a bid for the Ottoman's patronage? Taken all round our agricultural implements are the best in the world. Competition has proved it. As far as can be learned from the Trade and Navigation Returns, Canada has not yet sent any agricultural implements to Turkey, but in 1891 Roumania purchased $6,424 worth from us, and Roumania is a near neighbor of Turkey. Then the British possessions in Africa, Australia, France, Germany and Russia are among our customers for agricultural implements. Why not then Turkey? When a good customer is going around Canada is usually on hand to solicit his patronage. Judging from the efforts that are being made to supply Mr. Turk's wants in an agricultural implement sense, he must be a promising buyer. This country should try and secure a few of his orders. And it probably will.

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Spelter production has been a steadily growing industry in the United States. According to the report of the special agent of the United States Geological Survey, the total production during the first six months of the present year was 45,794 tons, compared with 45,499 tons for the corresponding period of 1892. The production every year since 1882 shows an increase over the previous year. In 1892 the production was 84,642 tons against 33,765 tons in 1882, an increase of over 150 per cent.

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After all that is said and sung about the "Parliament of Man," where the representatives of all nations are to sit and make laws world-wide in their bearing, one some times has to wonder whether that cosmopolitan spirit which must necessarily be the forerunner of such an assembly is not really declining instead of advancing, especially when we see the nations that boast of possessing the most enlightenment practising exclusiveness of the most pronounced type. We refer particularly to the United States and to France. In addition to erecting abnormally high tariff walls to keep out the products of other countries, they have both enacted measures to keep without their borders citizens of other countries. The Contract Labor and the Chinese Exclusion Acts, which the United States was pleased some

time ago to put on its statute books, needs nothing more than to be merely mentioned as an instance. Everybody has at least a general idea of their purport. With the measure just adopted by France there is not the same general acquaintance. In spirit it is similar to those laws of the United States just mentioned, although in scope or in intention it is milder. Its object, in a word, is to prevent foreigners from doing business in the country. The law provides substantially that foreigners who have not obtained leave to be domiciled in France or who came into that country for the purpose of exercising their professions, will have to register within eight days after their arrival at the place where they propose to reside. Upon payment of a fee, such foreigners will receive a certificate stating that they have complied with the law, without which they cannot obtain employment. If they change their place of residence this certificate is to be revised by the mayor of the locality. Foreigners at present established in France are given until September 8, to comply with the requirements of the new regulations. There are a lot of clouds yet hanging around the horizon of this boasted enlightened 19th century; and it is peculiar that the two big representatives of the republican form of government are among the busiest in trying to prevent their dissipation.

The crops in Ontario are not on the whole as satisfactory as it was a month or so ago anticipated they would be. This is revealed by the bulletin just issued by the Ontario Bureau of Industries. Fall wheat is estimated at 19.6 bushels per acre. This is a little lower than last year, but is of a fairly average character nevertheless. Harvesting began about July 7, but the great bulk of the crop was cut between July 15 and 25th. Spring wheat is again this year almost a failure; and it is not surprising. Owing to a wet and backward spring it got a late and uneven start. Then came drouth in many districts, causing too rapid filling and the resultant—a shrunken and inferior grain. Rust has been a common enemy in all parts of the province, while the midge and other insects have caused much destruction, especially in West Midland, Georgian Bay and East Midland. Grasshoppers, too, have been more numerous than usual. Barley, like spring wheat, also had a late start, but in spite of this and other adverse circumstances, the grain is on the whole, of a fine bright color, but smaller and lighter in weight than usual. The yield per acre is below the average. Two-rowed barley has done even worse than the six-rowed, the growing season having been too short to allow it to develope. The oat crop, too, has not turned out as well as its condition on July 1st indicated, and the same causes that contributed to the injury of the other cereals were present in this, making the yield below the average. After hearing so much from the canners regarding the smallness of the pea crop, and the limited character of the pack, it is somewhat surprising to learn from the crop report under review that "on the whole the crop will be about up to the average." The report, however, acknowledges that while the vines podded well, the drouth prevented the pods from filling perfectly. "A largely increased acreage and only a moderate yield on the whole," is the finding of the report regarding the bean crop. Everybody of course knows that the hay crop was large. The report places it at 578,719 tons larger than in 1892. One thing, too, that might be taken into consideration is the fact that hay is demanding a much better price this year than last. Corn, which is cultivated in the Lake Erie district more extensively than in any other part of the province, is reported "on the average to be very fair, though the drouth has affected it." Potatoes, the report says, will not be up to the average. The yield of roots on the other hand, give good signs of being above the average. Regarding apples, the report substantiates what has been said in different times in these columns, namely, that they are a failure throughout the province. The live stock appears to be in good condition, and the supply of dairy produce is of an average character. The supply of honey is, on the whole, good. While the lot of the farmer in Ontario is not bad it is evident that he will need to be careful. What is the best policy for the country merchant to pursue under the circumstances is equally obvious.

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Speaking of crop reports, a bright side to the picture is the prospects in Manitoba and in the Northwest Territories. In Manitoba the yield is generally conceded to be something like 20,000,000 bushels, and competent authorities say that the percentage of Nos. 1 and 2 hard will be greater than any previous crop. The wheat crop of the world, according to the annual report of the Hungarian Minister of Agriculture, issued this week is estimated at 2,279,000,000 bushels, against the official average of 2,280,000,000 bushels annually for the last ten years. The deficits to be filled up by the importing countries is placed at 370,000,000 bushels, and the surplus available in exporting countries to satisfy this demand at 378,664,000 bushels.

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A man may be a good salesman but a poor buyer. Inability to buy right is the cause of more failures than is the want of the ability to sell. The ability to buy right is only acquired by years of patient labor and study. A man, no matter how well he may be fitted by nature, cannot become an expert buyer in a week. Before he can become that there are two things he must pay particular attention to; and they are the wants of his customers and the columns of a good trade paper.

BRITISH IRON AND STEEL.

Despite all the adverse conditions which have ruled, the surprising fact is to relate that the British iron markets have shown improvement recently. There has been a strike of between 200,000 and 300,000 British coal miners, yet the iron and steel industries of the United Kingdom have suffered less than anticipated, if recent reports are to be believed.

At Glasgow and Middleboro' prices of pig iron have actually advanced within the two months, and the ship building industry in the north of England and Scotland, according to reliable exchanges, is more encourging than it was several months ago. The general demand for iron and steel throughout the United Kingdom is said to be fairly good, and if the coal trouble only terminates without any unreasonable delay, it is believed that the moderate improvement already established will be maintained. For seven months of the current calendar year the total exports of iron and steel from the United Kingdom amounted to 1,719,000 tons, valued at £12,734,000, showing an increase, according to last year's Board of Trade, returns of about 14.7 per cent. in quantity and 18.2 per cent. in value. In July alone the volume of British iron and steel exports increased 24.5 per cent. and the gain was made in spite of a decrease in exports to Australia, the improvement being attributed in part to the better demand from Russia and also, strange to say, from the Dominion of Canada. This latter increase was due, not to pig iron, but principally to tin plates, galvanized plates, etc. The demand from the United States is also of sufficient moment still despite all tariff barriers. The shipments of iron and steel from Britain to that country for the seven months were 239,-

351 tons against 212,020 tons for the corresponding period in 1892, an increase of 27,331 tons. This was chiefly due to the increase in tin plates which were 182,668 tons against 167,771 tons in 1892 an increase of 14,897 tons. This fact coupled with the record of last year, when tin plates also showed an increase, does not indicate that the infant tin plate industry across the lines is progressing as well as was predicted by the McKinleyites.

ALUMINUM ALLOY FOR STEEL COATING.

W. J. Wilder, Hampton, Ia., who has patented a process for coating sheet steel with aluminum-alloy, writes American Artizan as follows concerning the product:

"For all practical purposes for which galvanized metal is used, nothing in the world can equal sheet steel coated with aluminum-alloy for durability. This metal possesses something more than ordinary galvanized iron or steel. It can only be fully appreciated by the public when put into practical use Much has been written in the different metal journals asking for the opinions of metal men in regard to the galvanizing 'flaking off' when the metal is bent or seamed. Different opinions have been expressed by metal workers. Some say it is the fine grain in the steel that prevents the coating from adhering; others say it is in the preparation of the steel before coating, etc.

"My opinion differs from those of others. I claim that the coating is too brittle and too hard. The grain of the spelter is too coarse to enter the fine pores of the steel. This and nothing else is the trouble with the galvanized sheets. All these objections I overcome by coating iron or steel with aluminum-alloy. What is this new metal? It is a combination of aluminum with other metals that contain a finer grain than iron or steel, that will enter into the finest pores of such metals, and which I claim to be far superior to ordinary galvanized sheets.

"Sulphur does not affect this metal to the same extent as it does galvanized sheets. It does not flake when bent. It has a smoother coating, and it will last much longer.

"The following practical test show its practical utility. On November 13, 1892, I took a piece of steel, about 12 inches square, coated with alluminum-alloy, and nailed it to a cross walk on Maple street, Hampton, Ia., with common wire nails. This piece of metal was subjected to snow, water and slush for six months and six days, and when taken up the metal showed no sign of rust. In pulling the nails from the plank I found them covered to the very point with aluminum-alloy. This goes to show that under certain conditions the coating will follow the metal which is not coated at first. Even the edges of the sheet were coated over and showed no rust."

WHY CAN'T FARMERS PAY CASH?

Times like these test the soundness of the cash business. There are more people now than there were a year ago who believe that a smaller volume of business on a cash-down basis would have been better for them than a broad and enterprising expansion on borrowed capital that cannot now be squared by any convenient manipulation of figures. —Texas Farm and Ranch.

The writer of the above puts his finger on the weak spot in the farming business of the country. If he will keep the attention of his readers directed to this subject, and if other editors of agricultural papers will follow his example, the cry of hard times in the farming districts will probably soon cease, and the merchants of the country be enabled to adopt the cash system and give their customers lower rates. It is a waste of time and ink for trade editors whose papers circulate among country merchants to harp continually upon the beauties of the cash system, so long as the farmers are unable, owing to their foolish policy of cultivating more land than their capital allows, to meet their debts promptly. One must go to the fountain head to cure the evil. The farmers must be reasoned with and informed that it is possible for them to pay cash and save heavy interest, if they will only exhibit ordinary prudence and foresight. It seems as though, whether crops are good or bad, our farmers cannot walk alone, but must depend upon the merchants for assistance before the next harvest comes around. Improvidence is perhaps as fruitful a cause of the farmer's chronic condition of indebtedness as the custom of cultivating more land than he can afford, but whatever the reason may be, the evil is not without a cure, but the remedy lies in the farmer's own hands and none but he can apply it.—American Grocer.

AN ANCIENT CANE GUN.

Pittsburg, says an exchange, has secured a relic which is one of more than ordinary interest. It is a gun which was found by Rufus Campbell, United States court crier at Pittsburg, and the late Dennis McCollum, a number of years ago, having been dug up by workmen who were making excavation on the site of old Fort Duquesne, at Pittsburg. The gun is supposed to have belonged to a French officer. It is kown as a cane gun, the barrel being about the size of an ordinary walking cane, tapering towards the mouth. The handle is of buck horn. On it is the place for the cap and it screws on to the barrel. In the hands of an expert workman it must have been a dangerous weapon, as any fiery French dude of the day in which it was used could pull it on his adversary while promenading the streets apparently whirling a cane. The barrel of the gun is rusty and the weapon somewhat out of order.

SECRET OF TEMPERING COPPER.

Ferdinand Allard, blacksmith, of Levis, Que., the Canadian who recently discovered the long lost secret of tempering copper, was in Ottawa the other day. He has with him several articles of copper tempered by his process. The most interesting of these was a small cannon, about 18 inches in length, tested by Col. Montizamberts at Quebec. The little gun was loaded to the muzzle with the strongest powder driven into it with a sledge, but which, on explosion, produced no expansion on the barrel. Dynamite, Allard says, would only produce the same result. He showed also a copper plate three-eighths of an inch in thickness, containing impressions of rifle bullets fired against it at forty yards distance, with a force of two thousand pounds. The indentation did not exceed one-third the diameter of the balls, while a plate of hardened steel, two inches thick at its side, was shattered to pieces. A plate of this copper, fourteen inches thick, Allard alleges, could not be penetrated by the most powerful projectile known.

HE DOESN'T NEED SO MANY.

"I have just been figuring up what it will cost me to have an invention patented throughout the world," said a young Kansas City inventor in the course of a recent talk to a contemporary, "and I have found out. It takes a fortune. There are on this mundane sphere sixty-four governments that run departments devoted to fleecing the poor inventor, and pretend to give his idea protection. Sixteen of these sharks are to be found in Europe, eight in Africa, four in Asia, twenty-seven are on the two continents of America, and nine are in Oceanica. Of course the charges differ in every case; some are comparatively small, others are not so small. In the aggregate they average about $227.35 each, or a total of $14,550. That's a pretty sum for a man to spend to keep an idea from being stolen, isn't it?"

ENGLISH BRASS.

The average market price in Birmingham for fair quality brass is from $182.47 to $189.78 per ton, net. This delivery, say, in Philadelphia, would cost from $189.77 to $206.80 per ton, net, according to qualities, the latter being a good quality of brass. For gun metal various qualities are used, and price varies considerably. From $242.30 to $267.60 per ton would probably represent the average price, delivered in Philadelphia. Wages of brass casters average about $12 per week to irregular workmen, but skilled workmen of steady habits who work from Monday morning until Saturday night can readily earn not less than $24 per week. All are paid by the piece.

HOW I HAVE DONE IT.

A few days ago, says a writer in Ironmongery, the editor of Ironmongery said to me in effect: "You have an original way of your own and plenty of 'go' in you, and have made a success of it. I wish you would jot down a few hints of how you have done it, and let me lay them before your fellow-tradesmen. One success is worth a million failures, and there must be some good smelting in the metal-pot of an experience like yours." I have thought it over and concluded to try to do what I was asked to do. But I am not used to writing anything for publication, except my circulars and advertisements (and the readers of Ironmongery had a taste of these in the July number of the paper), and I am afraid my notes will read a little scrappy. However, if they are of any use to anybody, I shall be very glad; at all events, they can do no harm. I can say that every word is drawn from my experience. I have made mistakes, as every man does; but in these notes I give only what I have proved to be sound in practice and valuable in building up a business. When I took the business I am now carrying on the shop was 25 feet long. That was eight years ago. Now my shop is 140 feet long. I have covered every available inch of ground at my disposal, and rent two warehouses in the neighborhood besides, and only wish I had more land to build on. In these eight years I have made enough to retire upon and live comfortably. A sounder little concern does not exist, in my opinion, in the suburbs of London, or anywhere else for that matter. Of course, I have worked hard, and still do, but I am a young amn, and like hard work. I ought to add that this place offered no special advantages for building up a business. In fact, the suburbs of London are decidedly not favorable, since the facilities for buying in the metropolis itself are so great that suburban businesses are seriously handicipped.

I hardly know where to begin these notes; but as this is the holiday season, and my brother ironmongers will be taking their trips to the seaside and elsewhere for much-needed recreation, it occurs to me that I couldn't do better than to say a few words as to howI have been accustomed to make a doubly practical use of my holidays by combining business with pleasure.

Some time ago, I had given to me the name and address of a small unknown spring mattress manufacturer. I dropped him a line, saying I thought of factoring spring mattresses; would he quote me his bottom prices. I knew he was supplying one of the largest wholesale houses, upon whom I called and asked them for their trade prices, which they gave me. I found their prices far above what this little maker had quoted me. I wrote the maker, and he arranged to meet me in London, which he did; and after an hour or two's chat (during which time I did not fail to pump him), I made him an offer at which he was somewhat astounded. Anyhow, when he had recovered this shock and come to himself, he said, "I'll accept your offer, provided you give me an order for 100 mattresses for cash on receipt." I said, "Right you are—I will." He booked my order and sent me a model mattress to carry with me. I went home, and, on the strength of this, my wife and I arranged to go to Brighton for our summer holidays. I took the model with me, put on as bold a face as I could, and before I returned home I sent the maker a repeat order for upwards of 150 more mattresses; and I succeeded in opening exactly a dozen wholesale accounts with housefurnishers in Brighton, Hastings, and neighborhood.

I have also since added to the mattress trade, cutlery, brushes, furniture cream, knife polish, disinfectant, fire escapes, etc., for all of which I have best factor's prices, and to this day I have continued the above system. My wholesale accounts number some hundreds, and I have several travelers working for me on commission, and have in many cases opened fair accounts. I have trade cards printed representing each trade, which I take with me, and also illustrated price lists. I generally devote the morning to travelling, and the rest of the day I spend with my wife and children on the sands, boating, walking, driving, etc. In this way I enjoy my holidays far more than I used to do, and I generally make enough to pay all expenses, and bring a little home with me; and in nearly every case repeat orders have come on. I also make a practice of dropping my customers a line saying, I am sorry I have not been able to call upon them every journey, and will they kindly forward their orders by post. When you are fifty miles away from home nobody knows who you are, and nobody cares, and so long as your prices and goods are right you stand as good a chance as anyone else, and why should you not? Try it and see how it works. (But don't take up the wire mattress trade now. That is "played out.")

I have also made a practice of trying to get orders from the people with whom we have lodged, and have invariably succeeded. Last year I spent my holidays at Eastbourne, where I took an order off my landlady for a suite of furniture and several other things, such as bedding, fender, etc. The profit on these was about £5. From others I have orders for cutlery, electroplate, etc,and I have just had a letter from the person with whom I stayed last year at St. Leonards, saying she was immensely pleased with the goods I sent her, and if I and my wife and family cared to spend our holidays with her this year she would take out the amount of her charges in goods. Well, now, all this kind of thing is both enjoyable and profitable too.

Job lots picked up at the right price often pay well. If it's a big lot and more than you can dispose of in your neighborhood, take a sample round to the trade, and if both the price and the article are right, you will be sure to find a buyer. I have made many a pound in this way. For instance, the other day there was a bankrupt stock of wringing machines on the market I bid a price for the lot (some 300); after some bantering I got the refusal of them for twenty-four hours. I at once made my way to the wholesale houses in the city, and within six hours landed the lot and pocketed about £20 and off I went. On another occasion I bought a similar lot of washing machines (about 400), I bid a price less than one-quarter what I was asked, and which ultimately was accepted. I landed the lot at just double what I paid for them. These are two cases out of many. Keep your eyes open for "job lots," but they must be at the right price.

Try and combine the wholesale with the retail, and I may say that if you are a keen buyer you will have no difficulty in doing this, as you will be able to supply the small ironmonger as well as the factors can. The other day a man was going to open a shop in the east end of London. He called upon me and asked me if I would quote him prices, which, of course, I willingly did. He went away, and between then and the time I next saw him he said that numbers of London and county firms and waited upon him with samples and prices, but was of opinion that he could do better with me than with any of them; consequently I took his opening order, and I have done with him ever since. I keep up my stock to meet his requirements, so that when he sends he can depend upon getting what he requires.

To make a fortune out of an ironmongery business "pure and simple" (at any rate, a small business) is not one of the easiest things to be done. If space will allow, add bedsteads, bedding, perambulators, mail-carts, pictures. If still there is room, add also glass and china, furniture, carpets, linoleum—in a word, turn your shop into that of a complete housefurnisher. By this means you will add strings to your bow and feathers to your wings. None of these branches clash with each other, but all work harmoniously together and swell the returns amazingly. Therefore, I say, add as many of the above branches to your existing ones as space will allow. Extend your premises if you have ground at your disposal. As each alteration and addition has commenced, I have (by the "wiseacres") been called an ass or fool, and asked why I did not book a room in some lunatic asylum, as they were quite sure that this neighborhood had no opening for this, that, and the next thing. But, anyhow, time has proved that I was not quite such a fool as they thought, and I may add, that each of the following branches have, one by one, been added, and are all working and paying well. Glass and china, furniture, carpets, linoleums, pictures, perambulators, mail-carts, electro-plate, and many other sundries included in the stock of a complete housefurnisher. My advice is, try one of the above branches in connection with your present one, and if that succeeds, try another, and so on.

Buying well is most important. "Goods well bought are half sold" is true. Buy at "rock-bottom" prices; and to do this, it will be necessary to buy in large quantities. This is not in

all cases practicable, but it can generally be done. For example, nails (wire and cut) should always be bought in two-ton lots; this will apply to bar-iron, barb wire, rain-water goods, etc. In these, and other cases, you can always get bottom prices, and also save in carriage—the minimum rates being charged by the railway companies. When about to place an order of any magnitude, write to, say, half-a-dozen different firms for quotations; by this means you will get at the best market. You will often find that for "cash against invoice," most firms will be prepared to offer you a still further advantage, which every ironmonger should avail himself of. All these little points should be closely watched, and wherever there is a "bob" to be saved save it; this will add materially to your yearly profits. This is much overlooked by many firms, who seem to be on the look-out only for long credit. If they can get this, prices are quite a secondary object with them. Take my tip, buy as largely as you can, and pay promptly. You will always find firms anxious to get your orders at "rock-bottom" prices. Unless you do this, you cannot possibly compete with those who do, consequently, you will be unable to hold your own, and the man who does will soon knock the bottom out of your show—mark my word!

HEATING APPARATUS.

There are points of great importance to govern the selection of a boiler, says Canadian Electrical News. These are, efficiency per pound of fuel consumed, labor and skill required to maintain a desired temperature, facility for cleaning, and durability of joints and parts. These points constitute a large field for selection, and a close examination of construction and records of years' use would disclose a wide variety of results. The point we wish to make is that the legitimate ground for choice in boilers is limited to nearly the above points.

In the matter of radiators, the heat units emitted by the different constructions, especially in different locations, is a question that receives less attention than it deserves. Care is taken over the size of radiators, but little given to location. It is our experience that within certain limits the latter question is more important than the former.

Again, short rules intended to promote quick sales are in common use. The process is to divide cubic feet by a factor. The loss of heat from a warmed apartment to surrounding air of a lower temperature is through three exits, viz., through glass, outside walls, and by escaping warmed air. The loss of heat through glass can be accurately determined with sufficient accuracy, but the quantity of air lost from any apartment cannot be accurately measured. It may be approximated by experience under similar conditions. The construction of buildings, their location and uses, the desires and needs of the occupants, the values of heating surfaces in boilers and of radiating and air heating surfaces in radiators, vary so greatly that no fixed rule for allotment is safe. The fact is, that a plan for the installation of a fit hot water plant, competent as to the allotment of capacities, suitably proportioned in its parts, and able to accomplish the desired results, is a work of engineering, computation, skill, and experience, not of commercial push alone.

In this connection it must be borne in mind that the results from an intelligent equipment of hot water heating apparatus may not be limited to the mere production of heat. Stoves, steam and furnaces produce heat, and in great abundance. If heat alone were the object sought, but little thought need be given to plans. Modern civilization has progressed beyond the mere desire to warm. The apartment should be uniformly warmed at every point, not merely in the centre or on warm walls, but on floors and about cold windows. The several rooms of a building should be uniformly temperate and the plant yield desired warmth without frequent regulation or attention, but be governed according to out-of door temperature by the fire. The quantity of fuel in combustion, the rate of combustion, the temperature of water in use, its uniform delivery at different points and at various levels in the building to accomplish a uniform or uniformly graded result, are features to be realized.

In ventilation a sufficient quantity of air of an aggreeable initial as well as resultant temperature, free from impurities, its points of entry, the exit of vitiated air, the velocity of both currents, that of the incoming air at a rate less than a perceptable current, and of the outgoing air at a velocity sufficient to insure both the heat and ventilation desired, are, or may be, demands of modern intelligence.

WHY ONE DEALER COMPLAINS.

The casual visitor at one of the larger manufacturing or jobbing houses in the principal cities will be struck at once by the neatness of arrangement and the effective manner in which the goods are dipslayed, remarks Stoves and Hardware Reporter. In some cases an attempt is made at artistic decoration, often successfully, but as a rule the object aimed at is convenience for handling the goods or so placing them that the customer will have but little trouble in ascertaining and determining his wants. It is simplicity brought to a scientific point and pays for this very reason.

But it is not always so in the smaller establishments. It happened not long ago that a visitor in a small town not a thousand miles from St. Louis, dropped into a hardware shop in search of a knife, an ordinary bit of pocket cutlery. The proprietor was away back in the rear, and there was not a clerk in sight. The establishment, if such it can be called, was above the ordinary in size and the stock was equally large, but was littered all over the floors and counters. As the narrator tells the story, he asked for a knife, and, after at least five minutes search by the proprietor, was at last shown a tray half full of knives of all sorts and conditions, most of them partially rusted and the greater part without tags or marks to indicate their price. They had been thrown in a heap, without regard for anything save that they were for sale.

A knife was taken at a guess price and then the buyer asked the proprietor about business, whether it was paying or not. The reply was just what was expected. Business was dead, it wasn't paying expenses, and would have to be closed unless the times improved. The questioner looked around the store, remembered the circumstances under which he had bought the knife, and saw at once why trade was dead. It wasn't the dullness of the times, but the dullness of wit that effected this especial dealer, and the cause for complaint was found in himself. There is a lesson in this. It is not an industrial fable, but a story of actual fact. Successful business operations, whether large or small, do not result from a neglect of the cardinal principles, and of these the knowing how stands among the first.

FUN IN THE HARDWARE STORE.

Apropos of odd terms for ironmongery, I recently received the following written order: "Plese send me along twenty feet of shooting and the tunpail and a pipe two feet long send it to-day please if you can." "Shooting" has already been defined in Ironmongery, but how many know that "tunpail" stands for cistern head? My assistant, however, hit on the right interpretation, and executed the order correctly.

In the varied experience of most ironmongers many queer things happen, but the following caps all that have ever come under my notice. I was calling on a country carpenter, and in the course of running through my samples, came to coffin furniture, "Can I sell you anything here?" I asked. "Well, yes," he said, "I shall be wanting some; but, you see, I can't say when. The people are not dead yet, but very bad, and I've got the order for their coffins. I'll send in and let you know when I want the furniture." It occurred to me that if the coffins were selected in advance, the intended occupants might be more comfortable in their minds if they chose the furniture also; but I didn't say so, and as I have not yet heard from my customer, it begins to look as if the fine weather this summer had done him out of a job and me out of an order. Surely this was something more than taking time by the forelock—it was scalping him at once.—Ironmongery.

A CURIOUS REASON.

A firm which manufactures a bicycle known as the P. D. Q. recently, according to a contemporary, offered an advertisment of the bicycle in question to a paper for boys, which refused it on the grounds that it was suggestive of profanity. The firm explained that the objectionable letters stood for three Latin words, "Pedibus duobos quietus," meaning "rest for both feet;" but the editor desired to avoid even the appearance of evil and still rejected the "ad." The Latinity of this motto, by the way, is open to question; but perhaps it is hardly fair to expect pedal Latin to be capital Latin.

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

The London Foundry Co. will build an addition to their foundry.

Two carloads of binding twine from the Central Prison at Toronto arrived in Winnipeg last week.

The railroads will not advance Pacific coast rates again until ten days after notice is given of the change.

According to a Winnipeg despatch, harvesting operations are about finished in Manitoba. The weather continues fine.

Utilizing the wastegases from a battery of boilers is accomplished at some Fall River mills by forcing air through pipes in the flue connection, where it is heated and then forced to heat the mills. The device has been very successful.

European railroads are fenced in and have no grade crossings, the engines have neither bell nor headlight, and the engineer must stand. Freight cars are open cars, and goods are covered by canvas. Brakemen and conductors have to stand out in all kinds of weather. Cabooses are unknown.

The Western Lumber Co. have sold out their stock of lumber and are closing up business here. The office will be kept open for the present. Mr. J. D. Kennedy, the manager, is going out on the road for the new company. His coal business will be carried on as usual.—Times, Brandon.

A warrant has been issued for the arrest of H. F. White, the absconding secretary and treasurer of the Walkerville Malleable Iron Works, on a charge of embezzling $2,000. It is said White has been located by Detective Rogers and will be arrested soon.

The idea of an Englishman in patenting a submarine gas stove which will move around under the water, and heat it in a bath tub, has its advantages, but the Yankee would not have gone to work that way. A steam jet thrown into the water from different parts of the tub, but on the outside, would be more practicable, and not so liable to burn the preoccupied bather.—N. Y. Hardware.

At a meeting of the recent Academie des Sciences, M. Granger read a note concerning the production of copper-phosphide. It is known, he stated, that a bar of white phosphorus, immersed in a solution of sulphate of copper, becomes covered with a mixture of metallic copper and phosphite of copper. He then, by causing the phosphite of copper to act on the red phosphorus in the presence of water in sealed tubes at 130 deg., obtained pure copper-phosphide. It is a grey, crystallised powder, recalling, in appearance, plumbago. The substance is easily oxidisable, and decomposes under the influence of heat.

The B. C. Iron Works are kept busy with more than can be accomplished during the usual working hours. Among the work on hand are boilers and engines for a freight boat being built on False Creek, a boiler for the snagboat Samson, and steel buoys for the Marine Department. Capt. Gaudia was in the city yesterday and saw the boiler inspected.—News-Advertiser, Vancouver.

At a conference of British coal owners in London on Wednesday, a resolution was passed that offers of strikers to return to work at their old wages should be refused. The owners believe that the backbone of the strike is broken, and that the desire to go back to work is becoming general. In South Wales and Monmouthshire the determination of the men has been weakened by the increasing sufferings of their families.

N. Y. Ironmonger gives this recipe for cement for stoves: Glycerine and litharge mixed to a paste is recommended for the purpose named. Another recipe is to take equal parts of sulphur and white lead with about a sixth of borax, incorporate them so as to form one strong, homogeneous mass. When going to apply it, wet it with strong sulphuric acid, and place a thin layer of it between the two pieces of iron which should then be pressed together.

Ald. Bell's special Manufacturers Committee has passed a resolution recommending the City Council to exempt the land and buildings of the Toronto Glass Co. from taxation for 10 years. Manager Wilton, of the company, waited upon the committee and guaranteed that the company would operate its works eight months in the year and employ at no time less than 35 men. A site has been purchased and a building is in course of erection.

In the cold air freezing machines now employed on board ships for the transport of meat from Australia, New Zealand and America the meat is placed in large chambers, the walls of which are double, the interspace being filled with wood charcoal as a non-conducting material. A jet of intensely cold air is delivered into the chamber at each stroke of the piston of the expansion cylinder, and the temperature of the chamber is thus kept at or near the freezing point during the whole voyage.

The New England vessel owners are reported to be contemplating the laying up of coal vessels aggregating from 200,000 to 250,000 tons of coal-carrying capacity, in order to regulate coast-wise freight rates on coal, so that a dividend may be earned, which, from the low rates ruling for the past four weeks, has been an impossibility. This action will materially reduce the amount of tonnage from which Baltimore, Philadelphia and Newport News shippers have been accustomed to draw.

At a recent meeting of the French Society of Physical Science, M. Hurmuzescu showed the following experiment: A metallic wire through which a continuous electric current is run is placed horizontally in a glass tube containing gas, either at the ordinary atmospheric pressure or rarefied. As soon as the wire becomes red hot it begins to vibrate in a vertical plane and the containing tube becomes much hotter at the bottom than at the sides. This fact has not been satisfactorily explained by the discoverer.

Some English gas companies are adopting the use of a new automatic gas meter by which gas is sold to consumers by a penny-in-the-slot plan. Some 5,000 of these meters are now fixed in Liverpool, and are said to be very popular. They are gratuitously supplied to any house, and by dropping a penny in the slot twenty-five feet of gas can be obtained, or sufficient to supply one burner with a good light for five hours. The system is to be introduced into Ipswich and other towns, and it is believed that it will have the effect of inducing small householders to adopt gas for lighting and heating purposes in preference to any other medium.

The tercentenary of genial Old Izaak Walton is of special interest to all readers of this journal, writes Vulcan, in Ironmonger, for although the Father of Angling is generally described as being a mercer, he was in reality an ironmonger, and so described himself in the marriage register at Canterbury. In further proof it may be mentioned that Izaak was a member of the Ironmongers' Company. The three-hundredth anniversary of his birth was celebrated on August 9th, and his memory will ever be held in grateful odour by all the brethren of the gentle craft. With such a "lead" ironmongers ought to be the principal ministers to the wants of all who use the rod and line.

A recent English improvement in the construction of sight-feed lubricators prevents the dispersion of the oil by the steam in the event of the sight glass becoming broken, says an exchange. The improvement consists in forming a cone mouth at each end of the sight glass in which a suitable ball is provided, and which forms a valve at each end of the glass. Should the glass become broken and the pressure within released, the balls are forced into the cone, and so automatically close the valves. With a lubricator formed with more than one sight tube, this invention will provide for stopping only a damaged tube while leaving the others entirely unaffected.

Artificial noses are now made of aluminum, and they are so perfectly shaped, colored and adjusted as to defy detection. The aluminum is first covered with some light cloth—muslin generally—and is then painted, and the color of the skin is so closely

GUN POWDER

American Dead Shot. Schultze Smokeless.

H. S. HOWLAND, SONS & CO.,

Sole Agents for Canada.

37 Front Street West, Toronto

Linseed Oil,
Turpentine,
Castor Oil

PREPARED PAINTS

White Lead,
Coach Colors
Putty, etc.

14, 16, 18 and 20 Pearl Street, TORONTO, ONT.

The Toronto Lead and Color Co., Limited

adhered to that it is impossible to tell which is the false nose and which the true until you pull it. The materials formerly used for this purpose were vulcanite, wax, celluloid, wood and porcelain, but for many reasons aluminum is the superior of them all, it being lighter as well as stronger. Aluminum ears have become quite as fashionable as aluminum noses.

The will of the late Charles Gurney of Hamilton has been entered for probate. The estate is valued at $453,885.93. The personal property is valued at $439,135.93, comprised as follows : Household goods, $2,000; horses, $150 ; horned cattle, $75 ; book debts and notes and half interest in the assets of the late firm of E. & C. Gurney, $148,054,93 ; bank stock and other stocks, $288,075 ; cash in hand, $581; carriages, harness, etc., $200. The real estate amounts to $14,750, and comprises a half interest in Dundas real estate, $1,500 ; half interest in Lindsay real estate, $1,750 ; half interest in Hamilton real estate, $3,500 ; part of lot 13, third concession of Barton, $8,000. Mrs. Charles Gurney, the widow, receives $158,000, including the house and furniture, and the remainder of the estate is divided into three parts, of about $98,500 to each part. One part goes to the Carscallen boys, one part to the son Charles Gurney and family, and the income of the other third goes to the son George Gurney for life, and after his death the share will be divided equally among the three Carscallen boys and the children of the son Charles Gurney.

We quote from an exchange the following strong testimonial for aluminium cooking utensils, the writer being a metallurgist of some note : Speaking from an actual experience of two years with aluminium cooking utensils, I can state unreservedly that in point of lightness, cleanliness, durability and all-round adaptability to their purpose, they leave nothing to be desired. They are the perfection of cooking utensils. As to durability, let me cite an instance : Two aluminium boilers have been used in our kitchen for cooking all sorts of foods in all sorts of ways, preserving, stewing fruit, etc., for two years. They have been used, washed, rubbed once, twice or three times a day for that time. They look as good as they did a week after we received them. Weighed on March 14th, 1892, they weighed 1 lb. 12½ ozs. and 1 lb. 11 ozs., respectively. Weighed recently on the same scale they turn it to exactly the same weight, not a fraction of an ounce less. They both look good for many years' service.

The Japanese Government has for some years past projected the establishment of a steel foundry. Up to the present there has been only one such foundry in Japan—namely, that at Sakai in Izumi Province, which was established by Mr. Moriyama Moriyuki, ex-Director of the Osaka Mint, in 1889. The steel manufactured at the foundry is said to be of the best quality, but its proprietors have so little capital that they cannot extend the works. The original hope was to manufacture sufficient steel for the construction of men-of-war and arms for the military and naval services, so as to dispense with the use of imported steel. Several Japanese noblemen have now taken up the matter, with the result that a foundry is now being built in Osaka for the Japan Steel Manufacturing Company, who are procuring the latest improved machinery, and propose to manufacture five different qualities of steel from native ores.

Stick to no salesman who knows so little as to "stick" you.

Don't solicit orders for goods you know you cannot furnish, or your flow of eloquence may be dammed next time.

NEW METHOD OF CASTING STEEL INGOTS.

At the Nykroppa Ironworks, in Sweden, a method of consolidating steel ingots, by subjecting the freshly filled mould to pressure developed by centrifugal action, has been introduced by the manager, Mr. L. Sebenius. The apparatus consists of an upright shaft in the centre of a cylindrical casting pit, carrying a frame of four arms, to each of which is articulated a platform supporting four ingot moulds. While the shaft is at rest the moulds are upright, and are filled in the usual way, but when it is set in rapid rotation they fly up into the horizontal position, and a pressure in the direction of the length of the ingot is developed equal to 30 times that due to the column of liquid metal in the mould, which drives the gases out, and produces a perfectly solid casting. Uniformity of composition is also induced, as on account of the rapid cooling liquation is prevented. The process, which has now been in use about two years, has been applied to both the Bessemer converter and to the open-hearth furnace. The ingots are free from external defects, and the loss by defective ends has been diminished 40 per cent., the metal being so compact as to bear rolling to finished sizes without the use of the cogging mill. The cost of the apparatus is about £400 for a 3-ton and £800 for a 10-ton charge.

An article on the method appeared recently in Stahl und Eisen, but no details of the apparatus are given, except in the accompanying figures, from which it appears that the circumference described by the bottom of the moulds, when spun up into the horizontal position, is about 67 ft., corresponding to the working speed adopted of 125 revolutions to a velocity of nearly 10,000 ft. per minute. The pressure on the mould taken at 30 times the depth of the ingots, will be about 150 ft. of iron or from 500 lbs. to 600 lbs. per square inch. In the form of the aparatus intended for smaller ingots the moulds are arranged on an inclined position and radially to a central fixed vertical feeding tube upon a turntable, which is set in rotation after filling, or the latter operation may be performed while the table is actually in motion.

The second notice contains figures of a modification of the apparatus, in which the rotating table, being smaller in diameter than that previously adopted, can be driven at a higher speed, up to 200 revolutions per minute. There are eight pivoted moulds, each divided by internal walls, so as to give nine small ingots suitable for wire billets or thin sheets. By means of a central annular funnel lined with refractory material, and provided with eight feeding spouts, or one for each group of moulds, the whole number of seventy-two ingots are cast by a single pouring from the ladle, which contains from 4 to 6 tons of steel.

A STEAM BICYCLE.

A steam bicycle constructed on novel principles, says a contemporary, is the invention of Koonrad von Meyenburg, a student of the Royal Polytechnic School, of Dresden, Saxony. He has applied for patents on his bicycle in Germany, England and the United States. In his opinion as reported in a New York journal, it will come into general use on long distance riding, as it can be run, he says, an average peed of 12 to 14 miles an hour and the cost of fuel is a trifle. A bicycle fitted with the steam apparatus will weigh about 80 pounds and will cost about $100 more than the ordinary safety machine. The steam is generated in a boiler of galvanized iron, having an abestos jacket suspended between the wheels. The wet steam is super-heated through a long circular tube within the boiler. The steam then passes to the propelling machinery which is covered by an air and water tight rubber pouch on each side of the rear wheel. Circular crank shafts, directed by side bars on an original principle, give the speed, which can be checked or increased at will. The machinery is controlled as simply as by the same motion of the hand as the ordinary brake. The fuel used is petroleum or benzine, which is contained in a tank above the forward wheel. Enough can be carried to heat the boiler for three hours. From the tank the oil passes through a tube to a lamp beneath the boiler. The steam supply is practically inexhaustible, as it is returned to the boiler through condensers arranged in rows on each side of the back wheel.

ELECTRICAL PLUMBING.

Some time ago we called the attention of plumbers to the fact that their trade might be augmented and a very profitable line of work engaged in by the introduction of the electrical wiring of houses in their business. While this is not now a novelty in the plumbing trade, it is, notwithstanding, somewhat unusual to find plumbers in this country who have studied up the matter of electricity and its practical application sufficiently to enter into the work of wiring houses for annunciators and electric bells, &c. We believe that those enterprising master plumbers who have taken up this branch have been more than repaid for the trouble and work it has cost them, and we know that the practice is becoming more general, particularly among the younger members of the craft, who are ambitious and who are not afraid of hard labor. It will be an incentive to those progressive members of the craft to learn that some of their brethren abroad have gone ahead in this matter, It is natural that in the larger European cities where there is much electrical work done that there should be craftsmen equipped for the business, but it is somewhat of a surprise to learn from a recent issue of a local paper published in the island of Malta that the combination calling of electrician and plumber is there practiced by T. J. Paterson. In his announcement Mr. Paterson says that he has just received an extensive assortment of electrical goods and is prepared to fit up electrical appliances and keep them in order by contract for the year.—Iron Age.

HOW A TRADE PAPER HELPS.

A successful manufacturer, says an exchange, when asked why he patronized trade papers so largely to the neglect of other methods of advertising, replied : " Men who do not read their trade papers and keep posted in their business are usually poor customers. If I sell them a good lot of machinery they do not know how to use it and report it a failure, or, we have to run after them, lose time and money to get them a-going, and make the sale stick. But those who read and are posted know how and succeed Such men would not read circulars if I were to mail circulars to them. They see my 'ad. regularly in the trade paper and know I have an established business, and when they want anything in my line write me, and don't whine about price or what time they can get from others, buy, try, and have no trouble, and pay the bill. Give me such a class of customers as I get by such judicious advertising all the time." His experience is that of successful merchants. The trade paper keeps its readers in touch with the times ; with the currents of trade and commerce, it puts money in his purse in many ways. It is a preventive against sloth and rust. It helps develop the best side of a man's commercial life.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOT NAILS, ETC.
Hamilton. Ontario.
SP

RAZORS, SCISSORS
POCKET KNIVES


TABLE KNIVES
BUTCHER'S KNIVES

THE DISCOVERER OF STEAM POWER

The magazine Invention tells the painful story of Solomon Caus, a Normandy scholar who lived in 1576 and thereafter, and wrote many scientific works, all of which led up to his conception of an idea which resulted in the transformation of his whole life into a tragedy. After pestering the King and the Cardinal at Paris, he was ordered to be taken to Bicetre, the madhouse, and there shut up. This was done. They had just one way with mad people in those days. They shut them in iron cages and fed them through the bars like wild beasts. They did this to Solomon Caus. For a long time he stood behind those bars all day and called to those who would listen, and to them repeated the story he had told the Cardinal. He became the jest of the place. Some of them gave him writing materials, and then, amid the misery of his surroundings, he wrote down his ideas and amused his gaolers so much the more. However, it could not be long before such a life, such surroundings, would shatter any brain. In time Solomon Caus was as mad as every one believed him.

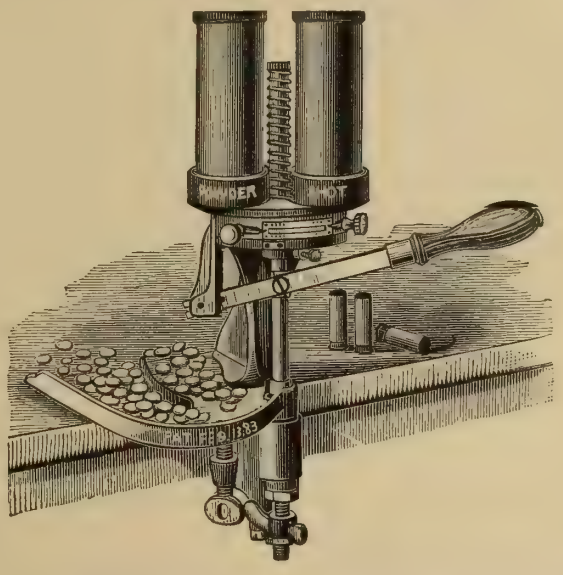
It was in 1624 that an English nobleman, Lord Worcester, went to Paris and visited Bicetre. As he was passing through the great court, accompanied by the keeper, a hideous face with matted beard and hair appeared at the grating, and a voice shrieked widly, "Stop! stop! I am not mad, I am shut up here most unjustly. I have made an invention that would enrich a country that adopted it." "What does he speak of?" the marquis asked his guide. "Oh, that is his madness," said the man, laughing. "That is a man called Solomon Caus. He is from Normandy; he believes that by the use of the steam of boiling water he can make ships go over the ocean and carriages travel by land; in fact, do all sorts of wonderful things. He has even written a book about it which I can show you." Lord Worcester asked for the book, glanced over it, and desired to be conducted to the cell of the writer. When he returned he had been weeping. "The poor man is certainly mad, now," he said; "but when you imprisoned him here he was the greatest genuis of the age. He has certainly made a very great discovery.

After this Lord Worcester made many efforts to procure the liberation of the man, who, doubtless, would have been restored to reason by freedom and ordinary surroundings, but in vain; the cardinal was against him, and his English friends began to fancy that he himself had lost his senses, for one wrote to another, "My Lord is remarkable for never being satisfied with any explanations which are given him, but always wanting to know for himself, although he seems to pierce to the very centre of a speaker's thoughts with his big blue eyes that never leave theirs. At a visit to Bicetre he thought he had discovered a genius in a madman, who declares he will travel the world over with a kettle of boiling water. He desired to carry him away to London that he might listen to his extravagancies from morning to night, and would, I think, if the maniac had not been actually raving and chained to the wall."

Thus, In Bicetre died the man to whom, after his works were published, many people gave the credit of being the discoverer of steam power, and it is said that from the manuscript written in his prison, Lord Worcester gathered the idea of a machine spoken of as a "water-commanding engine," which he afterward invented. Historians have denied that Caus died in prison, but there exists a letter written by Marion de Lorme, who was with Lord Worcester at the time of his interview with Caus, which establishes the fact beyond doubt.

BEATING A RIVAL.

A traveling man tells in a contemporary this story of how a salesman got ahead of his competitor. There is a man by the name of Crow, he says, who makes a stove polish and calls it "Crow Stove polish." He travels through the country with a fine wagon, drawn by a handsome black team, and on the top of the wagon he has several crows. The whole wagon is covered with mirrors and gilding and makes a very attractive turn-out. He gives away samples and tells the recipients they can get the polish at any store in the town. After he gets through advertising it, he goes around to the stores and takes his orders. While he was in Greenville, another stove polish man came to town. After sizing up the situation, he says to the boys around the hotel: "If I expect to do any business here I will have to get a hustle on myself before Mr. Crow gets through his advertising." So out he started. At the first store he struck he told the proprietor that he was selling stove polish. "Yes," the man said, "you have a very fine turn-out." The drummer saw at once that the storekeeper took him for the Crow polish man. He immediately decided to make capital out of Mr. Crow's advertisement, and going from store to store he allowed every merchant to think he was Crow's representative, sold each one a good bill and had him sign the order to make it hold. Before the other man had finished his circus business, drummer No. 2. had left town with his pocket full of orders. When Mr. Crow entered the first store, he was informed that his man had been given an order that morning. He was thunderstruck, but soon found out how he had been tricked and was good natured enough to appreciate, even if he did not really enjoy, the joke.



THE RAPID MACHINE LOADER.

H. S. Howland, Sons & Co., of Toronto, are putting on the market "The Rapid Machine Loader," a cut of which is herewith produced. It is held to be unexcelled for rapidity, accuracy, and simplicity. Wads seated with even pressure, adjustment of charge guage and powder, shot and wads changed in one minute. The Rapid Loader is cast iron, with handsome black japanned papier mache magazine.

IT HAS DONE MUCH NOW.

Science will yet achieve, says a Pittsburg writer, the reduction of aluminum to a cost which will substitute this wonderful metal in place of steel, silver, iron, copper and what not! Science is at work on this, and if successful, as it must be, its fabulous results will accomplish for the next century what steam and electricity have done for this. With its inexhaustible deposits the solution of the question of its cheap production will, in a few years, give us aluminum vessels, houses, railroad cars, street cars and heaven knows what not. It is only a question of time before the inauguration of the aluminum age, and when it comes the world will have made the same stride in progressive science that it did when it harnessed steam and buckled the belt of electricity around the globe to do the work of the world and measure itself to the use of man.

VIEWS AND INTERVIEWS.

"Turpentine is coming into us in bad shape these days," remarked Mr. P. J. McNally, manager of the Toronto Lead and Color Co., to me Thursday. "The trouble is in regard to leakages. I have just been figuring," he added as he picked up a label which showed evidences of some mathematical work, "and I find that on each of the six barrels I just had weighed there is a shortage of about ten gallons, or sixty gallons in all. Taking the whole car load I should fancy there would be at least a loss of ten per cent. to us. This spoils our little profit I can tell you. And we're not the only sufferers. Other houses are complaining. The trouble is the stuff has been too long on the way. Here," he added as he turned up an almanac, "our oil was shipped from Savannah July 25th and it did not get here till August 24th, or a month afterwards. This is about two weeks longer than it should have taken; and I suppose that during the most of this extra time it has been lying around at some station or in a hot car without the hoops being tightened. It is really too bad," concluded Mr. McNally; and I agreed with him.

"There's a nice thing we're now offering to the trade," remarked Mr. Williamson, one of Samuel, Benjamin & Co's salesmen, as he pointed to an attractive case of dessert knives and forks. "The feature about them is that the handles are of black stag horn. The blades are of the usual high-finished character, while the case is of walnut. A very pretty thing, isn't it. 'Twould make a nice present for your wife, wouldn't it?" he added with a laugh.

Mr. E. Samuel of M. & L. Samuel, Benjamin & Co. has returned after a week or so's absence from the city. He was as far east as Montreal and from thence took a run across to Saratoga. Mr. Samuel was on business bound as well as pleasure. When he is abroad he keeps an observing eye open, and when I asked him the result of his observations, he briefly replied: "Well, I found the situation in the United States improving. The banks are opening up, and confidence seems to be gradually being restored. But it will be a long time yet before the old condition of affairs again prevails. English capitalists are keeping off and are turning their attention more to Canada, which they recognize is now a better field for investment. Yes, the Americans have been taught a bitter lesson and it is to be hoped they will profit by it.

"There's a nice thing," remarked T. G. Dexter, of H. S. Howland, Sons & Co., as he led the way to a large pile of packages, opened one of them, and drew out a pair of hair clippers. "Now, there is a clipper that is new on this market, and we are the agents for Canada. It is named the 'Perfection,' which you see is stamped on the handle. It is manufactured by Boker & Company, of Germany, and is an exact pattern of the Browne & Sharpe American clipper, but it will sell for about one-half less."

"Yes," chimed in H. D. Heming, one of the firm's travelers, "and did you notice that two extra springs are furnished with each clipper?" BYSTANDER.

REGARDING STEAM JACKET.

On steam engine efficiency is still a subject of speculation, remarks Power. In some tests which have been made under as nearly as possible indentical conditions it appeared to make little if any difference whether the jacket was used or not. As a general thing, however, the saving effected appears to be sufficient to warrant its use. It is a noticeable fact that English engineers appear to have better success with the jacket, if their published tests are correct, than is attained in our own practice, reports showing an increase of efficiency of twenty per cent. or more by its use. Their jackets condense a larger percentage of the total steam consumed than ours do, a condition essential for their superior efficiency. At the same time, when it comes to a question of absolute efficiency the American engine is in the lead. Can we further improve our efficiency by a better understanding and application of the jacket, or does greater jacket efficiency imply a sacrifice at some other point in the design?

QUACKERY IN PLUMBING.

Much complaint and ill feeling says a contemporary has arisen among plumbers in consequence of the inability and irresponsibility of some among the profession, who, it is said, figure so closely on contract work as not only to deprive the first-class plumber of a just compensation for his services, but to exclude altogether the possibility of strictly first-class work and material. That this state of affairs really exists, there is little doubt, and that some steps should be taken, either by the master plumbers themselves or by the architect, to remedy such a justifiable grievance, public safety demands. Plumbing is a business and must be conducted on business principles, but at the same time it should be remembered that this profession, on account of the dangers to health which lie in the water supply, drainage and sewerage, occupies a sphere of vital interest to the public in general.

The incompetent plumber need not hope to acquire beneficial notoriety among our architects, and contractors by securing an immense amount of work at prices too low for profit, neither can he hope to win general favor by using second class material in occult places or by curtailing or departing in any degree from the plans and specifications.

The plumber should be a master of every detail of his business, and receive proper compensation for the care bestowed on his work. In figuring on contract work, not a few instances have occurred where the estimates differed almost one hundred per cent. and gave positive evidence of inexperience and quackery. An unsanitary state in any community not only produces sickness, but gives rise to epidemics of a most destructive kind, and it is therefore the duty of every owner to see that none but first class workmen are engaged to do the plumbing. The builder can better afford to spend a few extra dollars on the plumbing than on any other part of the residence, and since plumbing is a necessity to buildings, there is no reason why prices should not be kept up to a living standard.

FACTS ABOUT METALS.

Galena, or lead ore, always contains silver in greater or less quantities.

Copper is said to be found in over 16,000 localities in the United States.

The world's coal fields already known and worked contain coal enough to last for a thousand years.

By improvement in machinery, one man now raises more ore than four men could in 1800.

In 1889 the United States produced 103,000 tons of refined copper, nearly one-half the world's yield.

The United States leads the world in the production of iron, in 1890 producing 18,000,000 tons of ore and 9,202,703 tons of pig iron; Great Britain coming next with 13,000,000 and 7,904,000 tons respectively.

The mines of the world produce every year 540,000,000 tons of ore, etc., of which the United States produces 160,000,000 tons.

In the eighty-eight years from 1800 to 1888 the world mined 7,942 tons of gold, 95,559 of silver, 84,900,000 of copper, 34,600,000 of lead, 31,500,000 of zinc, 1,430,000 of tin, 1,273,000,000 of iron, and 10,601,000,000 of coal.

Spain is one of the principal copper-producing countries.

The tin production of the world in 1891 was 69,963 tons.

The annual production of gold and silver is about $200,000,000.

The United States produces 35 per cent. of all the lead in the world.

About 60 per cent. of the copper produced in this country comes from the Lake Superior region.

The United States produces 31.4 per cent. of all the iron ore in the world and 34.1 of all the pig iron.

In 1888 the United States produced 160,000 tons of lead; the world 297,000.

The "Longworthy crevice" near Dubuque has produced, it is said, nearly 10,000,000 pounds of lead ore.

The most important lead regions of the United States are in the Mississippi valley, one being a district in Wisconsin, Illinois and Iowa; the other in Missouri.

Canada produces nearly all the nickel in the world.

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TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

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"St. Helens,"
"Lancashire."

BRITISH SHEET GLASS
P.B.

These words and brand are on every box. None genuine without this Trade Mark. We warn our friend against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

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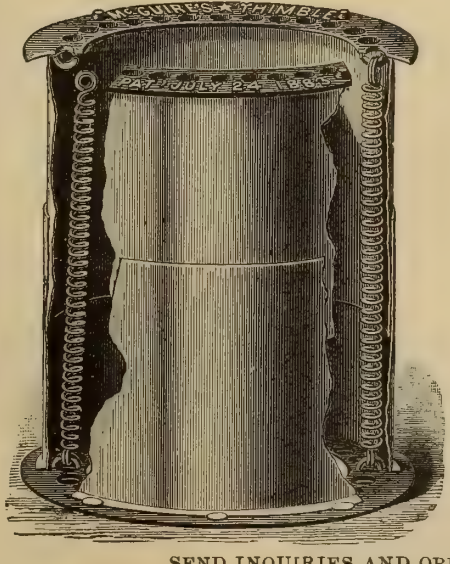
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Best,
Cheapest,
and
Most Durable

The heads are connected by Spiral Steel Springs, whose tension adjusts them to any thickness required.

Made for Six and Seven inch pipes.

Supplied either complete, or Castings and Springs only, as required.

SEND INQUIRIES AND ORDERS TO

THE JAMES SMART M'F'G CO. LIMITED
BROCKVILLE, ONT.

EXCLUSIVE MAKERS FOR CANADA.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Sept. 1, 1893.

HARDWARE.

There have been few new developements this week and business has been seasonably quiet on the whole. There has been a fair sorting trade to note in sporting lines, such as guns, ammunition, etc., but other lines rule quiet. The meeting of the various Iron Makers' Association are being held this week commencing on Thursday with the session of the bar iron and cut nail men, but it is too early yet to say whether any changes will result. In the meantime however buyers are disposed to hold off. In heavy hardware dullness is still predominant and paints, oils or glass do not furnish much feature.

WIRE—Nothing doing and very little enquiry in the matter of future business.

NAILS—The cut nail men meet this week but no one is prepared to say whether any change in the list will be decided upon. At present business is quiet both in cut and wire nails with buyers disposed to hold back.

TACKS—It is said that some re-arrangement of the discount may ensue at the coming meetings. Consequently business is quiet with buyers not in the market so to speak.

HORSESHOES—Trade is dull. The question of the reported cutting in the west is to be considered during the coming quarterly meetings.

CHAIN—No change and no business to report.

CUTLERY—Some fair sorting orders continue to come in which furnish about all the trade there is to note.

SPORTING GOODS—Demand for sporting goods has been maintained, and quite a fair movement has occurred during the week in guns and ammunition of all sorts.

TOOLS—No trade to note of any sort.

BUILDERS' SUPPLIES—Operations generally are not on an extended scale this fall, and business both in plumbing and building supplies is very quiet.

BINDER TWINE—No feature of importance transpires in this line on the absence of business.

WARE—Business is dull, with only a few small sorting orders to note.

NAVAL STORES—A fair demand is reported for stores at about former quotations. We quote:—Turpentine, 45 to 46c.; resins, $2.50 to $5.00, as to brand; coal tar, $3.75 to $4; cotton waste, 5½ for colored, and 7 to 10c. for white; oakum, 5½ to 7½c.; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep-sea line; pure Manilla, 11c. for 7-16 and upwards and 12c. for smaller sizes.

METALS.

The market for pig iron and heavy metals continues dull with the situation precisely the same as reported last week. Buyers show no disposition to operate at all, and business is extremely dull.

PIG IRON—This article remains very quiet, and despite the dull business that we have had very little future business on fall account is anticipated. There is little change of any kind except that owing to the coal strike and stocks are light here. Summerlee is rather stiffer in tone at $18.50 ex wharf to arrive and $19 ex yard. We quote: Summerlee, $18.50 to $19; Eglinton, $17 to $17.25; Carnbroe, $16.75 to $17; Siemen's No. 1, $18, and Langloam, $18.50.

BAR IRON—There is no change to report in bar iron, and the report that prices are being shaded by makers is flatly contradicted. The matter is to be brought up at the meeting on Thursday, but no one believes that any shading has been done. The trade set it down to some buyer who wanted to tempt a seller to cut by showing that he had been offered lower prices.

SCRAP IRON—There is no change in scrap iron, which rules dull and featureless.

TIN PLATES—These are dull but unchanged at $3.20 to $3.25 for coke and $3.75 to $4 for charcoal.

CANADA PLATE—Only a very small trade has been doing at quotations, viz., $2.40 to $2.45.

TERNE PLATE—Business in terne is small, and we quote as before, $7 to $7.25.

GALVANIZED IRON—There is no change to note in this line, which we quote as before, 4½ to 5¾c.

SHEET IRON—Business nil and prices the same, $2.40 to $2.60. Russian, 10½ to 11c.

HOOPS AND BANDS—Dull and featureless at $2.35.

ANTIMONY—Quiet with values nominally the same at 10½ to 12c.

SPELTER—Quotations are not changed and business rules quiet at $4.75 to $5.

ZINC SHEETS—There is no change and we quote $5 to $5.50.

LEAD—There has been some small trade doing on the basis of $2.85 for pig lead.

TIN—Business is quiet with no change to note. We quote 21 to 22c. for ingot and bar tin 23 to 25c.

COPPER—The easiness already noted in this still rules, and we quote prices easy in tone at 11¼ to 11½c. for round lots with smaller qualities at a slight advance.

CEMENT—No change can be reported this week either as regards the condition of the market or prices. The business passing is small. We quote the following: Belgian, $1.85 to $1.95, and English brands, $1.95 to $2.10. Firebricks are in fair demand at unchanged prices, $13.50 to $19 per 1,000 being still the idea.

PAINTS AND OILS.

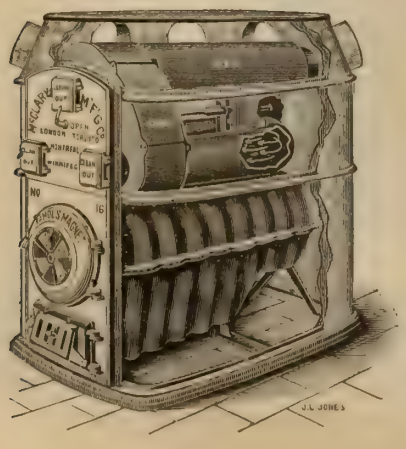
There is no change to report in the lead and paint trade, prices remaining firm at the late advance. Linseed oil continues firm at 60c. for raw and 63c. for boiled, but these figures would be shaded for round lots. We quote: Choice brands white lead, Government standard, $5; No. 1, $4.75; No. 2, $4.50; No. 3, $4.25; No. 4, $4.00; dry white lead, 5c.; red lead, pure, 4½c.; No. 1, 4¼c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, raw, 60c., boiled 63c.

GLASS.

The glass market is dull and unchanged, with prices the same on the basis of $1.35 for first-break. Putty in bulk continues at $1.85.

PETROLEUM.

The market is steady for refined oil under a fair enquiry, and we quote prices as follows: 11½c. in shed at Montreal for Canadian round lots, 12½c. for five-barrel lots, and 13c. for small quantities. American petroleum, 18c. in car lots, 19c in 10-barrel lots, 19½c. in 5-barrel lots, and 19¾c. for



WOOD FURNACE Famous Magnet

NO. 14 AND 16

We confidently ask the attention of the trade to this furnace. Let us send you full particulars regarding it. . . .

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Perfect in Construction and Working Qualities

Have you seen the new cuts of our Combination furnaces. - - - -

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FIRE ARMS. Above is a cut of one of the **Pieper Arms Co.** Guns, which are already becoming well known to sportsmen as being the cheapest thoroughly well fitted guns in the market. We also have a splendid assortment of cheaper grade goods, as well as Rifles, Revolvers, and all ammunition—and **invite inspection.**

MONTREAL Markets Continued.

single barrels, 2 per cent. off for cash ; American benzine, 23 to 25c. ; Canadian benzine, 10¾c. Petrolea, 12¾c. Montreal.

MONTREAL TRADE NOTES.

But small receipts of Summerlee iron are anticipated this fall and with small stocks it is firmer at $18 50 to $19.00. Drummond. McColl & Co. are the agents for this well-known brand.

The various Iron Associations commence holding their meetings on Thursday, when the bar iron and cut nail men will discuss matters that have transpired during the last quarter.

Cables from Great Britain to agents here state that iron manufacturers in England have advanced prices 5s. the ton.

There are reports that bar iron has been cut below $1.95 the Association rate, but makers flatly contradict this. However, the matter will be investigated this week,

Receipts of cement during the week were 6,000 to 7,000 casks.

TORONTO MARKETS.

TORONTO, Sept. 1, 1893.

HARDWARE.

Trade shows considerable improvement this week. This applies to hardware in general. Orders, however, are not as a rule large, but they are numerous and of a sorting up character. If anything the bulk of the trade is on Northwest account. Cutlery is beginning to move off nicely, and a good many orders are being received for sleigh bells, axes, handles, stove boards, stovepipes, coal hods, buck-saws and saw-horses, and in fact for all such lines of fall goods. There is still a little hay-baling wire moving, and there is a fair demand for sisal rope in small sizes. Nails are still selling well, and the trade is beginning to open up for horse-shoes. Cow chain is in good request and a fair business is reported in sporting goods, particularly rifles. An all-round improvement is reported in builders' and tinsmiths' supplies. There are some spades and shovels moving, and a brisk trade is doing in grain scoops. Payments show considerable improvement.

WIRE—There is nothing doing except in 14 and 15 hay baling wire which is still moving although in small quantities.

ROPE—Quite a demand is reported for sisal rope in ⅜, ½ and ⅝ inch sizes, at unchanged prices.

BINDER TWINE—A few orders are still being received, but the trade, as already noted, is practically over for the season.

CUTLERY—A good many nice orders are being received for cutlery, but the trade as a rule is buying cautiously.

NAILS—Demand for wire and cut nails continues steady at unchanged prices.

HORSESHOES—Trade is just beginning to open up in this line.

TACKS—The usual trade is being done at unchanged prices, and there are no features to note.

CHAIN—Cow and halter chains are in good request, but in coil chain there is practically nothing doing.

SPORTING GOODS—A good many orders are being received for ammunition, guns and rifles, particularly the last named, which are selling in larger quantities than usual.

APPLE PARERS—A fair movement is still reported.

WARE—There is not a great deal doing. In peerless ware, about the only thing for which there is any sale is kettles, and there is just a little enamelled ware going out.

PLUMBERS' SUPPLIES—There is no improvement in this line, trade continuing quiet.

TINSMITHS' SUPPLIES—A good many orders are being received for tinsmiths' outfits, and stovepipes, stove boards and coal hods are in good demand for the fall trade.

BUILDERS' SUPPLIES—There is a fair demand on country account, and trade in the city shows some improvement, although in the latter instance business is still light. Plain and tarred building paper and felt are selling well.

TOOLS—Quite a number of grain scoops are going out, and there is a little business doing is spades and shovels.

METALS.

The metal trade remains without material change. Pig iron is as dull as ever, and outside a few special brands there does not appear to be anything doing. Bar iron is still holding its own, and there is a good demand for iron pipe of certain sizes. Ingot tin is weak and ingot copper dull. Antimony shows some improvement. Other lines remain much as before.

PIG IRON—Business in this line continues in a demoralized condition. In fact there is no business except it be in a few special brands.

BAR IRON—Quite a number of enquiries are heard, and there have been some car-lots moving. The basis is still $1.95.

HOOPS AND BANDS—Dull, with prices unchanged at $2.50 to $2.60 for 1-inch and upwards.

IRON PIPE—There is a good demand for sizes running from 6-inch downwards. Some good orders have been filled for pipe for buildings in course of erection.

CORRUGATED IRON—Some good sales are reported for roofing at $4.75 to $5 for small lots. Quantities could be obtained at lower figures. The "Owl" brand is quoted at $3 to $4 per square for patented and $4.25 to $7 for galvanized, according to gauge.

GALVANIZED IRON—A good trade of a sorting-up character is being done. Orders are being booked for fall delivery, and the supply is sufficient for the demand. Queen's Head and Gordon brands are still quoted at 5 to 5¾c. for small lots.

INGOT TIN—The market is a little weaker outside, but there is no change here. There is the usual business doing.

INGOT COPPER—Several big orders have been filled, but trade is on the whole quiet.

SHEET IRON—Some fair orders for light guages are reported at 2½ to 3c. for small lots.

ZINC SHEET—A fair trade is doing and some enquiries for large lots are heard. The season's trade is now opening. For small lots the idea is still 5¼ to 6c. for 5-cwt. casks and 6 to 6¼c. for part casks.

TIN PLATES—There is the usual demand at unchanged prices.

RUST PROOF

Eastlake Steel Shingles

When you visit Canada's Great Fair you can see them on the Grand Stand, and nearly all the new buildings. . . . .

. . Sole Manufacturers . .

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84 to 90 YONGE ST.,

Send for Catalogue. **TORONTO**

TERNE PLATES—Dull, with prices nominally as before.

CANADA PLATES—Trade in this line is active and some large quantities are going out. Prices are unchanged, all dull, being quoted at $2 65, half-half at $2.75, and all bright at $2.80 to $3 per box for small lots.

SPELTER—In this line there is practically nothing doing. Prices are unchanged at 3¾ to 5¾c.

SOLDER—Demand is as usual and prices unchanged at 15½ to 16½c. for half and half and 14½ to 15½c. for standard.

ANTIMONY—There is a little better enquiry. For small lots we still quote 12 to 12½c. for Cookson's and 11½ to 12c. for common.

LEAD—Trade is quiet in this line, and prices still range from 3¼ to 5c., according to brand.

PAINTS AND OILS.

Trade is fairly brisk but payments do not seem to be as satisfactory as a week ago. Linseed oil is still occupying the most attention, the demand for it continuing good at 60 to 62c. for raw and 63 to 65c. for boiled. There is also a fair demand for white lead at the 5c. basis. Turpentine is dull at 44 to 46c. Neither is there much doing in varnishes. Castor oil is fractionally lower at 7⅞ to 8c., and trade is quiet. Prepared paints are not much wanted. In glue there is the usual steady trade.

GLASS.

Trade continues brisk at the basis of $1.25 to $1.30. Stocks are ample and fresh shipments are arriving. A fair and increasing trade is reported in plate glass.

OLD MATERIAL.

There is no change in old material since last report, although prospects are a little brighter. Prices are unchanged. We quote as follows: Agricultural scrap, 60c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 35 to 40c. per cwt.. No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs. ; borings and turnings, 10 to 15c.

PETROLEUM.

The Petrolea Advertiser, in its weekly report, says : There is practically no official price for oil these days, nor will there be until producers come to their senses and place their crude on a legitimate market. As

MARKETS—Continued.

near as we can get at it crude is worth $1.07 per bbl. Refined may be quoted at 10 cents f. o. b. here in car lots.

Trade continues good on the Toronto market, and there is no change in prices. We quote : 5 to 10 bbl. lots, imperial gallons, Toronto ; Canadian, 12½ to 13c. ; carbon safety, 16½ to 17c. ; Canadian water white, 17c. ; American water white, 18½ to 19c. ; photogene, 22c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—Remain much the same, although a change will likely be made to-day. Dealers are paying 4c. for No. 1 local hides and 3c. for No. 2.

SKINS—Are improving and the outlook is brighter. Lambskins and pelts are running at 50c., showing an increase of 5c. on lambskins and 20c. on pelts. Calfskins are also looking brighter, although prices are unchanged, at 6c. for No. 1 and 5c. for No. 2.

TALLOW—There is not much change ; buyers are paying 4¾ to 5c. and 5½c. for select quality.

WOOL—The market seems to be on the downward tendency and little or nothing doing in fleece. We heard of one instance where a blanket mill paid as high as 18c. for selected combing, but these sales are few and far between, the regular price being 17c., and 18 to 19c. for clothing wool.

MARKET NOTES.

The Canada Screw Co. of Hamilton is now carrying stock in Toronto.

Another consignment of Boker's razors has just been received by H. S. Howland, Sons & Co.

The Consolidated Plate Glass Co. of Canada, Ltd., which moved into its new quarters in Wellington Street, Toronto, report an increasing demand for plate glass.

H. S. Howland, Sons & Co. are in receipt of a consignment of several hundred dozen of cow chain, and by next week they expect to have all orders received up to date filled.

The miners' strike in South Wales, if it continue, seems likely to interfere with the manufacture of tin plates, and the works, therefore, are buying very sparingly of tin.

H. S. Howland, Sons & Co.'s travelers report large sales of Ager & Rich's horse rasp, and that it is preferred by some to any other make.

M. & L. Samuel, Benjamin & Co. are showing a new fancy stove board which promises to take well with the trade. The design is handsome and the coloring more than usually striking. A number of orders have already been received for it.

The Metallic Roofing Co. has recently completed, among other contracts for roofing, A. Campbell's warehouse, Toronto Junction, with Eastlake steel shingles and siding the same with Manitoba steel siding ; McKay & Guests' elevator, Renfrew ; D. McWilliam's residence, Hillsburg ; John Hardy's residence and stock barns, Ashgrove.

At a meeting this week the Scotch miners decided to demand another shilling per day advance, and it is expected that in view of the further increase in cost of fuel likely to follow, more pig iron furnaces will be damped down. This has induced some buying of warrants, and the price of Scotch has advanced during the past two days about a shilling per ton.—Metal Market Report, Aug. 29.

The advance in London caused a much firmer feeling to prevail in the local market, and although transactions on first call were limited to one sale of ten tons for Sept. 1st delivery at 19.30, there were bids in market for round lots at 19.35 to 19 40, which failed to result in business. Thus far in the present movement the Bulls have been able to move the market up steadily at the rate of ten points a day without being obliged to take any very large quantity of tin, and the impression is gaining ground that they have now a better control of spot stuff than at any previous time. We look for much higher values in the near future, and should not be surprised to see 20 cents the bid price for spot stuff very early in the ensuing month.—N. Y. Metal Market Report, Aug. 30th.

AMERICAN MARKETS.

New York, September 1, 1893.

COPPER—It is understood that about 5,000,000 pounds of copper, including Lake Superior ingot, electrolytic, and casting stock, have been sold during the past few weeks to exporters. The presumption is that the copper will be sent to Europe. This movement serves to relieve the weight of late accumulated surplus stocks, and thereby steadies the market in some degree. Home consumers are very indifferent buyers, however, because of the dull condition of the market for their products, and take little or no stock beyond what may be needed to satisfy well-defined or almost certain wants. The extreme range of quotations on Lake Superior ingot was 9 1-2 to 9 3-4c. The inside rate may be considered strictly exceptional, if, indeed, not an imaginary price, since bids of 9 5-8c. for full 500,000 pounds were turned down. Similar irregularity was noted in the instance of electrolytic copper, some sales of the same having been made recently at as low as 9c., against popular quotations of 9 1-4 to 9 1-2c. On casting stock the range is still 9 to 9 1-4c., according to brand.

PIG LEAD.—Light supplies on the spot and continued reserve in the offering by smelters still figure as prominent factors, and serve to hold prices very stiff. The demand did not appear to be particularly brisk, but it reflected rather more buying interest than has been manifested for a week or ten days past, and more general confidence in late reports as to the strong statistical position of the market. At least 100 tons were sold at 3.70c., but at the close 3.75c. was generally asked, and comparatively little lead offered for delivery during the next thirty days. The London market, according to quotations by cable to the Metal Exchange receded to £9 15s. for Spanish, presumably under the weight of quite heavy arrivals there during the past three or four weeks.

SPELTER.—Moderate sales were reported at 3.65 to 3.70c. for ordinary, and 3.95 to 4c. for choice Western brands, delivered here or at common point. Generally speaking, the situation is no better than it has been previously this month, since buying is almost wholly on hand-to-mouth lines, while the offering is fairly large for both prompt and near future delivery. London cable to the Metal Exchange quoted an advance to £16 17s. 6d. for good merchant brands.

ANTIMONY.—The situation is without visible change. Dealings are still chiefly in moderate sized lots at all events, and prices do not go much if anything above 9 3-4 to 9 7-8c. for Hallett's, 10 3-8 to 10 1-2c. for LX and similar brands, and 10 1-2c. for Cookson's, in round lots.

TIN PLATE.—Demand for spot goods was again of strictly commonplace nature, and sales were confined almost wholly to small lots for prompt shipment. Ordinary Bessemer cokes, full and light weight, were quoted a shade lower, and on other varieties former figures were repeated, although the undercurrent was unmistakeably soft nearly all along the line. In future deliveries the interest is tame, and for the most part buyers and sellers are a wide margin apart on prices and terms.

PERSONAL MENTION.

G. Hagerman of Zephyr, was in Toronto this week doing a little sorting up.

James Chalmers of St. Mary's, was noticed touring the warehouses this week.

Mr. E. Samuel of M. & L. Samuel, Benjamin & Co. has returned from a business and pleasure trip to Montreal and Saratoga.

Mr. Henry S. Herget of Samuel, Benjamin & Co. is back from his holidays, sunburned and well pleased with his visit to friends in Berlin.

BLACKING FOR SHEET IRON.

The simplest method to blacken iron, says an exchange, is to heat it with oil, especially linseed oil. The objects are first rubbed or painted with oil and then heated to such an extent that the oil is burned off. The surface produced in this manner is coal black and gives the objects a black coloring which will withstand the highest temperature. After the application is thoroughly dried the objects can be rubbed with benzine or with a solution of soda.

In order to procure a black asphalt lac for iron, melt 8 pounds of asphalt in an iron kettle, gradually adding 12 pints of cooked linseed oil, 1 pound of litharge, and ½ pound of sulphate of zinc. The whole mixture should be allowed to boil for three hours. Finally, 1½ pounds of black amber is to be added and the mixture carefully boiled for two hours longer. It is advisable, previous to using this mixture, to thin it somewhat by the addition of oil of turpentine.



TRIUMPH PATTERN

Orange Spoon

We have a complete line of above pattern in stock. All flat ware stamped "Toronto Silver Plate Co.," is hand burnished and guaranteed as to quality.

Toronto Silver Plate Co.

Manufacturers of Sterling Silver and Electro Silver Plate.

FACTORIES AND SALESROOMS :
570 King Street West, TORONTO, ONT.

E. G. GOODERHAM, Manager. - - - JNO. C. COPP, Sec.-Treas.

CURRENCY AND THE IRON TRADE.

At a conference of the iron and steel industries, held recently in London, Sir William Houldsworth, M.P., read a paper on "The Present Depression in the Iron Trade as affected by Currency Questions." Sir William began with some figures to show the course of prices from 1846 to 1892, and drew from them the following conclusions—that good and bad harvests, speculation, inventions, changes of fashion, discoveries, war, opening up of new countries, and fiscal legislation were causes which affected the course of industry: but there was another potent element which might affect trade, and was seldom taken into account—viz., an alteration in the standard of value. People generally assumed that money constituted a fixed standard, like a standard of weight or of measure, and that, therefore, it might be left out of account altogether. But there were two facts which disposed of this inaccurate view of the question:—Firstly, that the quantity of money in circulation determined the general level of prices; and, secondly, that when a variation took place in the general level of prices all prices did not move simultaneously or uniformly. The effect of the demonetisation of silver and the breaking of the link which up to 1873 bound silver and gold at a fixed ratio was a great factor in this connection. The exchange between this country and India—indeed, between all gold-using and silver-using countries—had been seriously disturbed, so seriously that the flow of capital to India and other silver-using countries, which would have developed railways and public and private works of all kinds, had been arrested. The reason was obvious; capital only flowed into channels where there was a prospect of a profitable and safe return, and a falling exchange absolutely destroyed that prospect. This damming up of capital owing to uncertainty in the relative value of silver and gold had affected the iron industry probably more than any other. The ordinary demand for iron and steel manufactures was not sufficient to keep in steady operation, at remunerative prices, the great producing machinery of this and other countries; consequently, when the flow of general trade became sluggish, and enterprise and the development of new countries was interfered with, shipbuilding, railway making, etc., became stagnant. Therefore, currency was a subject to which they must in future give attention.

BUSINESS MAXIMS.

These maxims, propounded by Henry Hopkins, were recently published in N. Y. Hardware :

Stick to no man who knows so little as to "stick" you.

The only friendship in business should be mutual advantage.

The welcome salesman talks to your inside pocket.

A sure sixty days is better than "take your own time."

When offered goods "at cost," you'd better buy light.

When a salesman "baits" his hook, do your fishing with a club.

To a drummer on a "bender," be neither buyer, nor a lender.

It's wisdom to cheque the drummer who solicits the payment of his house's account.

Buy no trash of any kind, in the quality (?) of the goods you soon forget the quality of the price.

Long-winded accounts are the "hoodoos" of enterprise.

The wise drummer meets the "ten-day" man always on the ground floor.

The self-sacrificing clerk takes his vacation in a partnership.

That will do for the buyers, now for a few intended for the "boys" themselves !

A rolling drummer should gather no trade.

The best passport to a customer's confidence is your continued identification with your house.

Don't "pad" the orders of careless customers if you want to keep their credit prompt.

Better is a county completely canvassed than a whole State simply skipped through.

Don't scatter "terms" too liberally ; umbrellas are only valuable when raining.

Don't leave your samples "at the depot ;" in a strange town you'll find, No samples, no sale !

Don't solicit orders for goods you know you cannot furnish, or your flow of eloquence may be dammed next time.

Many a drummer loses his head by opening his mouth too wide.

When compelled to sell goods "at cost," don't advertise the fact; the profit knowingly "averaged" is in the seller's favor.

Always remember one indiscriminating bookkeeper can close up more accounts in a month than two drummers can open in six.

And so endeth the second lesson !

The grape crop in Essex county this season will be the largest in years.

It is estimated that already this season $10,000 worth of fruit has been shipped from Leamington.

The Wilson Silver Bill, which provides for the repeal of the Sherman Act, passed the House Monday by 241 to 109. The Bill has yet to receive the endorsation of the Senate, and there it is where the biggest fight will be.

According to Hart & Tuckwell's circular the total import of American apples into Great Britain last year was 1,203,538 barrels. Of this quantity 429,243 barrels were shipped from Montreal, 116,525 from Halifax, and the remainder from New York, Boston and Portland. Of the Canadian apples shipped from United States ports 47,680 barrels went from New York, 142,047 from Portland, and 60,000 from Boston.

In Toronto recently the trumpeter of the newly arrived Canadian Hussar corps blew his trumpet on the Post office steps, and the public were warned that the commanding officer would not be responsible for debts contracted by the men. The military are great sticklers for old fashions. The civilian who wants to attract attention to his announcements now-a-days gets the newspapers to blow his business trumpet.—Gazette Montreal.

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HARDENING STEEL,

Steel is a metal of such a myst rious nature that no one can predict with certainty what its behavior will be under given conditions, writes B. F. Spaulding in Age of Steel. The operation of hardening it has to do with one of its peculiar characteristics.

This characteristic is the one which above all others has given its distinctive value from the earliest ages, as it has given it the mastery over all other metals as a cutting tool, which they had not power to resist. With the exception of a few of the pr.cious stones, all substances can be cut by steel when it is in a hardened condition.

Another valuable quality which steel acquires by the process of hardening, modified by the operation of tempering, is that of elasticity, which adapts it for use wherever a durable and reliable spring is needed, as in watches, gun locks, and numberless other contrivances, and yet more peculiarly is this quality exhibited in its true worth where it is combined with a resisting hardness, as in swords, knives, and in agricultural implements, such as forks, hoes, scythes and other tools us.d in securing the world's daily bread.

The metal compound, of which iron constitutes the principal portion, which is so deficient in its other constituents that it will not harden, although it exceeds in utility all other metals, when it is used for purposes for which its tenacity, ductility, malleability, stiffness, natural hardness in resisting penetration, and abrasion of wear, eminently fit it, is termed steel only by a forced application. It is the steel of the bookman and not of the blacksmith. The first test which the old steel workers would apply to determine whether or not a piece of metal submitted to their inspection was iron or steel would be to heat it in an open fire and quench it in water. If it hardened it was st.el, but if it did not harden it was iron.

Much of the so-called ste.l made at the present time is purposely so constituted that it will not harden, because the use to which it is to be put is of such a nature that the property of hardening is not desirable.

How does steel hard.n? is a question which is as difficult, apparently, to answer as how does an egg hatch, or how does a flower grow? It has so many different modifications of proportions, that when any statement is to be made about it, it is necessary that the composition of the particular piece spoken of shall be specified, for "steel" is only a common term which designates an innumerable number and variety of steels.

Some queries it may not be uninteresting to refer to as to how steel hardens. Do its particles become more compact, and being thus compacted do they acquire a greater rigidity? Take a bar of steel, saw from it two pieces of equal length, harden one and leave the other unhardened, subj ct each of them to such grinding process as will give similarity of surface. Now what change did the operation of hardening make in the substance, in the material particles, of that surface of steel, which is now, as far as can be discovered by the eye, like the surface of the piece which remains soft? Why is it now impenetrable? Why will not the file dig into its substance and scratch it by digging out some of its particles, as it will the soft piece? Why will the file scratch lead and not make any impression on quartz? Not because it is more dense; the quartz is not as dense as lead, but it is more compact. When the intrinsic nature of the two things is examined there will be found a difference in their substance or in form pretented.

If, as we may all come one day to believe, there is but one final element, and varied material is but varied manifestation of that element, then this hardness is simply a quality pertaining to peculiar form which is in any case exhibited as in the instance of the diamond, where the hardness is due to the peculiar form taken by the element carbon, which in another exhibition of itself, in the shape of charcoal, appears incohesive, not compact, soft.

Harden steel, the superficies is greater in every direction; the piece has increased in size, the weight is unaltered; the specific gravity is decreased. It contains the same amount of matter in larger bulk. Does this indicate that its texture is looser? that it has grown spongy? that the particles on the surface were not as compact as they were before, or does it rather show that some of the elements of which it is composed have assumed another form, and entered in this new form into the combination and thus increased its bulk. Some substances in uniting increase their volume, while other compounds are less in volume than the sum of their components, and it may therefore be possible that at a certain temperature carbon assumes such a form that its combination with iron increases the volume of the compound. In this view of the matter the increase of the size of the piece would not be incompatible with its greater compactness.

The amount of expansion which is caused by hardening is often of considerable importance, and is one of the things which cannot be certainly predicted by anyone, because if the two pieces of steel sawed off from the same bar, which have been mentioned—they being as near alike in substance as may be imagined—are heated and hardened in as nearly as practicable a like manner, it is not probable that they will expand alike; this has been the experience of steel workers in general. The variation is attributable to its sensitiveness to variations of conditions so slight as to be unobservable.

It is a very fortunate circumstance that it is not necessary to be cognizant of the why and wherefore of everything before we are able to find some means adapted to secure the object we aim at. The farmer who waits until he finds out why grain germinates will not be apt to get his corn into the ground in season to make a crop; and the steel worker who waits to know all the causes for the wild and erratic course that steel sometimes pursues, will fail to acquire a reputation as a practical workman. As good a plan as can be pursued is to learn the art of hardening by practical experience, and then strive to account for the curiosities of behavior in the light and leisure which such experience may acquire.

The way to find the best steel workmen in any city, on any special kind of tools, is to go to several of the workmen who use such tools, and enquire of them where they get the best satisfaction. There is generally some one who is accredited with being at the head of the business in personal skill. In Boston the stone masons and marble workmen had agreed that a certain workman was best on both granite and marble tools; but in New York there was a division of sentiment, as might naturally be expected. So in Philadelphia, and other cities, but these men who have by actual testing, day by day and year by year, the perfection of the tools which they have fashioned and hardened, with those which have been made by others, and have thus proved that they possessed the needful knowledge and skill to do the best of such work, have, strange as it may seem, never been instructed in technical schools.

I have seen one of the most reptuable steel workers in Boston do a thing which seemed to me absurd. He hardened a new 3-inch pipe tap in a tin bucket containing less than a gallon of oil. It was high steel and he heated it a very low red quickly on the outside and plunged it into the oil at once. He did not even set the bucket of oil in a tub of water, but by the time the oil had got as hot as he would heat the tap to draw the temper he had it out of there and finished cooling in water.

In the early part of this century the mode adopted for hardening milling machine cutters, which were round pieces of steel from 1 1-2 to 6 inches in diameter and from 1-4 to 6 inches long, with teeth like saw teeth cut all around the edges, was to pack them with charcoal made from burned leather, in iron boxes; the charred leather surrounded them thickly, and above the top of the leather a wire extended which was attached to the cutter. The boxes, after being thus packed, were heated on a forge, with a charcoal fire kept in place by piling bricks about it. The fire was continued until it was certain that the cutters had attained a low red heat, when they were taken from the fire and allowed to set a short time on the forge. The workman th n seized the extending wire with his tongs, and, lifting the cutter out, immersed it in oil until the slight tremor of the tongs caused by the formation of bubbles ceased, when he took it from the oil and submerged it in water, where it was allowed to remain until it was cold. There has not been any better way discovered than this for hardening cutters.

HEATING IN GERMANY.

The technology of heating and ventilation is in an advanced state of development in Germany, and its achievements are of great variety. The condition of things is to be ascribed to the fact that for at least twenty years, trained engineers have had such matters in hand. Scarcely a single large public building in Germany is now erected without a central system for heating and ventilation, and the number of dwellings and business houses provided with such arrangements is constantly increasing. The exportation of apparatus for heating and ventilation is also on the increase.—Kuhlow's German Trade Review and Exporter.

SOME INTERESTING DATES.

The apple parer was given to the public in 1803. At the present day one eastern firm makes over 27,000 a year.

Matches were first invented in 1839, and it is estimated that 75,000,000 a day are burned by the people of the United States.

The blast furnace was devised in 1842. In 1890 the United States alone made 9,000,000 tons of iron and 4,277,000 tons of steel.

Washboards with a metal face were patented in 1849; now the backs of the American women are weekly bent over 6,000,000 of these useful articles.

Window glass was first used in modern times in 1557. Now the consumption of plate glass alone exceeds 6,000,000 square feet in England and 9,000,000 in the United States.

A machine for making tacks was patented in 1806, but was not put into practical use until near the middle of the century. Now the world consumes 50,000,000 tacks a day.

The nail machine was invented in 1775. At the present day it is estimated that 4,000,000,000 nails are annually made by machinery in Great Britain alone, and from a fourth to a half of this number in the United States.

The first forks made in England were manufactured in 1608. Their use was ridiculed by the men of the time, who argued that the English race must be degenerating when a knife and spoon were not sufficient for table use. Last year a Sheffield firm made over 4,000,000.

Breech-loading rifles were invented invented in 1811, but did not come into general use for many years. It is estimated that over 12,000,000 are now in actual service in the European armies, while 3,000,000 more are reserved in the arsenals for emergencies. Statisticians say that there are 100,000,000 guns of all kinds in the world.

The railroad system of this country began in 1827. Now there are 214,528 miles of track in the United States and 354,310 in the world. The number of passengers carried by the United States railroads in 1892 was 555,025,802, and the total earnings were $1,138,024,459. The capital stock was $4,800,176,651, and the dividends $90,719,757. The number of men employed was 784,285.

The harvester was invented by McCormick in 1831. Since that time this machine has been brought to such perfection that, it is said, it will cut and bind an acre of grain in forty-five minutes. To such an extent has machinery superseded hand work in the grain farms of the North-west that it is estimated that the work of one man will raise enough grain to support a thousand men for a year, while the labor of a second will transport it to market, and that a third will prepare it for food.

SIMPLICITY IN WINDOW DRESSING.

Simplicity is one of the characteristics of the present vogue in window dressing, writes Harry Harman, the well known expert in such matters. This is due perhaps to the fact that in the study of color effects the necessity for or even the possibility of elaborate designs is reduced to the minimum. Windows with simple arrangements are very satisfactory, and no more advantageous way of showing goods has been observed. It is astonishing how well a window may be made to look with the simple arrangement of a few articles; a crowded window usually detracts as much as it attracts. It has an effect upon the holder like that of a small room whose walls are littered with bric-a-brac. No matter how valuable paintings may be they suffer a certain inevitable loss when crowded together in a small space. So in the display of valuable materials overcrowding is fatal to the best effect. Some of the most effective displays of city windows are remarkable for a studied negligence, a negligence so artfully planned that it almost makes that perfection of artistic methods—art concealing art. After all the most permanent attractions are those which are simple rather than complex. Simplicity carries us back to nature. Not all the skill of technique exhbiited in a painting can charm us like the touch of nature that appeals to our humanity. It is really true that there is great room for artistic study in window dressing, and the successful results in the long run will be won by those who study simplicity. A change is a good thing; a startling change is sometimes advisable. A window cannot be too neat, but it may be neat to primness. While, therefore, I argue for simplicity in general, I insist upon variety as a necessity. If you cannot think up a new thing, whiten the window front for a day or two and take a rest. The end of window dressing is not simply to make a good display but to advertise the place of business, and if that end is gained by an empty window it is just as satisfactory as to gain it by the most tasteful display. All window dressing is a means to an end.

To stop short at the perfect window is to stop with the means, and fail entirely of the great purpose of the window—more trade. It would be a wise thing in the merchant to encourage the successful window dresser by some little gift. Nothing stimulates like approbation, and approbation especially which takes on a tangible form. I call to mind an instance where a clerk had displayed great taste in dressing a window with the goods of a particular firm; to be specific, the window was filled with wax candles of all colors. The agent for the firm who manufactured the goods, happening along at the time, made the young man a present of five dollars, in recognition of the value of the advertisement of their goods offered in the window display. Such an encouragement went far to stimulate the successful man to active endeavor in other directions, and the example of the donor is one well worthy to be followed by others.

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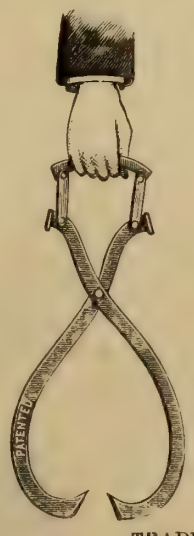
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COLLECTION OF ACCOUNTS.

That happy state of society has not yet been reached in which traders can do without keeping accounts—when debtor and creditor will be known only as a matter of history, writes the cashier in a Wolverhampton firm in the Ironmonger. We have, however, to do with current customs, and I will enumerate such systems as I have found answer in a rather long experience as cashier. Accounts chiefly in vogue at the present time are monthly, quarterly and journey, and I will treat of each class separately.

Monthly.—The usual terms are for payment on the 10th of the month following dates of invoices. Statements are rendered from the 3rd to about the 7th, so that debtors may have ample time to examine them and remit check by date agreed upon. Unfortunately, comparatively few adhere to the terms. Others have their pay days between the 10th and the end of the month—this deviation means, on an average, the loss of a fortnight's interest. It has still this advantage, that it is short credit, and the debtor gets a good equivalent for prompt payment.

Quarterly.—Accounts should be sent out so as to give seven clear days for their examination. In some districts there is a distinct day—as, for instance, the ironmasters' quarter days for the settlement of accounts in January, April, July and October—usually the second Thursday in the month at Birmingham, the second Wednesday in Wolverhampton, and so on—when traders outside those cities send round their collectors, with the result that whoever calls for his account will be paid. On the third Thursday Birmingham creditors call on Birmingham debtors, and Wolverhampton creditors on Wolverhampton debtors, when accounts are squared. If people do not call for accounts on these recognized pay-days the delay in the settlement of their accounts lies with themselves. This arrangement has stood the test of years, and has answered admirably.

Journey.—Assuming the "Commercial Ambassador" enclosed the account with his advice, it is only reasonable to expect that it should be quite ready for him to settle it immediately on his arrival. Retailers are not at liberty to neglect customers, consequently the commercial must stand aside and wait, or call again,. Undoubtedly much time is lost, and when the squaring up is done it is often done hurriedly, but no shape of money, checks, or bills is despised so long as a settlement is made. Nor, considering the length of credit retailers have to give their customers, should this be objected to. Every retailer has his reputation to maintain, and it is his wish to be as prompt as possible. Circumstances are often against him, and if a request is made to hold his check for a few days it should be acceded to with good grace. These three different classes of accounts are paid, on the whole, with such regularity that it appears unwise to suggest an innovation. Let well alone—there is no need of any alteration, may be almost universally urged. But if experience should disclose a better way, why not hear what it is? If commercial opinion admits it to be better, why not adopt it? If it is not better no harm is done by hearing of it. Instead, therefore, of continuing the present methods I would adopt the following system of settlements:

Monthly Accounts.—Render each debtor a statement by the 3rd of the month, with all deductions taken off, and showing the net amount due. Occasionally some error may occur, in which case the statement, with full particulars, should be returned by, say, the 7th, for correction. Books are then adjusted, and the accounts sent back again. Assuming the 10th of the month to be the recognized pay-day, instead of the debtor sending the usual check, the creditor should draw a draft at sight or, say, at three days after sight, to the order of his banker for the amount due. This draft will be paid into the bank to be forwarded to the debtor for acceptance and payment (the draft by prearrangement should show through what bank it is presented). The debtor, knowing that monthly drafts will be at his banker's on a given day, should call there and formally accept them. In due time the debtor's banker remits the amount of the draft to the creditor's banker, and the whole thing is completed.

The bookkeeping part of this is so straightforward that I suppose it is hardly necessary to give it, but to make the matter quite clear I do so. Let us assume the creditor has drawn about sixty or eighty drafts on different debtors. He credits each one with the amount of his separate account, the same as if he had received a check from each one. He then debits his bankers with the total of those drafts just in the same way as if they were so many checks. The debtors on their part honor the drafts and hold them as receipts, and the entry in their books would show bank creditor by so many drafts, and so many creditors paid by drafts in the cash-book through his banking account.

Quarterly Accounts may be treated in a similar way, with this exception—that the draft should be at the proper banks for acceptance and payment on the recognized settling days.

Journey Accounts it would be well to have netted by the tradesman alone, and then forwarded to the creditor, saying what date the draft should be drawn on him, or, as an alternative, the account should be netted by the traveler and customer together, and returned by the former to his house, with instructions re draft.

To sum up the advantages of this method over the present system the following points are worthy of consideration: No negotiable checks to be treated chemically and filled up for "large amounts." No risk to either debtor or creditor, the accuracy of the banks in these matters being sufficient guarantee. No loss of checks in transit by post. No loss of receipts—the draft being proof of payment of debt. No need of collectors, consequently no expense on that score, and no possibility of defalcation. The plan is perfectly practical, free from all risks, and could be equally, if not more, economical in its working than existing methods.

Overdue Accounts.—There is such a thing as being too lenient, as well as being too oppressive. A little extra credit must often be beneficial, and those who exercise patience must find it pay in the long run. In all your appeals be courteous with an honest tradesman. If you know that your debtor is trying to best you, use short, sharp, and decisive legal measures. These cannot be referred to here—indeed, let a legal man do this kind of business for you, or you may lose your account instead of securing it.



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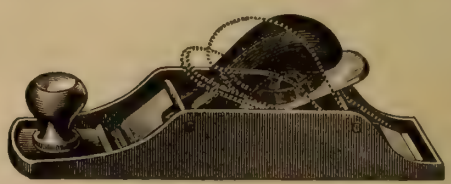
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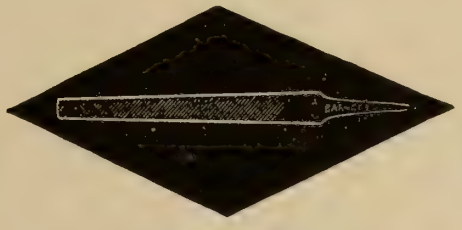
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THE E. B. EDDY CO., Hull, Canada

SOAPSTONE INDUSTRY IN CHINA.

The British Consul at Wenchow in his last report, according to an English paper, gives some interesting details respecting the manufacture of steatite or soapstone ornaments in China. The mines are distant 42 miles from Wenchow, and are reached by a boat journey of 35 miles up the river, followed by a land journey of seven miles over rough ground. The hills containing steatite are owned by 20 to 30 families, who, in some cases, work the mines themselves, in others engage miners to do it on their own account. The galleries are driven into the sides of the hills, and are often nearly a mile in length. The composition of the hills is soft, and the shafts require to be propped up by supports of timber; for the same reason the floors are full of mire and clay, so that the miners wear special clothing made principally of rhea fibre. They lead a hard life, living in straw huts on the hillside. The stone when first extracted is soft, hardening on exposure to the air. It is brought out of the mine in shovels, and is sold at the pit mouth to the carvers at a uniform price of about 1-2d. per lb. This would be when the purchaser buys it in gross, without first selecting it in any way. When picked over, the mineral varies very considerably in value—according to the size of the lump, its shape, and, above all, its colors. The colors are given as purple, red, mottled red, black, dark blue, light blue, grey, white, eggshell white, "jade," beeswax, and "frozen." Of these, "jade," (the white variety, not the green) and "frozen" are the most valuable. Indeed, so valuable is the latter that good specimens of it are said to fetch more than real jade itself. The industry finds employment at the present time for some 2,000 miners and carvers. A great impetus was given to it by the opening of Wenchow to foreign trade. Previous to that event the chief purchasers of soapstone were officials and literary men, and the article most often carved was a stamp or seal. When it was discovered that foreigners admired the stone, articles were produced to meet what seemed to be their taste. Such were landscapes in high or low relief, flower vases, plates, card trays, fruit dishes, cups, teapots and pagodas. If left to his own devices, the native carver proceeds first to examine his stone, much as a cameo cutter would do, to discover how best he can take advantage of its shape and shades of color. There is for this reason room for wide difference in artistic quality, apart altogether from the intrinsic value of the mineral, and carved pieces vary in price from a few cents to ten dollars and upwards. And among the more purely native articles produced are, besides the seals, writing material, as trays for pens, slabs for rubbing ink, and the like; flower vases, square, round, and hexagonal; boxes for sealing vermillion, incense boxes of all kinds, but chiefly having the character for "long life" in open work on the cover; small sandalwood burners, flower baskets and balls, candlesticks, chessmen (or, as we should regard them, draughts), cups, bowls and lamps; idols, as the Star of Longevity, the Eight Genii, Goddess of Mercy; lions, monkeys, and other animals. Less ambitious workmen content themselves with polishing the stone and cutting in relief certain common emblems, as the sun, moon, clouds, mist, the lute, chessboard, books, scrolls; or the characters of happiness, promotion, old age, and prospecity. It is said to be a peculiarity of the retail business that these goods are to be purchased more cheaply from house-to-house pedlars than at the mines. The reason given is that the excessive weight of the material makes the pedlar glad to dispose of it at any price. But the facts may be quite otherwise, and the story an ingenious concoction in the interests of the pedlar.

GETTING A MAN RATTLED.

Some boss plumbers, writes John Hamill in a contemporary, have a fidgety way of coming round a building wanting to know when a man is going to get through. They know in their hearts and souls that the men are doing all they can to push the job along, yet they think if they keep dinging at them all the time they may succeed in getting more work out of them. If a man gets angry and attempts to pick up his tools and quit they will immediately apologize and say they meant no harm.

Probably they do not, because I really believe that it is the force of habit. They probably had the same thing hammered at themselves when they were working journey work, and cannot help it. I know of one New York boss who has a habit of asking the boys when sent to the shop when their men are going to get through. He is a good hearted man, and I believe it is really from force of habit that he does it.

I remember one day a helper came in the shop and reported that the man he helped had fallen down a well hole and fractured his skull.

'Good Lord!" said the boss, "that's too infernal bad," and he expressed the deepest sympathy on being told that the plumber had been taken in an ambulance to Bellevue.

"I certainly will have to go and see him right away."

Just then an architect came in and called his attention to some alterations to be made on a building the boss was doing.

The helper stood back a respectable distance while the boss and the architect talked the matter over. The architect did not stay more than five minutes, and after he had gone the boss turned to the helper and asked, "When is Jerry going to get finished up there?"

The helper looked at him with his big eyes and answered, "I tink when hees skull gets well."

The boss immediately bethought himself and ejaculated, "Poor Jerry! Poor Jerry!"

Then he went at once to Bellevue, saw Jerry, and expressed the greatest sympathy for him. And the boss showed his sympathy in a substantial way by paying Jerry's wages for six weeks.

I saw another case of getting a man rattled that was laughable. I started one morning to do some work in the back room of a store on Third Avenue, that was occupied by an old German who sold and repaired musical instruments of all kinds. About nine o'clock a dudish young man, who said he played in an amateur orchestra, brought in a bass violin to have something done to it.

He told the German that he must have it done at five o'clock, as he and his orchestra (?) were to play that evening at a private residence uptown for the benefit of some guild or other.

The German hesitated, and finally promised he would do it, but he would have to work hard to get it finished.

The dude left and came back about eleven o'clock to see how the old man was getting along. He stayed a little while, went out, and came back at one, and the old man began to look weary.

The dude went out again and came back at three, and the old man said "bleas bodder me not; I haf him done as I bromise." But the dude came back again at four, and that rattled the old man so he cried out, "I vas sorry I dook your veedel; you bodder me so I doant gan work; you goom at vive, I have him vor you; please go oudor I dond fix him."

The dude went out, and just as I was packing up my tools at five, in came the dude and his fiddle was finished and paid for; then he left.

As I was going home the old man said "Ploomber, I vas dired vrom dose veller, vait I git a pint beer und ve drink a leedle aint it." I waited ultil the old man came in with the pint and he sank tired out in his chair. We both had a good drink and I was getting ready to go, when the old man let an unearthly screech out of him, clapped his hands on his head and cried "p'tch Gott ploomber vat you dink dose veller gots me so oxided I leef mine glue pot in der veedle!"

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,

Agents.
MONTREAL AND TORONTO.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.
Keene's Coarse, Parian and Superfine Cements.
SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.
FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,
CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.
Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

FIRE!

McCAUSLAND & SON

Beg to inform their customers and friends that they are in a position to fill all orders with promptness and dispatch, notwithstanding the recent fire in their premises. . . .

72 to 76 King St. W.

A. RAMSAY & SON

ESTABLISHED 1842.

TRADE MARK

Sole Manufacturers of the Celebrated Brands

Unicorn Mixed Paints
Russian Pure Lead
Unicorn Pure Lead
Unicorn Oil Stains
Etc., Etc., Etc.

MONTREAL

Canada Iron Furnace Co., Ltd.

Manufacturers of
CHARCOAL PIG IRON
MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

STOP!

Do not turn another page before we have told you what we can do for you.

OUR HERCULES METAL

Is the best in the world. Does not heat and suits all kinds of Machinery.

Our Solder is used by all the leading Plumbers, Roofers and Tinsmiths.

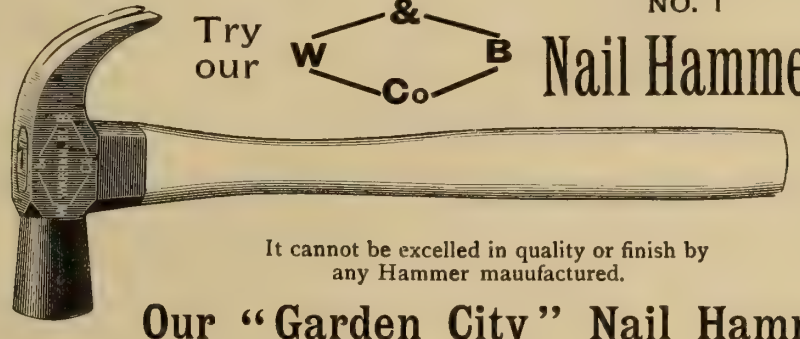
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TORONTO SMELTING & REFINING WORKS

92 and 94 Queen St. E., TORONTO.

THE WHITMAN & BARNES MFG. CO.

Canadian Branch: St. Catharines, Ont.



Try our W & B Co NO. 1 Nail Hammer

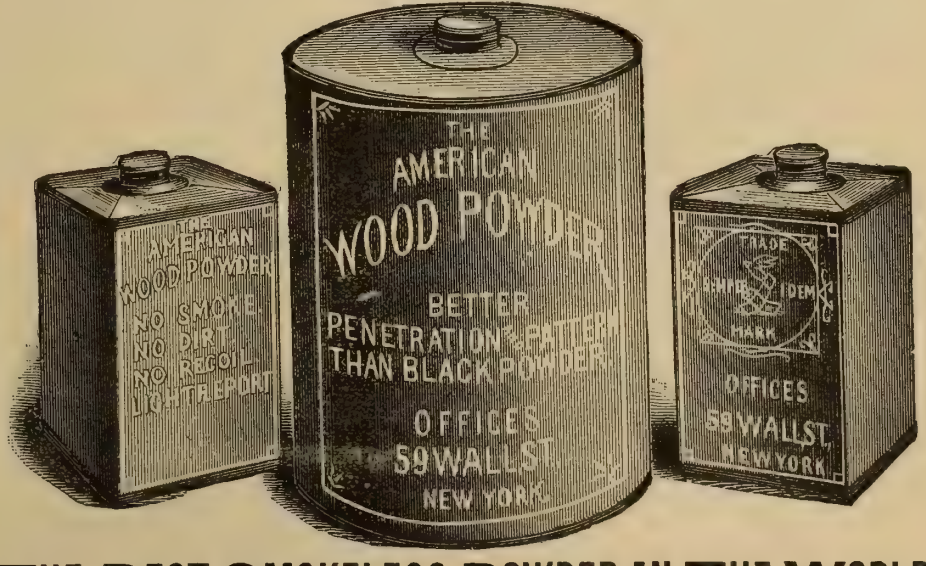
It cannot be excelled in quality or finish by any Hammer mauufactured.

Our "Garden City" Nail Hammer

GET OUR PRICES AND TRY OUR GOODS

Is the best and cheapest "Solid Cast Steel" Hammer on the market. . . .

We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .



THE BEST SMOKELESS POWDER IN THE WORLD

SOLE AGENTS. SEND FOR CATALOGUE.

The Bowman Hardware and Sporting Goods Co., Hamilton, Ont.



A Great Loss?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

George Grieves, hotelkeeper, Napanee, has assigned.

Samuel Halstead, tinsmith, Kincardine, has assigned to J. M. Stewart.

J. S. Carveth & Co., general storekeepers, Banda, have compromised at 50c. on the dollar.

Dutton & Ross, general storekeepers, Parkhill, are offering to compromise with their creditors at 40c. on the dollar cash.

The hotel of Winchester & Campbell, Kasto, B.C., has been closed by chattel mortgage. The business of Thos. Levi, hotelkeeper, New Westminster, B.C., has been sold by mortgage.

CHANGES.

W. G. Wyatt, hardware and lumber, Virden, Man., has moved to Selkirk West.

James McKim, general merchant, Union, B. C., has been succeeded by James McKim & Sons.

W. J. Thompson, general merchant, McGregor, Man., has sold out his business to a Carberry merchant.

SALES MADE AND PENDING.

The estate of J. Cameron, hardware, Beaverton, is advertised for sale.

W. A. Campbell has sold the boot and shoe stock of Milbee, of Barrie, at 37½c. on the dollar.

The store and stock of L. M. Blockstock, general merchant, Thornton, is advertised by the assignee for sale.

The stock of the estate of R. Buckley, general merchant, Allenford, is to be sold by auction Wednesday next.

At Suckling's trade rooms, Tuesday, the boot and shoe stock of Joseph Moran, of Hamilton, amounting to $15,000, was sold to Henry Arland, of Hamilton, at 75c. on the dollar.

The stock of shoes belonging to George Schneider, Berlin, assigned, was purchased by Jacob Uffelman for 50¼ cents on the dollar. A brick house, which cost $2,500, was purchased by George Suggitt, and the book accounts, amounting to between $800 and $1,000, were sold to Fred. Keil for $77.

PARTNERSHIPS FORMED AND DISSOLVED.

John Sim & Co., plumbers, Toronto, have dissolved.

Duclos & Paquette, painters, Montreal, have dissolved.

The Wright Cement Co. (Ltd.), of Hull, Que., has obtained a charter of incorporation.

S. Quevillion and E. Racicat have registered in Montreal to carry on business as blacksmiths under the firm name of Quevillion & Racicat.

Austin C. Campbell and Mark Woods have registered to carry on business in Montreal as manufacturers under the firm name of Campbell, Woods & Co.

J. Coates, C. R. Lee and George Swinburne have been registered partners to carry on business in Montreal as gas engineers under the firm name of John Coates & Co.

FIRES.

James Davidson, blacksmith, Avonton, has been burned out.

TENDERS FOR STEEL RAILS

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Steel Rails," will be received up to noon on Tuesday, 12th September next, for the supply of—

1,000 Tons of 50-lb. Steel Rails to be delivered C.I.F. on the Prince Edward Island Railway wharf at Summerside, Prince Edward Island.

300 Tons of 56-lb. Steel Rails to be delivered C.I.F. on the Intercolonial Railway wharf at Richmond (Halifax), Nova Scotia.

5,000 Tons of 67-lb. Steel Rails to be delivered on the Intercolonial Railway (Princess Pier) wharf at Levis, opposite Quebec.

All the above to be delivered in month of June, 1894.

Specifications, Conditions, Forms of Tender, and all other information will be furnished on application at this office, or at the office of the High Commissioner for Canada, London, England.

By order,

JOHN H. BALDERSON,
Secretary.

Department of Railways and Canals,
Ottawa, 8th August, 1893.

NONE GENUINE WITHOUT THIS LABEL





All kinds of Office and Store Fittings and Furnishings

FRANCIS HYDE & CO.

Builders' Supplies

We make a specialty of Fire Clay Sewerage Pipes, and all kinds of Fire Clay goods of best quality.

Best brands of London Portland Cement. Agents for Glenboig Union Fire Clay Co., etc.

STORES AND YARDS:

King, Queen and Wellington Sts., Montreal

TRY

Apted Bros.

54 YONGE ST.

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FOR

POSTERS

AND

General Commercial Printing

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

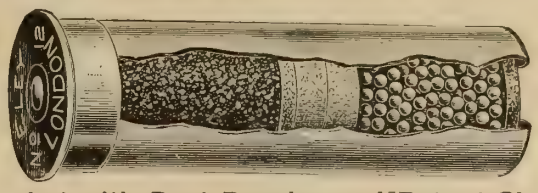
WESTERN BRANCH :

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

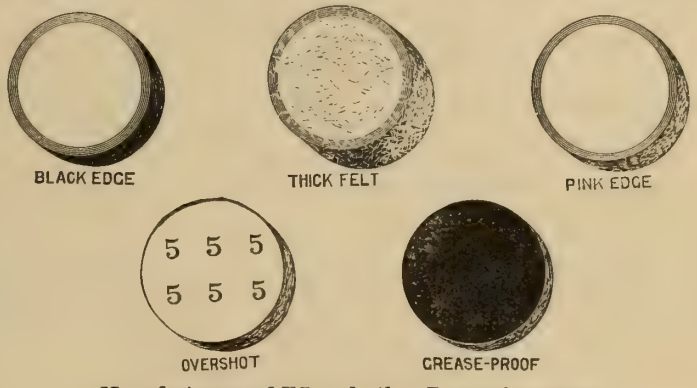
. . ELEY'S . .

CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. **Wholesale Only**

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

To the Stove Trade

We carry stock and can . . . . . ship promptly.

We have the following patterns for Repairs, PLATES. UNIVERSAL STOVES AND RANGES, lately made by J. M. Williams & Co., Hamilton ; SPLENDID BASE BURNER, lately made by the Toronto Stove Co., Toronto ; BRILLIANT RANGE and COOK, FORRESTER, CANDY FURNACE, QUEEN RANGE, lately made by Harte & McKillop, Belleville. . . . . .

The Wm. Clendinneng Son Co., Limited,

145 to 171 William Street, MONTREAL, QUE.

Cutlery

SPECIAL VALUE IN

Dickinson's "Damascus Blade" Carvers.
Dickinson's Improved Ivoride Tables, warranted not to shrink or discolor.
Joseph Rodgers & Co.'s best quality Pen, Pocket, and Butcher Knives.

. . . SAMPLES now ready for Fall Trade.

STEEL. Full stock of Jessop's warranted Tool Steel, at lowest prices. . .

A. C. Leslie & Co., Agents

MONTREAL and TORONTO.

You can lose more than we do by not subscribing for this paper.

MUNN'S LIQUID GLUE

IS THE BEST.

THE ART METROPOLE, Agents.

131 Yonge Street, TORONTO.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—
56 and 28 lb ingots, per lb .. 23½ 24
trip ..... " 25, 25½

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
M.L.S. equal to Bradley		
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 00	4 25
I.X., "	5 00	5 25
I.X.X., "	6 00	6 25
I.XXX., "	7 00	7 25
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets ..	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.	....	13 00
" " I.X.	....	16 00

Charcoal Tin Boiler Plates.

	Per lb.
C okley Grade—	
.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6½	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb ..	$1 95	....
Refined " " ..	2 35	2 65
Horse Shoe " " ..	2 60	2 75
Band " " ..	2 50	2 60
Hoop " " ..	....	2 60
Swedish " " ..	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets...	4 50	5 00

Boiler Tubes.

2-inch	10½c
-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¾ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2½, 2¾
26 "	2¾, 2¾
28 "	2¾, 3

Canada Plates.

Blaina	½ bright	2 75 ....
Abercarne		2 75 ....
Lion		....

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head
16 to 24 gauge, per lb 5, 5½
26 gauge, " 5½, 5½
28 " " 5½, 5¾
Gordon Crown—
16 to 24 gauge, per lb 5, 5½
26 gauge, " 5½, 5½
28 " " 5½, 5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb.....	6	6 3-5
" ¼ " "	4⅞	5
" 5-16 " "	4½	4⅝
" ⅜ " "	4¼	4⅜
" 7-16 " "	4	4⅛
" ½ " "	3⅞	4
" ⅝ " "	3⅝	3⅞
" ¾ " "		3 1-5
Trace, per doz. pairs	$3 60	5 00
German coil, per 100 ft	1 65	2 70
Jack chain, iron, single, per doz yards	0 13	0 50
Jack chain, double, per doz yards.....	0 15	....
Jack chain, brass, single, per doz yards	0 20	1 10

Copper—*Ingot.*

English B.S "	0 12½	0 13
Lake Superior	0 13	0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in .	$0 22	$0 25
" round & square 1 to 2 in	0 20	0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16	0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17	0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26	0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb..	0 19½	0 21
" 35 to 45 " " ..	0 17½	0 18
" 50 lb and above per lb	0 16½	0 17

Boiler & T. K. Pitts.

Plain Tinned per lb.....	0 21	
Spun " "	0 25	

Wire.

Pure, in coils—		
From 1 to 20 gauge.....	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20	0 21
" " 27 to 30 " ..	0 23	0 25
" " 30 and up.....	0 26	0 28
Sheets, hard-rolled 2x4 ft...	0 21	0 23

Zinc Spelte .

Foreign, per lb.....	0 04⅜	0 05
Domestic "	0 04⅜	0 04¾

Zinc Sheet.

5 cwt casks.....	0 05¾	0 06
Part casks	0 06	0 06¼

Lead.

Imported Pig. per lb.....	0 03½	0 03¾
Domestic "		0 03¼
Bar, 1 pound		0 05
Sheets, 2½ lbs, sq. ft, by roll	0 04¼	0 05
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04⅜	0 04⅝

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)...	0 15½	0 16½
Standard	0 14½	0 15½
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb $0 12		0 13
Other makes "	0 11	0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt		5 00
No. 1 Do.....	"	4 75
No. 2 Do.....	"	4 50
No. 3 Do.....	"	4 25

Prepared Paints.
(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1	20
2nd qualities "	1	00
Barn (in bbls)	0	65

Colors in Oil.
(25 lb tins, Standard Quality.)

Venetian Red, per lb.....	0	05
Chrome Yellow "	0	11
Golden Ochre	0	06
French "	0	05
Marine Black	0	09
" Green	0	09
Chrome "	0	08
French Imperial Green	0	19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35	1 40
" " (J.F.L.S.) " "	2	75
" " Royal " "	1 10	1 15
Venetian Red, (best) " "	1 80	1 90
English Oxides per cwt	3 00	3 25
American " } " "	1 25	1 90
Canadian " }		

Paris Green, per lb	0 13½	0 15
Burnt Sienna, per lb.....	0 08½	
Burnt Umber "	0	05
do pure	0	08
Drop Black "	0	09
Chrome Yellows "	0	12
" " Lemon pure, 8 lb. tins, per lb.....	0	19
Chrome Greens "	0	12
Golden Ochre	0	03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0	69
Extra "	0	90
Brown Japan "	0	55
Brown Japan, Turpentine p. gal.	0	71
No. 1 Carriage "	1	30
Gold Size Japan . ..... "	1	00
Pure Orange Shellac.... "	1 95	2 05
Hard Oil Finish	1	30
Oil Shellac	1	40
White Shellac	2	25

Linseed Oil (in bbls)

Raw, per gal	0 60	0 62
Boiled "	0 63	0 65

Turpentine (in bbls)

Selected Packages, per gal	0 44	0 46

Castor Oil.

Best, per lb.....	0 07⅞	0 08

Cod Oil.

Cod Oil, per gal.	0 50	0 51

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet	0 13	0 15
White, extra	0 16	0 18
Gelatine.....	0 20	0 30
Strip.....	0 16	0 17
Coopers	0 17	0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list
Munn's, dis. 25 to 30 per cent. off list

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis.40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags.....	1 00
Best thick brown or grey felt wads. in ½ lb. bags	0 70
Best thick white card wads. in boxes of 500 each, 12 and smaller gauges.....	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge.....	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge....	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 30 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c:

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross..... 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

. . NEW ARRIVALS . .

30 Cases Cutlery and Guns

ALL NEW GOODS.

Finest Finish. Best Value.

20 casks Cattle and Trace

CHAINS

10 tons Coil Chain

. . NEW ARRIVALS . .

Five Cars Window Glass

Bowman, Kennedy & Co., London, Ont.

Wrought Hooks and Staples, Amer- dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Finsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   Basis—50 to 60 dy 2 30
   40dy 2 35
   30 dy 2 40
   20, 16 & 12 dy 2 45
   10 dy 2 50
   8 & 9 dy 2 55
   6 & 7 dy 2 70
2. American Pattern Only
   from 4 to 5 dy 2 90
   3 dy. (lath) 3 30
3. Canada Pattern Only
   from 4 to 5 dy 2 80
   3 dy. (lath) 3 20

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross 1 00 4 25
" Carpenter 2 25 3 60

Picks

Per doz 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan R & L.Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz 1 35 2 00

Pruning Shears.

Per doz 4 00 5 50

Pulleys

Hothouse, per doz 55 1 00
Axle. 22 33
Screw 27 1 00
Awning 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot 3 3½
Sliding Door, " 3½ 3¾
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9½ 9¾	10¾ 11
¼, 5-16, ⅜ in.....	10	10½ 11½ 11½
Cotton, per lb.....		18 20
New Zealand		9½
Russia Deep Sea, per lb..		12¾ 13
Jute ..... " ...		08 08½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D, dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 to 40 per cent.
Hack, complete, each 75 2 75
" frame only 75

Saw Sets.

Per doz 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz 3 25 4 00
Bench iron per doz 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P,, 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen 1 25

Soldering Irons.

Per lb 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons .....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4½ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz ..... 1 [illegible] 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9 00

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " ..... 0 30 0 5[illegible]
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8,10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " " } 4½ 4¾
" Plain twist, 2&3 wires
" Steel thorn and ribbon 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

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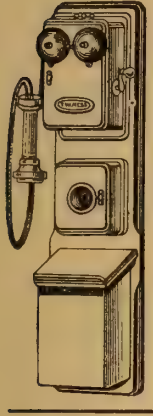
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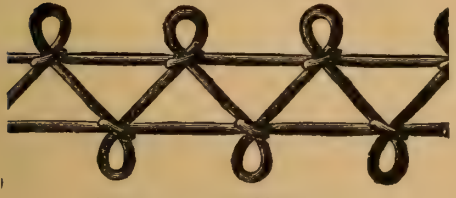
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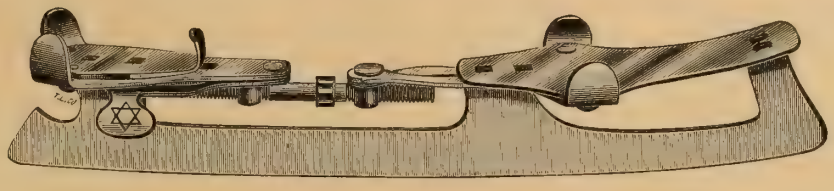
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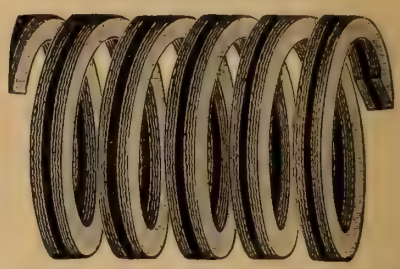
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VOL. V. TORONTO, SEPTEMBER 9, 1893. No. 36.

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Vol. V. TORONTO, SEPTEMBER 9, 1893 No. 36

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

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John Cameron, General Subscription Agent.

The tin market has exhibited a good deal more activity during the last few weeks, and there has been an appreciation in prices. This applies to both the United States and to Great Britain ; and the improvement in the one is largely the result of a better condition of affairs in the other. The improvement in business and the advancement in prices began in the United States. Last week alone there was a total gain in the New York market of 40 points for nearby deliveries and 50 to 60 points for futures. It was only natural that these advances should have touched a responsive cord in the English market. But there does not seem to be much confidence in the market. It is pointed out that while the market is undoubtedly in better shape and that prices can be advanced as long as the bull crowd can take all the metal offered, there is only one buyer and the consuming trade is dull. Furthermore it is claimed that all the improvement is not due to natural causes. In fact no less an authority than the N. Y. Metal Market Report plainly charges that manipulators have been at work both in New York and in London. "In London," it says, "we are asked to believe that the consumption for August was 2,070 tons, while the same month last year the consumption was 1,070 tons. England used 1,000 tons more this year than last, and yet most of the tin plate works in Wales are closed down. Then on the Continent: During the first six months of '93 the Continent bought in the Straits 2,880 tons, and during July and August we find the shipments to the Continent were 3,100 tons. We are unable to find out the consumption on the Continent, but we do know that copper was hidden away as 'consumed' on the Continent during syndicate times, and we have reason to believe that tin is being shipped to the Continent for the same purpose. Now for America: Consumption is called 1,600 tons, same as July. Of course these figures are misleading, and after a very careful estimate we would call the consumption for August 1,200 tons—the same as July—and this reduces the stock since the 1st of July 2,400 tons, while the Exchange in the same period makes the reduction 800 tons more." The visible supply of tin for September is placed at 8,080 tons, compared with 9,275 tons for August.

* * *

The hurricane which swept over portions of the Southern States Aug. 27 played havoc with stocks of turpentine in Savannah. Advices received in Toronto this week from agents there state that chaos reigns everywhere. In store there at the time of the catastrophe were 32,000 barrels of turpentine and 150,000 barrels of resin, and these the wild winds mixed up eternally, making shipments from there for the time being apparently impossible. Owing to the confusion that has been created, consignors write that quotations cannot be given until copies of letters sent out previously to consignees have been received. Jobbers are in a quandary as to what effect the present condition of affairs will have on the market. In the meantime they can only watch and wait, and that is what they are doing.

* * *

The utilitarian properties of the army rifle are still being extended. At first the rifle was a mere firearm. Then, by the addition of the bayonet, it became both firearm and spear. But the latest and most unique use to which it is being put is that of trench digging. True the poet tells us that the soldiers buried Sir Thomas Moore, "at the dead of night, the sods with their bayonets turning," but the latest addition to the rifle's appurtenances is a regular trenching tool. The invention consists of an arrangement of the stock of a rifle whereby a spade or a similar instrument can be easily affixed to the butt end turning it into a simple trenching tool, the rifle at the same time being immediately ready for use if, either with bullet or bayonet, the removal of the tool not being necessary. By means of a spring-catch the tool, which is made with a shank instead of the usual handle is placed in the receptacle made to receive it in the butt end of the rifle, the barrel taking the place of the handle in the ordinary spade. The inventor is a Mr. de Layen and the advantage he claims for the device is that it will constitute every soldier his own sapper and rifle-pit digger and thus having a whole army if sappers instead of the few which is necessitated by the cumbersome tools that constitute the present outfit, while the tool wagon could almost be dispensed with. In case of a sudden attack while trenches were being dug the soldier would have his rifle ready for use, and if he had not time to fix his bayonet the spade would serve the purpose and also as an ax. When not in use the spade is carried in a leathern case on the chest, where it not only acts as a counterbalance to the haversack but serves as a breastplate as well. At a recent experiment in England before a number of military men it was demonstrated that by the aid of this device, which does not weigh quite four pounds, a rifle pit could be dug in a very few minutes. Under favorable conditions it is claimed that a pit, sufficient for a man to lie down in, can be dug in three minutes. From all accounts the tool is likely to become as much a part of an infantryman's outfit as is the bayonet.

* * *

Financial panics are not infrequently more pronounced than the actual conditions warrant. And while this is undoubtedly the

case in the United States, the fact cannot be denied that there has been much to create alarm. There are many evidences of this. The world at large has for some years been passing under a cloud of depression; and the United States has been more or less affected by it. But the great cause of the trouble there is traceable to unwise legislation. Politicians of all stripes concede this. Look at whatever branch of trade you may and in it can be seen reflected the ominous cloud. But none answer this purpose better than the clearing houses. By referring to the returns of the New York clearing house, which is the most important in the States, it is seen that there has been decreases in some instances of something like one-third in the volume of business. The year opened out fairly well for the railroads, for the first four or five months the comparisons being favorable to this year's returns. But in July the tide began to flow against them, the earnings in that month exhibiting a decrease of over 4 per cent. Into the following month the adverse conditions followed, until by the third week in August the percentage of the decrease was over fourfold larger than in July. Even the exports from the port of New York, in spite of largely increased shipments of wheat, showed a decline of 6 per cent. for the first three weeks in August. Then it is scarcely necessary to more than mention the condition of the manufacturing industries of the country. This is already well-known, the closing down of this and that industry being daily chronicled in the press, until within the last few months over a million men have been thrown out of employment.

* * *

Hard as has been the depression in the manufacturing industries, they have scarcely felt it so severely as the banks. The unprecedented large number of failures is proof enough of this, but it is also reflected in the currency, which is so scarce that not enough of it can be got to transact the ordinary business of the country. To such a pass have things arrived that the people have lost faith in even the banks and they are withdrawing their deposits wholesale. From May 4 to July 12 alone, the amount on deposit decreased by $193,000,000, and this must have been enormously increased since. Confidence, however, seems to be gradually being restored, mainly because of the anticipated repeal of the silver purchase clause of the Act of 1890, and hoarded money and money locked up in defunct banks is gradually finding its way back into circulation, and hope is now expressed that there will yet be enough of the "needful" to move the crops.

* * *

So far, the only appreciable effect the depression in the United States has had upon Canada is in the matter of exchange. In this respect our merchants have experienced more or less annoyance. For goods imported from the States, which hitherto it has been the habit to pay for per draft, it is now necessary to send U. S. currency. "For God's sake, don't send checks or drafts. We will never get the cash," is in effect the cry of all U. S. creditors of Canadian houses. This means not only more trouble, but more expense as well. And every straw upon the already well-burdened back of the trade of the country tells. Some Toronto houses are resorting to the practice of remitting money to creditors in the States through the express companies. They deposit Canadian currency and the express companies deliver American. This method has been found both cheaper and less troublesome.

* * *

In the United States the circulation per head is over $23. In Canada it is something like $10. In view of this it seems strange that currency should be scarce in the former country and ample in the other. But the reason is not far to seek. In the United States the circulation is based upon an unsound principle; in Canada on a sound one. In the United States the banking system is wanting in elasticity; in Canada it is sufficently elastic to expand to all the requirements of trade. Congress is engaged in the task of trying to remedy one defect and an agitation is on foot to cure the other.

AUSTRALIAN TRANSPORTATION.

The trip of Hon. Mr. Bowell, Minister of Trade and Commerce, to Australia to confer with the Government of that country on the development of closer trade relations with that country, reminds one of a story told by the late Hon. Mr. Mackenzie of the experience of the late Hon. John Young, who was sent there by Mr. Mackenzie when he was Premier of Canada. It will be remembered that the early settlers in Australia were British convicts, transported there on life sentences. Mr. Young was enthusiastically received. A grand banquet was given in his honor, at which all the prominent people were present. In responding to the toast Mr. Young made a very neat speech complimenting the country on its progress, etc. He then referred to the object of his visit and said: "I will first speak to you on the question of transportation—" Before he got another word out the chairman pulled him down by the coat and, in great alarm, whispered: "For goodness sake, don't speak of transportation here."

HE'S AFTER THEM.

Mr. John Cameron, says the Truro Daily News, has just visited Truro among other Maritime province towns in the interests of the J. B. McLean Publishing Co., Toronto. This firm's trade journals—THE HARDWARE MERCHANT, CANADIAN GROCER, BOOKS AND NOTIONS, DRY GOODS REVIEW, and last, but not by any means least, THE PRINTER AND PUBLISHER, all have subscribers in Truro, and Mr. Cameron's visit this year has added others to the list. Referring to the last named journal, Mr. Cameron says that it is now more than an experiment, it is starting out on its second year as an established success, and is very highly spoken of by the craft. We added our testimony to its usefulness. Mr. Cameron has gone on to Cape Breton and eastern points, and will thence go the Halifax and the western counties.

THE GROWTH OF TRADE PAPERS.

The Hamilton Herald says: The tendency of the age is towards specialism in most walks of life, and an interesting development of late years has been the increase in the number of trade papers published in Canada. Most of these owe their birth and prosperity to the clear head and untiring energy of J. B. McLean, for many years commercial editor of the Mail, and latterly commercial editor of the Empire and president of the J. B. McLean Publishing Company. He is the proud parent of the Canadian Grocer, Hardware, Books and Notions, Printer and Publisher, and the Dry Goods Review, all excellent and prosperous trade journals. Their growth in public favor has been so steady that Mr. McLean has resigned his position on the Empire to give them more direct supervision. Mr. McLean is a level-headed and popular business man, a bright and capable writer, and a recognized atuhority on questions of finance and commerce.

CANADIAN MINERALS IN CHICAGO.

The Chicago Inter-Ocean, referring to Canada's mineral exhibit at the World's Fair, says :

From an economic standpoint, one of Canada's greatest resources is the inexhaustible supply of minerals which are stored away under Canadian soil. Large deposits of economic minerals in absolutely unknown quantities and of unestimated value are to be found in the mountainous district of almost every province in the Dominion.

The display which the country makes in the Mining building is a fair index to the natural mineral resources of the country. The Canadian section comprises an area of 10,000 square feet, and is on the main floor west of the central aisle extending back under the west gallery. The courts are similar to all other Canadian courts, in so far as large and prominent signs are concerned. Canadian flags and bunting give a gala day appearance to this most interesting section. The arrangement of the courts is good. The largest and wealthiest province assuming the most prominent position, and the smaller provinces with less important exhibits modestly coming after. The tout ensemble is exceedingly pleasing and a careful inspection of the different courts is highly instructive. Upon entering the large central court the visitor is immediately interested with the great pyramids of gold blocks representing the yield of that precious metal throughout Canada since it was first discovered in the far western province of British Columbia. The total yield of gold from there alone is estimated at something over $53,000,000 while across the continent, 3,700 miles, the surf-beaten province of Nova Scotia on the Atlantic ocean has produced from her gold deposits since 1864 over $8,640,000. In the banner province of Ontario, extensive deposits of gold quartz are being worked, largely by American capitalists, and here the output is estimated at nearly $1,000,000 annually.

The samples of coal from British Columbia show the excellent quality in both anthracite and bituminous of the inexhaustible coal fields of that province. Black diamonds are also taken out in large quantities in the province of Nova Scotia, and the sparsely wooded and illimitable areas of farming land in the great Northwest of the Dominion have a plentiful supply of excellent coal from the large deposits about Banff springs, near the Rocky Mountains. The province of Nova Scotia makes a poor showing of coal samples, despite the fact that she has some of the greatest coal areas on the continent. One mine in this province has a shaft running two miles out under the bed of the Atlantic Ocean, and the seam of coal is said to be the richest in the world.

The showing of nickel and nickel ore from the Sudbury district of the Province of Ontario is one which has attracted the universal attention, not only of mining experts, but also of naval officers The quality of these ores can best be indicated by the result of the recent tests made by the naval departments of Great Britain, France, Germany and the United States, in which Canadian nickel was found to have the greatest power of resistance and was by all means the most suitable for the purpose of making armor plates for improved war vessels. Following the result of these tests American capital immediately found its way into Canada, and even now thousands of tons of Canadian nickel ore are being mined by the Sudbury Nickel Company to fill a contract made with the neighboring authorities at Washington. This metal will be used for making armor plates for our proposed new war ships.

The displays of asbestos and mica and phosphates from the extensive mineral areas of the Province of Quebec show the economic value of the deposits there. The scientific collection of mineral ores and fossils made by the geological survey of Canada is one which cannot fail to interest students of mineralogy. Silver ore, argentiferous galena, copper ores, iron ores, marble granite, building stones of all kinds, graphite, crude and prepared, gypsum, lime and limestone, pigments, salt in great profusion are scattered through and tastefully arranged in pyramids in this fine Canadian collection. Topographical and geological maps, showing the situation of mineral areas, photographs of mines in operation, section maps and drawings are also arranged on the walls, so that the visitor at once gets a good idea of where the economic minerals of the country are situated. The gold from Canadian mines is worth at the mint in Philadelphia from $19.40 to $20 per ounce. Some of the quartz specimens taken from the Nova Scotia mines assay as high as $75,000 a ton.

Speaking of the Canadian machinery exhibit, it says : While this exhibit has many features of peculiar interest to visitors, the display is scarcely even a fair representation of what Canada's machinery manufacturers can produce. Many important lines are absent, and a number of the largest manufacturers are not represented at all. There is a good display of automatic and traction engines, compound marine engines, steam injectors and exhausters, high speed engines, fire engines, water wheels and iron working machinery of all descriptions, including planers, drills, shapers, lathes, etc., power hammers, woodworking machinery, lubricators, grease cups, and general steam-fittings and grain grinders. The display of woodworking machinery is one of the finest on exhibition at The Fair. This might almost be expected from a country which produces the quantity of timber that Canada does. The exhibit of brick-making machines has attracted special attention and is constantly examined by United States and foreign experts. At one end of the court is a large medal stamping press and the Canadian maple leaf is turned out in gold and silver badges and sold as souvenirs of a visit to Canada in machinery hall.

CANADIAN NICKEL MINES.

The current issue of the Mining World and Engineering Record, one of the leading trade journals of London, England, contains the first of a series of articles on the Canadian nickel mines. The descriptive sketch shows the writer to be familiar with the district he has started out to describe, both in regard to external physical features and mineral resources. Our natural wealth in nickel may be truly described as inestimable, and every season seems to add new discoveries and rich indications heretofore unknown. Under ordinary commercial conditions such discoveries do little more than bring down the price by affording more competing sources of supply. The transfer of the scene of production from one country to another must always be a slow process. The importation of nickel requires the exportation of other articles to pay for it. And the transferred industry must therefore crowd out and displace to a certain extent many other lines of productive activity. Gold is the only metal sufficiently alluring to cause a perceptible migration to any locality, and the facilities offered in so many countries for securing ownership of all valuable deposits are tending to discourage the speculative migrations of individual miners. Men hesitate to take up the burden of starting a new civilization with pick, shovel and washing pan when they are liable to find great rich areas staked off as the property of owners who have never seen the locality.

But the discovery of Canada's wealth in nickel comes at a time when commercial and economic conditions are changing. Discoveries in metallurgy are showing new uses to which nickel may be profitably applied. This will cause an increased demand for the metal in many places, and if the holders of the deposits in Ontario are energetic, and willing to accept reasonable profits, they will have the opportunity of supplying it. It is fortunate that The Mining World is about to describe this branch of our natural wealth. It reaches that section of the business community most deeply interested in the subject, and will doubtless point out a profitable field of investment to English capitalists.—Globe.

The new freight rates on Manitoba grain went into effect Tuesday last. The tariff has been printed in Winnipeg, but none have as yet been forwarded to the C.P.R. offices here, and the local traffic manager is not yet aware of what the change is. A private despatch, however, states that the new tariff shows a reduction in freight rates of 5 cents per 100 pounds from all points in Manitoba and the North-west to Port Arthur and Fort William. Rates to North Bay remain unchanged.

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

About 40,000 saw-logs are reported adrift in the St. Lawrence river above Quebec.

William Kough, of Owen Sound, has won about $1,000 on his Galloway cattle at the World's Fair.

The Canadian Electrical Association will hold its convention in Toronto, on Sept. 12, 13 and 14, in the Industrial Exhibition Building.

By the tenth census 23,010,000 inhabitants of the United States were supported by agriculture, 11,520,000 by manufactures and 15,620,000 by commerce.

Another gas gusher was struck near Kingsville on Friday with a capacity of 6,000,000 feet a day. It was struck at about the same depth as the other wells.

Tesla, the Russian electrician, says that Niagara Falls is capable of supplying the force that will generate twice as much electricity as the entire human race could possibly use.

Sharpers are now employing the aid of electricity in "sweating" gold coins. They can extract about 75 cents' worth of precious metal from each piece without altering its appearance.

W. F. Ritchie, general merchant and postmaster, Gelert, has bought the store and premises for many years occupied by J. W. Watson. The latter has removed his business to Minden.

Gates & Williams of St. Thomas, have ordered a three horse power electric meter from the Reliance Electric Company of Waterford, and will run their machinery by electricity hereafter.

Assuming the working age to be from 20 to 30 years, and counting only male workers, 440 persons in this country, says a United States contemporary, live on the labor of every 100 workers.

Traces of the bicycle are found as far back as the fifteenth century. In fact Egyptian figures found on obelisks mounted on two wheeled vehicles show they had some idea of the velocipede.

It is said that there are prospects of a hose factory, employing about 30 hands, being established in Toronto Junction. The old Stanley house, now owned by the town, will probably be utilized as the factory.

The British Museum contains the oldest specimen of pure glass which bears any date. This is a little lion's head, having on it the name of an Egyptian king of the eleventh dynasty. Thus it is shown that at a period at least 2,000 years before Christ glass was made with a skill that indicates the art was not new.

The Gaynor Electric Fire Alarm Company of Louisville, Kentucky, are considering the extension of their business into Canada, and the president was in Brantford the other day discussing the question of a location there.

New wheat has begun to arrive in small quantity at Duluth. Indications are that the crop in the three states of Minnesota and North and South Dakota will be about 100,000,000 bushels, or as large as any year up to 1891, and ahead of the average.

The Manitoba Loan and Trust company, of Winnipeg, has changed its headquarters to Montreal, and the name of the company has been changed to the Western Loan and Trust company. A branch office will be continued in Winnipeg.—Free Press Winnipeg.

Application is being made for incorporation by letters patent of James Swift, Thomas W. Nash, John McKelvey, Henry H. Gildersleeve, Henry J. Wilkinson and Mrs. M. E. Gildersleeve, of Kingston, as the Lake Ontario Steamboat Company, with a capital of $25,000.

The Natural Gas Company directors have decided to sink two more wells in Hamilton. Carmody Bros. have the contract. Applications have already been received for the use of the gas from the present well in the north-east of the city, but no action has as yet been taken.

The shipping business in Montreal this year has been remarkably large. The best of it is over now, however, but results show that the tonnage this year has been increased, and the grain exported has been considerably ahead of other years. The apple exports are now commencing, and also promise to show a large increase.

A Rat Portage despatch says:—"The largest gold brick ever produced in this district has just reached here from Sultana mine. It is a magnificent proof of the richness of our ores, weighing about 100 ounces, and valued at nearly $2,000. The brick was obtained from only sixty tons of ore."

An ice cream freezer is being placed upon the market which is almost instantaneous in its result, two seconds, and is as well an ice shave. Also different flavors can be placed in the machine and kept separate. As usual in better times, the promotors are placing a large price upon it, $5.00 each, and selling patent rights.—Ex.

Mr. Edward Atkinson, in a recent article, referred to the fact that the proceeds of a day's work of a mechanic upon the seaboard would pay for moving his year's supply of bread and meat from a western farm a thousand miles distant; while the average cost of the transportion of the food, fuel and fiber of fabric used by every man, woman and child in the country (estimated at a little more than 11 tons per year, with an average movement of 112 miles) would be about ten dollars. Verily, this is an age of wonders, not the least of which is that, in spite of the reduced cost of production and transportation the average outlay for living expenses is being constantly increased.—The Railway Review.

License Inspector Awde, of Toronto, is just now engaged in a controversy, to be settled in the police court, with the itinerant vendors of coal oil who claims that they are exempt from the provisions of the by-law under which Mr. Awde claims they should pay a license of $20 a year. The coal oil men say they are not hawkers or peddlers because they only deliver oil to their regular customers, but the Inspector thinks if they are not hawkers or peddlers he can fix them as "other persons carrying on petty trades," and is determined, if possible, to collect the $20 license fee.

Hon. Mackenzie Bowell, who has been appointed to visit Australia for the purpose of conferring with the several colonial Governments on trade matters between Canada and the Australasian colonies and other subjects of interest to the two countries, will leave Ottawa for Vancouver next Wednesday night. He will be absent about three months. In addition to enquiring into trade matters, Mr. Bowell will also look into the possibilities of going on with the long-talked-of Pacific cable scheme. He will call at the Sandwich islands on his way going. If it is not possible to have a conference of the different Governments at a central point, then Mr. Bowell will interview separately the Governments of New South Wales, Victoria, Queensland, and South Australia.

As we have heretofore remarked, the strikes to which we will become accustomed under the present regime will be strikes against the reduction of wages, and not strikes to secure higher wages. Eight thousand workingmen in the Pittsburg district engaged in the iron industry have been notified that a reduction of 10 per cent. will be made in their wages. They are talking about a strike, because there has also been a reduction in the selling price of iron. This is not a good time to strike, and it will probably occur to them that the selling prices of iron were reduced because sales could not be made at higher prices. Iron masters never put down their selling prices merely to get an excuse for cutting down wages.—Louisville Courier Journal.

Ten thousand more miners in South Wales and Monmouthshire have gone back to the collieries. Some 70,000 men who struck for a 20 per cent. advance in wages are now at work again, with the old scale in operation. The number of men still out in South Wales and Monmouthshire is approximately 30,000. The total loss of wages during the strike has

been £600,000. Most of the tin plate works in Swansea, Llanelly and Neath shut a few days ago, as their contracts to deliver goods have expired during the week. All would have remained open, despite the lack of orders, had they not been embarrassed by the coal strike. Since the McKinley bill went into operation the Welsh tin plate trade has suffered greatly, and, the manufacturers say, was quite unprepared for the new difficulties raised by the coal famine. The closing of the tin plate mills will deprive 7,000 men of work.

The reaping machine was invented in 23 A. D. A horse or ox pushing a rude affair, stripped the head off or cut the stalk, and in a modified form is still used in Australia. Mr. Gladstone bought a reaper in 1806.

Every country merchant in the Province of Ontario at least should visit the Industrial Exhibition now open. He will gather information that will assist him to make business a greater success. While here he will of course take a peep in at the wholesalers.

For some time Ald. Lamb, of Toronto, has been considering the advisibility of conveying ashes and street cleanings to the dumping places by the street railway electric service. He has succeeded in getting the company interested in the plan, and they have promised to lay temporary tracks from the regular lines to the Esplanade They have also agreed to lend the city six cars, which Street Commissioner Jones will fix up for the purpose of carrying the dirt. The scheme will be tried for a month to see if it will prove a success.

A Duluth despatch says :—The organization of the Lake Superior Consolidated Iron Mines, a corporation which will have much the same relation to the Bessemer iron ore trade of America that the Standard Oil Company bears to the oil traffic, was completed here to-day. It will control fully nine-tenths of the productive mining capacity for Bessemer ores of the United States. The other tenth is harder and more expensive to mine than its own ores. It will control a great fleet of vessels on the lakes with an aggregate carrying capacity of 60,000 tons, an ore receiving port and railway from Lake Erie to the furnaces of Pennsylvania.

An editorial in a recent issue of the Century on "The Disappearance of the Apprentice System" will be read with interest by manufacturers. The article says that the master mechanic, instead of presiding over a small shop and being a master of all branches of his trade, has become, in many instances, the master of merely a single branch of his trade. He does not work with his men and can give no personal attention to an apprentice. "It has come about, therefore, that boys are hired to do the menial work of the shops, to sweep and clean, run upon errands ; and, as part payment for their work, they are permitted to pick up only as much knowledge of the trade as the good nature of the foremen and the journeymen will permit. Of system and thoroughness in the knowledge thus picked up there is none. From the menial nature of the employment, self-respecting boys regard it as degrading, and consequently refuse to enter upon it."

Time no doubt hangs heavily on the hands of those persons who, having worked hard all their lives, suddenly give up business and retire into the country. It is on this assumption alone that I can account for the strange spectacle which was to be seen a few days ago in one of the suburbs of Birmingham, of a retired manufacturer seated on the lawn in front of his residence engaged in making a pair of trousers for himself! Perhaps the most comical part of the business was the way he was proceeding, cutting out one leg and stitching it up before he started with the other. Every now and again he would lay the embryo breeks on the grass, and fetch his wife to see how he was progressing. It will be interesting to note whether, when the garments are compelte, he will wear them on his visit to the Exchange. If he does, he will probably attract more attention than he had anticipated.—Vulcan in Ironmonger.

FUTURE OF THE BICYCLE.

The evolution of the bicycle, remarks Age of Steel, is among one of the salient facts in modern times. It has ceased to be an expensive toy or a fad for the usual crowd of novelty hunters. Its popularity and service are steadily increasing. This is observable in all countries, especially those where roadbed conditions are favorable, while in countries such as our own, where the public highways are in crude and unformed conditions, the bicycle interests must sooner or later insist on road improvements.

In a contrast between the older and newer styles of bicycle, the evolution in mechanism, in comfort of use, and even in artistic construction, is as distinctly manifest as in any other mechanical product. In the sprocket wheel, the pneumatic tire, etc., there has been a lessening of labor and a diminution of certain annoyances that interfered with the pleasure of cycling. The wheel of 1893 is from seven to ten pounds lighter in weight, though stronger in construction, than the wheel of 1889, while in other phases the advantages are all in favor of the modern article.

When more pleasure for less labor can be thus secured, it is not unreasonable to expect that so democratic a vehicle will be more popularized than ever. As a convenient form of locomotion it is being appreciated by the business man, the school boy, and even the lady school teacher and the milliner. With postman, the tax collector, and even in some cases with firemen and soldiers, the new mode of conveyance is being pressed into service. Its deployment in these lines is self-suggestive, while its future is possibly but half suspected. The family cycle is already a fact, while a roadster of the same character with an electric motor is by no means so far in the future as may be supposed. It would seem that the bicycle, like the sewing machine, has met a universal want. Had it been simply an innovation or a mechanical fad, with other mushrooms of that class, it would have had the same fate of an early decease. It is, however, happily innocent of being in the toy business, and as being associated not only with a means of recreation, but of health, and with practical convenience as with physical helpfulness, its future service is guaranteed with such improvements as are consequent to progress in mechanical science and the demands o public taste. It is reasonable to anticipate considerable expansion to the industries concerned in its production, and every such new departure adds to the industrial prosperity of nations. The future, as at present outlined in cycle service, indicates that in postal and military uses, and the thousand and one phases of life where such a means of locomotion meets a public need, that the bicycle of the future will take an important place.

A QUARRY OF RAZOR STONES.

Geo. McFaden, of Bridgewater, has discovered at New Germany, about 28 miles from Bridgewater, a quarry of stone suitable for razor hones of the finest quality. Mr. McFaden is himself a barber and therefore a good judge of the sharpening qualities of the stone, which he says surpasses anything he has ever tried. He has been distributing samples of the stone cut into suitable shape to the barbers in Halifax, and in all cases they are found to work like a charm. There is an unlimited quantity of the stone, and he has a very large sample with him, the face of which is polished and presents a beautiful mottled appearance. The stone is evidently a silicious slate commonly known as hone stone, but presents peculiarities that may render it much more valuable than the usual run of such stone. We should judge that as an ornamental stone for the manufacture of mantels and fire-places it would be in great demand, and as Mr. McFaden reports the stone present in unlimited quantities a large business in this line might be developed. It should also prove valuable as a polishing material for metals, marble, etc., etc. As good hones cost at retail from $4 to $6 some idea of the great value of the quarry may be formed. Mr. McFaden has purchased the property, and has arranged with the former owner, who has a saw mill near by run by water power, for room and power to work the stone, and proposes to at once place the article on the market. If the stone of equal quality with the samples we were shown is present in the quantity Mr. McFaden represents there should be an immense fortune to its discoverer and owner in the quarry.—Critic, Halifax.

PARCELS POST IN ENGLAND.

In an interesting sketch of the parcels post, the London "Times" says:

"The Act authorizing the parcel post was passed in 1882. But it may well be imagined that time was necessary to mount an entirely new postal service without disorganizing the ordinary mails, and it was not until Aug. 1, 1883, that the post was actually placed at the disposal of the public. The original scale of weights and charges was for a parcel not exceeding 1 pound, 3d.; up to 3 pounds, 6d.; up to 5 pounds, 9d.; and up to 7 pounds, 1s. At 7 pound the post stopped. The maximum dimensions allowed were 3½ feet in length and 6 feet in length and girth combined, and these dimensions have been found throughout to be sufficient to meet the public demands. May 1, 1886, a new scale of weights and charges was issued. This scale, which still obtains, ascended by single instead of double pounds, and thus represented a charge of 3d. for the first pound and 1½d. for each succeeding pound. At the same time the maximum weight was raised to 11 pounds, a parcel of that weight being carried for 18 pence. Compensation was promised for the loss or damage of any parcel in the post up to the sum of £1, while further sums of £5 and £10 might be secured by the payment of 1d. and 2d. respectively. The effect of these changes at once became visible. From June, 1886, onwards the number of parcels increased by more than 20 per cent. over the numbers for the corresponding months of the previous year, and the total number of parcels carried in the year 1886 rose to 31,000,000. In the meantime parcel posts had been established with many colonies and foreign States. The admirably managed postoffice of India and the postoffice of Egypt (organized bs this country) were the first to respond to the invitation of the Postmaster-General, and the interchange of parcels with India, Burmah, Aden and Egypt commenced on July 1, 1885. At the end of another six months Germany and Belgium (forerunners of this country in parcel post enterprise) had entered into similar relations, and from the commencement of 1886 the work of connecting this country with the rest of the world for the purpose of interchanging parcels by post proceeded apace. The next change of importance took place on June 1, 1891, when the system of registration was for the first time extended to inland parcels, together with compensation on a liberal scale. For the ordinary registration fee of 2d. compensation to £5 was promised, while for every additional 1d. another £5 could be secured up to a maximum of £25. At the same time the compensation payable on an unregistered parcel was raised from £1 to £2. Finally on December 1 last a scale of payment rising to £50 (which had previously been applied to the post to India and the West Indies) was adopted, and it is now possible to obtain compensation up to that amount by payment of the registration fee of 2d. and an additional fee of 9d., or 11d. in all. It is not surprising that under the influence of these improvements the number of parcels sent per head of the population has more than doubled since the post was instituted.

So completely has the parcel post now become an adjunct of daily life that it is almost difficult to realize that ten years ago any one wishing to send a parcel even between two centres of population, had no certainty when it would be dispatched, when it would be delivered and how much he would have to pay; while rural districts were for such purposes practically out of reach.

CONDUCTING A BICYCLE AGENCY.

The words of wisdom here found are taken by permission, and at random, from that valuable little work "How to Conduct a Bicycle Agency," issued by the Pope Mfg. Co.:

The first thing you should do is to establish a first-class credit, and protect it; your success depends upon it. Some agents are in better credit with a small capital than others with large capital, because their contracts are promptly met.

Unless experience has given you an expert's judgment of the relative merits of the makers and styles of bicycles open to your choice, but only of makers of established reputation and financial responsibility.

Avoid shifting around, and do not attempt to control the sale of all machines made. In making the selection it is not only the excellence or selling qualities that must be considered, but the reputation of the makers, their business principles, ability, and facilities for getting out goods as promised; whether the makers will live up to their guarantee, promptness in making repairs, and probability of their staying in the business for years, that the agent and the rider of each machine may be protected and looked after.

Select first a machine of the highest grade, for those who will be satisfied with nothing but the best, recognizing the fact that the best is the cheapest. Second, a machine in which economy of design without sacrifice of material or workmanship has enabled the maker to sell it at a lower price. Third, a line of cheap machines for boys and girls, according to the requirements of your trade, being careful, however, in selling them at their true value.

Don't sell conflicting machines.

Be sure that your location is well selected. Secure a store with a good show window, if not on the main street, on one leading from it, of easy access, and permitting of riding to the door.

A repair department of even the most limited facilities which will enable you to attend to repairs of a not complicated nature, will assist in retaining patronage.

A riding school in charge of a gentlemanly and competent instructor creates great interest and make sales.

Get everything in readiness for the season's business before the spring trade commences.

See that your store is neat, your goods well displayed, your machines complete and ready to be handled to the purchaser without overhauling, and of all things see that you have a well-kept set of books in which your exact standing can be ascertained.

Always carry in stock samples of the bicycles you represent.

Do not be afraid to order a fair stock early in the spring.

Advertise in a manner calculated to inspire respect.

Be dignified in your treatment of other agents.

Avoid controversies through the press, and proceed upon the even tenor of your way as if unaware of the existence of a competitor or another machine.

Confine your attention strictly to making known the merits of your own goods, and take advantage of any item concerning the same which may be of interest to the general public.

Don't be afraid of making yourself known.

Advertise strongly throughout the riding season, and be sure that you do not allow yourself to be forgotten during the winter.

Induce your local paper to devote a space to the sport, and contribute items of interest, taking in return an occasional "puff" for the machine you handle.

Carry a memorandum birsk in your pocket, in which to jot down the name and address of any prospective buyer, and see that he is supplied with literature descriptive of your goods the following day.

Avoid a discussion of the bad points of other machines.

If your customer expresses a liking for some other make, ascertain what he considers its best points, and then show him how the same results are accomplished in another way, or dwell upon the especially strong points of your machine, and particularly that it is satisfactory as a whole.

Be firm but courteous, and above all do antagonize your customer.

After you are thoroughly familiar with your own machines and able to clearly demonstrate their advantages, do not fail to acquaint yourself with the construction of any others which may compete with yours.

Never seek to work off an unsuitable wheel on a novice who relies on your advice, for he will soon gain a knowledge of wheels and will blame you for having taken advantage of him.

(By the time the above points are well considered, we shall find space to quote others.—N. Y. Hardware.

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WOMEN DRUMMERS.

About a year ago the Sun printed a story about a woman who was a commercial traveler. She was a success in her work. Her name was Adele M. Graef, and she was "in drugs" as they say on the road.

The other day Mrs. Graef called at the Sun office and asked to see the reporter who had interviewed her last year. What she had to say is of interest because it shows the alacrity with which some women take advantage of every opportunity to go into new branches of work, and also the readiness of business men to employ women in competition with men.

"Since that article appeared in the Sun," said Mrs. Graef, "I have traveled all over this country, and everywhere I have found evidence that the story of my work has been read. I couldn't tell you how many women have applied to my own firm. They all said they never thought of that way of earning money until they read the article in the Sun. The firms themselves took up the idea. One that I know right here in New York engaged five women on trial, and some of them are still at work. Another firm in this city sent out a woman who has proved very successful. On the road I met two women traveling for St. Louis firms. Both secured their places as a direct result of the influence of that article.

"These women, you must remember, are all traveling for the same line of goods that I carry, druggists' specialties. There are others in other lines. There is no reason why women should not find commercial traveling a source of good income, but very few of them understand that it is extremely hard work and that a woman who would succeed at it must have a good constitution, a stout heart, and a clear head. Given these requirements, there is no reason why women should not compete with men in this profession, as they have in others, and come off with a good share of the profits and the honors."—N. Y. Sun.

THE PRODUCTION OF GOLD.

We directed attention last week, says the "London Economist," to the increased production of gold in South Africa, and the United States. The annual report of the New South Wales Minister for Mines, which we have just received, shows that the output of that colony also has increased, the production of 1892 showing an excess of £10,872 over that of 1891, and being the largest recorded in any year since 1876. And it is the opinion of the Minister that the colony is not realizing the full benefit of its gold mines, and might, "with the requisite knowledge and appliances," considerably increase its output. Further, it has long been a disputed question as to whether or not China produces any material quantity of gold. The United States Director of the Mint used to credit her with an annual production of between £1,000,000 and £2,000,000, but in his last report he stated that, in deference to the criticisms of Dr. Soetbeer and other statisticians, he had ceased to credit China with any gold production. It appears, however, that the director's critics have been mistaken, for in a report to the Foreign Office, issued this week, Mr. Beauclerk, of our legation at Pekin, states that "a large amount of gold comes to Pekin as dust from the washings on the Chinese side of the Amoor River, and partly smuggled across the Russian frontier; it is melted down in Pekin into the shape of small bars of 10 taels weight, about the size of a sponge cake finger biscuit, and has nominally a percentage of 98½ pure gold." He adds that "in Pekin there must be a large amount of hoarded gold, for the officials, who in many cases, make large fortunes out of their places, buy gold bars and secrete them, fearing to put their money into banks, because their superiors would discover its existence and confiscate the whole of it.....When silver is very cheap and gold correspondingly dear, the possessors of these hoards of gold realize their property, and buy in again on the recurrence of a low market." Thus not only does China produce gold, but she has also apparently a considerable stock of the metal which, under favorable conditions, she is ready to part with

WHAT HAPPENS OLD WARSHIPS.

The "Rover" and the "Orontes" have gone to the Tyne to be broken up, says an English paper. The "Rover" has not had a very successful career. She was built by the Thames Iron Shipbuilding Company, London, some 30 years ago, and has been commissioned twice, but the commissions have only extended over a period of about 18 months. Her cost was £170,000, and she was fitted a short while ago with all the latest possible improvements, but the admiralty were not satisfied with her, and she has finally fallen into the hands of Messrs. J. H. Vasey & Co., iron and steel merchants, Close, Newcastle, and under the personal direction of H. J. Vasey, she is being gradually dismantled. The engines of the "Rover" are comparatively new; they are of 6,000 h.p., and have 10 boilers. Her length is 280 feet. The "Orontes" is a troopship, built at Birkenhead in the year 1862. Her length is 400 feet. She was re-engined in 1874, her first cost being £364,000. The engines are of 3,000 h.p., with eight boilers, and the vessel has accommodation for 1,600 troops. This ship is built on a magnificent scale, fitted with every possible comfort for troops and passengers, and has electric light throughout. Her fittings are of Spanish mahogany. The vessel has conveyed troops to India, to the Red Sea, the Mediterranean, and many other places, and has proved a most useful ship. The "Orontes" is still considered to be in perfect order, excepting that she wants new boilers, but owing to the Government having decided to charter merchant vessels to convey troops, the "Orontes" was also laid up for a while, and has been purchased by Messrs. Crawford Brothers, iron and steel merchants, of the Side, Newcastle, for a similar purpose to the "Rover." The vessel, however, being in splendid condition, will make a fine sailing ship, and when her engines and fittings are taken out, it is proposed to sell her for this use. The "Orontes'" fittings are very valuable, being of copper, brass and lead, especially the two former metals. Mr. Vasey is also superintending her partial demolition. These are the first vessels of their kind which have been brought to the Tyne for this purpose, and the speculation is expected to prove a great success. There are some 20 men engaged on board, but many more will work upon them after so much of the work has been completed, and it is anticipated that it will take about 18 months to finish the destruction of one and the alterations to the other. The "Rover" carried 16 guns, but was never in action of any kind. A statement was recently made in the House of Commons that obsolete warships were sold to the highest bidder, tenders being invited from about 100 firms. No guarantee is required that the vessels will be broken up, but that was usually their fate. The old "Victoria" was sold to a foreign firm last year for £9,804, which was greatly in excess of the sums offered by British firms.

TEMPERING STEEL.

When steel has been properly annealed and hardened there still remains another operation for it to undergo before it is exactly fitted for the duties it is its province to perform. This operation is tempering, or so modifying its hardness as to fit it for its work.

But why modify its hardness? What harm can the property of hardness be to a tool which is made to cut or stamp, or in some other manner make an impression upon something else? It is true the property of hardness may be detrimental to anything which is to be acted upon, but what hurt can it be to the thing which is to be the aggressor?

There is certainly no such thing as too great hardness in a cutting tool; when we say a tool is "too hard" and we have to modify its hardness and make it more or less softer to fit it for the duty it is to do, we are speaking loosely, for what we mean is that the thing is too brittle, and that in order to get it tough enough for its designed use we must sacrifice some of its hardness.

An English writer, sixty years ago, made some comments upon the practices of the cutlers of his day, which are so worthy of note that I may be excused for introducing them, as representing a certain current of thought which has run through many minds for many years. He says:

"It is a generally prevailing opinion among men accustomed to this process (that of tempering cutlery) that if steel be overheated previous to immersion, an extra portion of heat is likewise required to reduce it, or what is termed 'let it down' to a proper degree of hardness" (he means toughness) "and that without this a good cutting edge cannot possibly be produced. This, indeed, to say the least of it, is a miserable and ineffectual attempt to remedy one error by the introduction of another. That this is an extremely injurious opinion, and that it operates, perhaps, more than any other cause whatever, to produce a mass of inferior cutlery, must be obvious to everyone who thinks at all upon the subject. If overheated, the pores of steel become open and expanded; the fineness of its texture is annihilated, and it is rendered so extremely susceptible of injury that a small superfluity of heat acting upon it when at this critical stage entirely destroys its capability of sustaining a cutting edge. It should, therefore be inferred from these remarks that no degree of temper whatever will operate to restore to steel the pure properties of which it has been deprived by overheating."

It is to be observed that this writer, who was thoroughly conversant with the common practices of the cutlers among whom he lived, asserts that there was a "generally prevailing opinion" among them that it was necessary to draw the temper of overheated steel to a lower point than would have been necessary if it had not been overheated.

What, then, is the nature of the operation which is called tempering? What effect does it have upon the steel? These are questions which may be answered, as far as we have means of observation, but a harder question to answer than these is, why does the operation of tempering modify the hardness of steel?

It has been found that when a piece of hardened steel was heated to a slight degree, its hardness was somewhat diminished, and that as it softened its brittleness grew less and its toughness correspondingly increased. In good steel this softening and toughening process goes on in a regular manner from the first application of heat until the piece is heated red hot, and upon cooling is in a really softened and annealed condition. The process of tempering, therefore, is of the nature of annealing, and is, as far as softening goes, really a partial annealing. I say "as far as softening goes" because there is a tempering up as well as down; an increasing as well as a decreasing hardness, and tempering, properly so called, is a modification of hardness in either direction.

The following is a well recommended table of tempering colors, indicating what color should appear on brigthened hard steel to fit it for use in the instrument mentioned:

Use.	Color.	Temperature. Fahr.
Surgical instruments	Pale yellow,	428
Penknives, razors, wood tools	Straw	446
Chisels and scissors	Brown yellow,	491
Axes and heavy knives	Purplish,	509
Table knives and springs	Purple,	527
Watch springs, swords	Pale blue,	534
Fine saws, drills	Dark blue,	553
Hand saws	Very d'k blue,	600

It must be admitted that although such tables serve a very good purpose sometimes, as approximating to a right shade, yet they are almost never exactly right, and it may be doubted if an expert, in searching the stores of the country over, could find one bar of steel in a hundred which would give the best results of which it was capable if it was tempered according to any table that was ever laid down.

The truth must be confessed that variations in the forging, annealing, and hardening of pieces made off from the same bar will cause the proper heat for modifying the hardness and toughness to vary.

Some steel will not draw down in regular decreasing softness by regularly increasing temperature, but acts more like case-hardened iron. It will harden when quenched in water from a red heat, but when the temperature is raised to a straw color, the hardness has all flown! You stand ready to test the hardness with a file, and just as soon as any color shows you touch your file to it, and behold! the hardness has gone! It has not gone regularly with the increment of heat, but has all disappeared at once, the rigid clutch that held the diamond carbon firm has relaxed its grasp. It is scarcely worth while to investigate the properties of such steel, although there are uses to which it is well adapted when it can be used at its full hardness.

In the table above, the hardness indicated by a straw color is given as that at which razors should be left. A well-tempered razor is a very excellent specimen of the progress of the arts, but not one man in a thousand knows whether his razor is good, bad, or indifferent, even though he be of those who use them. He knows that he can produce an edge on it so fine that it will cut a hair, but that is no criterion to go by; the mere capability of receiving a fine edge is not by any means an indication of good temper. To ascertain whether a certain degree of temper was necessary to produce a razor edge, I sharpened a piece of sheet tin, that is, sheet iron tinned over, and set it until it had a fine edge and would cut the fine hair on the back of my hand. Having such success with the soft iron, I tried next a piece of soft sheet copper, and found it would do the same thing, and I afterwards made the same experiment with sheet zinc, and with the same success, so that it is evidently no mark of good temper that a piece of any metal is capable of receiving a fine edge. The zinc gave me the most trouble about the crumbling of the edge. Razors have an origin that antedates history, and the earliest in use may have been made of some kind of bronze, so tempered, in the admixture, as to be as hard as was compatible with the toughness required to prevent the crumbling of the fine edge; and this leads us to our ideal of what a well tempered piece of steel should be. The best tempered piece of steel is that piece which is the hardest and will yet take a fine edge without crumbling.

The cutler, who had the opinion that it was necessary to draw overheated steel to a lower temper than steel which had not been thus injured, now undoubtedly convinced in their opinion by their long experience, and the purchaser of the piece of cutlery thus injured, would probably never find out that his instrument did not hold its edge as long as it should, and, perhaps, if he had carried an excellent knife in one pocket and the badly tempered one in another, and had used them just as it happened, first one, and then the other, he might never have known the difference. They might be like the man's shoes. This philosopher tried an experiment. He greased one and let the other go dry. He said that the one he greased lasted five minutes longer than the other. I am a Yankee, and a good whittler, and I have a knife that I have carried in my pocket for eighteen years, it is always sharp, and yet I can't tell which of its three blades is the best tempered.

The color given in the table for surgical instruments is pale yellow, i.e., the first indication of color that appears on heating a brightened piece of hardened steel, and is so little softer than the hardest steel that it would be a difficult matter to determine whether it was any softer in the absence of a tool made especially for the test, as no ordinary file would mark either, and yet the little difference should be sufficient to relieve the tension of extra rigidity, to mellow the rawness of the hardening, so that the finest edge that can be put on any known material,can be put on it without crumbling. A celebrated surgeon once said: When my instruments are sharp enough, and my hand is steady enough, so that I can split a hair, then I can assert that the man and the means are ready to perform a capital surgical operation. When a piece of steel as hard as a pale yellow will cohere along so fine an edge as is required for the doctor's test it is certain that it is of good material and has escaped unimjured the dangers and perils of fire and water.

Even for a spring the hardest steel is not too hard, it is only too brittle, and as unfortunately the facts of the case have too often proved hardness and brittleness have become associated in companionship. A good sword should possess both the properties of hardness and elasticity, but it is not common at present to be rigorous in the test of hardness if they will stand the test for elasticity. Famous swords have depended sometimes upon the angle of the edge as much as upon their hardness, but the fame of keen edged swords must have been gained by excelling both the qualities of hardness and elasticity.

One of the best tests of steel for springs is the making of gun-lock springs. These are hardened in oil at a heat about red, they are heated a few at a time, and carefully watched. The temper is drawn on two at a time; they are dipped in a mixture of animal oil and beeswax, and are held over a fire until they blaze and the oil burns off; great care is required to blaze them off evenly, and not let them get too hot in any part; to insure uniform heating they are burned off three times. This gives a spring temper which is the hottest that any article requires to be in practice. Animal trap springs must be of that tough elasticity that they will bear to stand with the spring "set" in the very coldest weather, and the same test is required of a gun spring. The heat which is low enough for one is therefore sufficient for the other. These articles may be drawn to the proper temperature by immersing them in a lead bath which is kept by thermometer to the steady right temperature. Articles which do not require to be heated hot enough to blaze oil may be drawn by immersing them in vats of oil heated to the proper temperature regulated by the thermometer. Other methods of drawing the temper are by hot air ovens, and Harvey Waters, the maker of rolled steel scythes, used to have an automatic oven to draw the temper of his scythes which acted somewhat on the principle of the cracker baker ovens. The scythes were packed in iron boxes and set in on one side of the oven, and when they came out at the other end they have been drawn to the right temper. Swords are drawn to temper singly over a charcoal fire. Umbrella frame wires are in some places drawn to temper by blazing oil off from them as they are passed singly from the operator over a gas jet, Bunsen burner. Milling machine cutters are best drawn to temper on a hot mandrel inserted in the centre holes. A common Bunsen burner is a very convenient article to use in drawing the temper. In a watch factory I have seen a punch die four inches in diameter and two and a half inches thick drawn to a deep straw, very evenly, on a little sheet iron stand over a small Bunsen burner. Many agricultural machine springs are simply quenched in oil, the quality of the steel is such that this gives them the required spring temper.—B. P. Spalding in Age of Steel.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOT NAILS, ETC.
Hamilton. Ontario.
SP

KEEPING THINGS SQUARE.

The shop or or lstore with things askew, says Iron Age, bespeaks the character of the one in charge. It seems as though some men were born and bred with order in every act, while with others it is a faculty seemingly never to be acquired. In point of fact, it certainly is just as easy to place a thing squarely with relation to surrounding objects as it is to give it the appearance of having been simply dropped regardless of appearances. Nowhere does the effect of symmetrical arrangement show to better advantage than in the store. A single article misplaced or askew may have but little effect upon the general appearance, but the habit that allows an object to be thus placed will allow a hundred to offend the eye. The impression upon the customer may not be realized by himself or the storekeeper, but nevertheless if he is a man of any orderly sensibilities he cannot help comparing store and keeper with others, and inevitably inclining toward the orderly arrangement and the man who can maintain it. It is sometimes surprising to see the effect of a few moments devoted to simply setting square a helter-skelter assortment of articles. In the shop, particularly where similar pieces are made in quantity, they can as well be laid in order as they are operated upon as thrown into an eye-offending pile upon the floor. The manager of such a shop may do much toward the education of his men in orderliness by simply compelling them to keep their work symmetrically arranged. It will not be long before general cleanliness and order will follow as a mere matter of habit.

LIFE OF IRON BRIDGES.

The following letter was addressed by Sir William Arrol to a Glasgow gentleman :—"I am in receipt of yours of 4th inst, and in reply have to say that if the convener is under the impression that the life of an iron bridge is only forty years he is under a mistake, as the life of an iron bridge depends entirely on how it is kept and the material with which it is painted for its preservation. I may safely say that in my experience I have examined a considerable number of iron bridges, and one I examined was up for fifty years, and the parts of it which were properly looked after were practically as good as on the day they left the works. Some three months ago I examined another bridge over a river; it had been up for thirty years, and had not been painted for fifteen years, but there was very little corrosion, the parts that were rusted were parts were drips of water had fallen and had not been properly attended to. Then, again, I examined another a few weeks ago which has been up for 38 years, and every part of that bridge is practically as good as on the day it was put up. A few years ago I bought the material of the old Hammersmith's Bridge, London, for the purpose of using it as temporary plant in the erection of the Forth Bridge. It had been up for 62 years, and a great many of the parts had not been painted since its erection, as it was impossible to get at them; yet these parts were in a good state of preservation, in fact quite as good as when they left the works. I took some of the material with which it had been painted to ascertain the reason for the good state of preservation it was in, and the result of the analysis was that the material with which it had been painted was genuine white lead. You can see from these samples that an iron bridge properly taken care of by those responsible for it will last practically for any length of time. The Bonar Bridge, which has just been replaced, was carried away by the strong floods; it had been up for 80 years. The iron part of the bridge, which was 150 ft. span, was perfectly good, but the masonry piers got scoured out and washed away, therefore the iron work fell into the bed of the river and was destroyed."

ELECTRIC RAILWAYS IN EUROPE.

Electric railway enterprises seems to be cautious and hesitant in Europe when in contrast with its energy and vivacity in the United States, remarks Age of Steel. This apathy or slowness is not without its local reasons. It is not for lack of an intelligent appreciation of electric service, nor for backwardness in a theoretic or practical knowledge of its science, for as far as that goes, the European scientist is as much a preceptor as a pupil. The causes are located in the conservatism and prudence characteristic of old world methods, the slowness and thoroughness with which improvements are made, and the tedious process of obtaining municipal concessions.

In Great Britain, for example, until the very recent organization of the the County Councils, it was impossible to build an electric railway of any kind or size without obtaining an act of Parliament. It must also be remembered that this process involved not only considerable time but a heavy legitimate expense, the latter a big factor in any commercial or industrial scheme. With these facts in mind the tardiness of European progress in electric railroading is easily understandable. We are not so hampered this side of the water, nor in a country so new and vast are we so susceptible of inconvenience in the displacement of older methods by others of later date and more efficiency. Elbow room and lots of it counts for much in all such enterprises. This is partly explanatory of the otherwise surprising fact that Boston alone has a greater electric railway equipment both in miles of road and number of cars than the whole of Europe.

From a recent compiled table of statistics it is shown that Germany in the matter of mileage and number of cars in operation heads the European list, exceeding Great Britain by nearly double the mileage and nearly three times the amount of rolling stock, France following as third in the procession. Of the total of 60 roads in operation it is significant to note that not less than 35 are of the Sprague and Thomson-Houston systems, these being distinctly American. The following gives the figures up to date :

	Roads in operation.	Construction.	Proposed.	Number of cars.	Miles of road.
Germany.....	14	...	2	243	91
England.....	15	1	...	96	50
Austria-Hungary.....	3	...	...	74	15.5
Belgium	1	1	..	23	3.5
Spain.....	1	..	..	12	8.5
France.....	7	1	4	176	48
Italy.....	3	1	..	24	12.5
Holland	1	..	...	..	..
Russia.....	..	2	..	..	9.5
Sweden.....	..	1	..	22	4.7
Switzerland...	8	..	..	53	17.5

A NEW GAS BURNER.

A description of a new form of gas burner devised by Grangeon is given in a recent issue of Le Gaz. The lower end fits into the bracket in the ordinary way, and it is a vertical bit of tubing, closed at the upper end, and appropriately pierced. The upper end of this is surrounded by a sheath which can be rotated round it. From this sheath there pass outward two small pipes opposite one another, and bent into semi-circles, so that they ascend and approach one another at a higher level. These two small pipes are then connected with the gas burner itself. When the upper part of the apparatus is rotated upon the lower, the gas will be turned full on, or cut off, as the case may be; so that there is no separate stop cock. But there is a slight groove cut, which always allows a minute quantity of gas to pass ; and thus the alteration is not between a full stream and complete extinction, between a full stream and a flash-light supply.

THE LACQUER TREE.

The juice of the lacquer tree (Rhus vernicifera), says an exchange, is the natural varnish upon which depends the famous lacquer work of the Japanese. Specimens of the tree were brought from Japan sixteen years ago and planted in the Botanical Garden at Frankfort, where they have flourished and have yielded seeds from which thrifty young trees have sprung. This place now has thirty-four healthy trees, thirty feet high and two feet in circumference near the ground. To determine whether the juice is affected by its changed conditions, Prof. Rein has sent samples to Japanese artists for trial, and is having comparative analyses made by eminent chemists. If the reports are favorable, it is expected that the lacquer tree will be quite extensively planted in Germany, and that Europeans will be instructed in the art of lacquering wood by some skilled worker from Japan.

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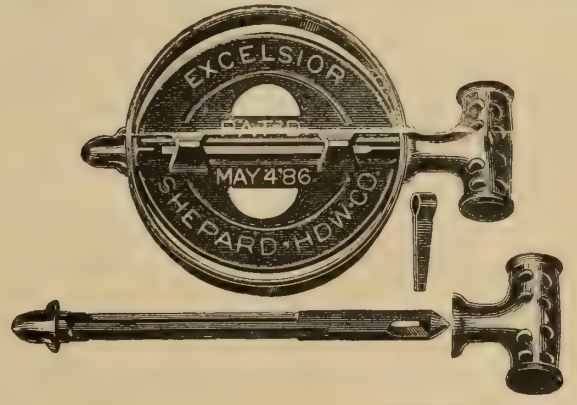
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FOR STYLE, FINISH, DURABILITY and CONVENIENCE, Positively Unequalled. Will always Maintain its Tension on Pipe.

ADVANTAGES OVER ALL OTHER DAMPERS.

No springs to burn out or become worthless by having temper drawn out by heat.

Spindles held in by new method and do not get loose by warping of damper plate.

Friction on outside of pipe, at both ends of spindle.

Acorn tip at end of spindle not only ornamental, but covers hole in pipe that is punched for spindle.

Spindles flat and do not turn in plate.

The shoulders or damper plate are made more flaring than usual, so as not to rub against the fin or rough edge around the hole made in pipe for spindle.

Nickel Plated or Japanned, "Always Cool" Ventilated Handles, substantial and ornamental, and unlike wood handles do not drop out.

☞5, 6, or 7 inch.

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EXCLUSIVE MAKERS FOR CANADA

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Sept. 8, 1893.

HARDWARE.

There has been very little change in the hardware market in any of its leading features. Trade still rules on the dull side, and although exhibition week has brought in some buyers and led to some incidental trading the increase was not sufficiently important to be really appreciable. By mistake we reported last week that the quarterly meeting of the Manufacturers' Association would be held this week. This was incorrect. They are to be held at the beginning of October. What was held was a meeting of the bar iron and cut nail men to discuss some cutting which was reported to have been done. The exact facts were not made public, but it is understood no definite proof could be adduced, so the matter was dropped. In heavy material there is no change to note.

WIRE.—There is little or nothing doing in wire except the sale of an occasional bundle of smooth wire.

NAILS.—There is only a small jobbing trade doing in wire and cut nails. Through an error we stated last week that the quarterly meeting of the association was to be held this week, when it is not to be held until the first week in October. There was a special gathering of the committee, however, to discuss some reported cutting in prices, but it is undertsood that no definite proof was adduced.

TACKS.—About the usual trade is doing, with no change to note of any importance.

HORSESHOES.—Some 25-box lots have been moved from makers' hands during the week, but jobbers report business quiet.

CHAIN.—There is nothing doing beyond a few small orders for cow and halter chains.

CUTLERY.—Some fair sorting orders are to note again this week, but buyers show a conservative policy in this as in other lines .

SPORTING GOODS.—Guns and ammunition have continued to furnish a fair movement; in fact this is the most active line in the market.

TOOLS.—There is very little trade to note in this line.

BUILDERS' SUPPLIES.—The movejent in this line is practically nil, except some small demand for roofing materials.

BINDER TWINE.—A few small orders are being sent forward.

WARE.—There is no business at all to note in this line except in the way of a few small sorting orders for enamelled and plain iron kettles.

NAVAL STORES.—There is no material change in general stores. We quote: Turpentine, 45 to 46c.; resins, $2.50 to $5, as to brand; coal tar, $3.75 to $4; cotton waste, 5 1-2c. for colored, and 7 to 10c. for white; oakum, 5 1-2 to 7 1-2, and cotton oakum, 10 to 12c. Cordage—Sisal, at 9 3-4c. for 7-16 and upwards, and 15c. for deep-sea line; pure amnilla, 11c. for 7-16 and upwards and 21c. for smaller sizes.

METALS.

There has been absolutely no change in the position of the market for heavy iron and metals, business ruling as backward as ever. Buyers show no urgency at all, and it looks as if the fall importations this year were going to be much lighter than usual in all the leading lines.

PIG IRON.—No change of importance is reported in pig iron, which remains as last quoted on both sides of the Atlantic. A few sales of car lots of Summerlee have transpired on the basis of $18.50 to $19, but that is all the actual business there is to note. We quote: Summerlee, $18.50 to $19; Eglinton, $17 to $17.25; Carnbroe, $16.75 to $17; Siemen's No. 1, $18, and Langloam, $18.50.

BAR IRON.—There is little to note in this line, which rule ssteady at quotations. A meeting of the executive committee was held on Monday last to discuss some question of cutting, but it is understood no definite proof was adduced.

SCRAP IRON.—Nothing doing, and no change to note.

TIN PLATES.—Tin plates have not shown much life. A few sales of round lots of coke have transpired at $3.10, but we quote $3.20 to $3.25 in a regular way. Charcoal are $3.75 to $4.

CANADA PLATES.—There is little doing, but stock is held steady at $2.45, and we quote $2.45 to $2.55 as a range, which is an advance of 5c.

TERNE PLATES—Nominally unchanged at $7 to $7.25.

GALVANIZED IRON.—A moderate trade is doing in small jobbing lots, and an occasional order is placed for forward delivery. We quote prices as before, 4 3-4 to 5c.

SHEET IRON.—Business rules dull and prices are rather easier at $2.30 to $2.40. Russian sheets are unchanged, at 10 1-2 to 11c.

HOOPS AND BANDS.—There is very little trade to note. The price remains at $2.35.

ANTIMONY.—No improvement to note and last week's prices, 10 1-2 to 12c., may be repeated.

SPELTER.—Absolutely nothing doing and quotations remain nominal at $4.75 to $5.00.

ZINC SHEETS.—Business rules quiet, and prices have been shaded a trifle during the week in some cases. We quote $5 to $5.25.

LEAD.—Business rules quiet and the tone is easy at $2.55 for pig lead.

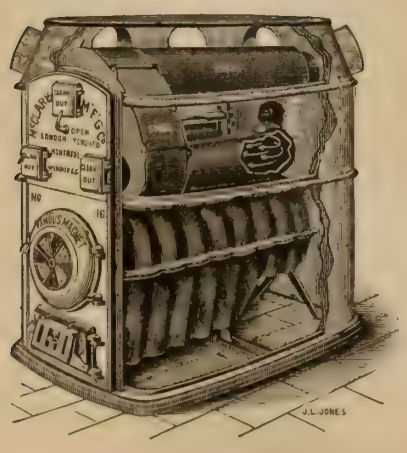
TIN.—The easy feeling in tin is still to note, but prices are not quotably changed. We quote ingot tin 21 to 22c., and bar tin 23 to 25c.

COPPER.—There has been no improvement in copper, the easy feeling noted last week still being apparent. We quote 11 1-4 to 11 1-2c. for round lots.

CEMENT.—The market is quiet as usual, although a few more small orders are being filled at current rates. We quote the following: Belgian, $.185 to $1.95, and English brands, $1.95 to $2.10. Firebricks are in fair demand at unchanged prices, $13.50 to $19 per 1,000 being still the idea.

PAINTS AND OILS.

The week has been without feature, fall trade not having commenced yet. The expectations in this connection, however, are fair. The tone is firm both in leads and oils, linseed having been cabled higher recently. We quote: Choice brands white lead, Government standard, $5; No. 1, $4.75; No. 2,



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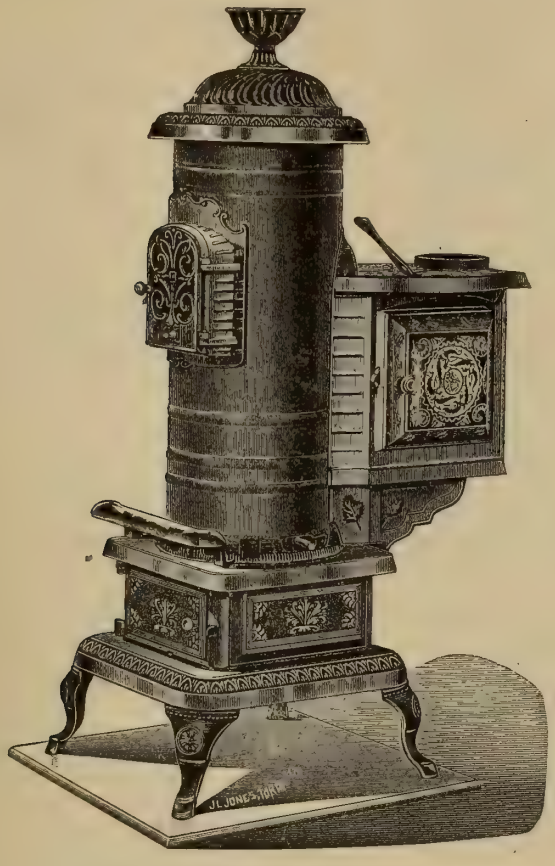
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MONTREAL Markets Continued.

$4.50; No. 3, $4.25; NO. 4, $4; dry white lead, 5c.; red lead, pure, 4 1-2c.; No. 1, 4 1-4c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, raw, 60c., boiled, 63c.

GLASS.

The glass market continues quiet and unchanged on the basis of $1.35 for first break; putty in bulk unchanged at $1.85.

PETROLEUM.

There is a fair enquiry for refined oil, a fair volume of small orders having passed during the week. We quote prices as follows: 11 1-2c. in shed at Montreal for Canadian round lots; 12 1-2c. for five-barrel lots; and 13c. for small quantities. American petroleum, 18c. in car lots; 19c. in 10-barrel lots; 19 1-2c. in 5-barrel lots, and 19 3-4c. for single barrels, 2 per cent. off for cash. American benzine, 23 to 25c.; Canadian benzine, 10 3-4c. Petrolea, and 12 1-4c. Montreal.

MONTREAL TRADE NOTES.

Southern advices on turpentine are somewhat firmer, but spot prices are not altered yet.

The Montreal Rolling Mills have an extensive exhibit at the Fair here this week of the various lines they manufacture.

W. H. Cottingham & Co. have been pushing forward a lot of sorting orders of Mander's pale carriage and No. 2 carriage varnish.

The Fox cutlery is meeting with great favor if the sorting orders that Painchaud, Squire & Co. are sending forward are any criterion.

Linseed oil was cabled firmer from England during the week, and it is said prices here would be advanced only that some old contracts at the lower prices have not run out.

The Wm. Clendinneng & Sons Co. have a number of big iron contracts on hand at present, notably for the Montreal Street Railway Co., and the alterations in the post office building.

It is understood that at the recent meeting of the executive committee of the Iron Association the fact that some of the Maritime Province makers had not fulfilled their agreement, was brought up. It was decided not to recognize them in future as members or in any way forming part of the association.

TORONTO MARKETS.

TORONTO, Sept. 8, 1893.

HARDWARE.

Trade exhibits further and more marked improvement this week. There have been a few merchants in the city taking in the Fair as well as doing a little business, but the increased movement is not to any extent due to this. It is due to a general and improved feeling throughout the country. Grain scoops are the leaders, there being more of them than anything else going out. But trade generally is of a good sorting up character. Forward orders for fall supplies are nearly all shipped. Hay baling wire continues to receive attention, and certain sizes of rope continues to go out. In cutlery the assorting trade is good. Nails, especially horseshoe, are in demand and there is a free movement in horseshoes. Sporting goods, such as ammunition, guns, rifles, etc., continue in request. Plumbers', tinsmiths' and builders' supplies are in moderate request only.

WIRE—Large quantities of Nos. 14 and 15 for hay baling continues in brisk demand. In other kinds there is nothing doing.

ROPE—There is a moderate demand for ⅜, ½ and ⅝ inch sizes in small lots.

CUTLERY—It is going out well in a sorting up way, jobbers reporting that nearly every order received contains some cutlery.

NAILS—Wire and cut nails are going out in moderate quantities and horseshoe nails are in brisk demand.

HORSESHOES—Trade is opening up favorably. The only thing the trade has to complain about is in regard to profits.

TACKS—Not much doing, but the usual fall demand for carpet tacks is expected to materialize shortly.

CHAIN—There is nothing doing, the demand being satisfied for the season.

SPORTING GOODS—Demand continues good all round for ammunition, guns and rifles.

WARE—Tinware is going out nicely and a good many orders are reported for peerless ware. Enamelled ware is dull.

PLUMBERS' SUPPLIES—There have been a few sales, but business in this line does not show any improvement.

TINSMITHS' SUPPLIES—Trade quiet and there is no feature to note.

BUILDERS' SUPPLIES—Outside some good sales have been made, but in the city business continues quiet.

TOOLS—Wheel-barrows, pickaxes, axhandles and goods of that kind are going out fairly well.

METALS.

Pig iron remains in much the same uninteresting condition, but otherwise the metal market seems to have somewhat improved.

PIG IRON—There have been some enquiries for carlots, but no transactions are reported.

Rogers, Brown & Co., Buffalo, report the Toronto pig iron market as follows: Buying continues of fair volume with every indication of a heavy fall business. Prices continue stationary and low. We quote on the cash basis f. o. b. cars Toronto, in bond: IX Foundry strong Coke Iron, Lake Superior ore, $14.80; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14.30; 2 Foundry Strong Coke Iron, Lake Superior ore, $14.05; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17 30; Southern Soft 1, $13.10; Southern Soft 2, $12.85.

BAR IRON—Quite a number of orders for both large and small lots are reported at the association price, $1.95. Complaints are heard regarding cutting in Winnipeg.

HOOPS AND BANDS—There is no improvement in business and prices are unchanged at $2.50 to $2.60 for 1 inch and upwards.

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IRON PIPE—Large quantities of this article are going out at unchanged prices; 62½ per cent. off is quoted for small lots, but this would be shaded for large lots.

CORRUGATED IRON—Trade appears to have slackened off in this line, but there is no change in prices; $4.75 to $5 is still quoted for small quantities and the "Owl" brand is quoted at $3 to $4 per square for patented and $4.25 to $7 for galvanized, according to gauge.

GALVANIZED IRON—Large quantities of this are selling, and prices are unchanged at 4¾ to 5¼c. for 28 gauge with the usual reduction for other sizes.

INGOT TIN—There is the usual volume of business doing, but prices are lower at 22 to 23c. per pound.

INGOT COPPER—Some sales are reported at 12c. for small quantities, but these prices would be shaded for large quantities.

SHEET IRON—A fair business is doing at 2½ to 3c. for small lots.

ZINC SHEET—A nice trade is reported in this line but at prices fractionally lower, the idea for 5 cwt. casks now being 5½ to 5¾c. and for part casks 5¾ to 6c.

SPELTER—This line continues dull at 3¾ to 5¾c.

TIN PLATES—A fair assorting trade is doing in this line at unchanged prices.

TERNE PLATES—Very little doing. Corrugated iron seems to be largely taking their place.

CANADA PLATES—Business continues good at former prices, all dull, being quoted at $2.65, half-half at $2.75, and all bright at $2.80 to $3 per box for small lots.

SOLDER—Business continues much as before, with prices unchanged at 15½ to 16½c. for half and half and 14½ to 15½c. for standard.

ANTIMONY—There is a continued fair enquiry at 12 to 12½c. for Cookson's and at 11½ to 12c. for common.

LEAD—Business has improved and prices have an upward tendency. We quote 3¾ to 5c. according to brand.

PAINTS AND OILS.

Nothing particularly new has developed in this line. Linseed oil is still in good demand at 60 to 62c. for raw and 63 to 65c. for boiled. But business is on the whole quiet. The little improvement noted in white lead last week seems to have vanished. Prices remain as before on the basis of 5c. Scarcely anything is being done in turpentine and prices are unchanged at 44 to 46c. per gallon. Owing to the hurricane in the South some difficulty is anticipated in getting supplies. What effect this will have on prices can at

MARKETS—Continued.

the moment be only surmised. Prepared paints remain quiet and uninteresting. The same applies to castor oil. Glue is in the usual demand, and a good deal of putty is moving. Payments are not satisfactory.

GLASS.

There has been quite an improvement in this line since a week ago, and as fall orders are now being received the supply will be ample. Prices are unchanged at $1.25 to $1.30 first break. Plate glass is in good demand at the 35 per cent discount.

OLD MATERIAL.

Trade in old material is improving a little. but prices remain unchanged. We quote : as follows: Agricultural scrap, 60c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 35 to 40c. per cwt.. No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs. ; borings and turnings, 10 to 15c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—Hides remain unchanged, notwithstanding the fact that buyers predicted an advance at the beginning of the month. Dealers are paying 4c. for No. 1, 3c. for No. 2 and 2c. for No. 3.

SKINS—Are on the rise, having increased 5c. during the week. Lambskins and pelts are now 55c.; calfskins are unchanged at 6c. for No. 1 and 5c. for No. 2.

TALLOW—Buyers are still paying from ½ to 5½c. for select quality.

WOOL—Market appears to be on the move, although a substantial report can not be made as to the prospects for the future, but dealers are not at all discouraged. Prices are unchanged at 17c. for selected combing and 18 to 19c. for clothing wool.

PETROLEUM.

The Petrolia Advertiser, in its weekly review, says : "Crude, $1.07 per barrel ; refined 10c. gallon in car lots. The exchange remains in the same apathetic state that has characterized its position of late, and we have nothing of importance to say in consequence. We are still hoping, however, that an agreeable change will shortly occur, and that an upward tendency in values will soon be apparent."

There is no change in the Toronto market either in regard to business or prices. We quote : 5 to 10 bbl. lots, imperial gallons, Toronto ; Canadian, 12½ to 13c.; carbon safety, 16½ to 17c. ; Canadian water white, 17c. ; American water white, 18½ to 19c. ; photogene, 22c.

MARKET NOTES.

M. & L. Samuel, Benjamin & Co. again draw the attention of the trade to the Hudson and "Little Star" apple parers.

"The Preservation of Painting Brushes," is the title of a neat little brochure issue by Hamilton & Co. It contains many valuable hints.

Statistics of Copper, published Tuesday, by N. Y. Metal Market Report show a reduction in the stocks since August 15th of 1,000 tons, and compared with the stocks a year ago there is a reduction of 11,000 tons, while the price then ruling was £44 10s spot and £45 futures.

Twenty tons of pig tin arrived in New York on Tuesday last. This is the first arrival since the duty went into effect. The cost in bond there was about 16¼c. per lb.

Samuel, Benjamin & Co. report an increasing demand for Kearney & Foot's files. "That speaks well for the quality of these goods," said a representative.

Bent & Cohoon, New Glasgow, N.S., in renewing their subscription to HARDWARE MERCHANT say they set a very high value upon it. The information it contains has been worth many times the subscription price to them.

A new and improved Marlin rifle, 3,855, model 1893, is being placed on this market by M. & L. Samuel, Benjamin & Co. It is already selling well, so much in fact that the manufacturers are unable to keep up with the orders. A feature of the rifle is its lightness.

N. Y. Metal Market Report of Wedesday says : "We are able to report a much stronger market for copper, prices having advanced ¼ cent per pound, and holders are not anxious to sell ; 9¾ is bid for any delivery, with very little offering under 10 cents.

The Metallic Roofing Co. has recently completed, among other contracts for roofing, W. Hendrie's residence, Waterloo ; Paxton, Tate & Co.'s mills, Port Perry ; Burr Bros. mills and Agricultural College Buildings, Guelph, and Telfer Bros. mills, Thornbury.

The warerooms and offices of M. & L. Samuel, Benjamin & Co. will be closed on Monday next as well as to-day. Business will be resumed again on Tuesday, when the firm will be pleased to receive calls from country customers who may be visiting the city.

M. & L. Samuel, Benjamin & Co. are sending a "Souvenir Guide to Toronto" to their customers. It contains a sketch of the past by G. Mercer Adam, the Industrial Exhibition program, and is liberally illustrated. There are 38 pages without the cover.

S. W. Royse & Co's (Manchester) report, Aug. 26 : There is little change to report in the position of affairs in metals. Business in the home iron ore trade is dull, and there is little doing at present in foreign ore, although prices for the latter remain steady. The imports of foreign iron ore again show an increase, being greater in weight by 382,327 tons, and in value by £148,866 during the seven months ending July 31st last than during the corresponding period of last year. Chrome ore is very firm under a good enquiry, both in this country and abroad. Manganese ore also is moving freely, and prices continue very firm. Foreign brimstone has not improved in value, but has been coming forward more plentifully, the imports during July last being greater in weight by 1,608 tons, and in value by £6,667 than during July, 1892, although the total imports in this year up to July 31st are still behind those in the corresponding period of 1892. There is a good enquiry for phosphate of lime, and prices are firm.

Walter Cottingham & Co. report that the demand for Mander Bros'. varnish and Blundell's enamell is constantly increasing. "The quality of these goods is such that wherever we get a customer to handle them, we never loose him. He always finds them a profitable line to handle, as once introduced they sell themselves. The makers of these goods, Mander Bros., London, and Blundell, Spence & Co., Hull, are among the oldest and wealthiest firms in the trade in the world." Cottingham & Co. are sale agents for Canada.

AMERICAN MARKETS.

New York, September 8.

PIG TIN.—London prices were advanced 15s. per ton for spot and 10s. per ton for futures. The New York market continues very strong, with 19 1-2c. bid for spot tin this a.m., and very little offering below 19.60c. At the close we report a sale of spot tin at 19.50c.; the market closes with buyers over at this price. We note the first arrival of pig tin since the duty went into effect. Twenty tons arrived Tuesday on the Manitoba from London, and the cost in bond here would be about 16 1-4c. per pound.

LEAD.—Market remains strong ; 3.80 to 3.85c. spot and September. Holders continue out of market for futures only at much higher rates.

SPELTER.—Dull at 3 5-8c.

IRON AND STEEL.—A Pittsburg despatch to Metal Market Report says : Trade in all departments remains very dull ; dealers, both buyers and sellers, apparently indifferent about operating. The sales of iron, therefore, continue light, with very low prices ruling for such deliveries as are needed. While ti cannot be said that trade is any better than it was a week ago, yet on the whole the feeling is steadier and the trade is inclined to accept the situation philosophically, seeing no alternative but to wait developments.

Mr. Cameron, one of the HARDWARE'S traveling representatives writing from Springhill, Nova Scotia, says : "this is a most thriving town. They have very extensive coal mines near by. The capacity is 2,700 tons per day. They employ 1,500 men. A very large amount of money was invested this year by the Montreal company on modern appliances. They sink down in one of their mines 2,600 feet. Springhill has a population of 6,000. Its business men are all prosperous and are fully alive to the times."

VIEWS AND INTERVIEWS.

A. Douglas MacArthur, of Craig & MacArthur, has just returned from a business trip through Western Ontario and a part of Michigan. Wednesday I ran against him in Wellington street. "Trade in the West," he said in reply to a query of mine, "is not at all bad. 'Tis true people are not as a rule placing large orders, but they are buying fairly well; and the best of it is, what they are getting they are paying for. Boiler makers are rather quiet. In London they are working on two-thirds time. Import orders there are not many, but taken all round things are pretty fair. We have taken some large orders for Canada plates; also for copper, for delivery between now and January. All the men in the West are taking advantage of the low market, and we can even report some good sales in Toronto. But business is much better in the West than here. We have been lately placing a lot of Goball's galvanized iron. This iron which is manufactured exclusively for us, has only been put on this market the past season and is regarded most favorably by those who have used it. In the West there is an active demand for it, and a good deal has been sold here."

"How, from what you could observe, does the situation in Canada compare with that in the United States?" I ventured.

"O, the business is much better here than in the States," replied Mr. MacArthur with emphasis. "In Detroit the condition of things is terrible. All the stove works are closed down, and I myself saw some two thousand men standing idle around the city hall there with picks and shovels on their backs waiting for something to do. A good many of them seemed to be clerks. O, yes we are better off in Canada to-day than they are in the States," concluded Mr. MacArthur as he walked away with the air of a man who was doing a satisfactory business

* * *

"The mode of doing business in horseshoes," said a jobber to me, "is very unsatisfactory. Houses have sold horseshoes at cost, and when a charge was laid before the association they wanted to know the name of the merchant to whom the shoes were sold before they could decide to withhold the rebate. This to my mind was an unreasonable request. Of course we couldn't do that. We made our charge, but if the firm complained of made an affidavit to the effect that they had not broken the agreement we would have produced our man quick enough. But of course the firm would not go the length of taking such an affidavit."

* * *

"The proportion of double diamond glass to other kinds being used is increasing rapidly," said the representative of a jobbing house to me. "At one time there was scarcely anything but the 'Star' brand used, but now-a-days, although there is still more 'Star' used than any other kind, the proportion is not nearly so great. A few years ago they used 'Star' glass for a window like that," he added, pointing to the office widows, "but now they prefer double diamond. The fact that prices of the two kinds are getting more approximate to each other has probably got something to do with it."

"It is understand," says a jobber to me Thursday, "that the price of iron is being cut in Winnipeg without any stipulation as to quantity, and we would like the association to throw some light upon the matter."

BYSTANDER.

PERSONAL MENTION.

Mr. Nicholson of the Nicholson File Works, was in Toronto this week.

G. J. Crowdy, of James Hutton & Co., Montreal, was in Toronto this week. He reports business improving.

J. W. Kennedy of J. W. Kennedy & Co., Georgetown, was in Toronto this week. He is starting out on a 500 mile bicycle tour.

Sir Henry Bessemer, who is now in his eightieth year, is engaged on his autobiography, which should prove highly interesting to all iron and steel men

There have been quite a number of country merchants in the warehouses this week, but the larger proportion of them are expected next week. Among those noticed were: J. A. Mader, of New Lowell; C. Mason, of Richmond Hill; J. Lund, of Berkeley; J. A. Allen, of New Market; John T. James, of International Bridge.

W. Hufner of Boissevain, Man., was in Toronto this week and ordered an assortment of goods. He was on his way home from the World's Fair. He said they were about through harvesting in his locality and that the grain was turning out well. The closing up of the Commercial Bank at Winnipeg had affected some of the farmers and hindered them from paying their accounts as promptly as usual, but the outlook, he said, was on the whole good.

A new railway is projected in England at a cost of £12,000,000. It will start (says the Contract Journal) ftom Manchester, and proceed to Middleton, Heywood, Rochdale, Bacup, to Burnley, thence on the low side of Nelson to Borrowford and Barnoldswick, and on to Gargrave, Threshfield, Kettlewell, Leyburn, Richmond, Darlington, Bishop Auckland, Newcastle, Howick, Carstairs, and to Glasgow. The route is intended to be a through express one, and in the more populous parts of the district four pairs of rails are to be laid. The promoters are trying to construct the railway without any steep gradient or sharp curves. Between Manchester and Newcastle the projected line will shorten the distance by over twenty miles, and between Newcastle and Glasgow the distance will be reduced forty miles.

A GUN MADE OF WIRE.

Agun which successfully withstood a pressure of 70,000 pounds to the square inch in its shop tests, and which is calculated to withstand even a greater strain, might well be regarded as a record-breaker in ordnance, says an Eastern paper. The Brown segmental wire wound gun which was tested by experts at Sandy Hook on Friday last promises to make something of a revolution in naval armament. With only 20 pounds of the new Leonard smokeless powder and a record pressure in the firing tests of 46,800 pounds per square inch, the Brown gun threw a projectile with the enormous muzzle velocity of 2,665 feet per second. This result has only twice been exceeded. A muzzle velocity of more than 3,000 feet per second has been attained with an English made gun, but its great length of 50 feet would render it practically unavailable in actual warfare. The Canet rapid-firing gun, which was also subjected to a severe test at Havre, France, developed a muzzle velocity of not less than 3,325 feet per second—an extraordinary degree of efficiency for a weapon of small calibre. The tests of the Brown gun with larger charges of powder, which are shortly to be made, will be noted with keen interest in naval and military circles, as some extraordinary results are anticipated.

THE LONDON MONEY MARKET.

The London Economist of August 26 writes: The advance of the bank rate to 5 per cent. is a prudent measure of precaution. It is very exceptional, of course, to have so high a rate associated with a reserve of £15,000,000, but then the circumstances are exceptional. During the four weeks ending Wednesday last there was withdrawn from the Bank for export gold to the amount of £6,150,000, while the receipts from abroad amounted during the same period to £1,640,000, there being a balance of £4,510,000. Broadly speaking, the gold has gone to the United States, and it is quite uncertain how much more will have to be shipped thither. All that we know is that the monetary stringency there, although it has somewhat relaxed, is still very great, and that the current requirements of the States always increase about this time of the year, when money is needed to move the crops. We know, too, that hitherto the American demand has fallen almost entirely upon the Bank of England, and that it will continue to do so unless the Bank of France can be made to part with some of its gold stock. Both, therefore, as a check upon further withdrawals, and as a means of putting pressure on the Bank of France, an advance of our Bank rate was called for.

TENDERS FOR STEEL RAILS

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Steel Rails," will be received up to noon on Tuesday, 12th September next, for the supply of—

1,000 Tons of 50-lb. Steel Rails to be delivered C.I.F. on the Prince Edward Island Railway wharf at Summerside, Prince Edward Island,

300 Tons of 56-lb. Steel Rails to be delivered C.I.F. on the Intercolonial Railway wharf at Richmond (Halifax), Nova Scotia.

5 000 Tons of 67-lb. Steel Rails to be delivered on the Intercolonial Railway (Princess Pier) wharf at Levis, opposite Quebec.

All the above to be delivered in month of June, 1894.

Specifications, Conditions, Forms of Tender, and all other information will be furnished on application at this office, or at the office of the High Commissioner for Canada, London, England.

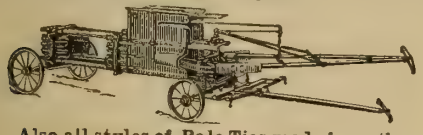
By order,

JOHN H. BALDERSON,
Secretary.

Department of Railways and Canals,
Ottawa, 8th August, 1893.

DEDERICK'S PATENT STEEL SHELL HAY PRESSES.

Made of Steel—lighter, stronger, cheaper, more power, everlasting, and competition distanced.



Also all styles of Bale Ties made from the Best Steel Wire.

Manufactured by BOYD & CO., Huntingdon, Q.

LAMPS

LARGEST STOCK
GREATEST VARIETY
and Lowest Prices in Canada.

Every dealer should see our samples before placing their orders. If you cannot wait for our travellers, send for catalogue and price list. We are sole agents in Canada for the CLARK BROS. LAMP CO, of Trenton, who are the largest manufacturers of Vase, Banquet, and Hanging Lamps in the world.

ALL NEW LINES. NO OLD STOCK.

JAMES A. SKINNER & CO.

TORONTO -:- and -:- VANCOUVER

GAS, ELECTRIC, AND COMBINATION

Fixtures

Of English, Canadian, and American designs. . .

Globes and Shades

Staple Brackets and Gas Fittings. Select stock of above always on hand.

Jas. Barwell, 88 Bay St., Toronto

SHOWROOMS
OF JAS. BARWELL, SONS & CO.,
Birmingham, Eng.

Drawings and Estimates on application.

The James Robertson Co.

LIMITED.

Toronto

SEND FOR

. PRICES AND CATALOGUE .

Coal Hods
Stove Boards
Stove Pipe Elbows
Dampers
Stove Shovels
Lanterns

You will Insure Success

IN THE

STOVE

Business, by selling

"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.

The Gurney-Tilden Co. Ltd.

Successors to The E. & C. Gurney Co.

HAMILTON - - ONTARIO.

NEW. CLEAN. GOOD



Meat-Cutter

WHITE ENAMELLED

Inside, and Brown Japanned outside.

H BOKER, Manufacturer. | For Sale by Leading Wholesale Houses.

TORONTO CUTLERY CO.,

65 and 67 Yonge Street, Toronto

M. MAYER, Propr.

NON-XLL

Cutlery

WARRANTED

And the Most Complete Lines of Cutlery of all descriptions.

ZINC PROCESSES.

Three different processes, each believed to possess its peculiar advantages, says an exchange, are in vogue among the manufacturers of zinc in Europe. In Belgium, to get pure zinc from the oxide, the latter is mixed with coal and heated in a retort, the zinc volatilizing and coming out of the mouth of the retort as a vapor; cadmium is always mixed with the zinc, and cadmium vapor comes out first, and, when lighted, burns with a brown flame, the latter changing to green as soon as the zinc vapor begins to come off; an iron cap is then placed over the mouth of the retort, through which the vapor passes and is condensed into a fine dust, and gradually the cap becomes hot and melts the dust into liquid zinc, which runs into molds and is cast into blocks. The Silesian process differs from the foregoing only in the retort, the mixture of ore and coal being put in and heated, and the vapor passing out through a tube bent at right angles to the retort; the tube is kept cool, but not cool enough to condense the vapor into solid zinc, as, if this should happen, the pipe would become clogged and the retort would burst. In the English process the retort consists of a tightly covered crucible, through the bottom of which passes a pipe; the pipe is stopped with a wooden plug, and the mixture of ore and coal is put into the crucible and heated, and, as the mixture grows hotter, the plug is converted into charcoal, allowing only the zinc vapor to pass through it.

QUALIFICATIONS OF A CLERK.

"In these stirring, go-a-head times a clerk of twenty years ago would have little chance of success without he was apt and imitative," writes a correspondent of the Industrial World. "A clerk of to-day must be alive, energetic, obliging, full of tact and originality. These five qualities are imperative, and, if he has well-defined conscientiousness —faithfulness in the performance of his duty, —so much the better for ultimate prosperity. Who of our readers has not met in a store a clerk who will wait on a customer like an automaton—a mere machine—get his few pounds of nails, a file or two, etc., and is never asked to look at some new device, a novel plane, or what not? If this meets the eyes of such a one, get out of that rut as soon as you can, for a clerk to be of value to his employer and an honor to himself must be bright and energetic, a man of fresh ideas with sufficient judgment to turn them to account whenever a favorable opportunity presents. These opportunities he should look for and improve as occasion presents, but, at the same time, judgment and tact must not be overlooked—hence a study of a customer's peculiarities is necessary to enable the clerk to handle him to the best advantage. If we have made one clerk a convert to our views and he has the good sense to know and appreciate the effort made, we are content. Rest assured the qualifications we have set forth here are the foundations of a sure success, all other things being equal."

SAFE BUSINESS.

Suppose, writes T. W. F. in Iron Age, that three hardware merchants are doing business with the same amount of capital, under the same expenses, but with different results. A, with a capital of $2,500, turns his capital three times during the year, resulting in sales of $7,500; with expenses amounting to $1,132.50. The expenses may consist of rent, clerk hire, freight, cartage, advertising, light, fuel, insurance, interest on capital at 6 per cent., postage, taxes and sundries, not including bad debts. The goods have been marked to yield a gross profit of 30 per cent. or $2,250. After deducting the expenses from the gross profits, $1,117.50 remains for personal expenses and clear gain. The ratio of expense to the sales in this case is a fraction over 15 per cent. B, with the same amount of capital, also marks his goods to yield a gross profit of 30 per cent., but the capital is turned but two and a half times during the year, resulting in sales of $6,250. Deducting $1,132.50 for expenses, from $1,875, which represents the gross profits, $742.50 remains for personal expenses. The ratio of expense to the sales is here a fraction over 18 per cent.

C, with the same amount of capital, expenses and goods yielding the same percentage of gross profits, turns his capital but twice, showing $5,000 as his year's sales. His gross profits are $1,500, leaving, after deducting expenses, $367.50 for personal expenses. Here the ratio of expense to the sales is a fraction over 22 per cent. A, shows a satisfactory business; B, a business that might be considered satisfactory for a poor year; but C is running his business at a loss, as the average family cannot live on $367.50 a year, and the capital would have to be drawn upon make up the difference. It will be seen that the percentage of expenses increases as the sales diminish, and that 30 per cent. profit is a fair average at which to mark goods. A business should increase from year to year, and as it increases, the expenses may be increased by adding more or better help, better appliances for doing business, &c; but the expenses should be kept down so as to bear the same ratio to the sales as formerly. In B's business the limits have been reached, both in the amount of expenses and smallness of sales; and to live anything but a hand-to-mouth existence the sales must be increased or the expenses reduced.

The interest on the capital would be a fair amount of increase in capital for the coming year, which a growing business will demand It is desirable to invest the net gains in some other way than by returning it to the business as increased capital year by year; for should adversity overtake the merchant, outside means would be needed to help him out of trouble or to allow him to gain a new start in life.

THE WORLD'S COAL PRODUCTION.

The Journal des Mines, in a recent issue, publishes some interesting particulars of the coal production of the different countries of the world. The coal mining area of the United States, it would appear, is as follows: Carboniferous soil: Anthracite, 985 square miles; Applachian, 64,395 square miles; central, 47,250 square miles; western, 98,700 square miles; Michigan, 6,700 square miles. Trias and Jurassic: Richemont, Piedmont, 170 square miles; Deep River, Dan River, 500 square miles. Cretaceous and tertiary: Western Plains, Rocky Mountains, 20,000 square miles; Mont Diabola, etc., Washington, Wyoming, etc., 11,300 square miles. New geological workings and new private discoveries have evidently increased this number. The following tables gives the areas of the different mines in the different countries:

	Square miles.	Per cent.
United States....	250,000	58.7
English America.	56,000	13.1
Great Britain	12,000	2 8
Spain	4,000	0.9
France.....	2,000	0.5
Germany	1,800	0.4
Belgium.....	518	0.1
Other countries...	100,000	23.5
Total.....	426,318	100.0

It thus appears that North America possesses a coal area largely in excess of the rest of the globe. The total production of coal in the year 1891 amounted to 520,000,000 tons. Supposing that 300,000,000 tons were used for domestic purposes, there remained 200,000,000 tons employed for the production of motive-power in the different industries of the world. Expressing this in horse-power, by taking two kilogrammes of coal per horse and per hour, and there results a force of 23,500,000 horses produced continuously during the whole year, night and day, excluding Sundays. Of this large consumption of coal for motive power, the United States take 150,000,000 tons, or 30 per cent. of the world's production. Supposing 70,000,000 tons to be employed for other purposes than for motive-power it gives for the latter industry a consumption of 80,000,000 tons, which represents the continuous work of 6,222,222 horses or of 49.777,777 men for the whole year. This work produced by the aid of coal has been largely supplemented by the use of wool, petroleum, and natural gas. These elements have not been taken into consideration in the foregoing calculations. It should be noted that the consumption of coal has increased in the United States for the production of motive-power more than in any other country; this increase, in 1891, over 1890, was in round numbers about 10,000,000 tons.

A BUSY FIRM.

During his rounds this week the Montreal correspondent of HARDWARE had occasion to call on Wm. Clendinneng & Sons. In the course of a short conversation with Mr. Wm. Clendinneng, Jr., he had to retire for a short space to hide his blushes before he could carry the interview to a finish.

"You want to know if there is anything new?" said Mr. Clendinneng. "Well, no, not much; but we are very busy at present for various reasons, and as HARDWARE is a pretty good paper and thoroughly deserving of appreciation, I don't mind telling you something for circulation a nong our friends through the medium of its columns."

"Yes, our new works at St. Henri are getting on pretty well, and we flatter ourselves that when they are completed they will be well worth a visit from anyone, no matter whether he is interested in the iron trade or not. We expect to be in full working order by the 1st of October. Our new foundry and stove-mounting department is quite extensive, measuring 350 feet by 65. When it is completed I hope you will come out and have a look at it. We need the extra accommodation badly, I can tell you, for we are busy on all our lines—so busy, in fact, that we can't fill half our orders for the 'Universal' and 'Leader' on time. The Etna hot-water boiler is having a very good sale also. We are every day receiving testimonials about it, and are getting orders right and left. Our rush in other work is also handicapping us in our regular stove trade. We are supplying the iron work for the big building of the Montreal Street Railway Co. at the corner of Craig and St. Lambert Hill, and besides have a lot of out of town contracts. The iron work of the new elevators and alterations in the General Postoffice is also in our hands, besides the stable and house fittings for W. W. Ogilvie's new country residence at Lachine, as also Mr. Reford's residence at St. Annes. So you see we have lots of work to occupy our increased capacity even when it is ready. I expect you out to have a look at it; and, good bye." And a very busy man turned to his work.

BUSINESS CHANCES

Advertisements under this heading two cents per word each insertion.

STOCK OF HARDWARE, TINWARE AND stoves for sale; good paying business, excellent stand, well established trade; good reasons for selling. Apply to J. D. BURK, Amherstburg.

RAZORS, SCISSORS

POCKET KNIVES



TABLE KNIVES

BUTCHER'S KNIVES



"BUILD TO-DAY THEN, STRONG AND SURE, WITH A FIRM AND AMPLE BASE." —Longfellow.

DO YOU?

WISH THUS TO BUILD, an advertisement in the CONTRACT-RECORD, TORONTO will bring you tenders from the best contractors.



PAINTERS

Will find the cheapest Paint Brushes are those having our . . .

Flexible Bridles—

Why? Because the bridle can be taken off and replaced in a moment. The paint circulates and the stump never hardens. You can wear the brush down shorter, therefore it will last much longer.

Ask your dealer for them. Made in round, oval, and flat. All sizes and qualities.

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General Commercial Printing

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Suitable for Any Athletic Competition.

Special designs prepared and estimates furnished on application.

The Toronto Silver Plate Co.,

570 King Street West,

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LAUNDRY APPLIANCES.

The strides that have taken place in laundry machinery are somewhat notable, and perfection in it has been impelled by the demands for good and quick work in these latter days, remarks N.Y. Hardware. The ordinary wash-tub, clothes line, and flat iron, would be altogether out of place in the public institution or the hotel of today, where in the latter the traveler comes in the morning, rings the call-boy, and gives him a dozen pieces, with the injunction that the clothes must be returned on the afternoon of the same day, so that a certain train can be taken. Nearly all of the machinery is driven by power, and in itself is intricate. There are the ordinary hydraulic washers, weighing from 675 to 3,000 pounds, making as many as 180 revolutions per minute, and doing their work well. These have many variations, but the better ones have brass cylinders, which are half hardened, and are cleaner and more effective than wood.

In establishments where there are large amounts of heavy linen or roller towels, brass tumblers are introduced, with a large number of perforations, which permit the vapor from the goods to escape, and at the same time allow a strong blast of hot air to be introduced, thus taking the moisture quickly away and rendering the linen more soft and appliable thereby. The starching machines are marvels in their way. By them the starch is kept boiling, and is so introduced into the shirt or other article, an agitator keeping it constantly in motion, while corrugated rolls at the proper time squeeze all excess out and carry it away. Passing by a great number of mangles, we find collar and cuff ironers which have a capacity of 14,000 per day, some with three heated rolls for high finish. Graphite bearings are used, so that the use of oil can be obviated, which always is liable to soil the work.

Goods requiring only a medium gloss or domestic finish are not made with so many rolls, but in all the drums are covered with seamless all-wool felt jackets, which make the bed soft and pliable, and will not cause splitting of the edges of the collar or cuff.

A shirt ironer will do up the full length of the bosom automatically, ironing one way or both, and is so constructed that the bed can be dropped from the hot roll at will. Its capacity is about eighty bosoms per hour. Special machines are used for neck bands, as as well as wristbands. Then there are sleeve ironers, body ironers, collar folders and shapers, all doing a special work, and very interesting in their operation.

For small concerns, and even for families, there are a variety of articles all tending to admit of the head of a household doing as fine work at home as in the expensively equipped laundry. These machines are run by hand, and consist of mangles, polishers, dampeners, fluters, gas iron heaters, wash tubs, wringers, baskets, etc.

Among the miscellaneous articles kept by the laundry supply men are sad-irons, iron-holders, collar-stringers, laundry-nets, eylet-raisers, iron-stands; and he will also sell you double concentrated powdered 98 degrees caustic soda, which will soften water; real caustic potash for making laundry soap; extra strong chloride of lime for bleaching and whitening, and refined pearl ashes for fine washing. He will get for you the celebrated Troy bluing, or the best indellible ink.

In all this there is perhaps something for a hardwareman. Washing is a homely subject, but an authority on it in each neighborhood would be more popular than a Harvard professor,and his name would be more often mentioned in sewing circles and at other gatherings, than the pastor of the flock.

BARB WIRE FENCING.

Regarding the use of barb wire fencing, says Stoves and Hardware Reporter, an estimate is made that one-half of the rail fences throughout this State have given away to the better substitute, while in many other States the change has been made to even a greater extent. The farmer has discovered that fences costing him less than four cents a pound are cheaper than rails, and that he is taking valuable time from his work when engaged in splitting them. He has also found out that wire gives him the use of more land and a greater extent of acreage for his crops. So the rails are going the way of all antiquated methods and devices, and the barb wire has come to stay.

This has only been obtained, however, after a campaign of education that must be continued if the farmer and trade alike are to receive the full benefits. Manufacturers say that more wire has been put up in the last five years than had been sold altogether before that time, but they add, and this is something known to everyone, that the trade has fallen off in the last year despite the low prices. A reason urged for this is the low price of grain and an indisposition on the part of the farmers to increase their expenses. If an effort were made to show them, as can be done, that the saving in timber, the recovery of hitherto valueless land and even the use of the old rails for firewood, would pay for the wire within a year, they could be induced to abandon the old worm fences and adopt the modern invention. The average farmer looks at all things through the light of dollars and cents, and the best way of appealing to this trade is through his pocket-book.

So far as the present outlook is concerned, manufacturers say that they prefer to supply such trade as there is from the stocks now on hand rather than to keep the mills running at the expense of a big pay-roll from which no immediate returns can be received. They also say that, while they can probably place a considerable number of orders now at the low prices, the general situation is such that they do not feel warranted in doing more than meet such demands as come in without solicitation. Notwithstanding this, the manufacturers do not appear to be in any way disheartened, and express the opinion that the trade will recover more than it has lost during the dull season.

STORAGE BATTERIES.

To many people the name "storage battery" is a symbol for the accomplishment of now impossible objects, "when it is perfected," and none can deny that its improvement promises to be of great benefit to the race, but we should not expect too much of it, for we are sure to be disappointed, says American Mechanic.

The perfected storage battery must necessarily contain considerable weight in order to have the requisite strength to stand the strain and jar incidental to railway work, even railway lighting subjecting the battery to the jar incident to all rolling stock. When used for street car propulsion it must always have the disadvantage of necessitating the carrying of dead weight regardless of whether the batteries are fully charged or empty, and of whether little or much power is required, so that even the perfected battery will have its drawbacks for this work. It seems to us that its main field of usefulness will be in the line of what is already being to some extent in European central stations, that of forming a reservoir of electrical energy, to be supplied by the engines when the load is light, and to be drawn upon for a supply to assist the engines or whatever the initial power,at times of extra load. Another field will be in the supplying of current in places distant from central stations, so that fans, motors, or lights may be run without a dynamo if desired, while the electric launch is destined to become a great feature in the pleasure boating in the harbors of the great cities, the freedom from noise and steam and dust, the absolute control without moving from your seat, and the absence of any dirty work, as in the case of an engine, make it a very desirable form of energy to be used in such a case.

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PECK, BENNY & CO., MONTREAL.
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ALEX. McARTHUR & CO., Tarred Felt Building Paper, etc, MONTREAL.
BELGIAN SYNDICATE, Cement, Iron Beams, etc.



COW TIES. Open Ring, Closed Ring, and Walton. Our Cow Ties are made of Brown's Steel Chain, all fittings being of steel throughout. There is no other chain on the market that will compare with these chains for strength, lightness, and handsome appearance. We confidently believe our ties of a given number are fully equal in strength to a size larger of any other on the market. If you have not tried the cow ties, send for sample half-dozen and discounts. Manufactured by

The B. GREENING WIRE CO., Ltd. HAMILTON, ONT.



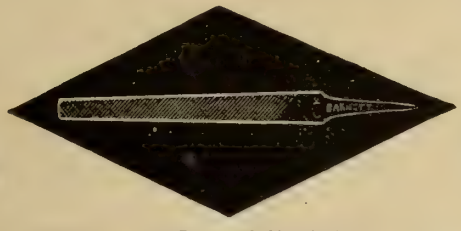
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- AND
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21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

—MANUFACTURERS OF—

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES.
CHISEL POINTED SAWFILES. GULLETTING SAWFILES.
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—AND—

EVERY OTHER DESCRIPTION OF SAW FILES.

Hard Wear Paper FOR Hardware Men

Manillas, Brown Wrapping,
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PAPER

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THE E. B. EDDY CO., Hull, Canada

SHIPPING DIRECTIONS.

Our attention is called to the frequency with which merchants neglect to accompany mail orders for goods with explicit shipping directions. Orders of this kind are often hurriedly written, and as the merchant has been buying goods from the same firm for years, he has no thought but that its members are familiar with the route by which his goods are shipped; or he may add, "ship same as last." This is probably more annoying than if no shipping directions were given, as it indicates that the merchant has a decided preference as to the route by which the goods are to be shipped, and yet gives no specific directions on this point. The shipping clerk is obliged to search through perhaps six months' business to find how the merchant's last order was shipped, and at a time when he can ill afford to give the attention required. Again, the clerk is apt to have no intimation of how goods are to be shipped until the goods packed ready for shipment are turned over to him for making out the bill of lading. Perhaps 50 or 100 bills of goods are to be gotten off the same day, so the one entailing the extra amount of labor is laid aside until he has more time. The merchant, in such a case, is displeased because the goods are not promptly shipped. Very frequently there are two stations of the same name in the same State, in which case it would be an advantage to have the county mentioned. In other instances, where goods are ordered by a customer living at a certain post office address whose shipping point is elsewhere, according to the guide used by the shipping clerk, the goods would be shipped to a certain railroad station. The customer might prefer, however, on account of the better condition of the roads, or for other reasons, to have the goods shipped to a station other than that mentioned in the shipping guide.

It is suggested by a large wholesale concern in Philadelphia, in connection with this subject, that it would be an excellent idea for customers in every instance to put on their letter heads the name of the city, county and the State in which they live, and also, if they desire goods shipped to a certain point to have this, too, printed on the letter heads. They state that they occasionally receive letters from customers at the top of whose letter heads are printed the names of the railroads on which they are located, all of which is a decided advantage to the house shipping the goods, saving the annoyance of having goods go to a wrong town, and also saving considerable time in looking up shipping directions. It would be still better if merchants would have order blanks printed with ink that would copy in a letter book, and use copying ink in writing orders, so that a complete record of each order could be found at any time by referring to the letter book. Orders given to traveling men, as well as those sent by mail direct to the house, should be made out on an order blank and copied. At the head of the order blank should be printed the name of the town and county, the railroad or boat route by which the goods are to be sent, and, if by boat, whether the goods are to be insured or not. The terms upon which the merchant wishes to purchase the goods should also be mentioned. All these directions should be given on each order, so that each order will be understood by itself without the necessity of referring to a previous one. The goods ordered should be designated by the catalogue number, or, if no number is given, the size, quality, and price of the article should be mentioned. In ordering special goods it is well to insure prompt shipment by adding the word "preferred," "or similar," thus allowing the jobber or manufacturer to substitute such goods as he may, in his judgment, think will be acceptable to the merchant. In a word, the shipping directions and order for the goods should be so plainly given that they cannot be misunderstood.—Iron Age.

DOMESTIC ELECTRICITY.

Domestic electricity, to a great extent, only exists as yet in the imagination of the people who are awaiting the time when they can have current on tap for cooking and heating, and for the greater part for lighting as well, as the incandescent has not as yet made its way into the homes of the multitude as much as could be desired. But it seems useless to await the coming of a new era in electric generation, if such it may be called, before beginning in a small way to utilize some of its benefits in everyday life, and it seems a fitting time, now that the hot weather is here, to suggest a more extended use of the innocent-looking but "wind-stirring" electric fan. It is not necessary to have connection with any lighting or power circuit in order to enjoy its breezes, although for large fans and perhaps for small ones it may be a trifle cheaper. But we can now procure fan outfits, including battery, fan motor, and fan for the sum of $5 and upwards, and, although small at this price, it will make its presence felt in a manner very gratifying to the sick person in the hot nights, and in some cases aid the doctors in their patients' recovery. A small fan over the cradle or crib of a child will add much comfort to its slumbers, and also make it more inconvenient for flies to annoy the sleeper. Our contemporary, the Electrical Review, has been doing a good work in illustrating the many different kinds of electric fans in recent numbers, giving people a better idea of the variety and uses than the majority may have had. And while we hope for electric current for many domestic purposes in the not distant future, let us use what is now available and add to our comfort by the use of these little fans which help to make life bearable on the warm days and nights of summer. By beginning to use the current in a small way people will become more accustomed to it and not be fearful of its dangers (?) when the opportunity presents for using it more extensively. —American Mechanic.

WHAT IS STEAM?

The above question is frequently asked of engineers nowadays, and although they make constant use of steam, very few will answer that "steam is an invisible gaseous fluid, generated by the aid of heat from water." Many of them, says Machinery, when told that steam is invisible, laugh and say they know better, because they see it every day. If one of these men who claim the honor and name of practical engineers will take a look at the water glass in the boiler room, if they have one—if not, let them look at the one on their neighbor's boiler—and then tell if they can see any steam inside of it. If the glass should happen to burst while they are making the observation, they will, no doubt, see plenty of what they call steam in the vicinity, and they might also see the same if the safety valve should happen to blow off. Why, then? Simply because steam is invisvisible, and so long as it is confined you cannot see it, but when it is cooled off, as when it comes in contact with the air, and is consequently condensed again to the water from which it originated, it becomes visible to the eye, like water in very small particles, as in a fog. Viewed at such times it has lost its characteristics as steam, and instead of being a gaseous fluid it has become condensed to water in very small particles, which occupy considerable space. When in this condition we see what we call steam, but when an engineer notes the flow of steam from guage cock or safety valve, he will notice that near the opening nothing is visible, while at some distance he sees fog. The reason of this is that at all times steam is invisible while it remains steam, but by condensation and the formation of water a fog is produced, which can be seen and distinguished in no way from fog which rises from rivers, swamps, or other bodies of water during such times as the temperature and other conditions are favorable to its formation.

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

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MONTREAL AND TORONTO.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.
Keene's Coarse, Parian and Superfine Cements.
SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.
FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,
CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

FIRE!

McCAUSLAND & SON

Beg to inform their customers and friends that they are in a position to fill all orders with promptness and dispatch, notwithstanding the recent fire in their premises. . . .

72 to 76 King St. W.

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ESTABLISHED 1812.

Sole Manufacturers of the Celebrated Brands

Unicorn Coach Colors
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Unicorn Varnishes
Crescent Star Varnishes
Etc., Etc., Etc.

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PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

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Is the best in the world. Does not heat and suits all kinds of Machinery.

Our Solder is used by all the leading Plumbers, Roofers and Tinsmiths.

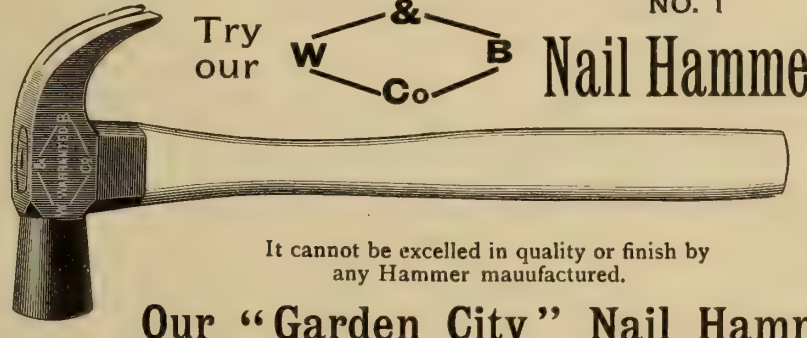
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THE WHITMAN & BARNES MFG. CO.

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Try our W & B Co NO. 1 **Nail Hammer**

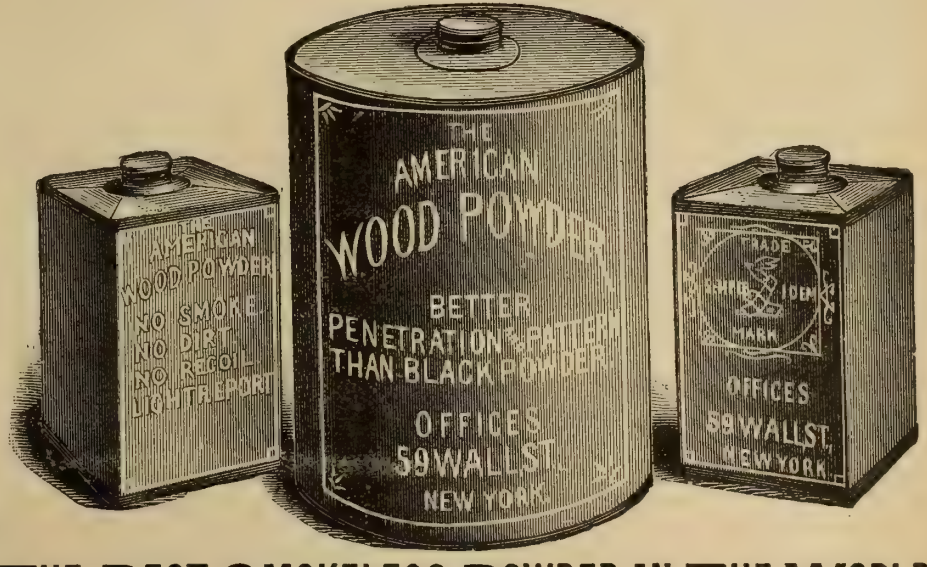
It cannot be excelled in quality or finish by any Hammer mauufactured.

Our "Garden City" Nail Hammer

GET OUR PRICES AND TRY OUR GOODS

Is the best and cheapest "Solid Cast Steel" Hammer on the market. . . .

We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .



THE BEST SMOKELESS POWDER IN THE WORLD

SOLE AGENTS. SEND FOR CATALOGUE.

The Bowman Hardware and Sporting Goods Co., Hamilton, Ont.

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

The Hamilton Whip Co. has assigned to C. S. Scott.

Angus Curry, general store, East Bay, C.B., has assigned.

Beland & Marrier, general merchants, Capelton, Que., have assigned.

Belard & Morrier, general merchants, Capelton, are offering to compromise.

The furniture store of George W. Hazelton, Hamilton, has been closed by the bailiff.

Hourd & Keenleyside, Dominion Baby Carriage Co. of London, have assigned.

David Kiely, boots and shoes, Montreal, has compromised at 53c. on the dollar.

C. M. Gowans, furniture dealer, Paris, is offering to compromise with his creditors.

L. H. Desrosiers, general merchant, Macnider, Que., is offering to compromise at 70c. on the dollar.

James M. Gordon, general store and grain, Beaverton, has assigned to Henry Barber & Co.

Higgins & Co., general merchants, Buckinham, Que, are offering to compromise at 50c. on the dollar.

The firm of A. R. McKinlay & Co., window shade manufacturers, Toronto, is in difficulties. The plant of the concern was burned a few months ago, and Mr. A. R. McKinlay inherited a lot of property, which has been an encumbrance instead of a blessing.

George E. Spurr, general store, Torbrook, Annapolis County, has assigned. He makes preferences of over $9,000, including $5,154 to the Commercial Bank, Windsor; Amos Burns, $3,214, and Delong & Seaman, $2,466. It is not likely there will be anything for the general creditors.

PARTNERSHIPS FORMED AND DISSOLVED.

Lavoie & Lemieux, broom manufacturers, Levis, have dissolved.

Beauchamp & Nadeau, saddlers, Montreal, have dissolved.

Angus Cameron & Son, general merchants and mill, Sherbrooke, N.S., have dissolved.

P. G Huot and Abel Huot have registered a partnership to carry on business as electricians at St. Casimir under the style of Abel Huot & Co.

Samuel Dussault and Hubert Denis have registered a partnership in Montreal to carry on business as tinsmiths under the firm name of Dussault & Denis.

N. Mercier, sr., and N. Mercier, jr., have registered a partnership to carry on business as saw filers at Levis under the firm name of Napoleon Mercier & Co.

J. M. Hill and Geo. L. Morse have registered a partnership to carry on business in St. Armand West as general merchants, under the firm name of Hill & Morse.

SALES MADE AND PENDING.

The stock and building of Mrs. S. Jordan, general store, Epping, is advertised for sale.

William Hagerman, furniture and undertaker, Whitevale, has sold out.

The stock of Hendricks & Clarke, tinware and furniture, Trenton, is to be sold by auction Sept. 11.

C. F. Noyle, furniture and undertaking, Mooretown and Courtright, is advertising business for sale.

The hardware and tinware business of the estate of J. D. Burk, general merchant, Amherstburg, is advertised for sale.

The stock of John Rennie, dealer in bankrupt stocks, St. Catharines, is advertised for sale on the 12th inst., under power of a chattel.

CHANGES.

Warner & Ham, general merchants Woodville, are removing to Lindsay.

R. J. Adams, stoves and tinware, Mono Road Station, has removed to Grand Valley.

Thomas Webb, general store and grain, Brighton, has sold out general store to J. B. Smith.

M. J. Anderson, general merchant, Athelstane, Que., has been succeeded by H. R McGinnis.

FIRES.

William Young, saw mill, Wiarton, has been burned out.

R. Bushlen, manufacturer of rakes, Port Elgin, has been burned out.

The store and contents of Ford's furniture store, Merlin, Ont., were destroyed by fire Sept. 1.

The hardware and stove shop of S. Van-Camp & Co., Hastings, Ont., was destroyed by fire Monday morning. The stock is insured in the Gore District Mutual for $3.500; building insured in the Commercial Union for $1,500. Peters' main block was considerably damaged. Total loss, $7,000.

DEATHS.

E. Schwartz, of E. Schwartz & Co., shipbrokers, Quebec, is dead.

John Wadleigh, general merchant, Durham, Que., is dead.



RURALLY BUNCOED.

FARMER FODDERSTRAW—"Jest keep yer eyes glued on that bull, friend."

COOLEY (the drummer)—"What's he going to do?"

FARMER FODDERSTRAW—"He sheds his horns every once in a while, and if I ain't mistakened this is his day."

ELECTRIC LIGHT AND EYESIGHT.

There are many people who regard the incandescent electric light as having an injurious effect on the eyesight. To these individuals the following consensus of opinions obtained by a leading electrical journal of London through a canvass of the principal oculists of that city should bear some weight in refutation of their unfavorable opinion of the latest illuminant. The journal in question recently published the following points as a resume of the facts and opinions elicited from the specialists above referred to:

1. No authenticated case of injury to eyesight through the incandescent electric light has ever been recorded.

2. In point of purity, sufficiency, absence of heat, steadiness and adaptability, electric light is preferable to either gas, oil lamps or candles.

3. The only eyes which are likely to be injured by electric light are those already suffering from weakness or derangement, for which a dark room is necessary.

4. In less serious cases a change from gas to electric light has been found decidedly beneficial.

5. In its constitution electric light very closely resembles sunlight, and has a far smaller proportion of harmful rays than any of its rival illuminants.

6. The extreme ease with which it can be managed makes electric light capable of being perfectly shaded and placed.

7. Electric light under proper conditions of use is the best form of artificial lighting known.

Intercolonial Railway

RAILS AND SCRAP

SEALED TENDERS, addressed to the undersigned, and marked on the outside "Tenders for Rails," or "Tenders for Scrap," will be received until MONDAY, SEPTEMBER 11th, from persons wishing to purchase the whole or any part of the following:

Twelve Hundred Tons Scrap, 38 lb. Iron Rails; also three or four Tons Fish Plates and Bolts.

Four Thousand Eight Hundred Tons serviceable Second-Hand Steel Rails, four inch and four and a quarter inch, fifty-six pounds to the yard, with bar plates.

Two Thousand Six Hundred Tons Scrap Steel Rails.

Two Thousand Six Hundred Tons Scrap Iron Rails.

Five Hundred Tons Cast Iron Car Wheels.

Three Hundred Tons Steel Scrap.

One Thousand Two Hundred Tons Wrought Iron Scrap.

Fifty-six Tons Scrap Brass.

One Second-hand Locomotive Boiler.

The 38 lb. Iron Rails, and the three or four tons Fish Plates and Bolts will be delivered free of freight charges at Summerside or Charlottetown, Prince Edward Island.

The other Rails, Scrap and Boiler will be delivered free of freight charges at any station of the Intercolonial Railway, the tender to state the place and time that delivery will be required. Payment is to be made in cash on delivery. A deposit of five per cent. of the amount of tender will be required from each person whose tender is accepted. This deposit may consist of cash or of an accepted bank cheque made payable to the Honorable Minister of Railways and Canals, and it will be forfeited if the contract is not carried out. When the contract is completed the deposit will be returned.

The Department will not be bound to accept the highest or any tender.

D. POTTINGER,
General Manager.

Aug. 29, 1893. Railway Office, Moncton, N.B.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

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Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

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First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.

We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

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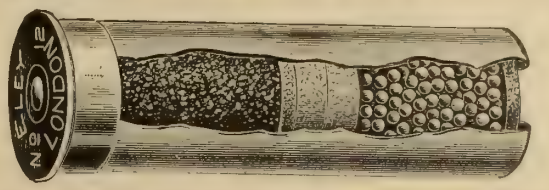
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Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

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We carry stock and can . . . . . ship promptly.

We have the following patterns for Repairs, PLATES. UNIVERSAL STOVES AND RANGES, lately made by J. M. Williams & Co., Hamilton; SPLENDID BASE BURNER, lately made by the Toronto Stove Co., Toronto; BRILLIANT RANGE and COOK, FORRESTER, CANDY FURNACE, QUEEN RANGE, lately made by Harte & McKillop, Belleville. . . . . .

The Wm. Clendinneng Son Co., Limited,

145 to 171 William Street, MONTREAL, QUE.

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SPECIAL VALUE IN

Dickinson's "Damascus Blade" Carvers.
Dickinson's Improved Ivoride Tables, warranted not to shrink or discolor.
Joseph Rodgers & Co.'s best quality Pen, Pocket, and Butcher Knives.

. . . SAMPLES now ready for Fall Trade.

STEEL. Full stock of Jessop's warranted Tool Steel, at lowest prices. . .

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IS THE BEST.

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"BURHAM" Portland Cement
For the past 8 months have been
25,499 CASKS.
"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,
McRAE & CO., OTTAWA



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—		
56 and 28 lb ingots, per lb	23½	24
trip "	25.	25½
Tin Plates—*Charcoal Plates, Bright.*		
M.L.S. equal to Bradley	Per box	
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 00	4 25
I.X., "	5 00	5 25
I.X.X., "	6 00	6 25
I.XXX., "	7 00	7 25
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

C okley Grade—	Per lb.
.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6½	6½
26 "	6¾	7
28 "	7½	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
⅜ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2½, 2¾
26 "	2¾, 2⅞
28 "	2⅞, 3

Canada Plates.

Blaina	½ bright	2 75
Abercarne		2 75
Lion		

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4¾ 5
" 5-16 " "	4¼ 4¾
" ⅜ " "	4¼ 4½
" 7-16 " "	4 4¼
" ½ " "	3¾ 4
" ⅝ " "	3½ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 12½ 0 13
Lake Superior	0 13 0 13½

Bolt or Bar.

Cut lengths, round, ½ to ⅞ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 19½ 0 21
" 35 to 45 " "	0 17½ 0 18
" 50 lb and above per lb	0 16½ 0 17

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft	0 21 0 23

Zinc Spelte .

Foreign, per lb	0 04½ 0 05
Domestic "	0 04¾ 0 04¾

Zinc Sheet.

5 cwt casks	0 05½ 0 05¾
Part casks	0 05¾ 0 06

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¾
Bar, 1 pound	0 04½
Sheets, 2½ lbs, sq. ft, by roll	0 04½ 0 04¾
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04½ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)	0 15½	0 16½
Standard	0 14½	0 15½
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 13
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do "	4 75
No. 2 Do "	4 50
No. 3 Do "	4 25

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p. cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red, (best) " "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " } " "	1 25 1 90
Canadian " }	
Paris Green, per lb	0 13½ 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure,	
8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40
White Shellac	2 25

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal 0 44 0 46

Castor Oil.

Best, per lb 0 07⅞ 0 08

Cod Oil.

Cod Oil, per gal. 0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list
Munn's, dis. 25 to 30 per cent. off list

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per 1 b
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 25

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... ..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb . 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

. . NEW ARRIVALS . . . . NEW ARRIVALS . .

30 Cases Cutlery and Guns

20 casks Cattle and Trace

CHAINS

10 tons Coil Chain

ALL NEW GOODS.

Finest Finish. Best Value.

Five Cars Window Glass

Bowman, Kennedy & Co., London, Ont.

Wrought Hooks and Staples, Amer- dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   - Basis—50 to 60 dy..... 2 30
   - 40dy..... 2 35
   - 30 dy..... 2 40
   - 20, 16 & 12 dy..... 2 45
   - 10 dy..... 2 50
   - 8 & 9 dy..... 2 55
   - 6 & 7 dy..... 2 70
2. American Pattern Only
   - from 4 to 5 dy 2 90
   - 3 dy. (lath)..... 3 30
3. Canada Pattern Only
   - from 4 to 5 dy 2 80
   - 3 dy. (lath)..... 3 20
   - 3 dy. A.P. Fine 3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 40 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pamp, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... . 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 25 per ct.

Pails.

alvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... .... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, 1bs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3½
Lanes, 33½ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33½ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9½ 9¾	10¾ 11
¼, 5-16, ⅜ in.....	10 10½	11½ 11½
Cotton, per lb.....	18	20
New Zealand	9	9½
Russia Deep Sea, per lb..	12½	13
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D, dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 to 40 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen..... 1 25

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

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Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

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Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

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Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
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Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

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Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

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Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
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Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

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English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75 p.c

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Asbestos, filled, per doz., 25 to 33½ p c

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Cow, per doz ..... 1 [illegible] 2 50

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P.S. & W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c

Tinware.

Stamped, dis. Assn list, 70, and 12½ per cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

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Game, Newhouse, dis 33½ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
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Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

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Bag, per lb..... 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
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Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
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" jute " ....
" Blue ribbon 0 12½
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" Crown..... ..... 0 10½
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Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
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Per doz..... 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

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Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
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Broom Wire 6 to 6¾c. per lb.
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" S., per doz..... 5 80 7 0
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
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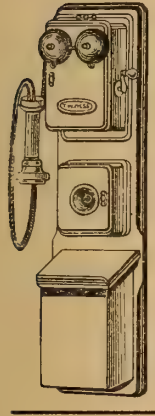
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Pat. Nov. 19, 1889.



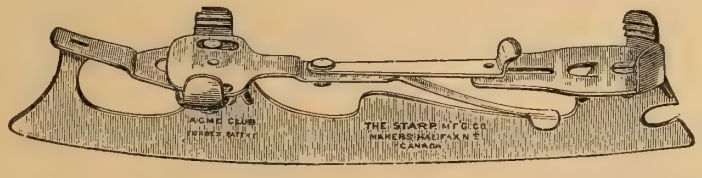
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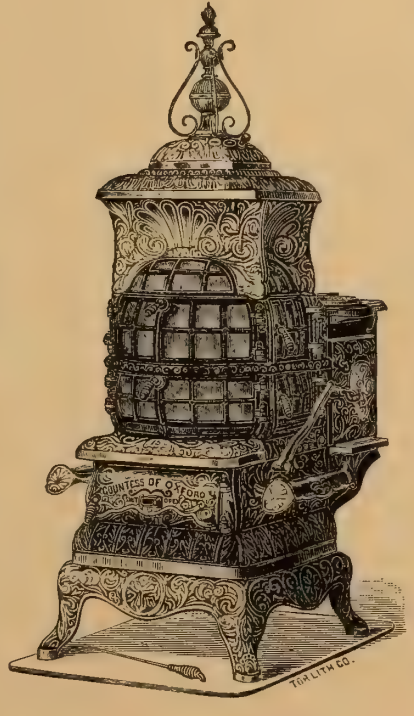
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Warm Air Furnaces, Stoves, Hot Water Boilers, Ranges, Radiators, Etc., Etc., Etc.

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Dominion Wire Mnfg. Co., (Limited)

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ESTABLISHED 1860 INCORPORATED 1893 DOMINION TRADE MARK

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Iron, Steel, Brass, and Copper . . **Wire**

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Wire Nails, Wood Screws, and Jack Chain.

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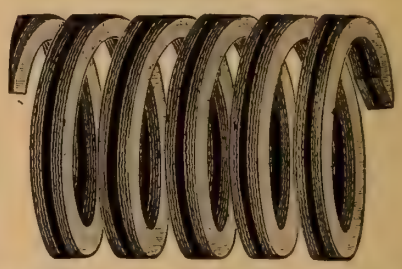
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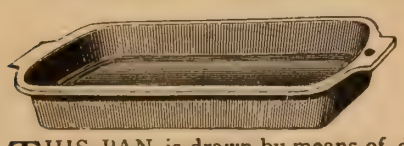
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3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

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CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, SEPTEMBER 16, 1893. No. 37.

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EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

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Bronze and liquid separate.

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In ½ lb. 1 lb. 12½ lb. 25 lb.

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"Perfection" Inside Seam

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Standard Patent Stove Pipe,
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Published Weekly. $2.00 a Year.

Vol. V. TORONTO, SEPTEMBER 16, 1893 No. 37

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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The controversy as to what constitutes tin plate "produced in the United States" has at last been practically settled. Tin plate, like pig tin, was one of the industries which the McKinley bill essayed to foster. In pursuance of this, it ordered the imposition of a duty of 2 1-2 cents per pound on all tin plates brought into the country. The duty was not, however, to go into force till July 1, 1891, nine months later, the ostensible plea being that by that time nearly the whole amount consumed would be made in the country. But when the nine months had expired it was found that expectations in this respect had not been realized. By the following January, however, according to a statement issued by the American Tin Plate Association, the capacity of the tin plate factories of the country were said to be 30,545,300 pounds per month. Just about the same time, however, the Tin Plate Consumers' Association reported that no coke tin plate could be had on the market, and that the loss to consumers for the short time the duty had been in force was something like $10,000,000, and that in the cost of the material their loss was $15,000,000. A commission was set to work to investigate, and those composing the commission were instructed to count as American tin plates imported black plates that had been dipped in the United States. This all took place under the Harrison Administration. Shortly after the Cleveland Administration came into office. Col. Ayer, the special agent deputed to gather statistics in regard to tin plate production, was instructed by Secretary Carlisle to revise his report, and to designate what tin plates had been manufactured from American black tin and what from imported.

* * *

It did not require much astuteness to fathom the purpose of the Government. It was plainly hinted that the views of the present were different from those of the previous Administration as to what constituted American tin plate, and recent developments show that their surmises were correct. From that day to this the question has occupied more or less attention. And it was no idle question that they were discussing, for the way in which it was solved meant a good deal to the tin plate manufacturers of the United States. When the clause in the McKinley Act relating to tin plates was adopted it contained an important proviso; and that proviso was to the effect that the amount of tin plate produced in some one year before July 1, 1897, shall equal one-third the amount imported and entered for consumption in any one year, in order to secure the retention of the duty.

* * *

To most people it seems unreasonable to claim that imported black plates can become "tin plates produced in the country," because after arriving in the States they are dipped in tin which is also, by the way, practically altogether imported. But there happens to be a little section in the McKinley Tariff Act which provides: "That where imported materials on which duties have been paid are used in the manufacture of articles manufactured or produced in the United States, there shall be allowed on the exportation of such articles a drawback equal in amount to the duties paid on the materials used, less one per centum of such duties." And it was upon this section that those who held that tin plates were alike "tin plates produced in the United States," whether they were made from domestic or from imported black plates. Those who took the other side of the controversy also saw something in the section that strengthened their views. The drawback law, they declared, made manufacture and production two distinct things, but allowed the drawbacks on articles where only the limited process of limited manufacture had been applied in the country; also in cases where the articles are manufactured and where they are produced in the United States, but that the tin plate law limited the computation for the benefit of reduced duties to plates "produced in the United States," and does not extend simply to those manufactured. And this is the view the Cleveland Administration takes of the question. At any rate Secretary Carlisle has decreed that tin plates produced from imported black plates are not tin plates "produced in the United States."

* * *

Col. Ayer's long expected report was made public last week. It shows that the product of the first three quarters ending March 31, 1893, was 34,632,052 pounds made from sheets rolled in the United States, and 39,290,282 pounds from imported black plates. This makes a total of both kinds of 73,922,334 pounds, and Col. Ayer estimates the production for June quarter at 35,000,000 pounds, which gives the production of the year as 108,922,334 pounds. As the net imports of tin plate for the year 1891-2 were about 300,000,000 pounds, it is evident that the one-third necessary to be produced to ensure a

continuance of the duty after July 1, 1897, would have been obtained this year but for the ruling of the Secretary of the Treasury, which brings the production of purely American tin plates down to less than 50 per cent. of the required amount. It is another illustration of the old adage: "There is many a slip between the cup and the lip."

* * *

In visiting the Australian colonies for the purpose of furthering trade relations between them and Canada, the Hon. Mr. Bowell, Minister of Trade and Commerce, is not chasing a wild Will o' the Wisp. The line of steamships which were established some three or four months ago between these portions of the British Empire evidences this. Already the success of the undertaking seems assured, and the projectors are so satisfied with the result that they will place a third boat on the route before long. But the intercolonial trade needs to be worked up. Trade between nations requires to be pushed as well as trade between individuals. And it is with this object in view that Hon. Mr. Bowell is now journeying across the Pacific. Australians on this errand bound have already visited this country.

* * *

Turn in which direction we may there there is no trade that seems more possible of development than that between Canada and Australia. Both are willing and anxious to do business with each other. Canada has granted a yearly subsidy of £25,000, New South Wales has donated £10,000 and Queensland is doing what she can to help on the project. In addition to this, a movement is on foot so it is said, for the establishment of subsidiary lines between Sydney and the principal ports of sister colonies to act as feeders to the main line crossing the Pacific. But what seems to us one of the best assurances for the success of this trade is that the two countries are the very antipodes of each other; while we are sweltering in midsummer our brothers and sisters in Australia are wearing their winter clothing, and vice versa. Australia is a great fruit-growing country, and, consequently, could keep us supplied with fresh fruits gathered from the trees three or four weeks before they adorned our tables. Bananas, oranges, lemons, apples and such fruits it has already been demonstrated they can supply us with. Then they have wool and other raw materials with which they can sell us. In fact, we already take about a quarter of a million dollars' worth of wool from them annually, but there is no reason why we should not take more now that there is direct communication between them and us, seeing that all told we import more than one and a half millions' worth every year. The beauty about the Australians is that they do not want the Canadian market for the purpose of getting rid of their surplus manufactured goods. On the contrary they want our manufactured goods, and in return they ask us to take raw material from them. "We want," said Mr. Ward, when he was in Toronto a few weeks ago, "to do business with your manufacturers. Australia is not a manufacturing country. It pays best for us to ship the raw material which nature has for centuries been storing up, and sell it—here I hope—for the manufactured goods we must buy. We do not want to get money in exchange for our natural products. * * * What we want is goods, and we send out our raw materials to exchange for manufactured articles." Where could there be anything more fair or more agreeable to Canadians! Fortunately the things they most want we are able to supply. They want fish, and where is the country that is so well able to supply them with this commodity as Canada. They want agricultural implements, and here again Canada is premier. They want lumber, and where is there a land that is more blest with rich forests than the Dominion. They want musical instruments; and these we turn out in abundance, and with tone rich enough and with scope ample enough to suit the most fastidious. They want boots and shoes, and here again we are just the people to supply them. It seems the more the possibilities of this trade are analyzed the brighter do they become. Now that we have the quick steamship service, the next thing to be done for the development of the trade is a little readjustment of the tariffs both in Canada and in Australia.

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Promising as is the prospects for the success of the Canadian-Australian trade, the steamship line which has undertaken to be the medium of communication has not to depend wholly on it as a source for revenue. And it is well that it is so, for it is scarcely probable that the Canadian-Australian trade pure and simple, even with the subsidies thrown in, would be sufficient to make the undertaking profitable to the carriers. There is, first of all, the passengers, baggage, and freight to be picked up at the Pacific islands which lie in the route of the steamers. Then, as people become better acquainted with the efficiency of the line, it will be utilized more for the transportation of goods and passengers, via the Canadian Pacific Railway, from Europe to the Antipodes and vice versa. In addition to these feeders many a passenger and ton of freight will be picked up from the United States, the line running out of Vancouver occupying several days less in crossing the Pacific than that from San Francisco. Already some large American shippers have forsaken the latter route for the former. Canada has now a rapid trans-continental railway, quick Pacific service with Australia and with China and Japan; and all we want now to give us efficient communication with the rest of the world is a fast Atlantic service. This, too, we will get in time. Situated as we are geographically, and with steamers as fast as the ocean greyhounds running out of New York, the Atlantic could be crossed in one to two days quicker by a Canadian than an American line. With such possibilities as these in view the present slow Atlantic service cannot obtain for a great while longer.

* * *

In spite of the cry of small profits there are here and there lines out of which the grocer can make a nice little profit. Tea is one of them; and it is strange that some do not make a greater effort to cultivate it. Practically the same sugars, fruits, canned goods, etc., are sold by all dealers alike, but with tea the case is different, and the very fact of this difference prevents cutting and gives each grocer an opportunity of making money out of it. The same class of tea will not suit every locality, but a good tea will take anywhere. The peculiarities of customers in the matter of taste

require a good deal of careful study. But the taste once gauged, as it were, the next thing is to push the sale of the tea for all you are worth. It would be inadvisable to do so before you know whether or not you have got a tea that suits the majority of your customers.

* * *

The official end of the Standard Oil Trust is approaching. A year or more ago it was of all combines the most powerful, but now it is tottering to its fall, and soon it will be formally wound up. Put not your trust in oil or your oil in trusts. It is risky these days.

THE WROUGHT IRON STOVE.

An American company with Canadian headquarters in Toronto are making a stove with which they are "catching on" to the farmer's trade in some parts of Western Ontario. They do not sell to the trade, but go direct to the consumers selling from wagons. A salesmen carrying three or four stoves drives from house to house. The advantage claimed for the stove is that being made of wrought iron and steel it will last longer than one of cast iron. To show how strong the stove is the salesman drops it from the wagon at the farmer's back door. If that is not sufficient he pounds the stronger parts with an axe or strikes the lid on the wagon tire. In this respect it is certainly stronger than the cast iron box, and this is what catches the farmer. He does not consider that such strength is no special advantage. Cast iron stoves hardly ever break, but the fire box gives out. From our examination of the wrought iron range we think the box will give out quite as soon as in the ordinary cast iron stove. It is also claimed for the stove that it is a good baker; so are any stoves of recent make. Two weak points in this new stove are the small fire box and small oven. This may do very well for the small housekeeper in towns and villages, but the farmer needs both to be large. It is the first thing they look for when buying a new stove. The price usually charged, $60, is a third more than what is asked for cast iron stoves to do the same work. They make it easy on the buyer by extending the payment over three years.

THE IRON MAKERS AGREEMENT.

Although endeavors have been made to keep the matter quiet in trade circles it is now well understood that some very interesting matters were discussed at the recent meeting of the cut nail and bar iron makers held in Montreal a fortnight ago. The chief topic was the question of cutting under the list of prices agreed upon, and it is understood that the representative of an Ontario maker asserted his determination to have the matter carried out to a decision one way or the other. It was generally understood that the imposition of a serious fine was provided for in a case where cutting was clearly proved. This is so, but the trouble is to prove that prices have been cut, while another fact has now leaked out and that is that the four firms of makers in the Maritime Provinces who have all along been supposed to be members of the association have never been bona fide ones. The Western members of the body who put up their forfeit honestly have made repeated efforts to get the seacoast people do likewise, so that they could have a hold on them in a case like the above, but could not succeed. As an offset for this they got them to agree to sell at a certain price, but it is understood that they have not been doing so, but, on the contrary, violating it. This in fact was one of the principal subjects of the debate at the recent meeting, and the decision arrived at was that the big Western makers would no longer recognize the Eastern ones. What this means is not definitely explained whether it is to fight them with their own weapons in their own territory or not. With no penalty to impose upon the delinquents, this is the only way apparent to an outsider of getting at them, and it is possibly what the decision above mentioned means. With regard to the agreement between the Western makers, representatives of makers here state that it holds good. They state that their principals' forfeits are up and they have no intention of breaking the agreement now or in the future. As to competition up west from makers in the Maritime Provinces they do not fear it. The capacity of those firms is not very large and they have quite enough to do to attend to their own trade. Some of the jobbers think differently, but so far as can be learned no authenticated cases of cutting in Quebec or the western territory can be cited.

ELECTRICAL ENGINEERS MEET.

The Canadian Electrical Association held its third annual convention in Toronto on Tuesday and Wednesday of this week. The meetings were held at the Exhibition, and J. J. Wright, of Toronto, presided.

The President, in his opening address said that with regard to the utilization of electricity, apart from the rapid increase of what might be termed its standard uses, the most notable development appeared to be in the use of alternating currents, especially of higher tension. With the advent of a practicable motor this use would increase in the near future for distributing electricity from one source of supply. The chief difficulty in the way of such a system seemed to be in running the generators into the mains in multiple arcs. This seemed to offer a most promising field for the experimenter.

Secretary C. H. Mortimer reported that the membership during the past year had risen from 107 to 133, showing the increase in the development of electrical engineering during that time. The amount on hand after paying expenses for the year was $275.

There were among the papers read: "Some of the Causes of Interruption to Telegraph Circuits," by F. C. Robertson, and the other on "The Turbine Water Wheel," by A. C. McCallum, M.E. "The History of the Telephone in Canada," by L. B. McFarlane, of Montreal; "Electrical Education," by E. B. Merrill, Toronto; "Direct Connected Dynamos and Steam Engines," by John Langton, Toronto; "Electric Street Railways," by E. Carl Breithaupt of Berlin.

These officers were elected: President, J. J. Wright; first vice, K. J. Dunstan; second vice, John Carroll; secretary-treasurer, C. H. Mortimer. It was decided to hold the next meeting of the society in Montreal.

WINNIPEG'S TRADE EXPANDING.

Despite the dull times in British Columbia, Winnipeg wholesale houses report a larger trade this year from the interior districts of that province. This is owing to the increased population in the mining regions of the interior. The trade of this interior country is tributary to the coast cities of British Columbia to a considerable extent, but in some lines dealers in the prairie metropolis can compete successfully. In provisions, of course, Manitoba has the advantage. The settlement of the interior of British Columbia on a large scale would greatly increase the market for our prairie farmers, in such products as butter, cheese, eggs, flour and feed, etc., besides increasing the trade of the wholesale houses in general mercantile lines.

While speaking of the development of interior British Columbia, it may be said that it is unfortunate that the silver market should be depressed just at a time when the rich silver regions of that province are coming prominently to view. Previous to this year, principally prospecting work was done, and enough was discovered to convince the world of the wonderful richness of British Columbia's interior mineral districts. This season capital was becoming generally attracted, and appearances looked bright for the rapid development of the country. The collapse of silver at this juncture is therefore a severe blow. However, the wealth of the country is such that it will be possible to operate these mines at a profit, notwithstanding the low price of silver, which will cause many mines in other districts to close. It will be more difficult, however, to attract the capital necessary to develop a new country, while the price of its principal product is so depressed.—Commercial, Winnipeg.

DEATH OF MRS. EDDY.

Death comes to each in turn. Last Sunday, 10th September, he visited Hull and claimed as his victim, Zaida Diana Arnold, the beloved wife of Ezra B. Eddy, the well-known match, paper,and and woodenware manufacturer, of that place. Deceased had been ill for some time. She was noted for her charitable works, and will be missed by a good many besides her sorrowing husband and family. To her husband she was a help-meet indeed, for much of his success is due to her assistance. The remains were interred Tuesday at Bristol, Vermont, where deceased was born nearly 66 years ago, from whence, with her husband she removed some 40 years ago to Hull.

COVERING HOT-AIR PIPES.

A correspondent who has had a highly satisfactory experience in the use of asbestos as a non-conducting covering for hot-air pipes sends Metal Worker the following article in praise of insulation:

Householders frequently complain through the winter of the large quantity of coal consumed in heating their dwelling, also of the overwarm condition of the cellar, which causes apples, potatoes, or other supplies stored there to decay, and renders it necessary in many cases to use ice the entire year to properly keep butter, milk, and other perishable food. Even with this large expenditure for fuel it is often impossible to comfortably warm the house, and occasionally the wood work ignites from the hot pipe running from the furnace to the register, and a serious conflagration results, which might have been avoided by the use of a proper nonconducting covering on the pipes. Of course, the colder the weather the more forcibly these defects assert themselves, and when the wind is high and the thermometer low, many perceive to their great discomfort that their furnace or steam heater, which has been efficient in ordinary weather, does not heat the house. An examination at the heater will show a good draft, a bright, clear fire, a free consumption of coal—in short, everything in good order—and the heater, as promised by the maker, generating a large body of heat.

Where, then, is the trouble? What is the defect? Why with so much heat on hand below stairs is so little obtained upstairs? are the questions you will ask yourself. Manifestly there must be a radical defect in an apparatus that pours a large volume of heat into the cellar, where it is not wanted, and sends but a small volume of heat to the rooms above, where a large amount is wanted. To answer these questions in advance is the purpose of this article. A serious defect exists in the equipment of most heating apparatus, and very likely in yours, which can and ought to be remedied. If we told you of a leak in your roof you would repair it before the next rain. If a window pane was out you would replace it at once. We now tell you of a leak in your heating arrangements, and the prudent householder will attend to it without delay.

The leakage or waste is due to the radiation of heat from the iron or tin piping, somewhere between the furnace or heater and the register or radiator. In effect, the loss is just as serious as though holes had been drilled in the iron, and the steam or hot air was pouring through them into the cellar, and the result is a failure to deliver the heat in the rooms above at the same initial temperature as it left the heater below. This is the working of a well-known law, that metallic bodies, like tin or iron, transmit and radiate heat rapidly. The heat on the interior of the pipe is quickly conducted through the iron, and then as rapidly radiated into the air of the cellar. This is a loss to you—a loss that is going but it is going on constantly. Every heat unit that is wasted down stairs will help, if saved, to raise the temperature upstairs. Do not flatter yourself that it occurs in cold weather only. It is worse then, and more noticeable, but it is goin gon constantly. Every day you are burning coal that goes to heat your cellar and paying your coal dealer for goods you do not need. This loss of heat, and consequently waste of fuel, can be stopped. Heating plants that do not give proper service can be made efficient by the use of mineral asbestos, if applied in proper form. It is clean and handy, fire-proof and safe; it stops radiation, prevents loss, and saves money.

HANDLING GAS STOVES.

At a recent meeting of the Pacific Coast Gas Association one of the questions discussed was: "Why should gas companies handle gas stoves?" Mr. Eichbaum, a prominent San Francisco gas man stated that the only reason he was aware of why gas companies should handle gas stoves was that if they did not do it no one else would. Mr. Eichbaum supplemented this statement by the further assertion that when other people see soemthing in it they will take hold and relieve the gas companies. Mr. Crockett, another San Francisco gas man, said, that after a stove is set up the average stove dealer has no further interest in it, but the gas manufacturer feels that he must see to and look out for a stove after he has sold it, noting that both the stove and the gas are properly used. Another argument advanced by this gentleman showing why gas companies should handle gas stoves was that they handle them simply to increase the consumption of gas. Mr. Rapee, of Rockford, Ill., stated that he could cite fifty cities where gas stoves have been introduced quite successfully. In the city of Rockford, with a population of 25,000, 2,700 gas stoves were sold last winter. Mr. Steinman, of Sacramento, Cal., stated that his company had begun to push gas stoves but a short time since, and in five weeks over 300 were sold. He said that the demand for gas stoves in Sacramento is increasing daily.

The gas manufacturers do not seem to make a very good case, and the reason is perfectly plain. Not they, but the hardware men, are the proper parties to handle gas stoves. The latter sell oil stoves, lamp stoves, gasoline stoves, in many cases those made by a manufacturer who also makes gas stoves, and what reason is there why they should not handle these last as well. None at all. If Mr. Eichbaum is to be believed the gas companies wish to be relieved of this business. Coupling this statement with that of Mr. Crockett to the effect that gas companies handle these stoves to increase the consumption of gas, it can be seen that the gas people would be only too glad to have the hardware men take the business off their hands. Why hardware men have not more generally taken this step years ago is a mystery to us. There can be no question but what a stove of any kind is a legitimate part of a hardware stock. There can be no question but that the demand for these stoves is a good one in towns where gas is burned. Witness the statement of Mr. Steinman to the effect that his sales averaged ten stoves a day in Sacramento. The hardware man need not devote much store space to them as their bulk is small. He need not acquire any great amount of technical knowledge concerning their operation, as their mechanism is simple and a great deal easier of explanation to a possible customer than the features of the average cook stove or base burner. The hardware man should not have any difficulty in getting these stoves, as the same manufacturers that make the lamp stoves or oil stoves he is now selling, also make these gas stoves.

It would be to the advantage of the gas companies as well as to that of the hardware man himself and the consumer to turn the sale of these stoves over to the men who make a business of selling heating apparatus of all kinds, and who have the amplest facilities for pushing the sale of this particular commodity. The proper party to sell a gas stove is the man who makes a business of selling heating apparatus, and we would add that more and more of them are doing so every year. There are, however, a large number who do not who should not let this legitimate business opportunity slip by.—American Artizan.

BURNING OILS AND GASOLINE.

These two products of petroleum or crude oil, says Stoves and Hardware, are obtained by distillation and treatment substantially as follows: The crude oil is run into a still through pipes and vaporized by a steady heat. The resulting vapor passes off through a series of pipes placed in a long tank filled with running cold water, the cold condensing the vapor and causing it to liquify. The first product of distillation, and the most valuable, are the higher grades of gasoline, these often having a specific gravity of 96 and 97 degrees, and being so extremely volatile that the rapidity of evaporation produces a very low temperature. A gasoline of this gravity has been used to deaden pain in surgical operations and is remarkably effective. There is but a small percentage of the higher grades of gasoline in the first runs of the still, and then comes the naphthas, another form of the same product, and with a specific gravity ranging from 76 down to 60 or 62 degrees. These are run into tanks according to their specific gravity. The next product is what is known as the distillate, and this, after running from the tail house at the end of the water tank, is placed in an agitator or treating house, where it is chemcially treated for use as burning oil, after having first been separated according to qualities. The heart of the oil, as it is called, consists of the medium gravity distillate and one process of the distillation is used in obtaining it,but ordinarily the better grades come after the naphthas. The chemical treatment of the distillates consists of a bath with acids and the use of caustic soda, in order to remove any foreign property from the distillate, and a subsequent washing and agitation with and in water so as to remove all traces of either acids or soda. The oil is placed in long, shallow and glass covered tanks, known as bleachers, where it is exposed to the rays of the sun, and is then sprayed so that, if the specific gravity is too high, the lighter or volatile matter may pass off and the oil be given its proper gravity. It is next tested as to its burning qualities and is then ready for the market.

The test for oils, apart from that determining their burning properties, which is done with an ordinary lamp, consists in heating a sample in an open vessel, with a thermometer attachment, and applying a light to the vapor as it begins to rise from the fluid. The flash, or the ignition of the vapor without conveying the flame to the oil, is first determined and recorded, and then the fire test is ascertained, this always being at a higher temperature. If the oil being tested is of a 150 degree quality, the intermediate flashes of flame are produced at a temperature of about 135 degrees, and the oil does not pass the inspector's test until it has obtained a temperature of 150 without steadily burning. After the oil has passed the test, it is ready for the market, and is either barrelled or run into tank cars containing about 100 barrels each. The number of gallons in each barrel is determined by weight, each gallon of the different specific gravities being equal to a fixed and certain number of pounds.

The oils commonly used in the domestic markets range in fire test from 120 to 150 degrees, although special grades of 175 and 300 degrees are made, the latter being for use on railway trains or steamers. In using burning oil, or, rather, in determining its qualtiies, the first test on the part of the purchaser is the color, which ranges from a light straw to a water white. The colors as known to the trade are standard, prime white and water white. All oils are officially inspected and branded on the barrel, and when this test is thoroughly made it stands as a guarantee that the fire test is what it purports to be. The burning qualities, so far as the purchaser is concerned, can only be determined by actual use, and they vary according to the fire test, while upon this also depends in a measure the safety of the oil as an illuminant. However, this point is determined more by the care taken in handling than by any lacking quality in the oil itself. There is but little oil on the market that is not absolutely safe if handled with the most ordinary precaution.

As has been said, the first products from the still are in the lighter grades of gasoline. After these have been run off the naphthas are separated and run into tanks. Most refiners re-distill the naphthas generally in a steam still, or one in which the necessary heat is supplied through a coil of pipe placed in the still, and coming in immediate contact with the naphtha. This redistillation produces, first, the grades of gasoline used in gas machines, and having a gravity of 86, 88 and 90 degrees, and, second, the naphthas used in gasoline stoves. The gravity of the naphtha used for this purpose is generally 74 or 76, or about 25degrees lighter than the higher qualities of burning oil. It is almost colorless, volatilizes quickly, and has a peculiar, far-reaching odor by which its presence can be quickly detected.

After the naphthas and distillates are run off, the residumn is piped to another and larger still and the next process consists of running off the paraffine oils to be used for lubricants. These are chemically treated or compounded, and make the best lubricants known to the trade. Parafin wax is otbained by squeezing the residumn in a hydraulic press, and the remelting product is then prepared for the market. During all the various processes, but a small percentage of any of the several products is allowed to go to waste, and this waste does not exceed 4 or 5 per cent. on the average at any of the refineries. The refining capactiy of the United States is not far from 100,000 barrels, and the production of crude oil is now not far from 75,000 barrels, so that it will be seen that the industry in all its branches is one of tremendous proportions. It has been said that at least one thousand million of dollars are invested in the business that had its first start only thirty-three years ago.

PLATE AND WINDOW GLASS.

There is not as much window glass in the country now as there was a year ago, and the prospects for any addition to the stock on hand are not of an immediately promising character. It now appears that the reports regarding a compromise between factory owners and their employes were not based upon fact, and the men continue to insist upon the old scale, and the owners ask for a 10 per cent. reduction. As the cost of glass making is at least 80 per cent. labor, if not more, the question of wages is of more vital importance to the employers than in almost any other branch of trade industry, and they are now reported as saying that they will not re-light their fires under any circumstances unless the men will accept the lower scale of wages. Under these conditions the trade must be supplied from the old stock for some time to come, and the consequence will undoubtedly be a gradual advance in price.

It is not altogether improbable that the window glass manufacturers will form an organization among themselves similar to that in force with the plate glass trade. When this latter organization was effected, one of the first steps taken was a reduction of output equal to 25 per cent. of the total amount manufactured. Prices have since been regulated through one agency, and the supply each season has been kept nearer to the actual demand than is the case with window glass. The benefit to the manufacturers is obvious and marked, so that, while nearly all the window glass factories have been shut down, the plate glass factories have been running in sufficient number to supply the trade and have a better chance for an early commencement of work, more especially as the stock on hand is running short.—Stoves and Hardware.

"The amount of toil and ingenuity you have put into your calling," said the city missionary to the burglar, "would have made you comfortably well off if you had engaged in some honest business."

"Mebbe it would," answered the burglar, "but a man in the burglar busines has the satisfaction that he don't have to ask nobody to give him a job."

SINS OF MANUFACTURERS.

The following is the second of a series of articles that have appeared in Ironmongery:

Last month we were speaking of delay in small orders; perhaps some may think too much stress was laid on small orders. I have done this because it is in the delay in execution of these that our chief grievances lie. Order twelve only of an article per parcel post, "at your earliest convenience," and after a few days' time you may receive (in answer to a post-card of enquiry) a reply saying that they are out of stock, and will forward in a week or two, which may mean three weeks from date of order. Write, however, for special quotation by wire for twelve gross of the same article, and ask them for date of delivery, and all attention and speed will be given to secure so large an order, and it will most likely be executed forthwith. I can only repeat, wholesale houses must attend to all orders, large or small, with the same punctuality and attention, if they wish to secure for themselves a safe and constant connection. It may be taken that,now-a-days, as a general rule, no tradesman orders more than he requires for immediate sale, and in a great majority of cases, not until he wants the goods. Some season orders are, of course, necessarily ordered months before they are required; these are, however, the exception, and are understood and treated accordingly. I think ironmongers rather overdo the marking of their order sheets with such words as urgent, important, etc.; if they had a system of using these marks, and supplied all the firms with whom they deal with a printed slip, perhaps it would be more effective. I would, however, suggest a printed slip to be gummed on all orders at the bottom corner (or printed on where a regular form is used), somelike the following (adapted, of course, to suit each special trade or branch):

NOTE—Orders marked A are wanted for stock.

Orders marked B are sold, and wanted for immediate d livery.

Orders marked C are urgent, must be delivered in seven days.

Orders marked D very urgent. Special attention to this.

These initial letters attached to the several lines of the order in red ink, would call for attention; a glance at the foot of this sheet would explain the meaning, and the maker would see that an ironmonger using these signs with care and selection meant business, and meant what he said, and if he neglected the order (or to reply saying the maker could not supply in time specified), there could be no excuse for the maker, and the sooner another house were found for these goods the better for the ironmonger and his customers too.

Orders having been received, goods procured by the factor or manufactured by the maker, are ready for the hands of the packer, and afterwards for transit and delivery. Frequently another delay awaits our goods; perhaps a day or two may be lost in the packers' department. This, of course, may be unavoidable in busy seasons, but too frequently, I am afraid, unnecessary delay occurs. It is customary, on goods being sent down for transit, to be entered, passed into the office, and at once invoiced; this often tells a tale to the ironmonger, who may be anxiously looking out for goods wanted, enquiring daily at the railway depot, when he discovers that goods from so-and-so were delivered to the carriers some two or three days or more after date of invoice, showing plainly delay in packing (or else leaving him to infer that the manufacturer had only sent the invoice a few days before goods were ready "to keep him quiet." Surely this cannot be true? No respectable house would do such a thing, would they?) Well, anyhow, let us put the sin of vexatious delay, in starting, at the door of the packer. The "Boss," as our American cousins would say, has, however, to bear the blame of this and all other acts of carelessness of his employees. Consequently, we can only assume that this delay, after sending invoice several days previous, raising our hopes of prompt delivery, which are not realized, must be caused by the loss of time in getting goods packed and off. This is no idle charge. I have frequently gone to London, Birmingham, Manchester, and other places, after urgent orders, and have been told they were ready, and ought to have left. I have, in these cases, insisted on seeing the goods; and, on being taken down to the packing room, found it in chaos, my goods waiting in some quiet corner. But I have never found a "silver key" to fail; the doors have flown open, and carriers have been hailed forthwith. Now, my complaint is, that though ordinary goods and consignments must take their turn, and, in busy times, sustain delay, too, still much time could be saved in execution of special orders, or urgency orders, or when unusual delay has occurred in procuring these goods; then, I think, makers might use especial care to, at any rate, lessen their "sin" instead of increasing it. Now, as regards carriage and carriers, discretion is needed in consignment and selection of the best and cheapest carriers. Manufacturers seem to care little if they can only get the goods off their premises, how they go, how long they are on the way, or how much carriage they cost. Of course, as to goods sold at prices carriage paid, we cannot dictate as to cost or route; this must be left to the manufacturers themselves, as they frequently have special rates and arrangements with certain carriers who best suit their convenience, so long as this does not cause unnecessary delay and trouble to the ironmonger. I would strongly condemn the practice of sending goods carriage forward at owner's risk. It should be a rule to send all goods at the risk of the carrier, unless specially ordered otherwise by the customer.

So much annoyance arises from making claims, and then, after vexed correspondence with the railway company, finding they were consigned at owner's risk. Enough has been written lately on the question of railway rates, so I will not enter into this, presuming all are alive to these over-charges, and carefully look over their carriers' bills with a view to checking and bringing cost to a minimum. Sometimes goods are received by rail when the same articles are usually sent by canal at half the cost. Again, when two railways run into one town, an advantage may be gained. I think a very good rule would be for all wholesale houses to ascertain definitely the carriers for their respective customers, and to adhere to them; Those on the spot know so much better the peculiar local arrangements of the district, and which carriers are most suitable for their purposes; it would save great annoyance, and be to their advantage in the end.

I often have to complain of goods arriving by passenger train when the same might have come by parcel post for half-price, and goods urgent being sent by goods train, and even the other extreme. I received, a few weeks ago, a carpet by passenger train, costing 4s. 6d., when it would have reached me by goods train, only a few hours later,for 1s. 6d. To-day, I received a parcel from Birmingham, costing sixpence, the postage of which would have been only threepence; this is a matter of almost daily occurrence, showing great want of discretion, and of studying their customers' interests. All this only wants judgment and forethought. I would recommend all manufacturers whose businesses are large enough to keep an order clerk, to employ only those who have served an apprenticeship behind the counter of an ironmonger's shop; it would cost them but little more,and the gain to themselves and their customers would be great; and a much wanted outlet would be provided for some of our junior assistants, with whom the market is over-stocked.

Of the delay on railways we cannot speak—it certainly cannot be laid as a "sin" at the door of the manufacturer; they must be passed over, and we must

GUN POWDER

American Dead Shot. Schultze Smokeless.

H. S. HOWLAND, SONS & CO.,

Sole Agents for Canada.

37 Front Street West, Toronto

Linseed Oil,
Turpentine,
Castor Oil

PREPARED PAINTS

White Lead,
Coach Colors
Putty, etc.

14, 16, 18 and 20 Pearl Street, TORONTO, ONT.

The Toronto Lead and Color Co., Limited

return to lay one more "sin" of carelessness at the door of the packer, or those who ought to superintend his work. Breakage is a sad loss to the poor ironmonger, and one in which it is difficult to obtain redress. Write the manufacturer, and report certain articles broken; he will unhesitatingly reply: "All goods left here in good condition, and were signed for as such; please claim from the railway company." The railway company in many ways, repudiate the claim—how, we will not enter into, as we are not writing on the sins of carriers (I am afraid there would not be space enough in Ironmongery); I think, however, all ironmongers will say, in many cases claims of breakage are repudiated justly; for clear cases of breakage through careless packing are constantly turning up.

Now, we do not for a moment say these can always be traced to bad packing, but we do say there are many cases of indifferent packing, mixing all kinds of articles in a heterogeneous mass, and tossing them in; further, it is an undoubted fact, that goods are sometimes sent out which have been broken long before. Many of these are covered in parcels and cannot be seen; but the "sin" lies very largely in repudiating every claim for damage "on principle"; and often only after "worrying" and writing many letters does the ironmonger get any allowance; indeed, so annoying is the petty warfare about these often trivial matters, that the ironmonger pockets the wrong and pays. I may say, in conclusion, that makers would do well to entrust this class of correspondence to someone with tact and judgment, and not leave it to a junior clerk.

ASBESTOS.

The best asbestos comes from Siberia. Canadian asbestos is also a very superior quality. In olden times asbestos was spun and made into tablecloths, serviettes, etc., which were cleaned by passing through the fire, and this material was also used by the ancients to wrap around corpses before placing them on the funeral pile, in order that the ashes might not be mixed with the wood.

In the Vatican Library, at Rome, an asbestos shroud can be seen which contains ashes and half-burnt bones, with which it was found in a sarcophagus. The ancients also made wicks for the funeral lamps of the material. In modern times asbestos has been used for firemen's clothing and for fire-proof paper. More recently in America its employment has greatly increased and it is now used as a substitute for minium caoutchouc in connection with the machinery in steamboats and locomotives.

Asbestos tissues, manufactured with pure amianthus yarn, are employed by the manufacturers of chemical products in filtering acids, and as wicks in certain heating apparatus. Asbestos mastic has an advantage over all known mastics, and resists the very highest temperature without injury. Asbestos colors are manufactured, which, in the case of metals, form an excellent preventive of oxidation and render wood and tissues absolutely incombustible Bricks made of very light and porous asbestos are frequently placed in the gas chimneys; the mineral reddens and throws out a great heat.

About twelve years ago not more than three or four articles, at the most, were made of asbestos, while, at the present day, the list contains more than a hundred, and the use of this article is extending everywhere. One of the uses to which asbestos is now put is in connection with ceramics, and the use of asbestos pottery is expected to become popular and to spread. With asbestos powder a species of earthenware is manufactured, possessing a grain of fineness hitherto unattained by any chinaware. Finally, as pipe-clay, asbestos produces an excellent pipe.—House Furnishing Review.

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

Newcastle, Ont., has been abolished as an outport of customs.

The Patrons of Industry of Manitoba handled twenty-one cars, upwards of $43,000 worth of twine this year.

Unmixed evils rarely occur. The fact that money has been tight is said to have resulted in a good deal of sober thought.

Alonson Harris, formerly president of the Harris Company, intends starting a factory in Brantford for the manufacture of a new pattern of lawn mowers. M. E. Bonham will be manager.

Artillery was invented in 1830, and from the foundation of the Krupp firm it has sold to the various nations of Europe over 15,000 cannon. There are estimated to be over 300,000 cannon in existence.

The religious census of Australia just completed, shows 1,485,066 members of the Church of England, 84,118 Catholics, 493,369 Presbyterians, and 394,564 Methodists. These are the four most numerous denoinations.

The grain is nearly all in the stack in Manitoba and threshing started last week. The sample generally is good. The effect of the hail storm is not so complete as anticipated. Many will have a fair second growth of oats .

Mr. H. Pim, of Toronto, has arrived to take the management of the Edison General Electric Company here. He has brought his family with him. Mr. E. Maxwell retires to Portland.—News, Vancouver.

John H. Hall, Brantford, Ont., has patented a stove-caster, among the features of which are a bracket provided with means for securing it to the stove leg, a hollow nut inserted in this bracket and adapted to be screwed in or out, lowering or raising the stove leg, and a caster spindle inserted in the hole in said nut.

Keep in touch with the market, and always see that you are buying at the lowest possible price. Don't carry a stock that is going to give you any trouble to pay for, simply because your competitor is carrying a larger one than you are. Keep your stock in a well-lighted, well ventilated place, giving it frequent applications of the dust brush. The observance of the above, in connection with a sharp eye on collections, would doubtless be the means of stopping some of the leaks to be found in farm tool business, and of making dealers in general more successful.—Farm Tools.

A Pittsburg despatch says: If the sublodges agree the Amalgamated Association will, to help the iron and steel manufacturers through the depression, make a further reduction of 10 per cent. in wages paid at guide, bar and ten-inch mills, and some others. Seventy-five per cent. of the mills still idle are union mills, and will doubtless resume on this basis.

Hardware reports that whilst a big trade in Harvest tools is being done with Manitoba and the North-west, "business is very quiet with British Columbia." This is only what might be expected from the too stationary condition of our agriculture in general, as shown by the great increase of food imports capable of home production.—News-Advertiser, Vancouver.

The restriction of pig iron production in the States never was so great as during the month of August, when the number of furnaces in blast declined from 169 to 132, and the capacity from 107,042 tons to 85,510. This is only a little more than half the total a year ago, and yet the stock on hand increased 56,000 tons during the month.

The new order in council governing bass fishing in Ontario and Quebec makes an important change with regard to the close season. Heretofore bass fishing has been prohibited from April 15 to June 15. Henceforth it will extend from May 10 to June 30, which will not only cover the spawning season, but the period during which the eggs are being hatched and the parent fish are caring for their young.

The St. Johns Stone Chinaware Company have applied to the corporation of St. Johns for a bonus of $25,000 payable in five yearly instalments to assist them in rebuilding their large pottery in that town. They will agree to give employment to at least 150 hands and to conform to all regulations that may be necessary to conserve the interests of the corporation.

A man living in a cabin near Centerville, N. S., adopted a novel method of keeping creditors away from the door. He would go to a store, get goods on credit, saying that he would pay for them on pay-day. When a collector appeared he found the dwelling placarded with the words "Scarlet Fever." This did not frighten one collector, and so the scheme was exploded.

According to the official journal of that trade, the hours and wages of stonecutters in the following places in Canada are: Toronto, nine hours a day and five on Saturday, wages 43c. per hour; Otawa, nine hours and nine on Saturday, wages 33 1-3c. per hour; Sault Ste. Marie, ten hours a day, and nine on Saturday, wages 40c. per hour; Vancouver, B.C., eight hours a day and four on Saturday, wages 56 1-4c. per hour; Victoria, B.C., nine hours a day and eight on Saturday, 56 1-4c. per hour, and Winnipeg, nine hours a day and eight on Saturday, wages 45c. per hour.

The Dominion Coal Company will endeavor to meet the demand for Souris coal this coming winter, and with that object in view two mines will be worked, the one at Estevan and one at Roche Perche. Major Walsh informs the Free Press that a man has already gone to the mines to get things in readiness for operations, which will be commenced immediately.—Free Press, Winnipeg.

The manufacture of galvanized corrugated sheets was introduced into Middlesborough about three years ago by R. P. Dorman & Company, says an English exchange. Some difficulty was at first encountered in obtaining the requisite skilled workmen, but now they are able to make corrugated sheets of a quality equal to those produced in Staffordshire and South Wales. The output of this firm is about 200 tons per week, all of which finds a ready market in India, China, the colonies, and elsewhere.

Lord Kelvin has a certain fondness for small jokes and puns. One day, while his apparatus for deep-sea soundings, by means of steel pianoforte wire, was being constructed, Lord Kelvin (then Sir William Thomson) entered Mr. White's shop in Glasgow, along with the great Dr. Joule, celebrated for his determination of the mechanical equivalent of heat. Joule's attention was called to a bundle of the pianoforte wire lying in the shop, and Thomson explained that he intended it for sounding purposes. "What note?" innocently enquired Joule, and was promptly answered, "The deep C."

The Georgian Bay and Lake Huron Salvage Company is the title of a new organization formed for the purpose of protecting sawmill men from dishonest persons who have been in the habit of gathering stray logs, obliterating the marks of the owners, and claiming the logs as their own. The new company intends patrolling these waters, gathering together all broken-up rafts, sorting the logs according to their marks, and returning them to their rightful owners. Mr. Charles Beck, of Penetanguishene, is president; Mr. A. Cadenhead, of Midland, manager, and Mr. A. A. Wright, of Toronto, secretary-treasurer.

Mayor Dagg and R. B. Cumming, of the town of Selkirk, Manitoba, were in Toronto this week for the purpose of floating a scheme to build and operate

an electric railway between the city of Winnipeg and the city of Selkirk, a distance of twenty miles. A charter has been obtained. and it is thought by these gentlemen that an electrical company in this city will take over their charter and build and operate their road. Mayor Dagg is very sanguine of the success that would attend such an operation and the benefit it would be to their northern town.

An estimate made by the London Times places the net loss experienced by the failure of crops this year in Great Britain, due to the prolonged drought, at not less than £2 per acre, or about $336,000,000 on the spendable income of England. A further estimate of the losses for last year and this shows that the aggregate reduction in the income of farmers throughout the United Kingdom from crop failures alone comes to $504,000,000. This is a sufficiently serious state of things, and it is not to be wondered at that money is reported as scarce and trade as very bad in the agricultural districts.

I hear on good authority, says Vulcan in Ironmonger, that the rage for cheap, or rather low-priced, goods in builders' hardware has been carried by the middlemen to such a pitch that the London market is flooded with door and window fastenings, and such like articles, of a quality which illustrates the lowest depth of inferiority. The result is that architects are beginning to specify, even for cottage property, certain makes of these articles, as they have long specified particular makes of grates, tiles, and other component parts of a building. The example thus set is likely to be followed, for it is only the "middleman" who benefits by the existing state of things.

The will of the late T. B. Griffith, manager of the Hamilton Streeet Railway Company, was probated Monday at $180,845 gross valuation, or $67,-065 net value. This does not include his life insurance of $10,000, payable to his widow, or real estate valued at $20,000, also in her name. The 1,557 shares of street railway stock he held are valued at only $100 each, and from the gross total is deducted $113,780, his proportion of liability on the stock held, most of which was pledged to financial institutions. The estate is left to the widow in trust for the children, among whom it will be divided when they attain their majority.

Here is a useful wrinkle, says an English paper, for those who intend to begin cycling, and they are indebted for it to a cycle dealer, who related his experience of the business in a provincial Bankruptcy Court the other day. The mode of operation is simplicity itself. The trade is pushed pretty briskly by the manufacturers, who make such terms with the retail dealers that these can part with their brilliant machines at figures considerably below the nominal price. They deliver to the buyer an invoice for, say, £16., but concontent themselves with an actual payment of £13. or £14. Then, when the "old stager" proposes to sell his machine second-hand, the invoice comes in very handy as a persuasive to the "young beginner" to pay on the higher scale. This, it would appear, is "a trick of the trade," and only an inappreciative outsider would think of calling it fraudulent.

Marine underwriters have had an unfortunate season owing to the large number of wrecks this year. The Wandraham, which went ashore, cost the insurance companies $200,000, that sum representing the damage to her cargo, which was valued at about $330,000. The Lake Nepigon's cargo was valued at about $220,000, and the damage to it was about $50,000. The Hurona's cargo was valued at about $100,000, and the damage was placed about $18,-000. The Straits of Gibraltar's cargo, valued at $8,000, was a total loss. The Alcides' cargo, valued at about $200,-000, cost the insurance companies about $120,000. The companies estimate that they will lose about $31,000 by the delay to the Sarnia, having to pay their share of the salvage.

The Department of Trade and Commerce has received a report from Mr. Thomas Connolly, formerly Canadian Government agent at Dublin, in which he states that the barley crop in Britain will be at least 30 per cent. short this year, and the long drought on the continent will diminish the supply of foreign barley. About 50,000 to 60,000 bushels of Canadian barley were sold on the Dublin market last season. The demand is increasing, especially from the large maltsters, who find it very suitable for the "crystal malt," which they ship in large quantities to the English brewers who use it to color English ales and give them a head. Canadian barley is purchased chiefly by the Dublin men from Liverpool houses, and at the date of Mr .Connolly's report (20th August) he learned from a leading broker that a large order for Canadian barley had been received at 12s .6d. a barrel of 224 pounds.

According to law all the Canadian railway companies must furnish annual returns to the Department of Railways and Canals by the 1st of October. In the event of the companies delaying sending in their statements they are liable to heavy penalties. Considerable trouble has been experienced in the past in inducing certain companies to furnish the returns. The big roads are invariably on time with their reports, the difficulty having been with regard to the small roads. An Ottawa despatch says the Department is anxious to get out the railway statistics promptly, and if some of these offenders do not send in their statements within the time specified in the act they will be made an example of this year.

TWO BUSY BUSINESS MEN.

"Hello! been to dinner yet?"

"No; haven't time, I am just rushed to death."

"Yes, that's so and much worse."

Surprised look of inquiry.

"Don't you know that the man who dies in debt to his stomach commits an unpardonable sin?"

"Oh, that's all bosh, besides I don't want to eat, don't have any desire to-day; I caught a little cold and my head feels—you know, just feels—and I feel it and I can't half work."

"So much the more need of dinner. Old man, we've always been friends, and I'm sorry we've got to break off, but I have no time for fools, and you're the foolest pattern I've seen lately—so it's got to be."

"Pshaw! don't waste my time with nonsense."

"Hold on a minute; you're a progressive business man and know that common sense is the safest guide, and you ought to know that you cannot get up steam without fuel, and if you put it in all at once in a hurry, you'll choke her and she won't work; if you don't put it in at the proper time, she'll slack down and rack your machinery so that it don't pay. Now a bolted breakfast and a hurry-scurry down town and a strain to do too much finds the stomach overworked at first, and nothing to work on later brings weariness, a faint heart, a dull head, a confused judgment, a sense of oppression, an irritable temper and a physical susceptibility to all the miCrow Bees that fly. Old man! you're a fool, and condemned to boot, by your own folly. I had the same trouble with some of my clerks and had to prescribe their diet and see that they were regular in put ting in the power. As a result I have to hustle now to keep in the lead of a lot of clear-headed, vigorous, jolly fellows that don't know what it is to say die."

"Old chap, being well conditioned I can outlast you in this contest, and I'm going to stick to you till you come out to lunch with me and let me lecture you on why the busy business man should eat, what he should eat, why he should be regular in doing it, and what it prevents and accomplishes—which you would know yourself if your head was cleared by the support of a regular feed, which even a jackass cannot do without—and this is one of the cases where it pays to be a—jackass."—Business Men.

THE ONTARIO TACK CO.

MANUFACTURERS OF

WIRE NAILS

TACKS, SHOT NAILS, ETC.

Hamilton. Ontario.

SP

VIEWS AND INTERVIEWS.

"A good many customers in this week! Well I should say there was," ejaculated a salesman in a local jobbing house Thursday. "Yesterday thirteen of us were given more than we could do waiting on them. Never saw anything like it in my life before. Of course as a rule the purchases have been small, but all the same we have sold some tidy-sized parcels."

"I know all my customers have been in," chimed in a traveler as he complacently threw a leg over the corner of a table; "and so next week I won't have anything to do. Guess I'll go fishing."

* * *

I was looking at a cheap line of revolvers the other day in a local jobbing house; and in remarking upon the low price, made the remark that the only weapon of the kind that I ever possessed in my boyhood days was a small breech-loading pistol. "That puts me in mind of the fact," interposed a salesman," that it was not so very long ago when we used to sell a lot of muzzle-loading pistols with caps. How long ago was it? O, not more than twelve years ago. Of course we used to sell revolvers too. I am speaking of the trade in Scotland," he paused to explain as he gathered up his knees between his hands. "They still sell some of those pistols there, but not many of them of course."

"Any new shipments in?" said Henry S. Hergert, of the wholesale hardware firm of M. & L. Samuel, Benjamin & Co., repeating a question of mine. "Why yes, we got some limburger cheese in a few days ago. You laugh, but it's so. The other day the shipping room was filled with a horrible stench. They thought a rat had got in between some boxes and died. They moved out the boxes, but no rat could be seen. Then they said the premises were unsanitary, and began to fear typhoid fever. When I went down it did not take me long to locate it. (Mr. Hergert has lately been holidaying in the German settlements around Berlin.) It was a box of limburger cheese that a customer of ours had sent from Berlin to have us put in with a carload of goods that we were forwarding him. We immediately placed the box in the cellar out under the sidewalk. If you see the big stone flags rise you'll know what caused it."

"There are a good many complaints just now regarding the quality of linseed oil," said a jobber to me the other day with a half worried look on his face. "It is not confined to any particular brand. All seem to be affected alike. I tell you the dealers will do well to carefully examine what they buy and satisfy themselves that they are getting pure oil."

A commercial traveler who covers the territory between Port Arthur and the Coast, has been in Toronto for the past week. This is his first visit to Toronto for 2 1-2 years. Tuesday last I had a brief chat with him. Naturally our conversation turned upon North-west affairs. "The situation," he said, in reply to a query of mine, as he laid the two first fingers of his right hand in the palm of his left, "is this: Owing to the poor crop and low prices we had last year business last winted was quiet. As a result the merchants had pretty heavy stocks on hand when the winter closed, and the wholesale men have had to carry a good many of them. Now we have a good crop and everybody is looking for better times. The crops in Manitoba are, I believe, better than they have ever been before, and proportionately ahead of those in the Territories, where there is not the same evenness as in Manitoba."

"I suppose, like everybody else from Manitoba, you are enthusiastic over the possibilities of the country?" I ventured.

"Yes, I am," he replied, as an assuring smile wreathed his features. "And why shouldn't I be? My route covers every settlement from Port Arthur to the Coast, and I go over it three times a year. When I am out I never miss a chance to talk to a farmer, and I never heard farmers talk so hopefully as they do. And I know something about the farmers in Ireland and in Ontario as well as those in Manitoba, and the North-west. But there is one thing I notice about the North-west farmers, and that is that they are too much given to over-trading their capital. In other words they don't go in enough for mixed farming. Naturally, by putting their all into one basket of eggs, as it were, they lose everything if the eggs get smashed. Why it is as bad as putting all the money you have in a 'Jack pot.' But I don't know anything about a 'Jack pot,'" added Mr. Dow-about a 'Jack pot,'" he added with a laugh. "I never play cards of these 'Jack pots.' It would be a much safer thing for the farmers up there if, instead of putting all their capital into grain, they divided it up and put some of it into cattle for instance. When I am on the road I keep an observant eye open, and I am convinced we have a grand country up there, and that business will be fairly good this fall and winter."

BYSTANDER.

LEAKY PIPES.

In reply to a correspondent who complains about pipes leaking, owing to the dissolving of the iron, the Scientific American says:

The water of condensation is to a considerable degree a solvent of iron of the quality used for making pipe. Such iron is not pure, containing slag and particles of some unknown substance that seems to have a galvanic action, producing pock holes that sometimes eat through pipes in from three to five years. Again, where the water runs along the bottom of wrought iron pipes, channels are cut partly by solution and partly by attrition, which are known to cut through a pipe in four or five years; while, on the other hand, the vast bulk of steam heating pipes are in use all the way up to twenty-five years with only an occasional leak from internal causes. The case is largely in the quality of the iron of which the pipe is made. The use of homogeneous or steel pipe is probably the only remedy. The same pitting and cutting is known to affect iron boiler tubes, and is a source of much trouble with vertical tubes with internal circulation although the water is not pure and soft as from condensed steam.

SEA-GOING WAR SHIPS.

A return issued by the British Admiralty, on the motion of Lord George Hamilton, gives the number of "sea-going war ships in commission, in reserve, and building; and the naval expenditure, revenue, tonnage of mercantile marine, and value of seaborne commerce of various countries for the year 1893." It shows the English warships in commission to be 24 battleships, three coast defence ships, 60 cruisers and 74 other ships not torpedo boats, together 161; we have also in reserve 10 battleships, 14 coast defence ships, 46 cruisers and 44 other ships not torpedo boats; and, in addition, we have building and completing for sea 9 battleships, 19 cruisers and 22 other ships, total 325. France is represented as having in commission 19 battleships, 5 coast defence ships, 23 cruisers and 50 other ships not torpedo boats; while she has in reserve 5 battleships, 3 coast defence ships, 20 cruisers, and 62 other ships; and building and completing for sea, eight battleships, two coast defence ships, 19 cruisers, and five other ships; total 221. Germany, which is the next naval power, has in commission 11 battleships, 14 cruisers, and 19 other ships; in reserve 3 battleships, 6 coast defence ships, 17 cruisers and 5 other ships; besides 7 battleships, 3 cruisers, and 1 other ship building and completing for sea; total 86. It appears from this classification, in point of numbers England possesses 325 warships, as compared with 307 belonging to France and Germany combined; and the English Colonies have also 20 warships of their own. England has 50 warships building, while France and Germany together have only 45. Russia has altogether 120 warships, mostly small ones, and Italy has 93. The aggregate naval expenditure of England is given as £18,480,916, while that of France is put at £10,694,860; of Germany, £4,795,570; of Russia, £5,040,139; and of Italy, £4,215,636; so that the present naval expenditure of England is nearly equal to that of France, Germany and Russia combined.

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Three sizes, 14, 17, and 20 inch fire pots.

The Jas. Smart Mfg. Co., Ltd.

BROCKVILLE, ONT.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

HARDWARE.

Montreal, September 15.

There has been little change in the situation during the week, and although improvement is noted in some lines it cannot be said to be of a radical nature. The Exhibition brought in some visitors to the different warehouses, but the business done on this account was neither large nor important, being confined to a few small orders for some few lines of shelf goods mostly. In heavy material there is no change to note, business ruling backward. Nails rule quiet; there is not much doing in wire; in fact the hardware market as a whole still rules on the quiet side.

WIRE.—A small business in light grades of smooth wire suitable for baling purposes is all there is to note. Other descriptions rule quiet.

CUTLERY.—Fair sorting orders in a small way have been moving during the week.

NAILS.—There is a moderate movement in both cut and wire nails from jobbers' hands, but manufacturers complain that trade with them is quiet in both descriptions.

TACKS.—Business in tacks is of a small jobbing kind, with nothing special to mention.

HORSESHOES.—Makers report a continuation of small orders noted last week, which may be taken to mean that the demand from dealers is commencing to be felt, although some jobbers here do not experience any change for the better in the demand. Still some must be having enquiries, as the above indicates.

CHAIN.—This article is featureless and unchanged.

SPORTING GOODS.—Demand for guns and ammunition is not quite so brisk as it was, but this is not surprising, for the articles have had quite a run recently.

TOOLS.—There is little to note except some small orders for axes for down below, some ten and twenty-box lots moving, also the handles for the same.

BUILDERS' SUPPLIES.—This line continues quiet as ever, and it looks as though building operations both in the city proper and vicinity were going to be smaller than usual this fall. Felt paper and some lines of naval stores used in roofing are the only lines that show appreciable movement in this connection.

PLUMBERS' SUPPLIES.—With the advance of the fall there has been a little more doing in this line, but the change is hardly appreciable.

WARE.—There was some movement in tinware during the week and some small orders in rough iron goods have been sent forward.

BINDER TWINE.—Nothing to note.

NAVAL STORES.—There is a little more doing in naval stores, but the demand is still slow and confined to immediate requirements. We quote: Turpentine, 45 to 46c.; resins, $2.50 to $5, as to brand; coal tar, $3.75 to $4; cotton waste, 5 1-2c. for colored, and 7 to 10c. for white; oakum, 5 1-2 to 7 1-2, and cotton oakum, 10 to 12c. Cordage—Sisal, at 9 3-4c. for 7-16 and upwards, and 15c. for deep-sea line; pure manilla, 11c. for 7-16 and upwards and 21c. for smaller sizes.

METALS.

Business in heavy iron and metals continues as dull as ever. Prices are moderate compared with the range in former seasons at this time, yet buyers will not go beyond immediate requirements, so that the volume of business is much smaller than is usually the case in the fall of the year.

PIG IRON.—There is no improvement in pig iron, which remains quiet, business being restricted to small lots to cover immediate requirements. We quote: Summerlee, $18.50 to $19; Eglinton, $17 to $17.25; Carnbroe, $16.75 to $17; Siemen's No. 1, $18, and Langloam, $18.50.

BAR IRON.—Makers report some fair orders from Ontario points, but the aggregate volume of business is still smaller than usual. The price here is $1.95, and makers say that no other figure is allowed, denying the reports about cutting in the West.

SCRAP IRON.—Nothing special to note, prices being nominal in the absence of business.

TIN PLATES.—Tin plates have not shown much activity, but there have been sales of coke at $3.10 to $3.12 1-2 for round lots, and at this basis sellers say there is no money, but they want to make a clearance. We quote for business in the regular way $3.20 for coke and $3.75 to $4 for charcoal.

CANADA PLATES.—These show a fair degree of steadiness under a moderate volume of business, a few fair-sized lots changed hands during the week at $2.45, and we quote $2.45 to $2.55.

TERNE PLATES.—Ternes show no change, business being nil. Prices rule at $7 to $7.25.

GALVANIZED IRON.—There been some good sized sales for forward delivery but the actual movement on spot is small. We quote prices steady as before at 4 3-4 to 5c.

SHEET IRON.—Some small jobbing lots have changed hands, but the same dullness prevails. We quote $2.40, etc., as before. Russian sheets as before, 10 1-2 to 12c.

HOOPS AND BANDS.—There is no change to note in this line, and the former quotation is nominally unchanged, viz., $2.35.

ANTIMONY.—A moderate enquiry is to note at 10 1-2 to 12c.

SPELTER.—The dullness is maintained, and prices remain nominal at $4.75.

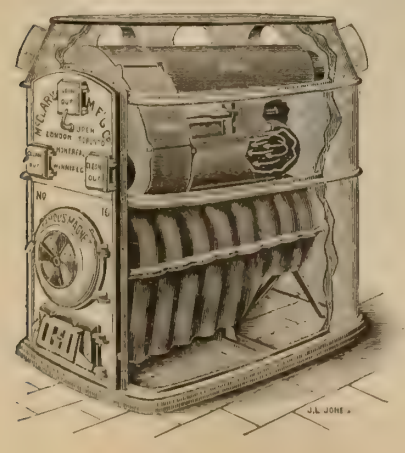
ZINC SHEETS.—This article rules quiet and prices remain at the decline noted before, viz., $5 to $5.25.

LEAD.—The easy tone in lead continues, and we quote $2.80, which is 5c. lower than last week, but even this price would be shaded for a ten-ton lot.

TIN.—Tin shows no change from a week ago, but the tone is easy also. We quote ingots 21 to 22c. and bar tin 25c.

COPPER.—The easy feeling in copper is maintained, and we still quote 11 1-4 to 11 1-2c. for round lots, while even 12c. has, it is claimed, been shaded in the case of jobbing lots. The latter figure is certainly an outside one in any case.

CEMENT.—There has been a fair demand for cement during the week, and while no advance has been established the tone of the market is firmer. We quote the following: Belgian $1.85



WOOD FURNACE

Famous Magnet

NO. 14 AND 16

We confidently ask the attention of the trade to this furnace. Let us send you full particulars regarding it. . . .

IT IS A GOOD ONE

The McClary Mfg. Co.,

London, Toronto, Montreal, Winnipeg

SAULT STE. MARIE CANAL

SEALED TENDERS, addressed to the undersigned and endorsed "Tender for Lock Gates," will be received at this office until noon on Thursday, the twenty-eighth day of September, 1893, for the construction and setting in place in working order of five pairs of Lock Gates at the Sault Ste. Marie Canal.

Plans and specifications of the work to be done can be seen on and after the eleventh day of September, 1893, at the office of the Chief Engineer of Railways and Canals, Ottawa, where forms of tender can be obtained.

In the case of firms, there must be attached the actual signatures of the full name, the nature of the occupation and place of residence of each member of the same, and further, an accepted bank cheque for the sum of $1,500 must accompany the tender. This accepted cheque must be endorsed over to the Minister of Railways and Canals, and will be forfeited if the party tendering declines entering into contract for the work at the rates and on the terms stated in the offer submitted. The accepted cheque thus sent in will be returned to the respective parties whose tenders are not accepted.

This Department does not, however, bind itself to accept the lowest or any tender.

By order,
J. H. BALDERSON,
Secretary.

Dept. of Railways and Canals,
Ottawa, 11th Sept., 1893. 38

DEDERICK'S PATENT STEEL SHELL HAY PRESSES.

Made of Steel—lighter, stronger, cheaper, more power, everlasting, and competition distanced.



Also all styles of Bale Ties made from the Best Steel Wire.

Manufactured by BOYD & CO., Huntingdon, Q.

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LARGEST STOCK
GREATEST VARIETY
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Every dealer should see our samples before placing their orders. If you cannot wait for our travellers, send for catalogue and price list. We are sole agents in Canada for the CLARK BROS. LAMP CO, of Trenton, who are the largest manufacturers of Vase, Banquet, and Hanging Lamps in the world.

ALL NEW LINES. NO OLD STOCK.

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GAS, ELECTRIC, AND COMBINATION

Fixtures

Of English, Canadian, and American designs.

Globes and Shades

Staple Brackets and Gas Fittings. Select stock of above always on hand.

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The James Robertson Co.

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Stove Boards
Stove Pipe Elbows
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You will Insure Success

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STOVE

Business, by selling

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They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.

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Successors to The E. & C. Gurney Co.

HAMILTON - - ONTARIO.

NEW. CLEAN. GOOD



Meat - Cutter

WHITE ENAMELLED

Inside, and Brown Japanned outside.

H BOKER, Manufacturer. | For Sale by Leading Wholesale Houses.

TORONTO CUTLERY CO.,

65 and 67 Yonge Street, Toronto

M. MAYER, Propr.

NON-XLL

Cutlery

WARRANTED

And the Most Complete Lines of Cutlery of all descriptions.

MONTREAL Markets Continued.

to $1.95, and English brands, $1.95 to $2.10. Firebricks are in fair demand at unchanged prices, $13.50 to $19 per 1,000 being still the idea.

PAINTS AND OILS.

No particular change is reported in leads and paints, but the fall demand is expected to set in shortly if it is ever going to set in at all. The market for white lead is firm, and prices are expected to go higher in the near future. We quote: Choice brands of white lead, Government standard, $5; No. 1, $4.75; No. 2, $4.50; No. 3, $4.25; NO. 4, $4; dry white lead, 5c.; red lead, pure, 4 1-2c.; No. 1, 4 1-4c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, raw, 60c., boiled, 63c.

GLASS.

The glass market is quiet and unchanged on the basis of $1.35 for first break, and putty in bulk $1.85.

PETROLEUM.

The demand for petroleum continues to improve as the season advances, there being now a fair local movement. There is no change in the price of Canadian refined, but American is lower. We quote Canadian at 11 1-2c. in shed in Montreal for round lots, 12 1-2c. for five-barrel lots, and 13c. for smaller quantities. American petroleum, 17c. in car lots, 18c. in ten-barrel lots, 18 1-2c. in five-barrel lots, and 18 3-4c for single barrels, 2 per cent. off for cash. American benzine, 23 to 25c.; Canadian benzine, 10 3-4c. Petrolea; 12 1-2c. Montreal.

MONTREAL TRADE NOTES.

The copper market is easy, round lots having changed hands here at 11 1-2c., and 12c. has been shaded in the case of jobbing parcels also.

Messrs. Cottingham were the recipients of a medal and first prize for their exhibit of pleasure skiffs at the Exhibition, and also of a very flattering mention for the fine finish of the boats in their exhibit.

Mr Painchaud, of Painchaud, Squire & Co., wholesale hardware dealers, leaves for Europe this week to look out for new goods, and call on the principals of the various firms whose goods his concern handles.

W. H. Cottingham & Co. are pushing at present Manders Bros.' varnishes, Blundell's Art Enamel, Green Seal Gold Paint, Estelle's Universal Gold Paint, and Green Seal Bronze Powders. These are bargains in each line.

H. C. McLaren had a taking exhibit of the Safford Radiator and the Booth Steel Clad Bath at the Exhibition in this city last week. The latter especially attracted attention from housekeepers.

Wm. Clendinneng & Son Co. carry a full line of patterns for repairs for a wide range of goods, and call attention to their advertisement in this respect. They carry a full stock and ship with promptitude.

Francis Hyde & Co. are doing a good trade in their fire clay goods. A new and taking line which they are offering at present is a line of garden edging, just the thing for fancy plots, beds, etc., in white, black, and terra cotta. This is a decided novelty. Another line that they are offering is agricultural glazed tiles, for which they are filling quite a few orders.

T. W. Ness & Co.'s exhibit in the far corner of the main Exhibition building was a centre of attraction for the crowds who visited the local fair here. This was the case especially at night when the various electrical appliances, lit up as they were by their own light, made a very brilliant picture.

TORONTO MARKETS.

TORONTO, Sept. 15, 1893.

HARDWARE.

The warehouses have been veritable beehives this, the second week of the Exhibition. The number of country merchants in the city this week was, it is generally agreed, larger than ever before. More of them, too, seemed to be buying goods. The parcels were, however, as a rule small and of an assorted character. A large number of them contained some cutlery. "A good many of our customers seem to have left the placing of their orders for cutlery until they came down to see the Exhibition," remarked a salesman to HARDWARE. Outside the fact that an unusually large number of merchants were in the city, trade has not developed any strikingly new features. Nails continue to move fairly well. Horseshoes are quiet yet. Quite a few orders are being booked for forward shipment. Cutlery has been occupying some attention, and trade is fair in sporting goods. In plumbers' supplies, the only thing that is occupying any attention is iron pipe. Tinware is selling well, but other kinds are quiet.

WIRE—Business is still practically confined to hay-bailing sizes.

ROPE—Demand is still moderate for ⅜, ½ and ⅝ inch sizes.

CUTLERY—A brisk sorting-up trade has been experienced this week in this line.

NAILS—In cut and wire nails there is a moderate business doing, while the demand for horse-shoe nails is brisk.

HORSESHOES—Trade in this line has not yet developed to any great proportions.

TACKS—Some special lines have been moving fairly well, but ordinarily business in this line is quiet.

CHAIN—Coil chain dull. While there is not much doing in cow chain for present shipment, quite a few orders are being booked for forward delivery.

SPORTING GOODS—Trade in this line continues fairly good, without any special feature to note.

WARE—A good movement is reported in tinware this week, and there is a steady demand for peerless and enamelled ware, but in small quantities.

PLUMBERS' SUPPLIES—Quite a quantity of iron pipe is going out, but business generally in plumbers' supplies is light.

RUST PROOF

Eastlake Steel Shingles

When you visit Canada's Great Fair you can see them on the Grand Stand, and nearly all the new buildings. . . . .

Sole Manufacturers . .

METALLIC ROOFING CO., Ltd.

84 to 90 YONGE ST.,

Send for Catalogue. TORONTO

TINSMITHS' SUPPLIES—Trade continues quiet and featureless.

BUILDERS' SUPPLIES—Building paper is in good demand, but this is about all in builders' supplies in which there is much doing.

TOOLS—Scarcely anything doing.

METALS.

Business is still on the whole quiet, although there is a little better feeling in some lines. Quotations have been withdrawn on some brands of Scotch pig iron, and prices on some kinds of manufactured iron have been advance 5c. per ton. A big demand has developed for galvanized iron and prices are firmer. Black sheet iron is also in good request, and a fair business is reported in tin plates. There is nothing special to note in other lines.

PIG IRON—Quotations have been withdrawn on some brands of Scotch pig iron, there being no stocks on account of the shortage of fuel. Local brokers report that owing to the shortage on the other side of the Atlantic they have been unable to make contracts here.

Rogers, Brown & Co, Buffalo, report the Toronto pig iron market as follows: Quite an increase in inquiry is noted. Sales for the most part are in small lots for prompt delivery and are widely scattered. We quote on the cash basis f. o. b. cars Toronto, in bond: IX Foundry strong Coke Iron, Lake Superior ore, $15.05; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14.55; 2 Foundry Strong Coke Iron, Lake Superior ore, $14.05; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17 55; Southern Soft 1, $13.35; Southern Soft 2, $12.85.

BAR IRON.—There is the usual trade doing at the $1.95 basis. Some kinds of manufactured iron have advanced 5s. per ton in England, so many of the works having closed for want of fuel, leaving stocks short. The trade is advised to place orders well in advance as delivery is uncertain.

HOOPS AND BANDS—Business in this line continues small in proportion, and for 1 inch and upward the price still remains at $2.50 to $2.60.

CORRUGATED IRON—There is not much doing, and prices are unchanged at $4.75 to $5 for small quantities. "Owl" brand $3 to $4 per square for patented and $4.25 to $7 for galvanized, according to gauge.

GALVANIZED IRON—There is a big demand for galvanized iron and prices are firmer. We quote 4⅞ to 5c. for 28 gauge with other gauges in proportion.

INGOT TIN—Stocks light and demand fairly good at 22 to 23c. per pound.

INGOT COPPER—Quiet and unchanged at 12c. for small quantities. This price would be shaded for large quantities.

SHEET IRON—Black sheet iron is going out freely without any change in prices.

ZINC SHEET—There is the usual demand at 5½ to 5¾c. for 5-cwt. casks and 5¾ to 6c. for part casks.

SPELTER—In fair demand at 3¾ to 5¾c.

TIN PLATES—Trade is reported good in this line, especially for M. L. S. brand, of which jobbers report that there is a difficulty at the moment of getting enough to supply the demand.

TERNE PLATES—Business is quiet, and apparently more than is usual at this time of the year.

CANADA PLATES—Orders for shipment from stock are small, most of the dealers in the country having just received their import lots. We still quote all dull at $2 65, half-half at $2.75, and all bright at $2.80 to $3 per box for small lots.

SOLDER—In steady demand with prices unchanged at 15½ to 16½c. for half and half and 14½ to 15½c. for standard.

ANTIMONY—There is not a great deal doing in this and prices are unchanged at 12 to 12½c. for Cookson's and 11½ to 12c. for common in small lots.

LEAD—Quiet with prices firm and unchanged. We quote 3¼ to 5c. according to brand.

PAINTS AND OILS.

A good many customers have been in from the country and trade has been fair. Payments are not yet up to the mark. Demand for white lead still continues to drop off, but prices remain as before at the 5c. basis. In prepared paints there is scarcely anything doing. Varnishes, particularly shellac, are selling a little better than they were. Business is not so heavy in linseed oil as it was, but there is still a fair business doing at 60 to 62c. for raw and 63 to 65c. for boiled. Complaints are heard about the quality of linseed oil, and dealers should exercise care when buying. Turpentine continues quiet and unchanged at 44 to 46c. per gallon. Prices are reported to be firmer in the South owing to the damage by the recent hurricane, but stocks on this market are too large to allow it to sympathise to any extent. Glue is in fair demand at unchanged prices. Castor oil is moving fairly well at 7⅞ to 8c. per pound.

GLASS.

Business is still small, although probably a little larger than a week ago. The $1.25 to $1.30 basis still obtains. Trade shows considerable improvement in plate glass, and the discount remains at 35 per cent. off.

OLD MATERIAL.

Offerings continue liberal, but there is practically no demand. The only basis upon which business can be done is the terms of consumers, which dealers are not inclined to accept. We quote prices paid by dealers as follows: Agricultural scrap, 60c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40 to 45c. per cwt.. No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings and turnings, 10 to 15c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—Trade in hides is running along smoothly. No fresh hides are being received by dealers. Prices are unchanged, dealers paying 4, 3 and 2c. according to quality.

SKINS—The supply in skins is fair and the demand good; Lambskins and pelts are 55c. Calfskins are in demand at 5 and 6c.

TALLOW—Tallow is weak. There is so much poor tallow in the market, and dealers object to anything but first-class quality, for which they are willing to pay 4½ to 5½c.

WOOL—No change in the wool market since last report. Large quantities are being received by dealers, but the demand for such remains quiet. Prices range from 17 to 20c. according to quality.

PETROLEUM.

The Petrolia Advertiser, in its weekly report says: There is no change in the market and nothing to report. The Exchange, instead of being a mart for the sale of oil, has become a mere meeting place to discuss any subject that may be brought up. If the producers don't soon take some action the Exchange will shortly become a thing of the past, and then good-bye to any chance of keeping up the price of crude. The price may be quoted at $1.10 delivered. Refined at 10c. f.o.b., car lots.

Business continues fairly good on the Toronto market, with the tendency of values towards a little more firmness. We quote: 5 to 10 bbl. lots, imperial gallons, Toronto; Canadian, 12½ to 13c.; carbon safety, 16½ to 17c.; Canadian water white, 17c.; American water white, 18½ to 19c.; photogene, 22c.

MARKET NOTES.

H. S. Howland, Sons & Co. report a greater demand than ever for Nicholson files this season.

The Dominion Wire Macturing Co. has issued its September price list on bright wire goods.

H. S. Howland, Sons & Co. are just in receipt of another consignment of The Little Giant meat cutters.

H. S, Howland, Sons & Co. are in receipt of a fine line of lanterns, especially adapted for contractors, thrashers and railway men.

H. S. Howland, Sons & Co. report large sales this last week of cross cut saws, files and handles, axes, axe handles, lanterns and cow ties.

H. S. Howland, Sons & Co. have received a complete line of Elliots' celebrated C. & C. razors, Boker's Perfection and Bengal, Tiger brand razors.

M. & L. Samuel, Benjamin & Co. are showing a fine line of hand, stand, library and parlor lamps, which they are offering to the trade at low figures.

The copper market in New York closed very strong on Wednesday with bids in market for large lots for spot or future delivery at 9 75c.; holders are asking 10c., and decline to entertain bids at any less price.

H. S. Howland, Sons & Co. have issued to the hardware trade of Canada an ammunition circular which includes a complete list of loaded shells and will be of great assistance to the trade in making up their orders.

J. H. Crocker, Shelburne, Ont., has sold the Canadian rights for his double truss cornice break to R. N. Irwin of the same town for a trifle over $1,500. Mr. Crocker will probably sell the American right. It takes very well here, and he should get a good figure for the American rights.

The Ager & Rich horse rasp for which H. S. Howland, Sons & Co. are agents is having a good sale, and many repeat orders are being received.

Referring to tin, the N. Y. Metal Market Report says: During the past few days there has been a marked revival of buying on speculative account, though it is rather difficult to fathom upon what such operations are based, as the shipments from the Straits continue heavy—4,200 tons during August—and there is nothing at the moment to warrant expectations of increased European consumption, while America has a stock sufficient for many months' requirements.

A new polish is being introduced on the Canadian market by Rice Lewis & Son (Ltd.) "Glistening Cream for furniture, a polisher, shiner, brightner and glosser of everything from a piano to a buckle on your shoe," is what the label on the bottle says. The polish is put up in bottles with handsomely lithographed labels, and there are twelve bottles in a box. The box is also handsomely lithographed, and will prove an attractive addition to merchants' stocks. The polish is guaranteed. Rice Lewis & Son have exclusive control of the polish and are rapidly placing it in the hands of responsible dealers, who already report a large demand for it. It is made by the same firm that puts up the crockery mender that has been so popular throughout the country.

AMERICAN MARKETS.

New York, Sept. 15, 1893.

COPPER.—On this metal there were no new developments. The demand was slow and chiefly for moderate quantities, but deliveries on former contracts continue fairly large and sufficient to keep stocks well within manageable bounds. Prices therefore remain quite steady at 9 3-4c bid, 10c asked, regular terms, for Lake Superior ingot; 9 1-2c. for electrolytic, and 9 1-4c. for common casting stock, in round lots.

PIG LEAD.—The price for common Western moved up to 3.90 to 3.92 1-2c. on very moderate dealings, and the market showed decidedly firm tone, with offerings light for delivery this month or next. About 100 tons went at the prices above named, but sellers figures at the close were 3.92 1-2c. upwards, with 4c. standing as the most popular asking price. London price for soft Spanish advanced to £9 17s. St. Louis quoted 3.75c.

PIG TIN.—Prices were carried still higher, or to 20.10c. bid for prompt, 20.15c. for September, 20.30 for October, and 20.50 for November and December delivery. No speculative trades were recorded, and most accounts were that new purchases by interior dealers and consumers are still on a moderate scale.

SPELTER.—There were bids of 3.80c. for ordinary Western, and, while demand lacked vigor, the negotiation was of a character that suggested better tone to the market. In other words, consumers displayed interest that has been wanting for some time past, and manifested more inclination to buy. The St. Louis market was stronger, with 3.45c. bid. London cable was £17.7-6, or slightly higher.

ANTIMONY.—Jobbing demand was somewhat better, but prices remain almost stationary at about 9 1-2 to

MARKETS—Continued

9 5-8c. for Hallet's, 10 to 10 1-2c. for LX and similar brands, and 10 3-8 to 10 1-2c. for Cookson's, in round lots. There was no distinctly new feature. Spot business was fair, but chiefly of retail character, while the movement in futures was little, if at all, better than it has been for several days. Stocks are ample, but not burdensome. Prices stand practically the same as they have been for over a week past.

UPWARD TENDENCY OF METALS.

We are able to report a better demand from consumers for all kinds of metals. Prices have advanced rapidly since the first of the month, and with the steady increase in the demand for the fall trade we are likely to have higher prices in all lines. Below we give the prices ruling last month and up to date :

	Aug. 15th.	Sept. 1st.	Sept. 12th.
Tin.....	18.15	19 50	20 10
Copper...	9.65	9.75	9.85
Lead.....	3.30	3.75	3 90
Spelter...	3.75	3.70	3.80

—N. Y. Metal Market Report, Sept 12th.

TELLING IRON FROM STEEL.

The simplest way is to pour on the metal to be tested a drop of nitric acid ; let it act for one minute, then rinse with water. On iron the acid will cause a grayish white, on steel a black stain. Steel may be distinguished further from either cast or wrought iron by the closeness of the grain, its toughness and its having that peculiar property called temper, which is the power of hardening when suddenly cooled after being red hot. If a bar of steel be made of a bright red heat, and then suddenly plunged into cold water, it will be found to have become harder than any other metal—so hard, indeed, that it will scratch glass, and is as brittle and readily broken as flint. If a piece of bright, hard steel is held for a moment in the hollow of a clear fire a pale straw color appears on the surface ; its hardness is slightly lessened and it is fit for razors, surgical instruments, etc., ; if held in the fire a moment or two longer it becomes of a bright golden yellow, and is fit for penknives and other cutting instruments ; held longer still, it becomes bright blue and is fit for watch spring, swords and other purposes requiring great elasticity ; if the heat be carried still farther, a brown tinge is seen, and it is now rather soft, but still greatly harder than iron and is still elastic ; saws, coach springs and other articles are made from steel at this temper. If the heat be carried to redness the steel will be quite soft when it has slowly cooled, but if suddenly cooled (as by being plunged into water) the original hard temper comes back again. The most curious manufacture in steel is that of lace, which was made several years ago, looking as fine as any Brussels lace, and said to be equally soft to the touch.—Brooklyn Eagle.

PERSONAL MENTION.

Among the country merchants who have been in Toronto during the week were : Thomas Woodward, Cannington ; J. W. Fear, Waterloo ; J. L. Drainie, Fergus : Mr. Henry, of Henry & Hambly, Drayton ; Messrs. Kelley & Marshall, Orangeville ; R. Martin, Arthur ; W. Strachan, Ottawa ; W. Coxall, Colborne; Mr. Everson, of Everson & Hawkins, Oshawa ; D. Macnab, of J. & D. Macnab, Claremont ; M. Bricker, Listowell; Mr. Gilby, Port Arthur ; R. E. Bingham, Stayner ; Wm. Scott, Forest.

HIGH-SPEED ELECTRIC DRILL.

What is claimed to be an advance in electric mining machinery has been introduced in England in the form of a new rock drill, says an exchange. Upon the cradle, which is made of cast iron and is about three-quarters of a yard long, is fixed a small motor completely enclosed in a brass case. The motor is exceedingly compact and well made, to enable it to stand rough use. It is wound to work at about 90 volts, and takes about four amperes, which is about a half-horse power, when doing its work. The armature is made up in 16 sections, with the same number of segments in the commutator of phosphor bronze. The speed of the motor is 2,000 revolutions per minute, and it transmits its power to the drill through two cog-wheels, which reduce the number of strokes to about 240 a minute. The drill is also given a slow revolving motion. By a spring arrangement all shock is taken from the drill when the blow is given, thus enabling the motor to work smoothly and without jar. The whole is fixed upon a tripod stand, which can be inclined at any angle and fed by a wheel at the upper end of the cradle.

IMPROVEMENT IN HOUSE FITTINGS

The Centennial Exposition of seventeen years ago effected, among other changes, a marked improvement in the architecture of this country, remarks Stoves and Hardware. This improvement was not confined to the larger cities and towns but was widespread and general, and while the growth is gradual, it is nevertheless certain, and the result is seen to-day in an artistic development that is not exceeded in any other country in the world. Those that remember the plainness and sombre effect of the general run of buildings and residences seventeen years ago can appreciate the change for the better, and are now apt to wonder why they were ever satisfied with the style, or the lack of it, in that earlier period.

But the change is not alone in the architecture itself. Interior fittings and decorations have been improved, upon and all that goes to make up the comforts of a home or the conveniences of a building have gone through a process of evolution until now it seems as if the acme of artistic skill and ingenuity had been attained. The heating and cooking appliances of that period, while not in any sense crude or lacking in any essential feature as regarded from the standpoint of knowledge then obtainable, had not reached their full development, and, for some uses, and in certain sections, were mainly experimental. Furnaces, as an instance, were not in general use outside of the larger communities, and the hundred and one accessories to the culinary department of a well-regulated house, and which are now everywhere in use, had not then been placed upon the market.

Still another improvement in the way of interior fittings is the great change in the character and design of builders' hardware. The cumbersome latch-key has been succeeded by a corrugated bit of metal of at least one-quarter the weight and size, that does better and far more effective work. Locks have been improved upon until there is but little resemblance between those now in use and their somewhat uncertain prototypes. Everything of this character, in short, has made material and artistic advances, and the difference in design and finish is so great that comparison is practically out of the question. The renaissance, or new birth, of architecture in this country was a testimonial to a better taste that carried its teachings throughout the house and produced an artistic and harmonious effect which had hitherto been lacking, and this without any sacrifice to the spirit of or desire for economy in expenditure.

SIWASH DAY.

Yesterday was "Siwash" day in New Westminster. From early morning till a late hour last night the thoroughfares were crowded with the dusky aborigines, accompanied by their sisters, cousins, and, in all probability, aunts. Children were a glut on the market. As soon as the banks were open those who had worked through the fishing season flocked in, and presented their checks. So large was the crowd that it was many hours before all the innocent looking bits of paper were converted into cash.

All the stores did a rushing business, and by evening there was hardly a native on the streets who was not carrying a bundle of some sort or another. These Indians were as quiet and well-behaved a set of beings as one could wish to come across. A rather amusing incident happened in the evening. A young buck went to Harvey's store and spent $9 in decorating his best klootch in a garb, beside which the patriarch Jacob's coat would be a thing of naught. Having parted from his fair one for a few minutes, he returned to the trysting place to find that his fickle beauty had fled. He pursued her, and, finding her in the company of a dusky Lothario, raised such a row that the favored swain was forced to disgorge the amount in cash that the original owner of the more or less charming maiden had spent in adorning her person. It is affirmed, to his credit, that he did not make any percentage on the deal. At a late hour last night good-byes were said, or, rather, au revoir, till next year's run begins.—News, Vancouver, Sept. 2.

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ELECTRIC TRACTION IN EUROPE.

The long deferred adoption of the electrical railway in Europe as a means of passenger transport has long served the Americans as an argument against its claims to higher civilization; and the American tourist in Europe, whenever cornered, has for the past few years always fallen back upon the greater development of electricity in the United States, as proving the superiority of his country over all others. Of this argument, however, he will probably soon be deprived, for Europe is awakening, and the adoption of the electric railway there is rapidly becoming general.

The causes are not far to seek for the backwardness of the old Transatlantic peoples. They are shackled with a conservatism which appears to us ridiculous from the extremes to which it is frequently pushed; prejudices are more rampant and harder to overcome; franchises are not so easily, and, parathetically, not so dishonestly obtained as they occasionally are here; no franchise is accorded without a reasonable pecuniary return for the privilege, and, lastly, a wholesome fear of the electric railway has been bred in them by the carefully recorded reports of the numerous accidents from electric street cars which have occurred and are daily occurring here. The effect of all this has been to retard the progress of the electrical railway, and, while the United States has increased its electric traction mileage from three to six thousand miles, Europe has done but very little. The case of England is peculiar, and she stands alone in Europe in that her engineers and projectors have had to overcome the selfish opposition of the telephone monopoly. Had they not been obliged to encounter this, there can be no doubt but that the electric railway would have been much more widely adopted than it is at present.

Our French contemporary, L'Industrie Electrique, has recently published statistics of the existing and projected electric railways in Europe, which show that the necessity for the improved facilities it offers has made itself felt, and that the different nations are beginning to recognize the goodness of the thing which we long ago saw and adopted.

From the figures we find that Germany has the greatest number of cars, 243, and miles of track, 91; England the greatest number of roads, 16, but only about half the mileage, 50; while France, although she has only eight roads, has twice as many electric cars as England, and about the same mileage. Switzerland, Austria and Italy follow in the order named, while Belgium, Spain, Holland, Russia and Sweden boast one road each. The total number of roads, operating, in construction and projected, is 66, the total number of cars 723, and the total mileage 260.7.

Electric traction in Germany has been brought into favor principally by the exertions of the Siemens family, whose efforts in this direction are too well known to need repetition here. But it is a remarkable and gratifying fact, that in Germany, France, Russia, Italy Sweden, and Switzerland the American systems of Thomson-Houston and Sprague have been more widely adopted than any which Europeans themselves have been able to devise. Indeed, nearly all the electric railroads in Europe, under construction or peojected, contemplate the adoption of American systems.

The outlook in Europe is, therefore, extremely encouraging. With the tremendous fund of American experience to draw upon, her engineers can go ahead without fearing the difficulties which Thomson, Sprague, Daft, Vandepoele, Knight, and others had th encounter and surmount; and, although we cannot look for a comprehensive "boom," such as we had here, we shall probably see a steady growth in the number of installations of solidly constructed and economically operated electric roads.—Journal of Commerce.

The total number of Chinese arriving in Canada last month was 126, a decrease of one as compared with August, 1892. Of last month's immigrants, 79 paid poll tax at Victoria, 40 at Vancouver, and seven at other points .

GAS AND ELECTRIC LIGHT.

A recent Berlin magazine has an exhaustive article on gas and electric light, of which an abstract may be of interest to our readers. Ten years of experience in the use of gas and electric light have furnished a basis of comparison as to their respective cost and possible future growth. Gas lighting has long gone on without improvement, and competition was too unfrequent to be successful, either in reducing cost or increasing candle-power. Suddenly Berlin saw its main street lit by electric arc lights, and New York was awakened to the merits of Edison's system in its shops, theatres, hotels and streets. Gas shares fell, until the high price of electric light reassured the owners. The gas companies rapidly introduced improvements to cheapen the cost and increase the candle-power, and Siemens and other inventors supplied better light with a variety of burners. Gas machines, gas cooking stoves, gas ovens will all be multiplied just as fast as the price for them is reduced. Its use for motors and other industrial purposes has increased from one-half of one per cent. ten years ago, to ten per cent. of the production, and in other more progressive countries at a still greater rate. In Paris, one-fourth of the gas production is used for heating, cooking and power. In Swiss manufacturing towns it has found similar use. Warming by gas has many advantages—in dwelling houses it abolishes smoke and ashes, saves furniture and economizes attendance. Schools and churches are now being warmed by gas—in Germany over fifty churches were reported to be satisfactorily warmed by gas in 1890, and the number is steadily increasing. Electric lighting has sharpened the zeal and inventive power of the men engaged in manufacturing gas, and its use for many other purposes than light is a compensation alike to the owners of the gas stocks and to the general public. The gas companies have thus gained rather than lost by being deprived of the monopoly of supplying light, for the competition of electric lighting has grown so slowly that gas machinery and domestic uses for gas for other purposes than light have found a wide field for the consumption of gas. The cheapening of the production of gas, and the manufacture of better gas for light, and of gas fit for heat and power and not for light, and of gas fit for heat, the sharp pressure of competition with electric light, and each of these important factors in the modern requirements of city and even of village and country life has a future before it, securing for both gas and electric companies abundant opportunities for earning a fair return on sound investments of capital.—Railway News.

THE EXAMINATION OF STEEL.

Perhaps there is nothing more notable in the metallurgical history of the past two decades than the investigations which have been made into the composition and structure of steel, remarks Engineering and Mining Journal. For some time after the invention and introduction of the Bessemer process had made possible the substitution of steel for wrought iron as a material of construction by increasing its production and lowering its cost, we were generally inclined to accept the metal as we had it and to make the best of it. Steel was steel, and the variations in its strength, hardness and other qualities which were found were for a time taken as inevitable drawbacks to its use and as offsets to the advantages which it presented for many purposes, with which we could not well dispense. The Bessemer metal was better than puddled iron in many respects, and why some should be better and some of inferior quality was a matter beyond control.

It was not to be expected, however, that this state of affairs would satisfy those to whom the use of the metal was important. To the railroad men belongs the credit of making the first advance, and the remarkable investigations of Dr. C. B. Dudley into the quality and characteristics of the steel rails furnished to the Pennsylvania Railroad first called general attention in this country to the possibility of regulating the composition of steel and adapting it closely to the special purpose for which it was to be used. The publication of the results obtained by Dr. Dudley brought out other investigators both in this country and in Europe and a great amount of study was applied to the question. The comparison of physical tests and chemical analyses revealed something, and new points in the metallurgy of steel, were constantly revealed. The extent to which these investigations have been carried is well shown by the great work of Professor Howe on the metallurgy of steel, which is the most complete and thorough study of the subject yet presented.

The invention of the open-hearth and the basic processes, which have supplemented that of Sir Henry Bessemer, have largely extended the production of steel by making possible the use of iron formerly considered unfit for the purpose, and have aided in increasing the substitution of the metal for wrought iron in many directions. The attention paid to the elimination of sulphur, phosphorus and other undesirable elements is gradually extending the production of raw iron which is adapted for treatment. Much greater certainty is now attained in securing the qualities of steel needed for special purposes, as hardness and resistance to wear in rails, tensile strength in bridge work, toughness and resistance to impact in armor plates, and vast progress has been made also in the study of alloys of steel, such as nickel-steel, chrome-steel, aluminum-steel for castings, and others.

One of the later developments in the study of steel is the microscopical examination of its structure, on which some remarkable notes were presented at the recent congress in Chicago. Taken in connection with physical and chemical tests, these structural investigations are bringing out new points in relation to the metal which will prove of great value to the metallurgist. Much still remains to be done in this direction to decide the exact relation between chemical constitution and physical properties, but the way has been made fairly clear, and the metallurgists are rapidly approaching the time when uncertainty and so-called mystery will be eliminated and the variations of quality in the product which are now unexpected will be fully understood and that steel of any desired property can be made to order.

SAFETY OF OIL STOVES.

"Cleanliness is next to godliness," the divine book informs us, says an exchange; so, too, it is an assurance of a perfectly safe oil stove. Interviews with dealers in these commodities, and especially with reference to their safety, are to this effect: As regularly as the summer season comes round, fires are reported in the newspapers as having been caused by the explosion of oil stoves. In such cases what really happens is this: A person rushes into a kitchen where there is an oil stove, notices the said stove enveloped in flames, and, catching it up, throws it bodily out of the nearest window. The stove is broken to pieces by that proceeding, but there has been no explosion; in fact, dealers say that oil stoves never explode. The trouble, they say, is that people do not take proper care of the stoves. Instead of cleaning them from time to time, as in the case of lamps, they neglect them and allow them to become clogged up with a coating of dust and oil. That mixture is very inflammable, and if it remains about the wicks it will eventually take fire.

BURNING TIN.

The metal tin can be burned as easily as paper, and to do it makes an interesting parlor experiment. A candle, blowpipe and tin foil are necessary. With the blowpipe, explains an exchange, direct the flame of the candle against a strip of tin foil, and it will readily take fire and burn with a brilliant light, the melted incandescent globules falling to the table and dancing about in a very curious manner. It will be noticed that the product of the combustion of the tin is a white powder, the oxide of tin, and it was observed many years ago, that this calx, as it was called, weighed more than the original tin. This simple observation was the beginning of a long series of investigations which finally led to the discoveries of Priestly, Scheele and Lavoisier, and laid the foundations of the modern science of chemistry.

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Plans and specifications of the work to be done can be seen on and after the eleventh day of September, 1893, at the office of the Chief Engineer of Railways and Canals, Ottawa, where forms of tender can be obtained. In the case of firms, there must be attached the actual signatures of the full name, the nature of the occupation and place of residence of each member of the same, and further, an accepted bank cheque for the sum of $800 must accompany the Tender. This accepted cheque must be endorsed over to the Minister of Railways and Canals, and will be forfeited if the party tendering declines entering into contract for the work at the rates and on the terms stated in the offer submitted. The accepted cheque thus sent in will be returned to the respective parties whose tenders are not accepted.

The Department does not bind itself to accept the lowest or any tender. By order,

J. H. BALDERSON,
Secretary.

Department of Railways and Canals,
Ottawa, 6th September, 1893. 38



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STUDY OF FORKS AND KNIVES.

On the table of to-day the silversmith shares honors with the cook in setting snares with his glittering wares, reproductions of the well-known articles which have in the growth of civilization come to replace fingers, and new creations that have grown out of old conditions newly recognized. The silversmith's opportunity is the continual changing of fashions in manners and in table service, between the two there being p rfect sympathy.

For the ordinary dinner for each individual are needed two spoons, three knives and four forks. The spoons are a large one for soup, a small one with a gold bowl for Roman punch, both to be placed in front of the cover; the knives are for meat, entree, and game, laid at the left; on the right are forks for the same purposes, and one more intended for fish. Usually, both knives and forks grade in three sizes, the largest lying closest to the plate. For the salad course, one of the earliest removed pairs is returned again to the table. But, as courses may be multiplied, so may the need for knives and forks; yet the number is not added to in the original laying of the table.

A dinner served a la mode begins with oysters—as long as the bivalve is in season—and the plate holding them is at each place as the guest sits down. Once any fork would have done for the oyster; now it has its own, a very pretty one, five or six inches long, with two flat rather broad prongs, taking up an inch or a little more of the forks' length. To imitate the novelty and prove its purpose, the fork is laid on the oyster plate; a year hence it may take its place at the end of the fork line, flanking the cover.

In the fish course the individual is passed over and the server has the new fancy for helping his fish—a fish fork. It is the old fish knife or scoop slit into four or five prongs of uneven size, the two outer ones being twice the width of the inner ones. Beyond the sentiment that fishes and forks are made for each other, this fish fork is no improvement on its predecessor.

The soup spoons of a service, which once helped vegetables, have been ousted by vegetable spoons, the idea and designs being adapted from England, where no table service is considered complete without them. For dry vegetables the spoon has a pointed bowl; for such as have gravies or sauces the bowl at the lower edge is deeply depressed and rounded up like a cup—a very ugly shape. Both styles have larger bowls than the soup spoon and handles two or three inches longer. For taking stuffing from a capon or turkey are spoons with the pointed bowl of the vegetable spoon, with handles a foot long.

The dinner progresses until the salad, when comes a huge novelty, a substitute in silver for the lettuce fork and spoon of carved wood. The new creation is a formidable pair of tongs, one end terminating in a large spoon and the other in a large fork, whose prong-tips are slightly curved in. Altogether the tongs are a foot long, and the half curve, where you are to grasp them for use, is a handful. The idea is pretty enough, but the present form of carrying it out is too massive, lettuce being so very light. In open-worked silver with a shortened handle the lettuce tongs will become dainty and appropriate.

In strongest contrast as to delicacy in conception and make is the novelty of the year and of the decade—the "strawberry fork." For several years fashion has decreed that strawberries should appear at table with their stems and be eaten by holding the stem of a berry in the fingers, dipping the fruit in powdered sugar, and biting it from the stem, a process that the enormous size to which the fruit has come to be grown has made practicable. The forks are to replace the stems and keep the fingers from becoming stained or sticky while thus eating it. They have a length of five or six inches, one inch or a little more of which is taken up by two slender pointed prongs. The designs shown have delicate handles of twisted wire with prongs beautifully chased.

For years that uncertain contingent party of the social world that wants to be correct if anything has not known how to eat its ice cream. As a result, between the fork and spoon honors have been easy. The silversmith has at last seized the situation and taken advantage of it for his own profit and the peace of the uncertain. He has designed the ice cream spoon. Its size is that of the teaspoon; its bowl makes it distinct from all of its kind, the lower edge becoming flat and pointed like a trowel. The spoon has rather triumphed as the preferred article, as it has become correct to serve with ices a cordial, a few spoonfuls of the liquid being poured over the ice.

Throughout the dinner a tiny little fork resting on the olive dish will show that at some tables the fingers have been banished from it. But once helped, they remain still the only means for conveying the much loved, often disliked relish from the plate to the mouth.

Sometime during the pudding course, or probably at the end of the dinner when coffee is poured, the rarest novelty in silver may appear. It is a wine burner, and its purpose is to burn out of spirituous liquors the alcohol they contain. It is an oblong, shallow cup that will hold a dessert spoonful of brandy. At one side of the cup is a crescent-shaped piece of open-worked silver—its greatest width is an inch, intended for a handle. The object lying behind the burning of the alcohol is a temperance one. Through submitting the wine to the process the intoxicating properties are destroyed and yet the flavor is preserved. There are some epicures who draw temperance lines, and to them the wine burner commends itself in usefulness.

In natural sequence supper follows dinner, but the novelties appropriate to it are some of those used at dinner, while in the use of others it has to divide honors with the luncheon table. With the latter supper has to share the new combination spoon and fork intended for serving chicken or celery salad. This clever idea of some worker in the precious metal has, at the end of a long delicate handle, what begins as the bowl of a spoon and ends in three prongs of a fork, sloping outward beyond the outer edge of the bowl.

The cold meat fork has the original idea expressed in several new designs and one entirely new shape. The latter is intended for chipped beef and takes the form of a pair of scissors. A stork, covered with satin-finished silver feathers, has its bill bent at an angle, and at the end of its long legs are rings through which the fingers can be slipped. The effect of manipulating the scissors is that of a bird stooping and pecking, the bill opening and closing. It is a quaint adaptation of a much copied form in nature, but is an awkward little trick and not very practical.

Another new silver piece is the bread fork, a trident with a short cylindrical handle of bright repousse work and prongs of the same three inches long, terminating in points. The idea is imported from the English table, where it is of practical use. The Britisher has his cold loaf on the table and slices it as he wishes it. Whoever assumes the duty passes not the bread board for you to help yourself, but the slice on the tip of the bread knife. It has not "taken" here, its occupation, like Hamlet's, being gone, our bread being served already sliced and delicately placed on a plate.

At breakfast appears the awkward, unornamented "cake lifter" and the cunning little butter "spreader," a new adjunct to the lately added table article, the bread-and-butter plate. The "spreader" is a knife five or six inches long, with a blade varying in size from a half to three-quarters of an inch. One side of the end of the blade is rounded into two teeth. You break apart your lump of butter with the teeth and the blade spreads it on the bread. The butter knife of our fathers is no longer used. The new notion is to serve butter in tiny balls or curls or cubes, patted in the home pantry and kept solid in a cool place until serving. For helping there is a spear or lance of silver or gold, the point of which is thrust through the butter ball and so transferred to the bread-and-butter plate.

To accommodate the fashion in serving, new styles of butter bowls are seen. They are round and flat, with sides of open-work silver two inches high. The silver shape is fitted with white or colored glass or china. Their usefulness is shown in warm weather, when the glass is half filled with ice water or cracked ice and the butter balls float about solid and firm during the entire meal or until they are eaten.

In the new way for eating the orange the silversmith has followed the orange spoon with the orange knife and the orange holders. The orange spoon has its bowl pointed, and new designs are occurring constantly. The orange knife has a blade like a rounded scimiter, one side having an edge, the other side teeth like a saw. The orange holder is an adaptation of the tong idea. It is not more than six inches long; one-half the length is the handle, the other half is a half globe divided in the centre. In the half globe the orange is held in place by the hand pressing the tong handle beneath. The half-globe is slit in fingers and finished in bright silver without ornaments.

Cracked ice spoons with small fluted bowls are to replace the pretty, insecure little ice tongs. New candelabra are fitted with unburnable candles of porcelain, that are, in fact, lamps, the

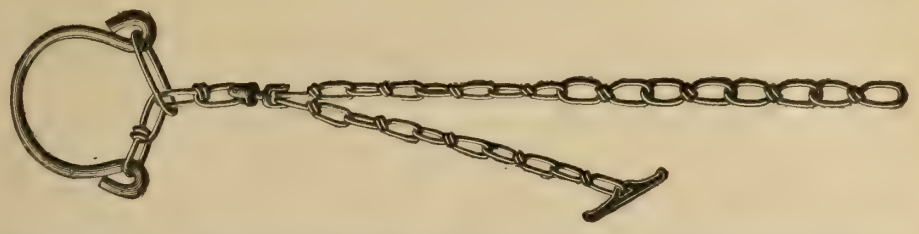
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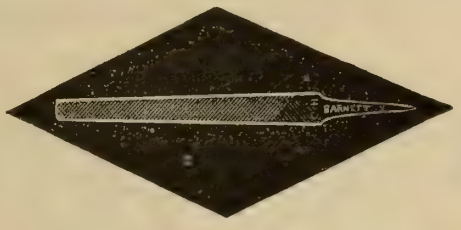
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candle being merely the receptacle for the oil. Fitted with flower decked shades, the cleverly-made imitations will pass for the genuine article. A new thing concerning candelabra is the coating of varnish or lacquer which can be given either silver or gilt. This invisible protection will last with care for months, and while it remains the metal will not tarnish, neither will it require polishing nor rubbing. All that is necessary is to wipe the candelabra with a damp cloth and immediately afterwards with a dry flannel one. When the varnish wears off it can be renewed at the jeweler's.

For one to be ignorant of the proper use of a novelty is nothing to be ashamed of. If you are ignorant, you are just a trifle old-fashioned—a season behind time. Frank innocence and tact will save a situation from awkwardness, and sometimes the resort to it is thought attractive. One rule to be observed is this: Begin to use from the outer end of your knives or forks; if you are uncertain of a new strange piece of silver, wait and watch your neighbor or your hostess and act accordingly.

Local customs and usages, even in this traveled age of people and products, make certain ignorance or innocence very possible. A Southerner could not be blamed for not knowing what end of the stalk of asparagus to eat, because it is not a vegetable of his latitide. In exchange a Northerner could not understand the bur artichoke, and in being ignorant he would be above reproach.

There is a certain sign language that obtains between host and guest, and between those who sit and those who stand and wait, and its meaning every well-bred child learns in the nursery. In the wonderful ups and downs in our country, the person who sits to-day at the finest appointed table may never have had the advantage of a nursery, nor of a mother who knew what civilization supplied to the top-ladder people. Such a person is in a kind of helpless ignorance, and how to enlighten him is the conundrum of many.

This overabundance of silver at table is due to the insatiable desire for novelty and the increased fortunes which allow the gratification of the desire. But as old silver is a patent of respectability, it is in no way banished from the ultra-fashionable table—it is used in preference whenever possible, the novelties being added according to their beauty or utility.

To own a set of old, wide, round-bowled Dutch spoons is equal to, and proof positive of,an aristocratic ancestry. Excessive decoration is the fancy of to-day as it was in the years of the last Louis of France. The bow-knots, festoons and garlands peculiar to the period stated have been revived and applied to the ornamentation of our silver for the table. The handles and even the bowls of many articles are variously edged with garlands, or in some cases their entire surface is covered with conventional designs of roses, thistles, lilies, and natural fern leaves. This gives opportunity for the employment of repousse or beaten work, now brought to such perfection. As for the outer finish of any piece or set, the "satin" or "polished" is equally fashionable.

With this increase of work adding expense to the manufacture, the price of our silverware constantly goes down. The increased supply of silver in the market does not explain the evident paradox. Have recourse to the scales, however, and the truth is revealed. Our inherited spoons are very much heavier than any we buy to-day and leave to be inherited. The depreciation of silverware—always marked when solid "sterling"—has crowded out plated ware. And in turn it has been crowded out by what is more common than most people believe—services of gold. The applying of the word silver to our tableware is an Americanism, the sister nation using our language speaks of the same thing as plate.—House Furnishing Review.

DEVELOPMENT OF GAS POWER.

In a paper read before the Incorporated Gas Institute of England, J. Emerson Dowson, M. Inst., C.E., as reported by a contemporary, stated that no gas engineer can be indifferent to the use of gas power which has taken place during the last ten years. Thanks to the remarkable invention of the late Dr. Otto, and to the skill and enterprise of the makers of his engines, their popularity has been assured; and at the present time in Great Britain alone the gas engines sold represent something like 500,000 indicated horse-power. If we assume that on an average only half the above power is in use for 1,000 hours in a year, it represents a consumption of gas of about 6,000 million cubic feet per annum; and this at 2s. 6d. per 1,000 cubic feet equals £750,000, or at 3s., £900,000 per annum. Truly no mean result. And yet this has been attained with less aid or encouragement from the gas companies than might have been expected. The gas engine has made headway because it has certain marked advantages, compared with the steam engine. No ground space for a boiler is required, and no chimney; there is no boiler to clean and repair, and no boiler insurance; there are no clinkers and ashes to remove, and no firemen to pay; the gas engine can be stopped or started in a minute, and there is no loss of fuel during the stand-by hours. In fact, when an engine is worked with gas taken from the town mains, the conditions of working are almost ideal—especially as the fuel is strong, clean, and always ready for use, and as ample storage of power is provided in the gasholder. These and other minor advantages have led to an extensive use of gas engines; but, on the other hand, they have been seriously prejudiced, because the price of the fuel they, for the most part, have to be worked with is much higher than that of the fuel used for steam power. The makers of gas engines are, in fact, obliged to admit that when town gas costs more than 3s. per 1,000 cubic feet, the working cost of an engine of more than 14 horse-power nominal exceeds that of a steam engine of the same power, under the usual conditions of regular working. If, however, the price of the gas was 1s. 6d. per 1,000 cubic feet, the result would be very different, even in localities where steam coal is cheap.

As is well-known, the efficiency of an engine, whether steam or gas, depends chiefly on the proportion of the heat energy of the fuel which it converts into work. This efficiency is mainly dependent on the difference between the initial and final pressures developed in the cylinder, as shown by the indicator diagrams; and it is because this principle is now more generally recognized that modern steam engines are worked with high-pressure steam. In gas engines, the initial pressure is more than double that usually adopted in steam engines, and this at once gives the gas engine a much higher efficacy than its rival. Moreover, with steam power, the steam must be produced in an independent boiler; and this must be large enough to produce a full supply and contain some in reserve. All the steam must be compressed in the boiler to the pressure required; and while under pressure it must be conveyed to the engine—the loss from leakage and cooling being considerable. In the gas engine, the working fluid can enter the cylinder with little or no pressure above that of the atmosphere; and if the gas is cooled on its way from the holder to the engine it has an advantage, as each charge of gas which enters the cylinder is more dense, and, consequently, a given volume has greater energy. The mixture in the cylinder is compressed by the engine itself; and when the charge is fired there is at once a great development of heat, and consequently of pressure. The difficulty, indeed, is not so much to get a high initial pressure as to prevent its being excessive. In his recent lecture at the Royal Institution, Professor Kennedy showed that a steam engine cannot possibly convert into work more than 30 per cent. of the heat energy put into the engine; that a hot air engine may convert 50 per cent.; but an internally fired gas engine as much as 80 per cent. The actual steam engine of the best type converts about 10 per cent., and the actual gas engine about 25 per cent.; so that not only is the gas engine far ahead of its competitor, but it has much greater possibilities of improvement.



PAINTERS

Will find the cheapest Paint Brushes are those having our . . .

Flexible Bridles

Why? Because the bridle can be taken off and replaced in a moment. The paint circulates and the stump never hardens. You can wear the brush down shorter, therefore it will last much longer.

Ask your dealer for them. Made in round, oval, and flat. All sizes and qualities.

CHAS. BOECKH & SONS

Brush Manufacturers

TORONTO - - ONTARIO

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,

Agents.
MONTREAL AND TORONTO.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.
Keene's Coarse, Parian and Superfine Cements.
SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.
FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,
CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

FIRE!

McCAUSLAND & SON

Beg to inform their customers and friends that they are in a position to fill all orders with promptness and dispatch, notwithstanding the recent fire in their premises. . . .

72 to 76 King St. W.

UNIVERSAL VARNISH



TRADE MARK

This brand has now become the favorite among painters and consumers in Canada.

Guaranteed first quality for

Inside or Outside on Boats, Carriages, Furniture, Floors, Church Pews, Etc., Etc.,

Manufactured only by

A. RAMSAY & SON, MONTREAL

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

STOP!

Do not turn another page before we have told you what we can do for you.

OUR HERCULES METAL

Is the best in the world. Does not heat and suits all kinds of Machinery.

Our Solder is used by all the leading Plumbers, Roofers and Tinsmiths.

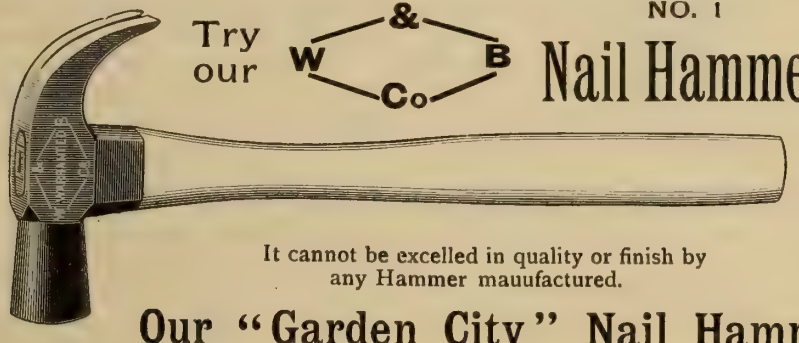
..TRY US..

TORONTO SMELTING and REFINING WORKS

92 and 94 Queen St. E., TORONTO.

THE WHITMAN & BARNES MFG. CO.

Canadian Branch: St. Catharines, Ont.



Try our W & B Co

NO. 1 Nail Hammer

It cannot be excelled in quality or finish by any Hammer mauufactured.

Our "Garden City" Nail Hammer

GET OUR PRICES AND TRY OUR GOODS

Is the best and cheapest "Solid Cast Steel" Hammer on the market. . . .

We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .



THE BEST SMOKELESS POWDER IN THE WORLD

SOLE AGENTS. SEND FOR CATALOGUE.

The Bowman Hardware and Sporting Goods Co., Hamilton, Ont.



A GREAT LOSS?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

James Martin & Co., general merchants, Thurso. Que., have assigned.

Samuel Halstead, tinsmith, Kincardine, has assigned to J. M. Stewart.

F. M. Nicholson & Son, general merchants, Dundas, P. E. I., have assigned.

A. St. John, N. B., machinist named Alfred Langstroth has assigned.

T. Linklater, plumber, Montreal, is offering to compromise at 25c. on the dollar.

The coal business of Lacoste & Co, Montreal, is to be liquidated by Evans Bros.

Robert Gurd, manufacturer of brooms, London West, has assigned to J. R. Gurd.

Donald McCallum, Cumberland, general store, has assigned to P. Larmouth, Ottawa.

G. B. McKeen & Co., hardware and ship chandlery, North Sydney, N. S., have assigned.

L. N. Desrosiers, general merchant, Macnider, Que., has compromised at 60c. on the dollar

Joseph Fortier, general merchant, Capelton, Que., is offering to compromise at 45c. on the dollar.

John Rennie, bankrupt stocks, St. Catharines, assigned to John McClung & Co., Toronto, and the stock has been sold.

Byron J. Kimbal, general merchant, Waterville, N. B., has assigned. So has Burpee E. Chute, general merchant, Bridgetown.

Aime Lemeux, general merchant, Henryville, Que., is asking his creditors to accept 70c. on the dollar in lieu of the customary 100.

The creditors of J. M. Gordon, general storekeeper, Beaverton, have been called to meet at Henry Barber's office on the 19th. The liabilities of the estate are about $11,000, assets yet unknown.

Assignee E. R. C. Clarkson has been appointed to look after the affairs of Messrs. A. R. McKinlay & Co., St. Albans street, who have assigned. Their assets will reach $25,000, and the liabilities the same.

William Griffith & Co., wholesale boot and shoe men of Hamilton, have been compelled to give way before the strain of financial difficulties. Henry Griffith was a member of the firm, but retired, leaving a large amount in the business. He had obtained judgment for $22,246 83. The liabilities are estimated at about $70,000, and the assets are expected to fall far below that amount. The firm has been in business since 1876.

PARTNERSHIPS FORMED AND DISSOLVED.

Brosseau & Tremblay, planing mill, Montreal, are about dissolving.

Revelstoke Lumber Co., Revelstoke, B.C., have dissolved. D. Robinson continues.

N. Lemieux & Noel, wholesale and retail hardware, will dissolve partnership shortly.

Butler & Hollands general merchants, Fort Francis, Ont., have dissolved. A. Butler continues. C. J. Holland is opening out a general store and liquors.

R. Sydney Sheraton and J. Ernest Whittaker have registered a co-partnership in St. John, N.B., to carry on business as dealers in stoves and furniture under the style of Sheraton & Whittaker.

SALES MADE OR PENDING.

The stock of R. Buckley, general merchant, Allenford, has been sold.

J. Riley, blacksmith, L'Amaroux, Que., is advertising business for sale.

Fred. Langeberg, furniture, etc., Hamilton, is advertising business for sale.

W. J. Frame, general merchant, Collingwood, is advertising his business for sale.

The property of the Ontario Terra Cotta & Brick Co. has been sold under mortgage.

The stock of Higgins & Co., general merchants, Buckingham, Que., is advertised for sale by tender.

The stock of Dubrule & Co., general merchants, Richmond, Que., has been sold at 57¼c. on the dollar.

The stock of Joseph Lemond & Co., general merchants, Sherbrooke, Que., has been sold at 54½c. on the dollar to E. R. Webster.

CHANGES.

Palmer Bros., coal, Vancouver, have sold out.

Wm. Howse, foundry, Sussex, N.B., has been succeeded by Richard Howse.

W. Y. Emery, general store, mills, etc., Port Burwell, is closing up general store.

Colquhoune & Munro, general merchants Carievale, Man., have removed to Stockton.

Thomas Dunn & Co., hardware, New Westminster, B.C., has sold out to A. Godfrey.

J. G. Wing & Go., general merchants, New Dundee, Ont., have sold out to E. H. Sluedel & Co.

J. A. Mara, general merchant, Kamloops, B.C., has sold out. So has H. M. Martin, a Kaslo, grocer.

FIRES.

Alex. Gordon, sash and door factory, Dutton, has been burned out.

RAZORS, SCISSORS

POCKET KNIVES



TABLE KNIVES

BUTCHER'S KNIVES

Patrick Devine, hardware, Renfrew, has been burned out; partially insured.

The planing mill of W. B. Derbyshire, Westport, Ont., has been destroyed by fire.

DEATHS.

R. Simpson, hotel, Neepawa, Man., is dead.

DIVE INTO IT.

The German strong man Sandow, has given some marvellous performances during the summer. He would take two chains, whose mates have sustained a weight of seven or eight thousand pounds, and fasten them snugly around his great nineteen-inch biceps. The arm is doubled, the big muscle swells, and the chains that two strong horses cannot break, snap as if they were cotton threads. In his exhibition before Dr. Sargent, of Harvard, Sandow placed his hand under the foot of a man who weighed two hundred and fifteen pounds, and, with his arm held straight, placed that burden on a table as easily as an ordinary man would lift an orange. He declares that the only secret of his strength is training; that such muscular power as he possesses is posstble to any man who is willing to work intelligently, and keep at it long enough. Whether this is absolutely true or not, it is certain than many go through life pitiably weak compared with what they might be, and Sandow's words are full of suggestion for more than the physical side of life.

No matter how irksome the task; bring all your powers to bear upon it; dive into the very heart of it; probe it to the quick; anatomize it; exhaust it. If confronted by a difficulty, no matter how serious, do not flinch from it, or turn aside; but face it boldly and resolutely; survey it coolly on all sides: then close and grapple with it, till by your prowess you have crushed it to powder. Do you want to grow strong? Then you must measure yourself, not with pygmies, but with giants, and wrestle with all your might. A throw upon your back will do you good. Your pulse should beat high, as if you were in battle, and the sound of the trumpet in your ear.—Ex.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF

First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.



We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

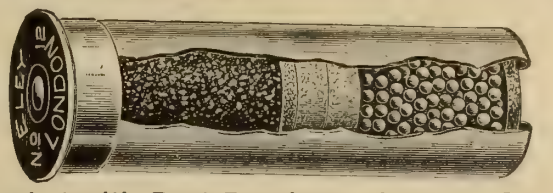
WESTERN BRANCH :

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

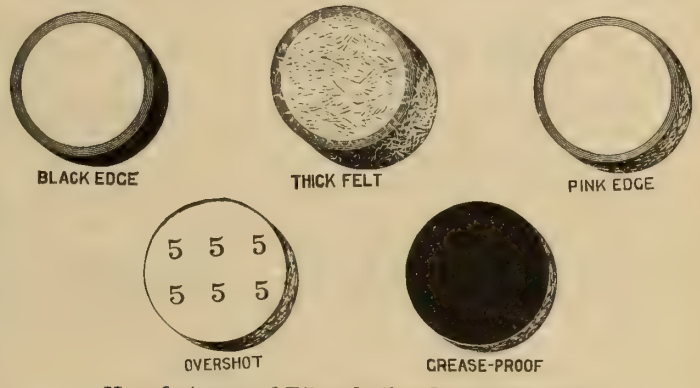
. . ELEY'S . .

CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. **Wholesale Only**

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

To the Stove Trade

We carry stock and can . . . . . ship promptly.

We have the following patterns for Repairs, PLATES. UNIVERSAL STOVES AND RANGES, lately made by J. M. Williams & Co., Hamilton ; SPLENDID BASE BURNER, lately made by the Toronto Stove Co., Toronto ; BRILLIANT RANGE and COOK, FORRESTER, CANDY FURNACE, QUEEN RANGE, lately made by Harte & McKillop, Belleville. . . . . .

The Wm. Clendinneng Son Co., Limited,

145 to 171 William Street, MONTREAL, QUE.

Cutlery

SPECIAL VALUE IN

Dickinson's "Damascus Blade" Carvers.
Dickinson's Improved Ivoride Tables, warranted not to shrink or discolor.
Joseph Rodgers & Co.'s best quality Pen, Pocket, and Butcher Knives.

. . . SAMPLES now ready for Fall Trade.

STEEL. Full stock of Jessop's warranted Tool Steel, at lowest prices. . .

A. C. Leslie & Co., Agents

MONTREAL and TORONTO.

You can lose more than we do by not subscribing for this paper.

MUNN'S LIQUID GLUE

IS THE BEST.

THE ART METROPOLE, Agents.

131 Yonge Street, TORONTO.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS.

METALS.

Tin.

Lamb and Flag—		
56 and 28 lb ingots, per lb	23½	24
trip "	25,	25½

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
M.L.S. equal to Bradley		
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 00	4 25
I.X., "	5 00	5 25
I.X.X., "	6 00	6 25
I.XXX., "	7 00	7 25
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

	Per lb.
C okley Grade—	
.X.X., 14x56, 50 sheet bxs }	
" 14x60, " }	6½c, 7c
14x65, }	

Tinned Plates

72x30 up to 24 gauge	6½	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¼ " nd thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2½, 2¾
26 "	2¾, 2¾
28 "	2¾, 3

Canada Plates.

Blaina	½ bright	2 75
Abercarne		2 75
Lion		

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head		
16 to 24 gauge, per lb	5,	5½
26 gauge, "	5½,	5½
28 " "	5½,	5¾
Gordon Crown—		
16 to 24 gauge, per lb	5,	5½
26 gauge, "	5½,	5½
28 " "	5½,	5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4¾ 5
" 5-16 " "	4¼ 4¾
" ⅜ " "	4¼ 4½
" 7-16 " "	4 4¼
" ½ " "	3¾ 4
" ⅝ " "	3½ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 12½	0 13
Lake Superior	0 13	0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in	$0 22	$0 25
" round & square 1 to 2 in	0 20	0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16	0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17	0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26	0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 19½	0 21
" 35 to 45 " "	0 17½	0 18
" 50 lb and above per lb	0 16½	0 17

Boiler & T. K. Pitts.

Plain Tinned per lb		0 21
Spun " "		0 25

Wire.

Pure, in coils—		
From 1 to 20 gauge	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20	0 21
" " 27 to 30 "	0 23	0 25
" " 30 and up	0 26	0 28
Sheets, hard-rolled 2x4 ft	0 21	0 23

Zinc Spelte .

Foreign, per lb	0 04½	0 05
Domestic "	0 04⅝	0 04¾

Zinc Sheet.

5 cwt casks	0 05½	0 05¾
Part casks	0 05¾	0 06

Lead.

Imported Pig, per lb	0 03½	0 03½
Domestic "		0 03½
Bar, 1 pound		0 04½
Sheets, 2½ lbs, sq. ft, by roll	0 04½	0 04¾
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¼	0 04½

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)	0 15½	0 16½
Standard	0 14½	0 15½
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12	0 13
Other makes "	0 11	0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do "	4 75
No. 2 Do "	4 50
No. 3 Do "	4 25

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35	1 40
" " (J.F.L.S.) " "		2 75
" " Royal " "	1 10	1 15
Venetian Red, (best) " "	1 60	1 90
English Oxides per cwt	3 00	3 25
American " } " "	1 25	1 90
Canadian " }		

Paris Green, per lb	0 13½	0 15
Burnt Sienna, per lb		0 08½
Burnt Umber "		0 05
do pure		0 08
Drop Black "		0 09
Chrome Yellows "		0 12
" " Lemon pure, 8 lb. tins, per lb		0 19
Chrome Greens "		0 12
Golden Ochre		0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal		0 69
Extra "		0 90
Brown Japan "		0 55
Brown Japan, Turpentine p. gal.		0 71
No. 1 Carriage "		1 30
Gold Size Japan "		1 00
Pure Orange Shellac "	1 95	2 05
Hard Oil Finish		1 30
Oil Shellac		1 40
White Shellac		2 25

Linseed Oil (in bbls)

Raw, per gal	0 60	0 62
Boiled "	0 63	0 65

Turpentine (in bbls)

Selected Packages, per gal	0 44 0 46

Castor Oil.

Best, per lb	0 07⅞ 0 08

Cod Oil.

Cod Oil, per gal	0 50 0 51

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet	0 13	0 15
White, extra	0 16	0 18
Gelatine	0 20	0 30
Strip	0 16	0 17
Coopers	0 17	0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list
Munn's, dis. 25 to 30 per cent. off list

HARDWARE

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Heuis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10 p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.

st break	$3 65
2nd "	3 90
3rd "	4 60
4th "	4 95
5th "	5 40
6th "	5 90
7th "	0 50

Picture Glass.

Pilkington's ordinary.

1st break	4 0
2nd "	4 70
3rd "	5 40
4th "	5 90
5th "	6 50
6th "	6 90
7th "	7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb . 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

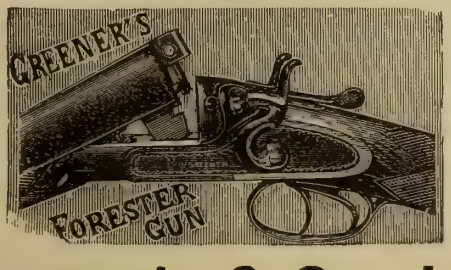
Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

NEW ARRIVALS

30 Cases CUTLERY AND GUNS

ALL NEW GOODS.

Finest Finish. Best Value.



NEW ARRIVALS

20 Casks Cattle and Trace CHAINS

10 Tons Coil Chain.

Five Cars Window Glass.

Bowman, Kennedy & Co., London, Ont.

Wrought Hooks and Staples, Amer- dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Finsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   - Basis—50 to 60 dy..... 2 30
   - 40dy..... 2 35
   - 30 dy..... 2 40
   - 20, 16 & 12 dy..... 2 45
   - 10 dy..... 2 50
   - 8 & 9 dy..... 2 55
   - 6 & 7 dy..... 2 70
2. American Pattern Only
   - from 4 to 5 dy 2 90
   - 3 dy. (lath)..... 3 30
3. Canada Pattern Only
   - from 4 to 5 dy 2 80
   - 3 dy. (lath)..... 3 20
   - 3 dy. A.P. Fine 3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 60 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 25 per ct.

Pails.

alvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L.Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9½ 9¾	10¾ 11
¼, 5-16, ⅜ in.....	10 10½	11½ 11½
Cotton, per lb.....	18	20
New Zealand.....	9	9½
Russia Deep Sea, per lb..	12¾	13
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B.& A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 to 40 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen..... 1 25

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz.	$2 75	$5 50
English Pat. Leather	5 50	9 75
Chesterman's, each	0 90	2 85
" steel, each .	0 80	8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz ..... 1 [illegible] 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p c

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9 00

Twines.

Bag, per lb	0 12½ 0 20
Wrapp'g, mottl'd, pr. pack.	0 50 0 60
" cotton, per lb ..	0 18 0 20
Mattress, per lb	0 33 0 45
Staging "	0 27 0 35
Broom "	0 30 0 5[illegible]
Binding, flax, per lb	....
" jute "	....
" Blue ribbon	..... 0 12½
" Red cap.....	..... 0 11½
" Crown.....	..... 0 10½
" Silver Composite	0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz.....	4 00 6 00
Bench, parallel, each	2 00 4 50½
Coach, each.....	6 00 7 00
Peter Wright's, per lb	0 12 0 13
Pipe, each	5 50 9 00
Saw, per doz.....	6 50 13 00

Washer Cutters.

Per doz 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8,10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6½c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart " 4 " 4 & 6 " " " Plain twist, 2&3 wires	4½ 4¾
" Steel thorn and ribbon.....	4¾ 5
"Lock Barb," 4 point	.... 0 04½
Ditto Glidden 2 point	.... 0 04½
Galvanized Barb, "Lyman," 2 to 4 points.....	..... 0 04½
Steel staples	0 04½ 0 04½

Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
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MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

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Scotch . . English or American

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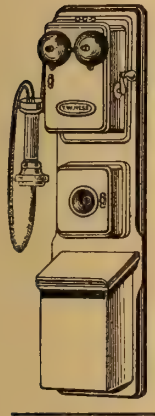
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749 Craig St., Montreal.
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THE HATHEWAY PATENT FENCE WIRE.

Pat. Nov. 19, 1889.



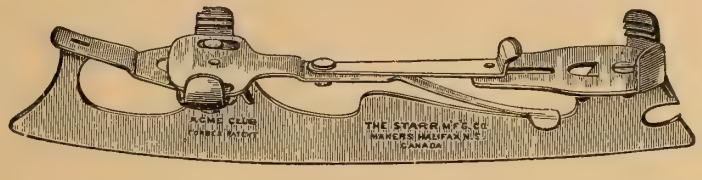
Above Cut Is One-half Actual Size.

The Hatheway Patent Fence Wire, the most popular fence wire throughout the United States, and fast gaining that position in the Dominion of Canada, as it contains all the requisite qualities of a fence wire, being handsome, strong, visible—seen at a long distance; will not sag or get out of shape; allowance for contraction and expansion, heat and cold; being broad, requires less strands to make a complete fence; easily put up, splices itself; will not injure stock. Put up in spools of 120 lbs. each. For sale by all the leading hardware stores in the Dominion.

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The Genuine Acme



THE LEADING HIGH CLASS SKATE

All genuine "Acmes" have our registered trade mark "ACME," and the Company's name and address in full, stamped on each runner. Beware of imitations.

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Halifax, Nova Scotia.

: : For Sale by all the Leading Jobbers : :



OXFORD "OXFORD" OXFORD

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Warm Air Furnaces, Stoves, Hot Water Boilers, Ranges, Radiators, Etc., Etc., Etc.

Our Leaders for 1893--are the

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BASE BURNER

Examine our MANY NEW LINES at OUR OWN BUILDING at the INDUSTRIAL EXHIBITION. . . . . .

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Our Show Rooms are at 500 King St. W.

Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St, Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 x 4 Barb
Plain Twist and
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And Staples for same.

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ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

London Exhibition

WE have secured the warehouse No. 372 Richmond St., London, and during the Exhibition will have the finest display of goods we have ever made.

Visitors and Buyers . .

WELCOME.

Call and See Us.

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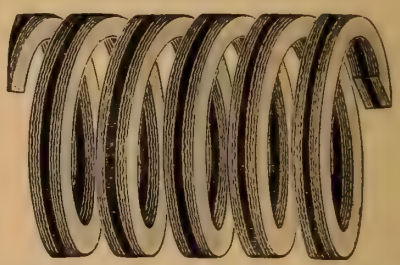
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SPIRAL PACKING

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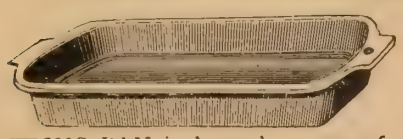
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THE GUTTA PERCHA AND RUBBER M'F'G CO.

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"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to litt the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, SEPTEMBER 23, 1893. No. 38.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

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In Sorting up for Fall

You should have in Stock . . . .

Good Goods Most Satisfactory to Handle

MANDER BROS. VARNISHES

In Pint, Quart, ½ Gallon and 1 Gallon tins. Always reliable and a profitable line to handle.

BLUNDELL'S ART ENAMEL

Brilliant, Beautiful, improves everything in the household. Send a postal for handsome sample card free.

GREEN SEAL GOLD PAINT

Ready mixed for use.

ESTELLE'S UNIVERSAL GOLD PAINT

Bronze and liquid separate.

GREEN SEAL BRONZE POWDERS

Superior brilliancy in all colors.

WHOLESALE ONLY BY

The house for Fine Paints, Varnishes and Specialties.

Walter H. Cottingham & Co.

MONTREAL

Sporting Powder

Curtis's & Harvey's

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4 6 DIAMOND GRAIN

Pat. Brown. Basket.
Tower Proof Rifle.



CLYDE MILLS CO.'S . .

SMOKELESS

In ½ lb. 1 lb. 12½ lb. 25 lb.

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Sole Wholesale Agents . . . King St., TORONTO

Steel-Clad Baths

Manufactured and Patented in

CANADA,

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Also Patented in Australia.

AGENCIES AND WAREHOUSES AT

MONTREAL, Que. ST. JOHN, N.B.
VICTORIA, B.C. NEW YORK, N.Y.

HEAD OFFICE FOR CANADA:

Toronto Steel-Clad Bath and Metal Co.

LIMITED

123 Queen St. East, TORONTO.

"Perfection" Inside Seam

ELBOWS.



STRONGEST, HANDSOMEST, BEST.

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DIFFERENT KINDS

Standard Patent Stove Pipe,
Stove Boards, Coal Hods.

ORDER ALL FALL LINES EARLY.

Kemp Manufacturing Co.

TORONTO, ONT.

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, SEPTEMBER 23, 1893 No. 38

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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The iron ore combination, announced by the despatches to have been formed in the United States, seems to be a formidable affair, notwithstanding that no one outside those immediately interested appear to have had any premonition of its birth. Since its formation, however, there has been no attempt to hide its purpose. A Mr. Merritt, one of the promoters, made no bones of telling a reporter that the combine was formed to fix the price of ore, and that at such a figure that would net the producers a profit of $2.95 per ton. The price is to be $4.50 per ton, and this, Mr. Merritt has no hesitation in saying, will prevent the deep, hard ore mines from competing with the Lake Superior Consolidated Mines Company, which is the name of the new combination. The profit, it is claimed, will be the result of a "saving in management, freight rates, etc." Be this as it may, the fixed price of $4.50 is an advance of fifty cents a ton on the grade largely produced by the mines in the consolidation.

* * *

The formation of the combination on iron ore has again revived the agitation for a removal of the duty on ore. But the prospect of this being accomplished does not disturb the Lake Superior Consolidated Mines Company, if what Mr. Merritt says are its sentiments. "There is not another company in the world, even those of Europe with the tariff of 75 cents a ton removed, that can compete with this company on the new agreement." It must be remembered that the celebrated Mesaba range mines, where the ore is scooped up by a steam shovel at the rate of twelve carloads an hour, is a member of the combine, and therefore he has good reason for being independent of the tariff. Then, too, the American mines in Cuba are members of the new company, and therefore, to be able to bring the product of these mines in free would probably be pleasing to it than otherwise. But while the Consolidated Company can produce ore at such a low cost—$1.55 per ton—and therefore have no fear of outside competition, there are other mines, notably those in Ohio, Illinois, and Western Pennsylvania, which would, the N. Y. Journal of Commerce thinks, be injuriously affected. "It could hardly fail to stimulate," says that paper, "the dying iron interests of New England, and it would undoubtedly be of great benefit to such establishments as that of the Maryland Steel Company, which were placed on the coast in order to use imported ore. The removal of the ore duty would take about $1.35 a ton off the cost of pig iron, and as the pig iron men have for more than a year been complaining bitterly of the low prices at which they were compelled to sell, a reduction of $1.35 in the cost of a ton of pig iron ought to have a heavy influence on the blast furnaces. The statement of Mr. Merritt certainly proves that the owners of Michigan mines can well afford to let the Atlantic Coast have free ore, and as Pennsylvania produces coal rather than ore, her interest is to have as much ore, whether domestic or foreign, smelted as possible. The steam shovel which loads twelve cars with ore an hour renders any comparison between American and foreign wages superfluous."

* * *

No sooner was it noised abroad that the Mesaba range iron mines had formed a combination than the Minnesota Iron Company set energetically to work to form a counter consolidation. There has been some talk for months of organizing such a concern, but the birth of the Lake Superior consolidation accelerated the movement of the projectors, and the Minnesota people now boast that another combination as strong as the former will be formed. The Minnesota is capitalized at $16,500,000, while there will be from $25,000,000 to $30,000,000 of consolidated stock. The Minnesota owns the Duluth and Iron Range Railway, while the Consolidated owns the Duluth, Mesaba and Northern. The Minnesota owns a magnificent fleet of eight great steel ships of 25,000 tons capacity. The Consolidated controls the American Steel Barge fleet of 70,000 tons capacity. A tussle between these rival factions will be a veritable battle of giants and the conflict will be watched with interest.

* * *

There seems to be no limit to the uses to which aluminum can be applied. We have aluminum knives, forks, spoons, cups, boats, steamers, nicknacks, and even buildings. Now it is being extended to the dental art. The metal, it is said, makes an excellent medium for filling the teeth, and does not darken as do some other materials used for this purpose. Even whole sets of teeth have, it is averred, been experimentally made of aluminum. For filling aluminum may be all right, but the color kills it as a material out of which false teeth can be made. Imagine talking to some one with a set of silvery looking molars! And then discuss with yourself the possibility of such

teeth taking the place of the ordinary ivories.

* * *

For a merchant who is doing fairly well to move from one store to another is often a dangerous experiment. Two instances which illustrate this have recently come under our observation. One merchant who was doing fairly well and whose business was gradually increasing, conceived the idea that it would be a good thing to move to another locality some distance from where he was then situated. "You know," he reasoned, "I think I can retain most of my present customers. In fact I have spoken to some about it, and they say they'll continue to deal with me. And then I'll surely be able to get a few new ones where I am going. Then the expenses won't be very much greater." He moved, and in a short time had to put up his shutters. He was unable to hold the trade he had or to get enough new to keep the pot boiling, and so out of business he had to go. The other instance referred to was of a merchant that moved only about half a dozen doors. In the old place he was paying a moderate rent; in the new a high rent. In the old store the stock was not large, but it was well assorted, but in the new a large stock was needed, besides modern conveniences to be in keeping with the general surroundings. His capital in the old place was none too large; in the new it was not large enough. And now he has assigned. To set a hard and fast rule as to when a merchant would be justified in moving from one store to another, or as to under what conditions he should do so would be unreasonable. But one thing seems demanded. That is that there should be at least a moderate capital, for in addition to the many incidental expenses incurred, there are a thousand and one contingencies that may arise which may prove a hard strain upon the resources. It is seldom that the number of chickens hatched come up to expectations; and it is possible that all the merchant's anticipations will be realized after he has moved. In fact we know that frequently they are not. The two examples given prove it. We are told that it is good to think twice before speaking once, but it is wise for a a storekeeper to think several dozen times before he moves from one store to another.

THE IRON MARKETS.

The iron market in its general features shows no change, and some sales at low prices of Scotch pig iron are to note. The difference with the colliers, however, it is argued by many sales' agents in Montreal, may have a material influence on the iron market, as stocks in England are not heavy. They remark, also, that the stocks of Scotch pig iron at present on spot and the quantity afloat to Montreal, and ordered for importation, is very much smaller than last years, but their predictions don't seem to have much effect on buyers, who act as independently as ever, the pig iron market in Montreal being much quieter than is usually the case at this time of the year.

In view of all this it may be interesting to give some recent figures of stocks in store in Great Britain and the shipments therefrom. On the 8th of September, 1893, the stock in Connol's Glasgow stores was 334,427 tons against 390,950 tons for the same week in 1892; in Connol's Middlesboro' stores the quantity was 89,828 tons against 14,304 tons in 1892, and in the Cumberland stores the stock was 75,862 tons, against 38,064 tons in 1892. This is a total of 500,117 tons this year against 445,318 tons for the same period last year, the excess being due to the stock in the Cleveland and Cumberland stores, as that at Glasgow is smaller than for the same period in 1889 The movement on the other hand from the three points mentioned is heavier this year than last, but more especially from Middlesboro', where the shipments from the 1st January to the 2nd September, 1893, were 635,267 tons, against 409,392 tons in 1892. The total shipments from Glasgow, Cumberland and Middlesboro' this year are 1,033,073 tons against 879,217 tons in 1892, an increase of 154,856 tons, which shows that the market has been better on the other side at anyrate wherever the iron is going.

In connection with the above it may be interesting to give something from the American Iron Trade Review with regard to the American market, which is as follows: "The activity of the steel mills in the Pittsburg district, which is greater this week than at any time since the general shutdown, is the only feature of improvement in the iron situation. These resumptions are altogether apart from scale considerations; in the general wage situation there has been no move on either side, and no prediction can be made on that subject. The fact seems to be that, in spite of the general depression, there has been an accumulation of orders in certain lines, and resumption was necessary in order to clean up order books, but there is no promise of long-continued operations. As to the general outlook, one hears varying reports, according to the experience of the reporting firm. Surprising as the production in pig iron was in July, there will be a further heavy cut in August. It the Pittsburg district, in spite of a reduction of 14,000 tons a week in active furnace capacity, stocks showed an accumulation. The stoppage of puddling furnaces has shut off nearly all sales of mill iron, and foundries are not making half their regular output. Such as have special contracts are running; with others operations are spasmodic, but the general run of new business is very light and prices are made by buyers, who continue to quote offers that sellers are scarcely able to credit."

A PROPOSED CONSOLIDATION.

A circular, according to N. Y. Journal of Commerce, has been sent to stockholders of the Thomson Electric Welding Company, and the American Projectile Company, looking to consolidating them under a single management. The Thomson Electric Welding Company has an authorized capital stock of $1,000,000. That of the American Projectile Company is $500,000. It is proposed to organize a new company with a capital stock of $1,000,000. As a general thing the stockholders have an interest in both, and it is believed that by uniting them all concerned will be greatly benefitted. It will cause a reduction of expenses, and in many ways the new company will start off with advantages which heretofore have not been possessed by either of the old ones. It is proposed to have one-half the stock preferred and one-half common. On account of the reduction of capital, stockholders will not receive share for share in the new company. The ratio exchange has been determined after a careful analysis of the assets of both companies by a committee of their stockholders having substantial holdings. The preferred stock will be entitled to dividends not exceeding seven per cent. from the earnings of the new company, and any surplus beyond this will be applied to the common stock.

AMERICAN GAS CONSUMPTION.

An investigation made by the American Gas Light Journal shows that the total output of 54 gas companies in this country during the first half of '93 amounted to 1,080 millions cubic feet, and the output at the same points in the corresponding half of 92 is returned at 996 million cubic feet, a gross gain of 84 millions cubic feet, or a percentage gain of 9.22. It seems that a large part of the showing is traceable to the increased use of gas for purposes other than lightning. In 21 of the places reporting, a special rate on gas used for purposes other than lighting. In 12 of the places reporting, a special rate on gas used for purposes other than lighting is allowed; and 17 of the plants report the operation of electric lighting annexes. In 12 of the localities a concession in the general gas rate was granted; the average of the 12 concessions amounted to, roundly, 15 cents per 1000. It is to be undrestood that in these results no account is taken of gas used or sent out for public streets lightning uses.

A SATISFACTORY TEST.

P. J. McNally, manager of the Toronto Lead and Color Co., recently submitted samples of linseed oil from J. & J. Livingston's factory, Baden, Ont., to E. B. Shuttleworth, Dominion analyist. Three samples were submitted, one being raw from another dealer, and the other two, raw and boiled respectively, from the Toronto Lead & Color Co.'s own stock. Monday Mr. McNally received this reply :

"I have made a careful examination of the samples of linseed oil—Nos. 1, 2 and 3 —submitted, and find them to be free from adulteration. Special search was made, by a variety of tests, for mineral oils, cotton seed oil, rosin oil and fish and animal oils, but none of them were found to be present in Nos. 1 and 3, nor were mineral oils or rosin oil found in No. 2. The dryers used in making boiled oil interfere with the ordinary color tests for raw oil, but that by saponification was tried on No. 2, with results which proved the absence of mineral or rosin oils, but from the elaidin test, and the readiness with which the sample tried without being tacky, I do not believe it to contain cotton seed or fish oil. The specific gravities of the oils were :—No. 1, 932 ; No. 3, 931 ; No. 2, 943. I think No. 3 a slightly better sample than No. 1, as being less contaminated with the oils of foreign seeds frequently associated with flax seed.

TIN IN EUROPE.

Throughout the past month, says an English circular, there was a gradual shrinkage in values. Fine foreign sold from £82 down to £76 12s. 6d. cash and £81 5s. to £77 5s. three months. During the last fortnight three months' delivery commanded a premium of 10s. to 5s. per ton. Since the commencement of present month there has been some active buying for forward delivery by a clique interested in supporting vulues, and as sellers in the East kept back, prices quickly rose to £79 15s. cash, £80 5s. three months.

The London deliveries were very large—2,065 tons. There was a steady demand from South Wales in spite of the coal strike, and about 500 tons were sent into Cornwall, where it could be profitably used in the manufacture of English at present margin of values ; also considerable quantities were shipped to the continent. Shipments from the Straits were again very heavy—4,300 tons, making a total of 26,240 for the eight months, or an increase of 19 per cent. over last year.

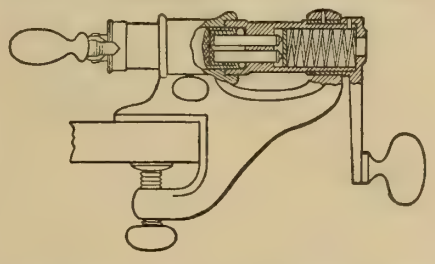
Visible supply for Europe shows an increase of over 1,000 tons for the month.

Owing to the large quantities being shipped to ports where no record is kept of stocks and deliveries, present statistics are misleading. The direct shipments from the Straits to the Continent during the first eight months of this year amount to 6,135 tons, as against 3,688 tons same time last year, or an increase of 65 per cent. It is not to be supposed that this excess can all have gone into consumption, and it may, therefore, appear in the figures at some future date to the disarrangement of the London market. Stocks in America are reduced by the amount of deliveries, which are variously estimated by authorities there at 1,100 to 1,800 tons. Considering the dead-lock in business during August, the former estimate is probably the most correct. For English there was a good demand, and high prices, as compared to the foreign, were easily obtained.

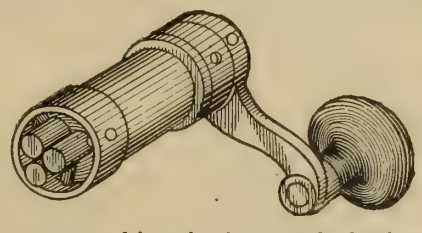
On the 30th ult. about 13,000 peculs billiton offered for sale, at Batavia, realized average of fl. 48¼ laid down in Holland.

AN IMPROVED SHELL CRIMPER.

The accompanying cuts give illustrations of "The Nichol" anti-fricton straight feed cartridge shell crimper, which is being put



on the market by H. S. Howland, Sons & Co., Toronto. This is the only tool that will positively crimp every shell alike, no matter what the variation of the load may be, thus preventing load becoming loose in trans-



portation, and insuring best results in shooting. The action being entirely automatic it can be handled with greater rapidity than with the ordinary tool, and is invaluable to users of the 'Schultze' smokeless powder.

MRS. EDDY LAID AT REST.

The funeral of the late Mrs. Eddy, wife of Mr. E. B. Eddy, the well-known manufacturer of Hull, took place from the family residence on Tuesday of last week, and was largely attended, the cities of Ottawa and Hull turning out to do respect to her who was beloved by all for her unassuming manner and benevolence. Although surrounded by wealth she was not proud, but a constant friend to those who were poor or afflicted. Thousands of old, young and middle-aged, who had known or received a kindly word or assistance from the deceased lady, called at the residence to see her face for the last time, and their tears told the story.

Flags on all the principal and public buildings were at half-mast. Factories were closed down from 12 to 4 p.m. throughout the city, and the Eddy Co.'s factories and branches were closed from Saturday to Thursday morning.

Thousands lined the streets as the funeral procession wound its way to the Canada Atlantic station, where a special train was in waiting to convey the remains and mourners to Bristol, Vermont, where the interment took place on Wednesday.

The casket containing the remains was bronze oxydized silver. This was placed in a strong oak, brass bound shell; although the family requested that no flowers be sent, the coffin was covered with wreaths. crosses, etc., which were placed in the funeral car. Special locomotives were in waiting to convey the train, so that no delay might occur. A great number of friends accompanied the mourners part of the way, Mr. Rowley, Mr. Millen, Mr. Gormully, Q.C., and the clergy going through with Mr. Eddy. The Eddy burial plot at Bristol is a beautiful one, and on Tuesday presented a sight not soon to be forgotten. The city of Hull feels that a dear friend has gone whose place will be hard to fill. Telegrams and letters of sympathy with the bereaved family were received all along from Newfoundland to British Columbia, also the United States.

Mr. E. B. Eddy, of Hull, complying with a special particular request of his late loved wife to do so, has publicly expressed his grateful acknowledgment and full appreciation of the many kindnesses, courtesies and evidences of regard and esteem shown to her for 40 years past, more particularly for the kind enquiries during recent days of trial and suffering. Mr. Eddy ventures to hope that all friends will accept an expression of his own thanks coupled with the foregoing for the many truly kind evidences of sympathy and condolence that have been showered upon him from all quarters in this time of his great sorrow and affliction.

Application has been made for the incorporation of the Hamilton Iron and Steel Company (limited), and its objects are to carry on the business of mining, smelting, etc. The operations of the company are to be carried on in Hamilton and the township of Barton, and elsewhere within the Province of Ontario, Hamilton to be the chief place of business of the company. The amount of the capital stock of the company is to be $1,000,000, in 10,000 shares of $100 each. The applicants are : Joseph Jennings Morehouse, New York City, manufacturer ; James Morehouse, New York City, manufacturer ; William VanVoghten Reynolds, Reynoldsville, Schuyler County, N.Y., railroad president ; William Foster, jun., New York City, manufacturer ; Edward Harris Thompson, Millerton, Duchess County, N.Y., banker ; Herbert Nelson Curtis, New York City, manufacturer ; John Henry Tilden, Hamilton, ironfounder ; John Milne, Hamilton, ironfounder, and Robert Jaffray, Toronto, banker. These are to be the first directors of the company.

A REVOLUTION IN OVEN HEATING.

Great results are often obtained from the invention of simple contrivances. Illustrations of this are seen almost every day. One instance in point is exhibited in a range that has this season been placed on the market by the Gurney Foundry Co. of Toronto.

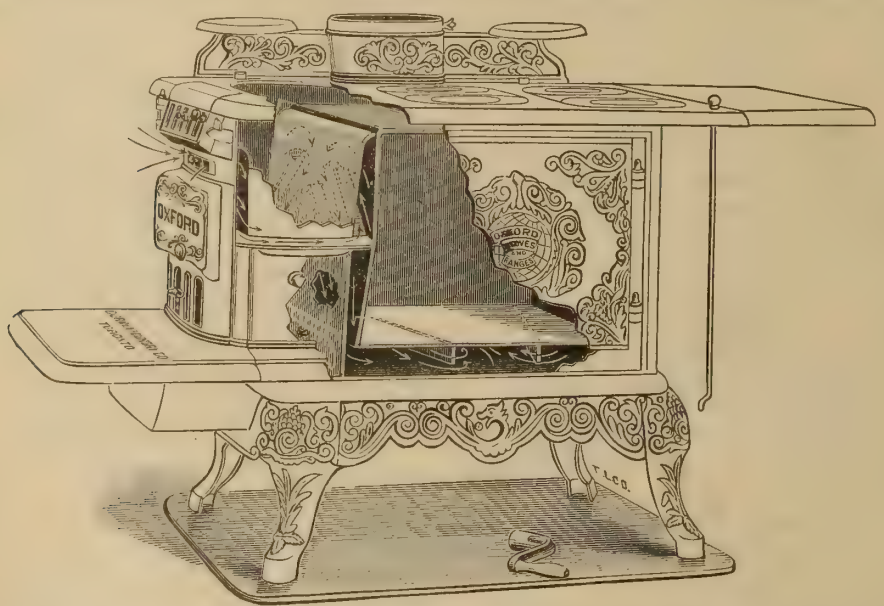
Some time ago one of the foremen employed by the firm asked permission to take to his home a range which did not work exactly satisfactorily. He said it was in order to make an experiment with it. The permission was granted. Shortly afterwards he brought the stove back, remarking in effect to the manager:

"I suppose you wouldn't believe me if I told you that I could put that stove out in the open air and bake potatoes in it?"

"Indeed I wouldn't," replied the manager with a somewhat sarcastic laugh. "Why, it can't be done; or at least I don't think so."

"Well, it can," emphatically remarked the foreman, "and I'll prove it to you."

The range was placed in the yard, two or three lengths of pipe put on it, fire was started and the potatoes were put in the oven. To the astonishment of everybody who saw the test, except of course the foreman, the potatoes were cooked in a short time. The invention was patented, and the Gurney Foundry Co. is attaching it to the Duchess of Oxford range, which they are now placing on the market.



The accompanying cut shows the principle of the invention, which is named the Patent Duplex Flue, and is a complete air chamber around the entire firebox. You will note that over the front door there is a register damper which can be opened and shut. Through this damper the cold air passes. By following the pointed arrows you will note that it comes against the heated fire linings, as the current of air has to pass around each end and behind the firebricks upward over two diaphragms, and then downward. By this circulation the air becomes super-heated. Part of it is drawn into the oven through perforations at the bottom of the front oven plate, the balance of the air goes down below the oven front to the bottom flue, where it strikes the protruding diaphragm from the back of the stove. The air flows to the front part of the bottom, thus giving a more uniform heat to the oven than found in any other range. At this point the super-heated air comes in contact with the products of combustion as thrown around the regular range, and ignites any gases that have not been consumed, and is of great assistance to a range connected to a sluggish draft. The super-heated air in the oven passes through the oven and out at the top of the back oven-plate into the flue, making a most complete ventilation and a uniform baker, so that gravy, meats, or anything cannot be dried up or burnt, and the smoke or fumes are carried off into the flue and not allowed into the kitchen. The invention not only gives a uniform heat to the oven, something which was never before accomplished, but enables a saving to be made in the quantity of fuel consumed. It is undoubtedly the most important invention of the kind ever made, revolutionizing as it does all previous systems.

NOVELTIES IN ADVERTISING.

Many manufacturers successfully endeavor to continue the demand for their goods by calling attention to them through the use of souvenirs, so-called, or of little articles of daily use and on which their names are printed or stamped. When these articles are of a useful or ornamental character, they serve their purpose and return big dividends to the manufacturer, but when they are only something that hardly pays to take out of the mails, as is so often the case, or when they are so constituted or made that their use or purpose is not at once suggested, the sending out is merely a waste of so much money that had much better be used in a more legitimate manner. Trade gew-gaws only serve to fill the waste paper basket. Articles of use, however inexpensive, are constant reminders of the donors and of the goods which they are intended to advertise. —Stoves and Hardware.

MILEAGE AND METAL.

Iron and steel, as factors in railway construction, are so vitally relatrd to the latter that the progress of the one marks that of the other, remarks Age of Steel. In fact, had it not been for the broad sections of the planet the iron and steel rail had to overlap the statistics of production would have been unsparingly minimized. It is evident that within certain parallels of latitude railway enterprise has been pushed almost to its available limits, and that future demands for rails, except in the way of renewals, must largely be beyond our national lines or in completing a net work of short lines to intersect the main arteries of public transport.

From indications given by the executive directories of railway extensions, it would seem to be a settled matter that short line building will be the feature of railway construction during the next two or three years. The advisability of these enterprises, in a commercial sense, has been practically accepted and probably would have been acted on earlier had not various circumstances demanded prudent and conservative action. Everything contributory to this conclusion is in force, the stringency of money notwithstanding. There is a steady increase of population and extensions of area in which manufacturing facilities are constantly deploying. These conditions are not limited to any particular section, but apply with equal pertinency to the South and West as the Eastern States. We are consolidating internally, and the numerous blanks or gaps of unoccupied territory now void of railway service are, in an economic and commercial sense, soliciting the same.

As it is, the decrease in mileage of construction for several years has been abnormal, when the situation is accurately canvassed. This has been due to various reasons, and perhaps more to decline in dividends than to the requirements of the country. These adverse conditions may possibly have the fag end of a time table yet to fill out, and the revival of construction be temporarily postponed. but with the agencies of demand more urgent than ever, it is simply a matter of but a little time at the most when the situation will be changed for the better; this is manifestly inevitable. There may not be much margin for the longer lines, but for for shorter intersecting and connecting lines the outlook admits of no question. It is possible that electric traction is putting its spurs in the steam horse, but with this stimulus allowed, it is evident that railroad authorities recognize the necessity for increased mileage of the character indicated. In this direction the increased demand for equipment, outside of that of existing mileage, cannot fail to be of service and advantage to all manufacturing interests concerned.

PLENUM SYSTEM OF VENTILATION

The following was a paper read at the annual meeting of the Quebec Association of Architects by A. C. Hutchison :

The necessity of efficient ventilation of buildings where large numbers of persons are congregated together will be readily admitted, but in no class of buildings is it so essential as in hospitals, where, though the occupants are few in number and the air space allowed to each person is far in excess of what can be allowed in a hall, school, church, or theatre, which are only occupied for a few hours at a time, there is, on the other hand, a constant occupation of the wards in a hospital and the necessity for a larger supply of fresh air to a person in sickness than one in health.

The requirements of the human body are such that when in a state of health a constant supply of fresh air is needful to maintain it in that condtiion, and that when diseased and weakened by sickness the necessity for an abundant supply of pure air is much increased and in many cases absolutely necessary as a means of restoration to health.

Ventilation may be briefly stated as the process by which the air in closed and inhabited rooms is maintained as nearly as possible at the same standard of purity as the air surrounding the room or building, and only the processes by which this is most successfully accomplished and without causing drafts may be considered efficient.

So much has been said and written on the subject of ventilation that it is needless for me to describe the composition of the air we breathe, and how the proportion of the gases which compose it are changed in the process of breathing and become impure. Of the various impurities which are found in the air of inhabited rooms, carbonic acid is the most common, and when it is present in the air in proportions exceeding ten parts in ten thousand we are informed by sanitarians that the air is unfit to dwell or sleep in ; the object, therefore, of any process of ventilation, is to introduce such a volume of air into inhabited rooms as will keep the percentage of this gas at the minimum. Authorities on sanitation claim that to preserve the lowest standard of purity one thousand cubic feet per hour for persons in health is required, while in the case of sick persons from two to four thousand cubic feet per hour. In countries of milder and more uniform temperature than we experience, the supply of such large quantities of fresh air to inhabited rooms is not so difficult a problem as it is with us, where we have a range from one hundred and ten to one hundred and twenty degrees in temperature between the extreme cold of winter and the heat of summer, when for nearly seven months in the year our buildings have to be artificially heated. Where large volumes of air have to be introduced into our buildings during the winter season, the difficulty is much increased by the means which we take to exclude the cold (and at the same time fresh air) by doubling our doors and windows and carefully closing every crevice by which fresh air might find entrance. Being thus compelled by the rigor of our winter temperature to prevent the flow of fresh air into our rooms by natural channels, it follows that if a large supply is to be introduced it must be in such a manner that it will not cause discomfort to the occupants.

The problem which presents itself when we are called upon to provide efficient ventilation for any building in the winter season is, how can a large supply of air taken from the outside of the building, at a temperature from freezing down to 20 or 25 degrees below zero be introduced into a room that is almost hermetically sealed, in such a manner as not to cause discomfort by drafts, or to lower the temperature of the room below 64 degrees.

It is evident that in solving the problem two conditions must be complied with : First, that the supply of fresh air shall be abundant, and, second, that it is heated to a proper temperature. It therefore follows that ventilation and heating are so intimately connected together that we cannot consider the one without the other. The solution of these conditions has caused many methods to be devised, some simple, some complex, and all capable of being divided into two classes which may be distinguished as natural ventilation and artificial ventilation.

Under the natural ventilation we may class all those methods where no special appliances are used to cause movements in the air, and where such movement depends solely on natural forces such as may be obtained by the difference in temperature between the air in the room to be ventilated and the air outside, or by drafts caused by heated flues, or by the force of the wind applied either by forcing air into or exhausting it from the place to be ventilated.

Under artificial ventilation we may class all the appliances which depend upon mechanical contrivances for furnishing the force required for causing movements in the air, and also the many kinds of furnaces and heaters, where such movement is caused by the rarefaction of air passing over heated surfaces.

I think it will be admitted that while natural methods of ventilation may be tolerated for ordinary dwellings, or for other buildings where there are but a small number of occupants, that for buildings occupied by large numbers of persons, such as schools, halls, churches, theatres, hospitals, etc., where a large supply of fresh air is a necessity, that they are utterly inadequate and not to be depended upon, and that for such buildings some artificial method of ventilation is a necessity.

During our winter season, where there is a difference between the temperature of the air in inhabited rooms and that outside from forty to one hundred degrees, it is evident that any method of natural ventilation will be insufficient where the admission of fresh, cold air direct from the outside into a room has to depend upon the opening of doors and windows, or upon Tobin tubes, or any other means by which it is admitted direct without heating, and I think that it will be granted that where the extraction of vitiated air has to depend upon the draft of flues or upon the force of the wind acting upon the ejectors or cowls, or whatever form they may be, that they are not in all cases to be relied upon.

For any building to which a large amount of fresh air has to be supplied and then extracted after it has served its purpose, it is evident that some method must be adopted that will be independent of the wind or other natural forces, and that combined with that method must be some means of heating the air to such a degree as will not cause discomfort to the occupants. The many different appliances devised for effecting this two-fold object may be divided into three classes.

First. The plenum system, by which air is forced into the room to be ventilated by the means of a fan operated by steam or other power, the air so forced being warmed by coming into contact with steam-heated pipes or other heated surfaces.

Second. The exhaust system, by which the air to be ventilated or exhausted is sucked out by the aid of a fan, and fresh air which has been previously warmed is drawn into the room.

Third. Those in which the air is warmed by passing over heated furnaces and then flowing naturally into the room.

I do not here intend to enter upon a discussion of the merits of the different methods I have mentioned, as the adoption of either will depend upon the character of the building to be ventilated and the use to which it is to be applied. It may, however, be of interest to you to explain as briefly as possible the practical application of one of these methods to buildings which I was commissioned to erect during the

past year, and in which the method adopted has, I believe, been applied for the first time in the city. The buildings to which I refer are the new surgical pavilions of the Montreal hospital. These buildings consist of a group of three distinct buildings, an amphitheatre and two pavilions connected together by corridors. The amphitheatre building is about 84 feet by 43 feet, and two stories above the basement; this building contains on the ground floor a number of waiting, reception and examination rooms, and in the second story a large operating theatre with a number of small rooms in connection therewith. Each pavilion is about 156 feet by 34 feet, and two stories high above the basement, and contains, besides nurses' rooms, kitchens, lavatories, etc., two large wards for twenty-four beds each and four small wards for two beds each, or a total of one hundred and twelve beds in two pavilions. The wards and rooms in these buildings that require special ventilation contain in all about 300,000 cubic feet of air, and the problem that presented itself in arranging a system of ventilation was how to provide a supply of air as pure as could be obtained outside of the building to the wards at the rate of not less than 3,000 cubic feet per hour for each patient, without causing drafts, and at the same time warming the air to such a degree as would maintain the temperature in the building at not less than 65 degrees during the cold weather. After careful consideration of the plenum and exhaust methods of ventilation, the former was adopted as being the best adapted to perform the work required. For forcing the requisite volumes of air into the buildings a pair of fans about six feet in diameter by three feet wide, made by the B. F. Sturtevant Co., of Boston, were installed in the basement of the amphitheatre building and operated by a 28-horsepower, high speed, automatic cut-off engine, the revolutions of the fan being arranged for 210 per minute. From the fans ducts made in brickwork are carried along the basement floor of each pavilion and amphitheatre leading to vertical shafts leading to the several wards and rooms to be ventilated. In each of the large wards there are six of these vertical shafts, while in the smaller wards and rooms there is only one each; the air is in every case discharged from these shafts in the rooms close to the ceilings. As it was considered of importance that the air discharged into the large wards should be dispersed throughout the upper part of the room before it descended toward the beds, the shafts which are built in the external wall were arranged so as not to be opposite each other; by this arrangement a thorough mixing of the air is secured. The air supplied to the fans is taken through two windows, each 7' 0"xs' 0", and to procure the air as free from dust as possible, these windows open into a court between the two pavilions where there is little danger from dust from the streets reaching them. With the fans in operation at a speed of 210 revolutions per minute a large volume of air is forced into every room, a measurement made with an air meter showing the actual quantity to be about 1,182,000 cubic feet per hour. At this rate the air in each room would be changed about four times every hour, while the supply to each patient in the wards would be at the rate of 4,500 and 5,000 cubic feet per hour. Anyone who has had experience in conveying warm air through pipes or ducts will readily understand the difficulty that is often met with in sending an equal volume of air through two pipes or ducts of equal dimensions and similarly placed.

In arranging the ducts and flues it was anticipated that this difficulty could be met, and that some shafts would convey a greater volume of air into the room than others, even though they were of the same size and placed in the same position in relation to the main duct. A test with the air meter proved this to be the case, and it was found that some openings gave double the volume of air supplied by others.

To regulate the flow of air in each shaft and make them as nearly as possible uniform in operation, a regulating valve was placed at the base of each vertical shaft, and arranged so that the engineer could control the flow.

The fresh air, as before described, is supplied to each room near the ceiling, from whence it descends towards the floor, and is thence carried away through gratings placed in the skirtings into ducts below the floors to the extracting shafts, which are three in number, one in each pavilion, and one in the amphitheatre. These shafts have each an area of one square foot to about each 5,000 cubic feet of the building with which they are connected, and are carried up in brickwork to about ten feet above the roofs. Each shaft contains a coil of steam pipes which may be used for rarefying the air and causing a draft at any time when the fans may not be in operation.

Wishing to avoid the placing of heating coils or radiators in the wards it became necessary to heat the air supplied to the fans to such a degree before it entered the wards as would keep them comfortable in the coldest weather.

To effect this object, indirect steam radiators are employed, and the air is heated before it passes through the fans by a hot-blast apparatus made by the B. F. Sturtevant Co. This apparatus consists of 7,000 feet of one-inch pipe arranged in a great number of sections, each section composed of two upright pipes fixed in a cast-iron base and connected together at the top by a cross-pipe. The length of pipe in the sections varies, but in the longest it is not over twenty-three feet, so that, however rapid the condensation of steam in a section when the air is rapidly passing over it, at a temperature of twenty degrees below zero, there is no danger of freezing. These heating pipes are placed directly in front of the fans, and opposite the windows by which air is admitted into the building, so that no air can find its way into the ducts until it has come in contact with the steam pipes and been heated. The manufacturers of the apparatus considered that 7,000 feet of pipe arranged in this manner would be sufficient to heat all the air supplied to the wards and rooms, but as I was afraid that in seasons when the temperature remains at 10 to 20 degrees below zero for three or four days at a time, it would not be equal to the work, I arranged a reinforcing or supplementary heating shaft, and in these chambers placed cast-iron radiators, over which the air could be forced to flow when it was found necessary to heat it to a greater degree than was possible with the fan alone. The radiators placed in these chambers were equal, in the whole of the buildings, to about 11,000 feet of one-inch pipe, thus giving a total heating surface, including the piping in the hot-blast apparatus, of 5,666 superficial feet, or equal to 17,000 feet lineal of one-inch pipe.

The flow of air into the wards, either direct from the fan, or after it has passed over the radiator in the reinforcing chamber, is entirely under the control of the nurse in each ward, who can regulate it by means of a valve operated in the ward. By thus having two means of heating the air, first, by the hot-blast apparatus, and, second, by the radiators in the reinforcing chamber, it is expected that economy in the use of coal can be exercised and an equal temperature maintained in the wards during the winter months.

PIG IRON CURRENCY.

Of all the astounding contributions to the recent financial history of the country, the following from the Birmingham News is the greatest: "In view of the fact that gold and silver have almost dropped from the avenues of trade, and currency is very scarce, the plan recently adopted by a North Alabama furnace company is rather striking. They commence their operation upon a basis of pig iron circulation. They pay for all materials which go to make their iron product in pig iron, while they only pay employees and railroads in currency. If this new circulation should become popular in this district, we can surely look for an early restoration of material prosperity in this section. This is significant, in that it shows that there is such confidence in pig iron, the product of this district, if there is not in anything else."

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HINTS TO CLERKS.

The following "pointers," according to a contemporary,, were prepared for the employes of a firm in Mississippi:

"It is necessary that you work in co-operation with your employers, having their interest at heart.

"Strive to perform your duties in a pleasant and agreeable manner, so as to obtain and hold the good will and friendship of all customers.

"Give the same courtesy and attention to the poorest customer that you would to the richest; it never lowers a person's dignity to be polite. Very often the person with the most unpretentious outward appearance, and apparently without money, has the intention to buy, and the money to pay for, a nice bill, but on account of the manner in which they are met on coming into the store they say they do not want anything, and leave in search of a place where the clerks approach them in a more cordial manner.

"It is well to find out the name of your customer; impress it on your mind and remember it; people like to be remembered, and if you cannot call their names after repeated visits to the store, they will think you are indifferent to their business, and will seek other places, where their trade is better appreciated.

"Some employes seem to think they are hired to sell goods only, and try to shirk all other work. In this they mistake their best interest. It is a pleasure to the proprietor to find the clerks not only trying to excel in salesmanship, but also exerting their best effort to keep the goods well arranged and to make the store attractive generally. It is very necessary that this work be done, and to have it done properly you must take part, and not be afraid of exceeding your share.

"Exercise a continual effort to keep up the small details of business, as well as to catch some big customer. We like to see your sales large, but it is well to bear in mind that the stock must be kept in order, and it is necessary and expected that each clerk work to that end.

"Any suggestions for the advancement of the business are always appreciated, and, when expedient, will be acted upon.

"Remember, you may be an employer some day; and try to perform your duties as you would have them performed by clerks under you."

MUD SHOES FOR HORSES.

We doubt if very many persons ever saw mud shoes for horses. They are used on horses in plowing the low and wet lands of the valley north of Sumner nearly every spring. The mud shoe consists of a heavy board about eight inches wide and from eight to ten inches long, rounding in front. On this board a red hot shoe of the size worn on the horse's foot for which it is intended is placed until it burns into it to a depth sufficient to bury itself. It is necessary that the shoe have a long toe and long calks. A piece of circular band iron to fit over the top part of the hoof to hold the mud shoe solidly to the foot. One end of the band is fastened to the board with a screw, which, when tightened, holds the board as squarely to the bottom of the hoof as if it had grown there. The horses become accustomed to wearing them, and after a day or two experience no difficulty in working in them. By this means farmers are enabled to plow land in the spring where, without the use of mud shoes, horses would mire down. Sumner blacksmiths had considerable experience last spring in thus equipping teams for plowing the lowlands.—Sumner (Wash.) Herald.

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

The Lake Ontario Steamboat Co., Toronto, is applying for incorporation.

The plate glass insurance companies of the United States have decided that they will write no more term policies.

The Richelieu and Ontario Navigation Company's steamers between Toronto and Montreal will cotminue their regular daily trips until September 30.

The police do not yet appear to have any clue to the murderer of Angus McLeod, the Napanee hardware merchant, who was shot and killed by a burglar last week.

The Canadian General Electric Light Co., Hamilton, intends removing its factory to Peterboro' in a few weeks. The object of the company is to centralize its works.

A motion has been made in Chancery for the appointment of a liquidator to wind up the Dewey Coal Company of Hamilton. The Dewey Company was organized fourteen months ago, and its liabilities are now $43,000.

An Alabama furnace company has adopted a new and certainly novel currency system and pays all its local bills in pig iron. "What's the matter with screws and nails? They're sizable, and everybody needs them," remarks an exchange.

On Friday and Saturday, the 28th and 29th inst., the General Mining Association of the Province of Quebec, and the Mining Society of Nova Scotia will hold a united meeting in Halifax, N.S. A number of interesting papers will be read.

Recently a number of merchants from Turkey made an inspection of the lumber industries of Ottawa. The party then went to Montreal, and if the steamship companies there will give reasonable rates, a lumber trade between Canada and Turkey may result.

The most powerful hydraulic crane at present existing is reported to be that at the Government arsenal at Spezzia, Italy. It is capable of lifting 160 tons, or 10 tons more than the large electric crane at the Crensol Iron Works in the States.

A Victoria, B.C., despatch says that Joseph Boskowitz, an extensive dealer in furs, asserts that the sealers are at heart well pleased with the outcome of the arbitration, and that their profits have been proportionately larger during the continuance of the modus vivendi than ever before. The regulations, he says, leave ample time for satisfactory prosecution of pelagic sealing, and at the same time will prevent drugging the world's market and thereby maintain prices as well as demands.

The Marine Department has taken over from the trustees of the Polson Iron Works Company the new cruiser Petrel, and she is now being fitted out for service on the Georgian Bay, Lake Huron and Lake Erie. She will be engaged chiefly in the preservation of the fisheries.

Hourd & Keenleyside, of the Dominion Baby Carriage Company, London, will resume business at once, their difficulties having been satisfactorily settled. Their financial embarrassment was the result of losses by bad debts, amounting to $7,000. Their liabilities were $10,000 and assets $13,000.

As compared with the first of August, stocks of petroleum in the United States have decreased from 14,768,-615.38 barrels to 14,304,048.63 barrels, a decrease of 464,566.75 barrels. The average daily production has increased from 85,900.72 barrels to 89,797.41 barrels, an increase of 3,896.69 barrels. The receipts in August were 2,604,-384.60 barrels, as compared with 2,-492,821.22 barrels in July, an increase of 111,563.38.

Five thousand saw logs, valued at $250,000, are coming down the Gatineau river. They are monsters in size, averaging 39 to 40 inches diameter,and calculated to contain about five standards, or 1,400 feet each, of the best yellow pine without knot or break, and worth $40 a thousand feet b. m. These logs are said to represent a greater value than ever known before in Canada or the United States for the same quantity of yellow pine logs.

At the regular half yearly meeting of the Directors of the Bank of England held last week, the Governor of the Bank announced that the liabilities of Baring Brothers & Company had been reduced to £4,223,001. The debt of the firm to the bank had been reduced to £4,095,000. Governor Powell also announced that the realizations upon the Baring's assets was proceeding slowly, but that the interest upon the securities was more than enough to meet the interest on the Bank's advances to the firm.

The Brooklyn letter-carriers expect about October 1st to commence in some quarters the delivery of mail on bicycles. The messengers leave certain stations five times a day and meet at a given collection point. Some of the stations are two miles and a half apart. The traveling in the department of the service has thus far been done by the horse-cars, involving a heavy expense. It is with the idea of economy that the bicycles are to be introduced. The carriers are already in active practice, and unless they are knocked out by the Brooklyn cobblestones, the experiment will no doubt prove a success.

So much is now being said in Washington about the proportion of labor value in articles of domestic production that it is worth while to recall the report of the Massachusetts Bureau of Labor three years ago, giving the results of a very painstaking enquiry into the relation of labor value and material value, and also the relative degrees of competition with concerns in the State itself, in the rest of the country, and in foreign countries. In industries whose product in 1885, the year of the State census, was worth $158,016,950, or 23.42 per cent. of the whole, the labor cost did not exceed one-fifth of the whole. In industries whose products were worth $313,010,-086, or 46.40 per cent. of the whole, the labor cost was between one-fifth and one-third of the whole cost of production. In industries whose products were worth $163,817,382, or 24.28 per cent. of the whole, the labor cost was between one-third and one-half. The labor cost, then, did not exceed one-third the total cost of production in industries that produced 69.82 per cent. of the industrial products of the State, and it did not exceed one-half in industries that produced 94.10 per cent. of the whole. The statements of the manufacturers indicated that foreign competition was an extremely small factor.—N. Y. Journal of Commerce.

COOKING BY GAS.

At a recent meeting of the North British Institute of Gas Managers, J. Ballantyne, of Rothsay, read a paper on cooking by gas, in which, according to a contemporary, he gave the experiment of his company in hiring out gas cookers. Mr. Ballantyne said:

Every gas manager has here a large field which he can work, if so disposed, and a field which, I am pursuaded, if properly wrought, will be found to be one of the best paying he can possibly get. In the first place, it does not require any extra plant to work it, as the consumption is principally during the day. To meet an increased night consumption means with most of us an addition to our plant, as very few works can boast of ample provision in this respect. On the other hand, no extra plant is required with an augmented day consumption until it exceeds that of the night—a not very probable thing for many years to come. Again, the employment of gas for cooking purposes is principally during the

summer months, when the largest proportion of our plant is lying idle; although it will be found that when once consumers begin to use cookers, they will do so, more or less, all the year through, but not to the same extent during the winter as in summer, when the weather is hot. In Rothsay we have many consumers who use nothing but gas for cooking all the year round, as they find it cheaper than coal for the purpose, and, of course, very much cleaner. During the months of May and June, and part of July, our day consumption is now as great as that of the night. This means an increase in the daily make, during that period of almost 100 per cent.

We began to hire out gas cookers in 1886, and since then our annual make of gas has increased from 22,127,700 cubic feet in that year to 32,741,400 cubic feet in 1892—being an advance of 48 per cent. For the six years prior to 1886 the increase was only about 9 1-4 per cent., as the annual make of gas in 1880 was 20,249,600 cubic feet. Or if we take the revenue from consumers by meter alone, we find that for the year 1886 it amounted to £3,392, with the price of gas at 4s. 7d. per thousand cubic feet, less 10 per cent. discount if paid within 21 days; whereas in 1892, with the gas at 3s. 9d. per thousand cubic feet, less 5 and 10 per cent discounts if paid within a month, the amount was £4,235, or an increase of £843, notwithstanding the reduction in price. Fully 11 per cent. of our consumers are now supplied on hire with cookers or ranges, hot plates and oven fittings; and we calculate that on an average, each cooker or hot plate is equal to at least £5 per annum of revenue for gas consumed. For cookers we charge 10 per cent. on the list price; and for hot-plates and oven fittings, 6s. per annum—all fitted up free. I am safe in saying that were it not for the hiring out of gas cookers the increase during the last six years would not have exceeded 7 or 8, instead of 48 per cent., and probably less; as for two years preceding the introduction of cookers into Rothsay, there was actually a decrease in the quantity of gas produced. And when we take into account the enormous advance which has been made in the construction of oil lamps, as well as the great extension of lighting by oil, especially among the better classes, we could hardly expect that the same rate of increase could have been kept up during those six years as compared with the previous six.

But it may be asked, Is it a safe investment to engage in the hiring out of gas cookers? Will it not be the case that, after a few years, we shall have them all thrown on our hands as old iron, and that the cooks and housewives will go back to their good old-fashioned coal fires? I firmly believe that so long as gas is to be had by which to cook, there will be a demand for gas cookers. The form of the cooker may change somewhat, and that can be very little now; but there is no fear of cooking by gas becoming obsolete till that far off day, which has been pictured for use by some of our friends (?), when there will not be a bit of coal left the wide world over by which either to make gas or kindle a fire. Cooking by coal fires is much more likely to be a thing of the past than cooking by gas. In truth, with many it is a thing of the past already. And is it not a fact, patent to everyone, that gas stoves are becoming more popular every day? There need, therefore, be no fear of getting them back as old iron till they have been completely worn out in good service. In my own case, I have not a single gas cooker that is not in use, and earning its ten per cent.; and, further, I have not a single obsolete cooker belonging to the Corporation. True, a few of the older forms have been made more modern, by having newer designs of burners fixed on them; but these do not exceed a dozen cookers in all.

TO GET GOOD SERVICE.

Are you in possession of a careful training, forethought, prudence and the faculty of always being well poised and self-confident; if so you have the foundation elements of success.

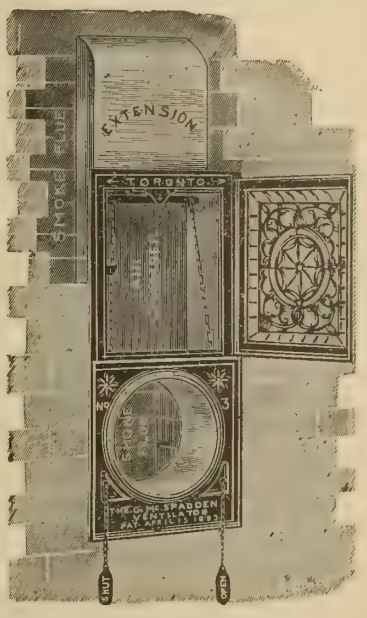
But the success of an undertaking, especially if it be a mercantile business, depends not only upon your individual qualifications, but also, and largely, upon the qualifications of your employees, and the extent to which they use their abilities in your interest. If merchants generally but realized the importance of looking well to the character, capabilities, general fitness and interested activity of their assistants, there would be very much fewer unexplained failures.

It is not only necessary to secure the right sort of persons in the first place, but to take heed that the value of their be not discounted, in order to insure their services being continuously valuable. In order to do this, their compensation must be ample. It is mistaken economy—in fact the veriest extravagance—to keep the remuneration of services rendered below their real value to you. (Of course, it is not just, but we are not moralizing; we are talking simply business.) A well-paid assistant, on the other hand, will work with an interest and a willingness that well repays his employer, and with good interest.

"Self-preservation is the first law of nature," and every human being whose services are not worth having is going to look out for his or her own personal interest. There is nothing surer than the same fact—not even "death and taxes." Hence it follows that if you expect to have your employes work for your interests, you must see to it that you make those interests identical with their own.—Commercial Enquirer.

THE McSPADDEN VENTILATOR.

This ventilator is especially for use in dwellings, hotels, hospital wards, school houses, and wherever pure air is required. That, under such conditions, it adds to the comfort and healthful conditions of the home is obvious. There are two sizes, and the one shown in the accompanying cut is for the kitchen. The size for parlors and other rooms is without the stove-pipe connection or thimble, and is a



neat and thorough ventilator. Where these ventilators are in use there is no excessive heat, steam, smoke or cooking odors. Its cost is much less than any other ventilating device, and it dispenses with the flue that is built for ventilation, thereby saving from $20 to $50 in cost of a new building. It will last as long as the building, being made of cast iron. It is easily put into any chimney or wall of houses already built or being erected. It is a recent invention, and is within reach of any interested by reason of its small cost, being only $5 to $7.50 according to style. McSpadden & Co., Toronto, are the sole owners of the patent.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOT NAILS, ETC.
Hamilton. Ontario.
SP

IRON AND STEEL.

Writing nearly a couple of months ago on the prospects of the iron and steel trades, we ventured to hold out the expectation that there would be no further shrinkage in orders and prices, but that, on the contrary, the signs of improvement which were then beginning to make their appearance would probably assume larger proportions if they were not checked by some untoward event. Unfortunately, an event of a very untoward character has since interposed itself—namely, the strike of between two and three hundred thousand colliers in the Midlands and the affiliated districts. In view of this most regrettable incident, it would scarcely have been surprising if our previous calculations had been completely upset but, as a matter of fact, the strike, though, on the one hand it has made iron and steel manufacturers additionally careful in accepting contracts,and, on the other hand has rendered the outlook for the industry quite uncertain, has not, so far, exercised such an adverse influence as might have been anticipated. The prices of pig iron in Glasgow and in Middlesborough, and to a lesser extent on the West Coast, are higher than they were two months ago, and the prospects of the shipbuilding industry in the North of England and in Scotland are decidedly more hopeful than they were in the early part of the year. The reports from the leading manufacturing centres vary a great deal; but, speaking generally, there seems to be a fairly good demand for iron and steel for home consumption, and if, as seems probable, the colliers, who are now enjoying their vacation, determine to return to their employment at an early date, and anxiety as to the supply of fuel is removed, the moderate improvement in the iron and steel trades already established will be maintained.

In the Glasgow district the fears of a coal strike having been removed, five of the blast furnaces which were recently damped down as a temporary measure have been restarted, making the number of furnaces now in blast 67, comparing with 76 at the same time last year. Shipments from this centre have been very small recently—about ten thousand tons less than at the corresponding date last year; but from the Cleveland district they have been larger than any year since 1887, the falling off in the one case and the increase in the other being due to the fact that there is a difference of about 7s. per ton in favor of buyers in the Cleveland district. Prices of manufactured iron and steel have tended upwards, owing mainly to the increased cost of fuel; but there has been no such advance as would materially check the demand, which is fairly brisk for plates and angle-bars, and for the construction of mill-work and machinery. One notable phase of the present situation especially in the North of England, is that speculation in pig iron is practically at a standstill. The laws of supply and demand are thus left free and unfettered by manipulating gamblers; hence the steadiness of quotations, despite the uncertainty felt with regard to the future cost of production. With reference to the exports of iron and steel, we pointed out recently, in dealing with the Board of Trade figures for July, that the shipments of manufactured iron and steel had maintained the satisfactory improvement shown in the returns for June. For the seven months the exports of iron and steel amounted to 1,719,737 tons, valued at £12,734,770, showing an increase of about 14 3-4 per cent. in the quantity and of over 18 1-4 per cent in the value. In July itself the volume of the shipments exhibited an increase of nearly 24 1-2 per cent.; but, owing to the lower prices ruling when the orders were booked, the augmentation in the value of these shipments was only about 6 1-4 per cent.

The increase last month was obtained in spite of a falling off in most descriptions of iron and steel sent to the Australasian colonies, the largest sources of improvement having been Russia and Canada; while the exports of machinery and millwork were satisfactory, exhibiting an increase of about £125,000 over July last year. The influence of the United States demand for our iron and steel, though less important than it was a few years ago, is still of sufficient moment to require careful attention. It may, therefore,be of interest to show the quantities of the exports thence in the past seven months, as compared with the corresponding period of last year.

	1892 Tons	1893 Tons
Pig iron	25,137	28,852
Bars, angles, etc., . .	1,455	1,635
Railroad	289	888
Hoops, sheets, and plates	5,101	17,851
Tinplates, etc., . . .	167,771	182,668
Cast and wrought, etc., ...	2,158	2,838
Old (for remanufacture)	9,688	4,245
Steel (unwrought) .	421	374

It will be seen from this that in every important branch the exports of iron and steel to the United States have shown a considerable improvement in the United States was 206,765 tons this year. And this improvement is likely to continue. In the first half of the current year the production of pig iron smaller than in the corresponding period of last year, and it is anticipated that the production for the second half of the year will fall considerably short of that of the second half of 1892; so that, when the figures for the whole year come to be compared, the total production of 1893 will in all probability be much less than that of 1892. The demand may also show a considerable shrinkage, especially in connection with the railroads; but nobody, we imagine, believes seriously that the progress of the American continent is going to be permanently jeopardized because of the present financial malaise. There is no doubt, too, that fresh markets for our iron and steel will be opened up as time goes on. On the whole, therefore, we are not inclined to alter the view we have previously expressed—that iron and steel are likely to improve in value in the near future. Even the coal strike is not an unmitigated evil; for it is restoring to the Scotch producers some of that prosperity which has been absent since the great labor dispute which took place a few years ago.—Financial News.

AN IMPROVED TURBINE WHEEL.

The efficiency of the steam turbine, as recently tested in Great Britain, has made a remarbable showing, says Age of Steel. In the test named the turbine used steam of 100 pounds pressure, and ran at about 4,500 revolutions per minute. It was coupled to a dynamo and only used 20.3 pounds of steam per electrical horse-power at 164 9 estimated horse-power, and 20.8 pounds at 148.5 estimated horse-power. Assuming the efficiency of the dynamo to be 90 per cent., these quantities become 18.27 and 18.72 respectively. Superheated steam was used on this trial, but with allowance made for that fact, the results obtained compare favorably with the efficiencies of the best types of modern compound engines. The advantages of the steam turbine are high speed and small occupancy of space, with comparative simplicity and perfect balance of the working parts. The smallness of space occupied, apart from its heat efficiency, gives the steam turbine a special advantage in marine engineering in connection with lighting plant. The tests made by Prof. Kennedy were of an exhaustive and scientific character, and are not likely to be without effect in popularizing the steam turbine as a marine apparatus. It is by such impartial and conscientious investigations that new types and ideas make their way in practical mechanics.

MARK YOUR STEEL.

Where different grades of steel are kept together in one rack, it sometimes happens by mistake that a very fine tool is made of common steel, while a tool for common work is made from an expensive grade, remarks a contemporary. A simple way to avoid this is suggested by one of our friends. It is to paint each bar with a distinctive color when it is received; not the whole bar, but just a streak on one side, near the center, a foot or two long. For example: Crescent, white; crescent extra, red; crescent special, blue; common, green. Let the smith cut from both ends of the bar and he will never be at a loss as to the grade of any short piece he may have on hand. The grade or quality is, however, stamped in the middle of each bar.

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

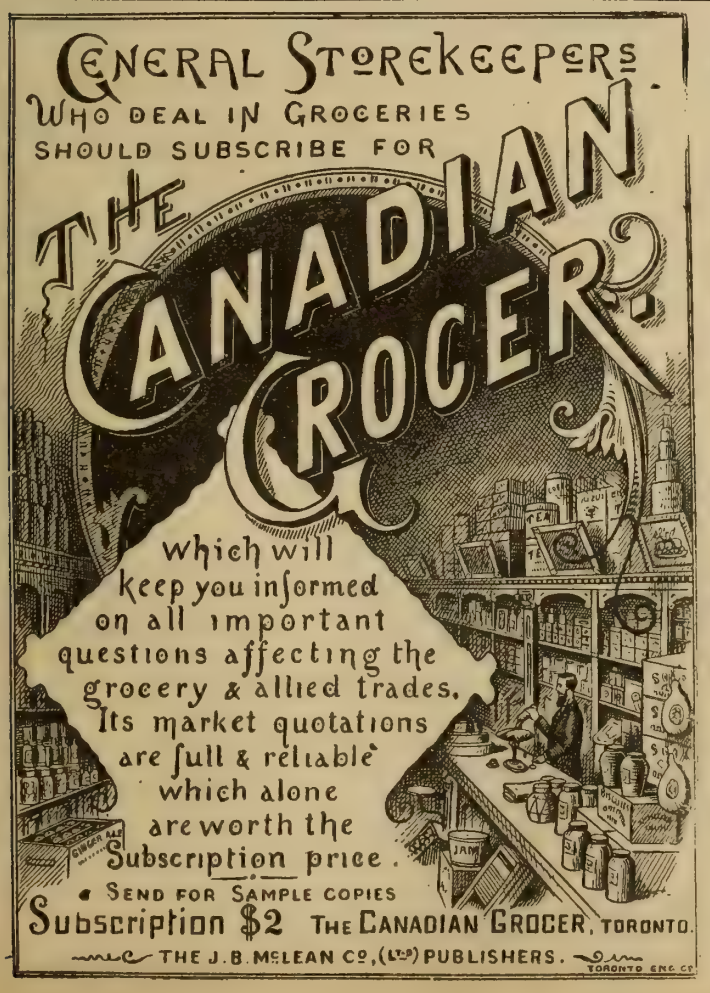
ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."



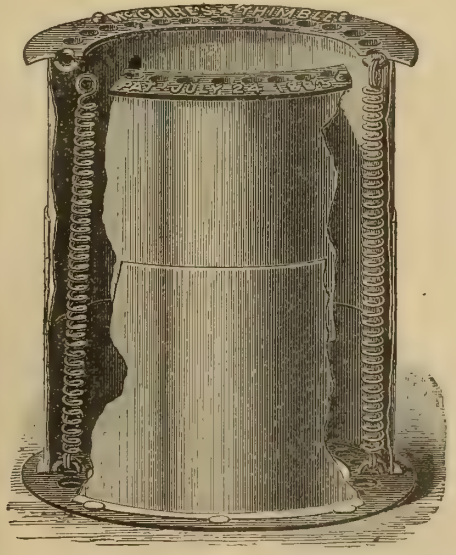
These words and brand are on every box. None genuine without this Trade Mark. We warn our friend against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

GENERAL STOREKEEPERS
WHO DEAL IN GROCERIES
SHOULD SUBSCRIBE FOR



CHENEY'S PATENT - -

DIAMOND EXTENSION **STOVE PIPE THIMBLE**



Best, Cheapest, and Most Durable

The heads are connected by Spiral Steel Springs, whose tension adjusts them to any thickness required.

Made for Six and Seven inch pipes.

Supplied either complete, or Castings and Springs only, as required.

SEND INQUIRIES AND ORDERS TO

THE JAMES SMART MF'G CO. LIMITED
BROCKVILLE, ONT.

EXCLUSIVE MAKERS FOR CANADA.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Sept. 21, 1893.

HARDWARE.

The week has witnessed rather more activity in general hardware, but still business is not exceptionally brisk. Buyers are supplying themselves in a moderate way, which keeps business moving, but in no line is any desire manifested to stock up any length ahead. Both jobbers and retail dealers are characterized by the same disposition in this respect. The lines which show the most activity at the moment are annealed and baling wire and cutlery, which show a steady movement in small lots. A demand is springing up for sleigh bells also, and more activity in this line is one of the new features of the week. Cow chains also contribute to the business now transpiring, while guns and ammunition have again brightened up this week. Nails and tacks are quiet, and other lines are much the same. There is no important change in values. Payments are fair on the whole and hardware houses are not complaining very badly in this respect.

WIRE.—There is a moderate business doing in small lots of annealed hay baling wire.

CUTLERY.—The sorting up trade noted last week continues; in fact the line is going out very well.

SLEIGH BELLS.—A new feature is that enquiries are commencing for sleigh bells, and quite a few orders have been filled from stock that has been carried over. Makers are being asked to push forward supplies in consequence.

NAILS.—Cut nails rule quiet in a jobbing way, but there is a fairly good demand for wire nails in small lots. Makers report matters quiet.

TACKS.—Nothing doing, with no new feature of interest to mention.

CHAIN.—The only business to note is some fair sized orders for cow chains both for prompt and future delivery.

HORSESHOES.—Trade is small as yet, the week showing only a few orders for small lots.

SPORTING GOODS.—More activity is to note this week in guns and ammunition than last. In fact, these goods made up the bulk of the orders booked this week.

TOOLS.—Very few orders for tools are reported, business being exceedingly quiet.

BUILDERS' SUPPLIES.—Business generally in this line is quiet. A few small orders for hinges and locks and the movement of some fair-sized lots of felt paper is all there is to note.

PLUMBERS' SUPPLIES.—Some movement is to note in a jobbing way consequent upon demand for actual fall wants, but nothing of a special nature is to note.

WARE.—Some fair orders for white enamelled ware are noted by one or two of the houses during the week, and a fair business has been doing in tinware also.

NAVAL STORES.—A fair business is noted in naval stores, and prices hold steady as follows: Turpentine, 45 to 46c.; resins, $2.50 to $5, as to brand; coal tar, $3.75 to $4; cotton waste, 5 1-2c. for colored, and 7 to 10c. for white; oakum, 5 1-2 to 7 1-2, and cotton oakum, 10 to 12c. Cordage—Sisal, at 9 3-4c, for 7-16 and upwards, and 15c. for deep-sea line; pure manilla, 11c. for 7-16 and upwards and 21c. for smaller sizes.

METALS.

The movement in heavy iron and metals as a general rule is still of small volume, and the general complaint is that the movement is restricted as compared with last year. The quantity of material afloat is said to be less also, the amount of Scotch pig iron which will be wintered here being much smaller than last year. Values as a rule hold steady in the face of backward buying, while in one line a temporary scarcity in spot and a lack of supplies near at hand has led to an advance in Canada plates. Other lines are without special feature.

PIG IRON.—There is no material change and not much business doing, prices ruling fairly steady on the best brands. Small lots of Summerlee have sold at $18.50 ex wharf, and $19.00 ex store. The supply of the grade is small. We quote Summerlee, $18.50 to $19; Eglinton, $17 to $17.25; Carnbroe, $16.75 to $17; Siemen's No. 1, $18, and Langloam, $18.50.

BAR IRON.—Makers report moderate orders for delivery shortly and jobbers are doing an ordinary trade with nothing special to mention.

SCRAP IRON.—No business of importance to mention, and we quote No. 1 wrought scrap the same at $15 to $16.

TIN PLATES.—Business rules quiet with the tone easy, further sales to arrive being reported at $3.10 to $3.12 1-2. On spot we quote coke $3.20 for ordinary jobbing business, and charcoal $3.75 to $4.

CANADA PLATES.—A comparative scarcity of Canada plates has been developed during the week, and the inside price is now $2.50, at which figure we note sales of some good sized lots, while the range runs up to $2.55 for smaller quantities. There are supplies on the way, but they are coming late as the difficulty with the colliers has put back the majority of the makers in their work.

TERNE PLATES.—Quiet and unchanged at $7 to $7.25.

GALVANIZED IRON.—A fair demand is to note for galvanized iron at former prices, 4 3-4 to 5c.

SHEET IRON.—The movement is fair and prices are quoted as before at $2.40 to $2.60. Russian sheets are rather lower for the outside price at 10 1-2 to 11c.

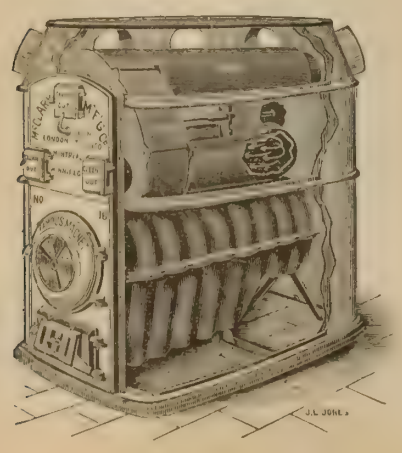
HOOPS AND BANDS.—Very little business to note. We quote the former figure, $2.35.

COPPER.—Business has not improved but the feeling is somewhat stronger, and ingot copper has sold a trifle higher for good sized lots at 11 1-2c., and we now quote 11 1-2 to 12c.

TIN.—Tin also shows some improvement in tone, the cutting in values having stopped. Good sized lots of this article have changed hands as low as 19c. cash, but now prices manifest a firmer disposition at 21 1-2 to 22c.; bar tin, 25c.

SPELTER.—There has been rather more doing in spelter this week, prices for jobbing trade remaining at $4.75, but it is understood round lots have changed hands at $4.65.

ANTIMONY.—Business very quiet, but prices steadier, 11 1-2 to 13c.



WOOD FURNACE

Famous Magnet

NO. 14 AND 16

We confidently ask the attention of the trade to this furnace. Let us send you full particulars regarding it. . . .

IT IS A GOOD ONE

The McClary Mfg. Co.,

London, Toronto, Montreal, Winnipeg

SAULT STE. MARIE CANAL

SEALED TENDERS, addressed to the undersigned and endorsed 'Tender for Lock Gates," will be received at this office until noon on Thursday, the twenty-eighth day of September, 1893, for the construction and setting in place in working order of five pairs of Lock Gates at the Sault Ste. Marie Canal.

Plans and specifications of the work to be done can be seen on and after the eleventh day of September, 1893, at the office of the Chief Engineer of Railways and Canals, Ottawa, where forms of tender can be obtained.

In the case of firms there must be attached the actual signatures of the full name, the nature of the occupation and place of residence of each member of the same, and further, an accepted bank cheque for the sum of $1,500 must accompany the tender. This accepted cheque must be endorsed over to the Minister of Railways and Canals, and will be forfeited if the party tendering declines entering into contract for the work at the rates and on the terms stated in the offer submitted. The accepted cheque thus sent in will be returned to the respective parties whose tenders are not accepted.

This Department does not, however, bind itself to accept the lowest or any tender.

By order,
J. H. BALDERSON,
Secretary.

Dept. of Railways and Canals,
Ottawa, 11th Sept., 1893. 38

DEDERICK'S PATENT STEEL SHELL HAY PRESSES.

Made of Steel—lighter, stronger, cheaper, more power, everlasting, and competition distanced.



Also all styles of Bale Ties made from the Best Steel Wire.

Manufactured by BOYD & CO., Huntingdon, Q.

LAMPS

LARGEST STOCK
GREATEST VARIETY
and Lowest Prices in Canada.

Every dealer should see our samples before placing their orders. If you cannot wait for our travellers, send for catalogue and price list. We are sole agents in Canada for the CLARK BROS. LAMP CO, of Trenton, who are the largest manufacturers of Vase, Banquet, and Hanging Lamps in the world.

ALL NEW LINES. NO OLD STOCK.

JAMES A. SKINNER & CO.

TORONTO -:- and -:- VANCOUVER

GAS, ELECTRIC, AND COMBINATION

Fixtures

Of English, Canadian, and American designs. . .

Globes and Shades

Staple Brackets and Gas Fittings. Select stock of above always on hand.

Jas. Barwell, 88 Bay St., Toronto

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Drawings and Estimates on application.

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LIMITED.

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SEND FOR

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Coal Hods
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You will Insure Success

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Business, by selling



"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.



The Gurney-Tilden Co. Ltd.

Successors to The E. & C. Gurney Co.

HAMILTON - - ONTARIO.



NEW. CLEAN. GOOD



Meat - Cutter

WHITE ENAMELLED

Inside, and Brown Japanned outside.

H BOKER, Manufacturer. | For Sale by Leading Wholesale Houses.

TORONTO CUTLERY CO.,

65 and 67 Yonge Street, Toronto

M. MAYER, Propr.

NON-XLL

Cutlery

WARRANTED

And the Most Complete Lines of Cutlery of all descriptions.

MONTREAL Markets Continued.

LEAD.—Quiet and steady at $2.80 to $3 for pig and sheet $4 to $4.25.

ZINC SHEETS.—A quiet demand is to note at steady prices, viz., $5 to $5.25.

CEMENT.—Business in cement continues good, several round lots having been disposed of during the week at prices within our quotation. We quote: Belgian, $1.85 to $1.95, and English, $1.95 to $2.10.

CHEMICALS.—Heavy chemicals show a firmer feeling. Caustic soda is stronger for 60 per cent at $2.40 to $2.50, and 75 per cent. $2.65 to $2.75. Sol soda has advanced to 10s. in Liverpool, and is strong here at 85 to 90c.

PAINTS AND OILS.

Business has not improved yet, but many of the houses report receiving quite a number of fall orders. White lead remains firm, and an advance in price shortly would not surprise the trade. Linseed oil is firm at former prices. We quote: Choice brands of white lead, Government standard, $5; No. 1, $4.75; No. 2, $4.50; No. 3, $4.25; No. 4, $4; dry white lead, 5c.; red lead, pure, 4 1-2c.; No. 1, 4 1-4c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, raw, 60c., boiled, 63c.

GLASS.

Glass is quiet and unchanged at $1.35 for first break, etc. Putty in bulk, $1.85.

PETROLEUM.

A fair movement is noted in refined petroleum, business being fully up to the average for this season of the year. Prices hold steady. We quote Canadian at 11 1-2c. in shed in Montreal for round lots, 12 1-2c. for five-barrel lots, and 13c. for smaller quantities. American petroleum, 17c. in car lots, 18c. in ten-barrel lots, 18 1-2c. in five-barrel lots, and 18 3-4c for single barrels, 2 per cent. off for cash. American benzine, 23 to 25c.; Canadian benzine, 10 3-4c. Petrolea; 12 1-2c. Montreal.

MONTREAL TRADE NOTES.

C. J. Chishold, the iron commission merchant, whose specialty is tin plates, etc., is on a visit to the World's Fair.

A brisk demand for sleigh bells and the fact that guns and ammunition contribute to the bulk of the orders going out this week are the leading fact of the week noted by Frothingham & Workman.

Mr. Arthur King, the foreign traveler for Mander Bros., of London, for whom W. H. Cottingham & Co. are agents, will visit Montreal on one of his periodical tours of the agencies of the firm all over the world.

McArthur, Corneille & Co. say that business is quiet just at present in oils, leads and chemicals, but they expect it to brighten up during September and October on the heavy lines, as buyers generally want to evade the advance in freights.

The low sized Safford radiator, both in the circular and straight shapes, is reported by H. C. McLaren & Co. to be attracting favorable attention. Covered with a handsome red plush cushion it makes a nice, handy seat in a hall or parlor.

Wm. McNally & Co. have shipped some big lots of cement west to fill orders booked a while ago. The quantity aggregated between 6,000 and 7,000 casks.

Drummond, McColl & Co. report that the round lot of Ferrona pig iron lately received in Montreal is moving out very well at current quotations ruling for stock of similar grade.

Simpson, Hall, Miller & Co. will move some time in November from their present premises on De Bresole street to Notre Dame street, which will be a much better business site for their branch of trade. The office and sample rooms will be at 1794 Notre Dame street, and the factory and works 11, 13 and 15 Reccolect street.

TORONTO MARKETS.

TORONTO, Sept. 22, 1893.

HARDWARE.

The market does not exhibit the same activity that it did last week. But this is nothing more than is expected the week following the Exhibition, the travelers only having just gone out again. Business is not, however, by any means bad. In fact the houses are all fairly well employed, and a steadily increasing business in looked for from now out till at least the first week in December. Nothing particularly marked has developed during the week. Axes and ax-handles are going out freely; and the same may be said with regard to tinsmiths' fall supplies. Outside these the orders are of a general sorting-up character. Some houses report that a number of Northwest orders were disposed of the beginning of the week. Payments continue to show some improvement.

WIRE—Bright iron wire for tinners' purposes has been in good demand during the week, but for hay-baling wire there is scarcely anything doing.

ROPE—Last week's remarks still apply, ⅜, ½ and ⅝ inch sizes still being in moderate demand only.

CUTLERY—Trade continues fairly good without any special feature to note.

NAILS—Cut and wire nails, especially the latter, are in good demand, although in quantities the orders are not large. Trade continues brisk in horse-shoe nails.

TACKS—Trade in this line continues quiet and uneventful.

HORSESHOES—A gradually increasing trade is reported in this line at unchanged prices.

CHAIN—Orders are coming in more freely for cow ties, but very few are for present shipment. Coil chain is dull.

SPORTING GOODS—Rifles, guns, ammunition, etc., are still going out in fairly good quantities.

WARE—The improved business noted in tinware last week has been maintained this week, and peerless and enamelled ware continue to go out in small quantities.

RUST PROOF

Eastlake Steel Shingles

When you visit Canada's Great Fair you can see them on the Grand Stand, and nearly all the new buildings. . . . .

Sole Manufacturers . .

METALLIC ROOFING CO., Ltd.

84 to 90 YONGE ST.,

Send for Catalogue. **TORONTO**

PLUMBERS' SUPPLIES—Demand for iron pipe, both black and galvanized, is good, and for plumbers' supplies generally an increasing business is reported.

BUILDERS' SUPPLIES—In locks, bolts, etc., trade is light, but demand continues good for building paper.

TOOLS—Trade in this line continues dull and featureless.

METALS.

The metal market remains much as before, about the only change to note being fractionally lower prices on ingot tin. If anything business is a little brisker in metals.

PIG IRON—There is not much doing as yet, but enquiries are a little more numerous. Siemen's was quoted at $20 to $21 Toronto.

Rogers, Brown & Co., Buffalo, report the Toronto pig iron market as follows: The market continues steady without change in prices. Those consumers whose business is of such a nature as to permit a reasonably close estimate of their future requirements, are covering wants into next year. For deliveries beyond six months some furnaces are holding for an advance. We quote on the cash basis f. o. b. cars Toronto, in bond: IX Foundry strong Coke Iron, Lake Superior ore, $15.05; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14.55; 2 Foundry Strong Coke Iron, Lake Superior ore, $14.05; Jackson County Silvery 1, $17.55 to $18.30.; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17 55; Southern Soft 1, $13.35; Southern Soft 2, $12.85.

BAR IRON—There is no special feature, but a fair trade is still doing at the $1.95 basis.

HOOPS AND BANDS—Some fair shipments are reported, although in general the quantities are small. Prices for 1 inch and upward remain unchanged at $2.50 to $2.60.

CORRUGATED IRON—Trade in this line is somewhat on the quiet side, although some houses report a fair business doing it in at $4 75 to $5 per square. Considerable improvement is expected in this line next month. "Owl" brand is quoted at $3 to $4 per square for patented and $4.25 to $7 for galvanized, according to gauge.

GALVANIZED IRON—Is going out freely, all gauges from 18 to 28 inches being in demand. We quote 4⅞ to 5c. for 28 gauge, with other gauges in proportion.

INGOT TIN—There is just an ordinary business doing in this line, no round lots having been enquired for. Prices are a shade lower at 22c., or at 21½c. for quantities.

INGOT COPPER—Very little doing at the moment, and prices are as before, at 12c. for

MARKETS—Continued

small quantities, with larger lots obtainable a shade lower.

SHEET IRON—A good business is being done in black sheet iron, and prices have advanced 10c. per cwt. during the last ten days.

SHEET ZINC—Quite a number of full cask lines have been sent forward, and business is of the usual character at this season. Prices unchanged at 5½ to 5¾c. for 5-cwt. casks and 5¾ to 6c. for part casks.

SPELTER—There is not much demand, either for the imported or the domestic article; 3¾ to 5¾c. is still the idea as to price.

TIN PLATE—Trade in this article has been exceptionally good in all grades from coke to M. L. S. brands.

TERNE PLATES—Enquiries for these have fallen off somewhat during the last week or so, but an improvement is anticipated next month.

CANADA PLATES—Shipments from stock are still small, most of the dealers having, as noted last week, received their import lots. We still quote all dull at $2.65, half-half at $2.75, and all bright at $2.80 to $3 per box for small lots.

SOLDER—Is going out more freely. Prices are unchanged at 15½ to 16½c. for half and half and 14½ to 15½c. for standard.

ANTIMONY—A few good sales of Cookson's have been reported, but generally speaking there is not much doing. Prices unchanged at 12 to 12½c. for Cookson's and 11½ to 12c. for common. These prices are for small lots and they would be shaded for quantities.

PIG LEAD—Business continues quiet with prices unchanged at 3 to 5c. according to brand.

PAINTS AND OILS.

Linseed oil is the only article in which there is anything like a good business doing. In about everything else there has been a falling off. Linseed oil is still quoted at 60 to 62c. for raw and 63 to 65c. for boiled. Turpentine is dull and easy, and it is possible that a reduction may be made in the figures now quoted, viz., 44 to 46c. In prepared paints there is practically nothing doing and prices remain unchanged. There is a little movement in castor oil at 7⅞ to 8c., but it is small. Business continues dull in white lead at the association basis of 5c. A slight improvement is reported in payments.

GLASS.

Business has picked up considerably, and for the smaller and larger sizes the demand is good. In the medium sizes business is not so brisk. Prices are unchanged at $1.25 to $1.30 for first break. Plate glass is in good demand at the discount of 35 per cent. off.

OLD MATERIAL.

Dealers report that trade in old material is brightening considerably, and a free and easy disposal of their heavy stocks is anticipated. Prices remain steady at the regular quotations. We quote prices paid by dealers as follows: Agricultural scrap, 60c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40 to 45c. per cwt.. No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings and turnings, 10 to 15c.

PETROLEUM.

The Petrolea Advertiser in its weekly report, says: "The crude market is somewhat improved, transactions on 'Change are more frequent, and "futures," based on the present values, are being taken when offered. Prices must of necessity go up shortly. With but 106,459 bbls. of stock on hand and the winter approaching, demand for refined increasing and the quality of Canadian refined getting better all the time, we are fully warranted in expecting better prices. As to present prices, crude on the Exchange may be quoted at $1.05. Refined in car lots, f.o.b. here, 10 cents.

Demand for burning oils on the Toronto market continues to improve and that for lubricating kinds is well maintained. We quote 5 to 10 bbl. lots, imperial gallons, Toronto; Canadian, 12½ to 13c.; carbon safety, 16½ to 17c.; Canadian water white, 17c.; American water white, 18½ to 19c.; photogene, 22c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—There is no change in the price of hides. Market is steady and there is a fair supply coming in, for which dealers are paying 3 and 4c. according to quality. They are asking 4¼ to 4½c. for fresh dressed hides.

SKINS—In skins the market is a little quiet; prices unchanged at 55c. for fresh lambs and shirlings. Calfskins are unchanged and there is not much doing. Prices nominal.

TALLOW—The demand in tallow has improved and prices remain steady. Dealers are paying from 4¾ to 5½c.

WOOL—There is nothing doing in wool to speak of. The foreign demand is dropping off, and business with mills is also small at present. Prices the same, 17 to 20c.

MARKET NOTES.

Trade is beginning to pick up in glass.

A thousand tons of American pig iron was purchased by the Gurney Foundry Co. last week.

Rice Lewis & Son are experiencing a brisk trade in house furnishings.

The Oxford Crown hot water boiler shown at the Industrial Fair by the Gurney Foundry Co. has been sold to Joseph Jennings of Concord avenue.

Black sheet iron has advanced 10c. per cwt. during the last ten days.

The Gurney Foundry Co. have just shipped a pair of their largest No. 8 Oxford boilers with radiation all complete to the Insane Asylum, Hamilton.

The Kearney & Foote files, for which Samuel, Benjamin & Co are the agents, are going out in larger quantities than ever before.

The Gurney Foundry Co. report that they have had such a demand for radiation that they have been compelled to order another power facing machine.

Turpentine is lower in the South, and it is possible a reduction will be made in figures quoted in this market. Some of the importers who received turpentine in bad order during summer months have awakened to the fact that it pays to pay an extra cent per gallon and get their turpentine in selected machine made barrels.

Sapolio sells in ¼ or ½ grs. boxes at $11.-30 per grs.

The Gurney Foundry Co. are heating the Rat Portage jail with combination wood furnace—hot water and hot air. They have also secured an order from the Algoma hospital, Sudbury, for one of their Oxford wood furnaces.

The Metallic Roofing Co. have recently completed these contracts: Blenheim, church and Robt. Nichols' residence; Merritton, the Riordan Paper Mills; East Angus, Royal Pulp and Paper Co.'s Mills.

Adam Hope & Co., Hamilton, offer for sale "Pioneer" and "Sloss" pig iron. These are fine foundry irons being strong and large scrap carriers; also all the well know Scotch brands, broken car wheels and railway cast scrap.

The Oak Hall Co. have placed an order with the Gurney Foundry Co. for four of that firms largest Bundy radiators and Quintet Rugby radiators for their new building in King street. It is said these radiators will be the largest and finest ever turned out by the Gurney Co.

The market for Lake copper is inclined to be easier again in New York. Last week we were able to report bids of 9⅞c. with very little offering below 10c., while to-day the best bid is 9.75, and holders ask 9.85 for nearby delivery and 5 to 10 pointt higher for futures.

The Bowman Hardware and Sporting Goods Co., of Hamilton, report trade brisk. Their traveler has just returned from a tour of the province, and says that from the looks of things on the road this is going to be a splendid season for game. He also states that the gun clubs for the shooting of artificial birds are increasing, there being one in nearly every town in the province.

The Seamless Flanged Drip Pan has had some improvements made to it recently by the manufacturers, Thomas Davidson & Co. of Montreal. The improvement consists of rolling in the edges, thus doing away with the sharp flange with which some found objection. This pan is drawn by means of dies and is finished with a flanged edge, which not only enables the cook to easily and safely lift the pan, but, among its other recommendations, it can be kept cleaner and is cheaper than the old style pans, and does not warp or lose its shape.

The Shepard Hardware Co., Buffalo, N.Y., manufacturers of the "Lightning Freezers," announce that they have sold and transferred to North Bros. Manufacturing Co., of Philadelphia, Pa., their ice cream freezer business, including patents, patterns, trademarks, etc. All orders for Ice Cream Freezers of the kinds formerly made by them,

also repairs for same, should be sent to above named firm. The North Bros. Mfg. Co. state that they will be ready to furnish the full line of Lightning freezers by Dec. 1st next, probably sooner. These freezers will be of the same high standard as heretofore, in quality of materials and workmanship, and the new proprietors hope to retain all the business in these goods which had been enjoyed by their predecessors.

Referring to the tin market the N. Y. Metal Market Report of Tuesday says: "Now that prices have been pegged up systematically 5 points at each call, from 18 20 to 20.55, it is more than likely that the Bulls will have to take more of the actual metal if they wish to keep on lifting values. So far it has been an easy matter to bid up the spot price each day. There was no weak stuff to come out, but now that we are getting near to October there will be several lots to be paid for, and we may possibly see a reaction. The London market is decidedly easier, and looks like lower prices. 20.50 bid for spot, 20 55 bid for September, and 20.65 the best bid for October.

The Toronto Radiator Mfg. Co. have issued their new illustrated catalogue "B" of Safford Patent Hot Water and Steam Radiators. Within its 143 pages is much to be found that is interesting to the trade. The frontispiece contains views of the extensive works in Dufferin street, Toronto, and the different branch warerooms of the firm. A feature of the catalogue is some 131 photogravures of public and private buildings throughout Canada which have been during the last few years fitted with Safford Patent Radiators. Among these buildings may be mentioned the Provincial Parliament buildings at Toronto, Toronto University and Museum, Wycliffe College, School of Practical Science, Freehold Loan & Savings, Rossin House, Toronto Board of Trade, Carsley's dry goods block, Montreal, Hotel Dieu Hospital, Montreal. The Toronto Radiator Co. are to be complimented on the excellency of their catalogue "B."

PERSONAL MENTION.

G. B. Morris, hardware merchant, Guelph, was in Toronto a few days ago.

Thomas Elliott, with Henry Taylor, of Perth, Ont., was in Toronto a few days ago.

F. W. Martin, of Toronto, for nine years in the Toronto Electric Light Co.'s powerhouse, has been appointed manager of the Hamilton Electric Light and Power Co.

Mr. J. A. Painchaud, of Painchaud, Squire & Co., sailed from New York on 13th inst. by S.S. Majestic for a trip through the hardware manufacturing districts of England, Belgium, France and Germany.

John Cameron, representing the firm of J. B. McLean & Co., Toronto, is in town, in the interests of the various publications of the firm, including THE PRINTER AND PUBLISHER, THE HARDWARE MERCHANT, THE CANADIAN GROCER, BOOKS AND NOTIONS, and THE DRY GOODS REVIEW. In the hands of the genial agent, John Cameron, these publications should go.—Evening Mail, Halifax.

AMERICAN MARKETS.

New York, September 22.

PIG TIN.—Prices averaged somewhat higher and the market displayed further improvement in tone, despite very moderate dealings. Neither speculative or trade buying showed any remarkable spirit, but it was plain that the leading holders of tin have practical control of the market, and that they meet no opposition worthy of the name in getting prices closely up to import price plus the McKinley duty.

COPPER.—The market was bare of distinctly new feature, but the few facts that came to light indicated a quite firm undertone. Thus the Calumet & Heckla Co. was reported to have refused bids of 10c. per ingot, and the representative of a group of mines reported bids of 9 7-8c. for fairly large sized quantities. Producers of casting copper raised their prices to 9 3-8 to 9 1-2c. There was some chance of moderate quantities being secured at a shade less from second hands, but the outside offering was extremely reserved, and had no pronounced effect. New business was moderate, and the demand lacked spirit, but deliveries on former contracts continue on a scale that strengthens values in some degree.

PIG LEAD.—Small sales were the rule and for anything more than single car load lots the demand was extremely tame. The offering was quite moderate, however, and of a character indicating decided firmness on the part of sellers generally. A few car loads went at 3.87 1-2c. early shipment, for common Western. Closing quotations were 3.85c. bid, 3.90c .asked. London cable to the Metal Exchange quoted £9 17s. 6d. for soft Spanish.

SPELTER.—On the position of the market for domestic spelter there is nothing new to report. Orders were comparatively few at this point, but good sales were reported in Pittsburg at relatively better figures than have been reached here thus far this week. Fair quotations on ordinary brands, delivery at New York or common point, were 3.75c. bid, 3.80 to 3.85c. asked. London cable was £17 7s. 6d. for good merchant brands.

ANTIMONY.—Distribution of jobbing parcels is running very fairly at old prices, and prices remain quite steady at about 9 1-2 to 9 5-8c. for Hallett's, 10 to 10 1-8c. for LX and similar brands, and 10 3-8 to 10 1-2c. for Cookson's, in round lots.

TIN PLATE.—Outside of routine spot buying there was little business, and the demand dragged listlessly. As a rule, spot business was at practically the same prices that prevailed last last week. Futures were somewhat irregular in price, and are finding rather slow sale.

PIG IRON.—Except for ordinary quantities for prompt and near future delivery there was hardly any demand, and it was the exception that best efforts aroused anything in the nature of speculative interest. The offering, while not particularly urgent, continues free enough to keep prices down to the low level that has ruled for some time past.

Scotch pig meets with very slow sale, but prices remain steady at about $21 to $21.50 for Coltness, $20.50 to $21 for Summerlee, and $19 to $19.50 for Eglinton, to arrive.

Spiegeleisen and ferro-manganese remain very quiet, with market prices still greatly nominal. Ferro-manganese is quoted at $56 to $56.50, and 20 per cent. spiegeleisen at $25.50 to $26, landed here.

STEEL RAILS, ETC.—The demand for steel rails shows no improvement whatever, and prices for heavy sections stand at about $29. Rail fastenings are also dull and rather weak.

OLD MATERIAL.D—emand is erratic and chiefly for moderate quantities. quantities. Prices continue low. Current quotations are about $15 to $15.50 for iron tee rails, $13 for steel rails, $14 to $14.50 for No. 1 wrought scrap iron, $10 to $12.50 for machinery cast scrap, $11.50 for wrought turnings, and $7 for cast borings.

Business in pig iron continues very dull, but there appears to be a growing belief that the worst is past and an improvement near at hand, although the situation in some important respects is not by any means as encouraging as it might be. In the present condition of affairs it would not require much of a spurt in the demand to cause the market to stiffen, as in addition to a very light production prices are about down to about cost of production, and while this continues none of the idle furnaces are likely to be started up. There appears to be no demand for muck bar, which in the absence of sales may be quoted nominally at $21 to $21.50 cash. Ferro-manganese continues very dull. Prices are reported weak at $57.50 to $58 for 80 per cent. domestic.

There is an improved demand reported for some kinds of finished material, but business is scarcely a drop in the bucket as compared with what it was this time last year. At present but few of the mills are in operation, none of them working up to their full capacity. The fact that some of the wrought iron pipe mills have been started may be regarded as evidence that there has been an improvement in the demand for pipe, but prices continue irregular and unsatisfactory, and the season is too far advanced.

There has been some enquiry for wire rods for immediate or near delivery, with an exceedingly light stock; may be quoted along $27 to $27.50 cash at maker's mill. Bessemer steel billets continue quiet with prices weak and drooping. We are advised of some small sales at $19.25 to $19.50 cash at maker's mill, with intimations thrown out that a desirable order could probably be placed at even money, $19.

L. B. Montgomery & Co., dealers in asbestos and engineers' supplies, 125 Bay street, Toronto, have the sheriff in possession under a writ issued by S. Grandize for $1,250.

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, TORONTO

ENGLISH HOUSE: **SAMUEL, SONS & BENJAMIN**
164 Fenchurch St, London, E. C.

AXES BLACK PRINCE, KEEN CUTTER,
LANCE—Plain and Bevelled,
MAPLE LEAF, M. L. S.,
MONTANA.

CROSS CUT SAWS RACER, MAPLE LEAF,
PREMIER, LUMBERMAN'S PRIDE,
DISSTON'S TOLEDO BLADE.

FINE ASSORTMENT OF AXE HANDLES AND COMPLETE STOCK OF ENGLISH COW TIES.

REPAIRING LAMPS.

The manufacture of incandescent lamps has served as an example of the economies growing with the industries, remarks Journal of Commerce. An incandescent lamp past service was formerly deemed as useless, although not as noisome, as an egg retired from acitive business. The rising price of platinum rendered it worth while for lamp manufacturers to collect old lamps, and to separate and crush the necks, as preparatory to the separation of in which the platinum was originally the platinum leading in wires by washing in a manner comparable to that separated from the natural deposits. The decision of one of the Federal Courts in the United States sustaining the Edison lamp patent, also gave a value to destroyed lamps, as one always has the right to repair a patent article which has come into his ownership; and this repairing of Edison incandescent lamps has become quite an industry. Lamps with broken filaments are perforated by crushing the end of the protruding tip of the lamp, and then revolving it rapidly in a lathe while the end of the lamp is heated by a gas blast flame until the glass is softened, and the centrifugal force assisted by a former inserted into the orifice, increasing the diameter of the hole from one-twentieth of an inch to about three-fourths of an inch. The remnants of the old carbon are cut away and the inside of the lamp carefully cleaned by special tools. A new carbon filament is attached by electroplating of copper at its terminals to tiny copper tubes about one-sixteenth inch in diameter and three-eighths inch in length, which are inserted in the lamp and the tubes placed upon the projecting copper and platinum which held the filament originally in the lamp. The contact is made secure by means of a pair of nippers which crush the tube with lateral corrugations. The end of the lamp is then softened by heat, and the opening reduced to about 1-4 inch, and sealed to a tube. The lamp is then evacuated and finished in the usual manner. When a lamp bulb has been broken the glass is cut away at the neck, and a glass tube fused upon it, which is afterwards blown, and the carbon filament inserted in the method described. It is estimated, says Engineering, that 10,000 lamps per day are being thus repaired in the United States, consuming not only all the available breakages, but their demands are levying upon stray barrels and boxes of old lamps which have been broken in the past and not thrown away, but stored in sheds and attics in accordance with that prudent New England principle which checks the destruction of anything which may be considered to contain the possibility of possessing a value at some future time.

NAILS AND BARB WIRE.

Although the movement in these markets is slow, yet there are some signs of a betterment and the situation is far from being as discouraging as it was during the summer months. A number of mills in both lines have been started up within the last ten days and the demand is slowly increasing at the old prices, which are claimed to be as near the actual cost as is possible without sacrificing money in their manufacture.

The growth of the barb wire industry has been remarkable and it is undoubtedly coming into more extended use as the knowledge of the gain involved in its use becomes more widespread and general, but it so happens that a better appreciation of its merits than now exists was relied upon by the manufacturers, and that the total plant capacity is now greater than the trade demands or can expect to demand for some time to come unless the wire becomes of more general use. As for nails, the fact is that there are more manufactured than are needed, and the inevitable result is a non-profitable price, and the shutting down of most of the mills, with a few recent resumptions as noted above.—Stoves and Hardware.

THE CUTLERY DEPARTMENT.

There is no department of the furnishing-ironmongery trade that should with proper management give more profit to the proprietor, or more credit to a pushing assistant, than the cutlary and electroplate department, writes J. S. Bicker in London Ironmonger. On the other hand, if badly kept, no part of the stock takes so much capital, causes so much confusion to the salesman and annoyance to the customer. For example, a lady customer wishes to select some table cutlery. After diving about for some minutes in two or three drawers, half-a-dozen badly tied parcels of ivory handled knives are produced, and, after the usual questions as to price, quality, etc., a selection of one dozen of each table and dessert and a pair of carvers to match is made. The assistant proceeds to look up the order, and presently returns to the customer and informs her that he is "sorry, but we have only ten table and nine dessert of this pattern." If the customer is in a good temper and not pressed for time the assistant may have the opportunity of submitting another pattern, and then possibly find there are no carvers to match. The customer is disgusted, businesslike and unprofitable scenes I would submit the following suggestions:

To begin with, select from your cutlers, say, six patterns of ivory-handled knives (make one of these patterns a special leading line and keep a good stock of it) two patterns xylonite, three white bone, three black, two stag, and one buffalo, with carvers and steels to match, and mark each parcel or box (the latter being much the most convenient for stocking) distinctly on the end with number and price. Arrange these on shelves 1 to 6 in back of counter, with carvers to match in drawers 17 to 20; have close at hand, in drawer 8, rolls containing patterns of each table and dessert, with number and price marked in plain figures on handles. These rolls are convenient to place before a customer immediately they are asked for. A good salesman will soon be able to see what class of knife his customer is looking for, and should then produce the bulk or stock parcel, as many persons will not decide from seeing a single pattern. I have tried both drawers and tin boxes with pattern outside, for keeping this stock, but find boxes or parcels laid on shelves and marked as described the most convenient to handle quickly, and the easiest to see when stock is getting low.

For electroplated forks and spoons the same plan may be adopted, but drawers instead of shelves used unless goods are boxed and rolls for samples.

Pocket Cutlery.—A good assortment of this should be kept on one of the glass shelves or trays in counter-case, and the remainder in well-tied parcels in drawers 11 and 12. A few rolls such as are used for cutlers' travelers may be adopted to advantage for boys' one and two blade 6d. and 1s. knives. This plan saves exposing stock, and the goods are easily wiped with a chamois elather after being handled. Buy quarter-dozen only of the better class pocket knives, sportsmen's fancy knives one-sixth or one-twelfth dozen.

Scissors.—A selection should be made of six or eight useful patterns and kept in each size from 4 1-2 inches to 7 inches, with nail and embroidery scissors to match, and the different sizes of each pattern tied together and placed in stock drawers 14 and 15. By keeping stock patterns of assorted sizes, cases of three or four pairs can be made up at prices to suit your customer. It also saves time in going through travelers' patterns every journey. In the counter-case can also be arranged an assortment of electroplate butter knives, bread forks, preserve spoons, fruit knives, etc. The case on front of counter should be filled with cased goods, such as fish carvers, dessert spoons, nutcracks, carvers, etc.

This completes what may be termed the small goods of this department. Now comes the window-display, and this, if it is to be a success, must be done well. It is almost impossible to do this part of the business without considerable outlay in fixtures, and the ironmonger who sets apart a portion of his capital to put in a first-class air-tight window and stocks it with good middle-class electroplate, is the man who will do the business and see a good return. If this is not done, he must not be surprised if the jeweler and the pushing draper take the trade out of his hands. The window should not be too deep from front to back—say, 3 feet at the outside. The goods show much better near to the front, and are much easier to remove in placing before a customer. A set of good glass shelves should run the full length of the window at back; the bottom shelf, say, 24 inches wide, the next 18 inches, and reducing in width to the top. On the front of window racks for ivory-handled knives, electroplated forks and spoons, and some small brackets with small glass shelves can be worked in, according to taste and room at disposal. Mirrors at the end and at the bottom of the window are very effective, and a few rods fixed close to the top of window will be found useful to suspend dish-covers, cruets, etc.

Having invested a considerable amount in providing this window and stock, next place the stock in the window in the most attractive manner to catch the eye of the passing customer. This requires great care and study on the part of the assistant entrusted to dress the window. All articles should stand or hang so as not to clash with or hide each other. Artificial flowers, grasses, and fruit in stands all help to make a window attractive. I think much more could be done in this way with a little experience and study than has hitherto been effected; at the same time it must not be overdone, or the window will look more like a greengrocer's than an ironmonger's. Plain tickets should be freely used. Many articles also require a descriptive ticket as well as the price. Novelties are continually coming out in electroplate, and if not properly described many people are ignorant of their use, and do not like to come into the shop to ask, especially if other customers are in at the same time. For instance, four out of six would not know the use of an asparagus server if it were not so described.

Special orders, by which I mean orders for goods not in stock, and which must necessarily be sold from catalogues.—This requires considerable tact and judgment on the part of the salesman, also a careful arrangement and knowledge of the best illustrated lists in the trade, so that a good illustration, with price, etc., may be placed before the customer at once. Many a good order has been secured by the assistant who has devoted any spare time he may have to the study of these lists, and has them at hand when required.

Procuring goods on approval for selection often leads to good results. Many Sheffield firms who have London showrooms are only too pleased to send goods on these terms, and a sixpenny wire will (to any ironmonger within reasonable distance of London) bring the goods down the same day. Hotel and club orders for cutlery and plate should be carefully watched for. They are, no doubt, cut "very fine," but 5 per cent. on such lines is worth trying for.

The hire department can very well, and with profit, be added to this department, and, after the first cost has been recovered, pays wonderfully well.

By giving careful attention to the smallest order entrusted to your care, civility to every customer, and keeping all stock bright and clean, the largest to the smallest ironmonger may increase his return and add to his income, which is the main object in view with us all.

Hon. Mackenzie Bowell has conferred with the Vancouver, Westminster, and Victoria Boards of Trade. He said that the Government would no doubt reduce the duty on dead mutton from Australia, which was now too high. Mr. Bowell sailed from Victoria Saturday.

THE LOW PRICE OF COPPER.

The financial depression—we hope soon to be able to say the recent financial depression—has forced down the price of copper like that of the other metals. The market quotation in New York last week was 9 1-2c. for Lake, while a lower figure was accepted for export; this week 9 1-2 to 9 5-8c. has been quoted. Even after the collapse of the French syndicate prices did not go so low as this. Of course, the copper market is directly affected by stringency in the money market. A very large part of the consumption of the metal is by the manufactures of electric machinery and in the installation of lighting, power and tramway plants. The business has been carried on in a high degree by means of the credit system. A local company is organized to build an electric street railway, say, by the efforts of the manufacturing electric company, which takes all the bonds of the local company, perahps, or a part of them, at least, in payment for the plant furnished. The central company holds these bonds until the local company becomes a going concern, and a favorable opportunity to dispose of them appears, when the transaction is closed. This system of business was made necessary by the very magnitude of the undertakings, especially when such electric installations were a new thing and the identification of the company which wanted to sell them with the local companies or purchasers was in the nature of a guarantee. It was for the interest of the manufacturing companies to follow this policy in order to sell the largest possible number of plants, not only for the profit in the first transaction, but also for the business of furnishing supplies to them ever afterward. The success of the Thomson-Houston and Edison electric companies, now consolidated as the General Electric Company, in building up an enormous business has since demonstrated the wisdom of this plan, but when the credit system failed, of course the whole fabric tottered, it being impossible to carry the bonds and securities of subsidiary concerns, and no capital coming forward for investment in new undertakings. The shares of the General Electric Company, showing 8 per cent. dividends hitherto, which sold above par, are now quoted at 40. Of course the demand for copper is cut off, and notwithstanding the unusually large exports the price has declined to the lowest point on record.

The lowest previous average monthly quotation was 10 cents in June, July and August, 1886, and in May and June, 1887. At that time the lowest possible point in copper prices was supposed to have been reached, and they were certainly unprofitable except to a few of the great producers. The present prices are also unprofitable, but some of the large producers have reduced costs within the past seven years, and this is especially true of electrolytic copper. Every metal used at all extensively in the arts becomes cheaper as years go by. All history shows no exception to this rule.—Engineering and Mining Journal.

BUSINESS CHANCES

Advertisements under this heading two cents per word each insertion.

STOCK OF HARDWARE, TINWARE AND stoves for sale; good paying business, excellent stand, well established trade; good reasons for selling. Apply to J. D. BURK, Amherstburg. (39)

HARDWARE STORE AND TIN BUSINESS for sale. Smart town; splendid business being done; stock, etc., about $3,0 0; established 18 years; liberal terms. Address, J. E., HARDWARE OFFICE. (38)

RETAIL HARDWARE BUSINESS FOR SALE in thriving town in Western Ontario. Stock about $5,000; comprises general hardware, iron, paints and oils, stoves, glass, etc. Satisfactory terms can be arranged. Box 9, HARDWARE MERCHANT. (39)

Sault Ste. Marie Canal

NOTICE TO CONTRACTORS.

SEALED TENDERS addressed to the undersigned and endorsed "Tenders for Steel Bridge at Sault Ste. Marie Canal" will be received at this office up to noon on Thursday, the twenty-eighth September instant, for the construction and erection in place, completed and ready to receive the rails, a Steel Bridge composed of one swing span of 250 feet and a fixed span of 75 feet, to carry the Canadian Pacific Railway over the Sault Ste Marie Canal.

Plans and specifications of the work to be done can be seen on and after the eleventh day of September, 1893, at the office of the Chief Engineer of Railways and Canals, Ottawa, where forms of tender can be obtained. In the case of firms, there must be attached the actual signatures of the full name, the nature of the occupation and place of residence of each member of the same, and further, an accepted bank cheque for the sum of $800 must accompany the Tender. This accepted cheque must be endorsed over to the Minister of Railways and Canals, and will be forfeited if the party tendering declines entering into contract for the work at the rates and on the terms stated in the offer submitted. The accepted cheque thus sent in will be returned to the respective parties whose tenders are not accepted.

The Department does not bind itself to accept the lowest or any tender. By order,

J. H. BALDERSON,
Secretary.

Department of Railways and Canals,
Ottawa, 6th September, 1893. 38

RAZORS, SCISSORS

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DO YOU?

WISH THUS TO BUILD, an advertisement in the CONTRACT-RECORD, TORONTO will bring you tenders from the best contractors.

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General Commercial Printing

THE MAKING OF AN AXE.

A Pittsburg reporter tells the world about the making of an axe: Entering the main workshop the first step in the operation which is seen is the formation of the axe head without the blade. The glowing flat iron bars are withdrawn from the furnace and are taken to a powerful and somewhat complicated machine, which performs upon them four distinct operations, shaping the metal to form the upper and lower part of the axe, then the eye, and finally doubling the piece over so that the whole can be welded together. Next the iron is put in a powerful natural gas furnace, and heated to a white heat. Taken out, it goes under a tilt hammer and is welded in a second. This done, one blow from the "drop" and the poll of the axe is completely welded. Two crews of men are doing this class of work and each crew can make 1,500 axes per day.

When the axe leaves the drop there is some superfluous metal still adhering to the edges, and forming what is technically known as a "fin." To get rid of the fin the axe is again heated in a furnace and then taken in hand by a sawyer, who trims the ends and edges. The operator has a glass in front of him to protect his eyes from the sparks which fly off by hundreds as the hot metal is pressed against the rapidly revolving saw. The iron part of the axe is now complete. The steel for the blade, after being heated, is cut by machinery and shaped. It is then ready for the welding department. A groove is cut in the edge of the iron, the steel of the blade inserted, and the whole firmly welded by machine hammers. Next comes the operation of tempering. The steel portion of the axe is heated by being inserted in pots of molten lead, the blade only being immersed. It is then cooled by dipping in water and goes to the hands of the inspector. An axe is subject to rigid tests before it is pronounced perfect. The steel must be of the required temper, the weight of all axes of the same size must be uniform, all must be ground alike, and in various other ways conform to an established standard. The inspector who tests the quality of the steel does so by hammering the blade and striking the edges to ascertain whether it be too brittle or not. An axe that breaks during the test is thrown aside to be made over.

Before the material of the axe is in proper shape it has been heated five times, including the tempering process, and the axe when completed has passed through the hands of about forty workmen, each of whom has done something towards perfecting it. After passing inspection the axes go to the grinding department and from that to the polishers, who finish them upon emery wheels.

WHEEL MOVEMENTS.

The question whether the top of a wheel in motion moves faster than the bottom is often discussed by those inclined to technical investigation. An exchange answers an enquirer in the affirmative, and offers the following demonstration of the fact: The top is moving in the direction of the wheel's motion of translation; the bottom is moving directly opposite. Here is a practical and easily understood demonstration of the fact: Take a wheel, or, if none be at hand, a silver dollar; mark points at the top and at the bottom and call these points A and B, (A at the top and B at the bottom) upon whatever surface the wheel is to be rolled over. Now roll the wheel or dollar for one-quarter of a revolution, which brings A and B upon the dividing line between what were the upper and lower portions of the wheel at the time it was started. It will then be seen that A and B move upon a radius equal to the diameter of the circle, and that by actual measurement A has moved a much greater distance and described a much longer curve than B, consequently it must have moved considerably faster. Both points, however, have described what are known as cycloidal curves. Now, if another quarter revolution be made, which will bring B to the spot occupied by A at the start (or at the top), it will be found that B has traveled the greater distance and described the longer curves. It is said that in instantaneous photographs of carriage wheels in rapid motion, the spokes at the upper part of the wheel are blurred and indistinct, while at the bottom they are plain and clear cut.—World's progress.

COURTESY IN TRADE.

One recent Saturday afternoon, a New York business man now residing in St. Louis, had occasion to make a small purchase in one of the local hardware stores, says Stoves and Hardware. Business was over for the day, and the one remaining clerk was about locking the door when the stranger called. The latter apologized for taking even a moment from the other's half holiday, but explained that he was in need of half a dozen lead sinkers for a fishing line—and would the clerk kindly accommodate him? To this came the reply that an apology was not necessary, that he, the clerk, was there for the purpose of selling goods, and that he would continue doing so so long as there were any purchasers in sight. The amount of this sinker purchase was exactly eight cents, yet the transaction was as courteously conducted by the salesman as if the amount had involved so many hundreds of dollars, and it is perhaps unnecessary to add that the purchaser will go to that store again whenever he has any hardware goods to buy.

On another day of the following week, the same business man found himself in need of an article for personal use, not in the hardware line, and went to one of the establishments dealing in such goods in order to procure it. He found the desired article, enquired the price, and was somewhat surprised when the salesman named a price about double what it was worth or for which it could be obtained at several other places. To his remonstrance, the salesman replied: "Well, that is our price, and if you don't like it you needn't take the goods." It is perhaps unnecessary to add that the salesman did not make a sale nor that the intending purchaser will not go again to the place where insolence is permitted to take the place of courtesy and tact.

The moral to this short story in two chapters is positively evident. The point is to apply it.

THE WESTERN IRON TRADE.

The Iron Trade Review of Sept. 14 says: "No setback has come to the tendency toward better things, but from present indications it will be a long time before the old volume of business comes back. Here and there a better run of small orders is reported, but buyers are feeling their way and waiting. In raw iron markets there has been large movement, but prices are as before. Stocks in buyers' hands were were never so low, and were usual amounts of pig carried at foundries and mills the statement of stocks in makers' hands would show a decrease. The active blast furnaces September 1 numbered 132, with a weekly capacity of 85,510 tons, against 169 active Aug. 1, with a weekly capacity of 107,042 tons. This means that the production of pig iron at the beginning of this month was at the rate of 4,500,000 tons a year, or about half as much as was produced in 1892. Coke iron production Sept. 1 was at the rate of 59,076 tons a week or 3,000,000 a year, which is 44 per cent. of the coke iron produced last year. There was a total accumulation of coke iron in August of 37,000 tons, nearly all in the Pittsburg district and the two valleys. Some sales of Bessemer pig at Pittsburg are reported at $12.50. Billets show a further weakness, a number of orders being taken at $19.50 by sellers anxious to get tonnage sufficient to start their mills. Structural material has seen a somewhat better market of late and the outlook for building contracts, particularly in the East, promises a continuance of moderate improvements."

No days of grace are allowed in Paris on bills payable at sight, as is the custom in this country.

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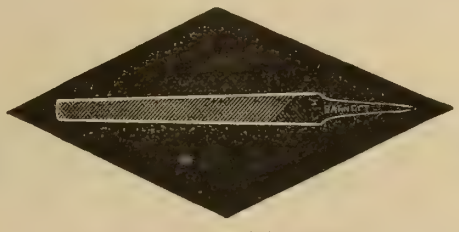
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GREAT AMERICAN CROSS-CUT SAWFILES.
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PAPER

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SANITARY EDUCATION OF PLUMBERS.

The following paper was read by Mr. Moxham at a conference of plumbers in Swansea, Eng.:

It is my intention in this short paper to make a few remarks on sanitation generally, pointing out the advisability of the plumber being thoroughly educated in the work. The importance of registration of plumbers under this particular heading is most forcibly brought to our notice, and it effects every individual, both rich and poor, as the sanitation, and thereby the health, of each and every household is in the hands of the plumber; therefore, should he not be well versed in sanitary matters generally, the results are, as we know, in many cases, disastrous. It is naturally, then, to the interest of the public and to all plumbers, to have the sanitary arrangements of the best and most approved principles. The community at large are now waking up to the importance of these matters, and the medical officers of health have an all-important work to undertake. The medical profession in general now look upon the value of sanitation, and frequently in cases of illness suggest the calling in of a thoroughly efficient person to examine the sanitary arrangements. Plumbing, or, more especially, plumbing fixtures, in the past were considered luxuries, but have now become a necessity, not only for convenience, but for cleanliness and health. Even a small house has its scullery sink, water-closet, and some have baths, while larger houses have a more elaborate system, and I think that it might be said that even with a larger houses the less sanitary fixtures to meet the demand the better, as with a multitude of fixtures these mean a larger number of soil and waste pipes, and the chance of leakage of sewage gas through defective joints increase correspondingly. In all houses the plumbing system should be arranged so as to exclude any possibility of the escape of noxious gases from the house drain or sewer. It is the duty of the plumber, as it is of every man, to take an interest in his work, and to have none but good work executed under his supervision, or, as I previously remarked, should bad work be done the results may be disastrous. The cases of unsanitary plumbing which come under our notice are numerous. Such as a defective water-closet, perhaps with no interception whatever between the pan and the sewer; defective piping; the sink discharging direct into the main drain; no ventilation to soil pipes; the water supply cistern for household purposes connected direct the water-closet; all of which make a house quite unfit for habitation. What a frequent occurrence on going to a water-closet to find it nothing more or less than a stink hole. It is all very well to say that the time occupied in a water-closet is so short that it is of little or no consequence; but it must eb borne in mind that this vitiated air is distributing itself about the house day after day. A water-closet should be fixed as as to be objectionable to no one. In carrying out some new sanitary arrangements lately I found the old wash-up scullery sink waste pipe was connected straight into the soil pipe, no trap or interception whatever, the consequence being that it acted as a ventilator to the drain. In another case I found the bath on an inside wall, with the waste pipe, which had no trap, carried to a length of fifteen feet or more under the floor, and then discharging itself into a cast iron head connected direct with the soil pipe. In many cases I have found water-closets on the inside wall with no window or ventilation whatever excepting the door. The great want of education in the past on this subject is obvious; but I say, and I am sure you will agree with me, that during the last few years plumbing has taken a big step forward in the right direction. We have at all times got to work under disadvantages, even so with the plumber, and one of those worthy gentlemen a few days ago, in pouring out his griefs to me, remarked the disadvantages they had at times to labor under, for he said, "Sometimes we have to work under a most faulty specification, and sometimes under a man who knows little or nothing of his work" (and the less he understands the more he wishes it to appear he knows). Another time, should the plumber point out some particular piece of work, making some suggestion that would be of material advantage, he is answered abruptly, and told to do as he is bid, that he is paid to work and not to give opinions of his own. Drainage into cesspits may be considered now obsolete in all large towns, but still there is no doubt at the present time that there are many old disused cesspits which are throwing off obnoxious gases, and it is most essential that care should be taken to see that all old drains and cesspits be removed from the premises. Large drains should be avoided. It has been proved beyond all doubt that matters easily carried away by a small pipe remain an obstruction to a large drain; as a rule four-inch diameter branch pipes are sufficient for soil or surface water, and then 6-inch pipes into sewer. Junctions should never be made at right angles with the pipe, but should always be made at a gentle curve or bend into the length of the pipe. All traps in drain pipes should be earthenware syphon traps with inlets and covers so laid and constructed as to be ready of access for cleansing out. Grease traps should be provided in connection with all scullery sinks, and so constructed as to be easy of access for removing the accumulation of grease periodically. It has become the practice of some to have two separate and distinct systems of drainage, viz., one for the waste from sinks, baths and rain water, the other for the water-closets alone. This, I say, is a mistaken idea, as we require all the waste water to help flush out the soil drains, and with one system of drainage instead of two —with a good flushing and sufficient fall in the drain, is what we require. Before the drains enter the sewer and outside the house, there should be constructed a brick shaft, three feet by two feet, with iron cover and syphon trap on the sewer side of the shaft, with inlet and outlet ventilation pipes. Sinks and water-closets should be placed against the external walls, so that refuse water or soil may be discharged into a drain outside the main wall. Water-closets should never be placed where they cannot be thoroughly ventilated directly from the external air. All drains and soil pipes should be on the outside of the buildings. Every sink, bath, lavatory, etc., should be trapped immediately under with a lead trap and brass screw joint and screw for use in case of choking, that each of these wastes should then be carried on the outside of wall, and discharge on an open gulley or into a vertical pipe head. All rain water pipes should discharge on open gulleys also. All soil pipes leading from the water-closets to drains should be either lead or glass glazed iron. Great care and attention must be given to the ventilation of the soil pipes—to have the ventilation shaft carried well up beyond the eaves, and not to be right opposite a window, in which case a certain amount of vitiated air would become dangerous to the occupant of the adjoining room. All water-closets should be trapped, and, wherever practicable, drawn lead pipes should be used in preference to the soldered joints. With regard to water-closet pans, it would be well to bear in mind that no D traps should be used under any circumstances, and that the best pans are the pedestal wash-out. Each water-closet should have a separate water supply cistern; the best method is to have a small three-gallon flush-out cistern connected with the water supply cistern, and in no case should the water supply for flushing purposes be taken direct from the cistern which is used for domestic purposes. Every cistern should have its overflow pipe discharging into the open air. All public urinals, water-closets, etc., for schools, workhouses, asylums, and large public institutions, should have automatic flush-out cisterns. The testing of drains, after they have been completed, or the testing of old drains, and the general subject of making thorough sanitary examination of houses, is a matter which should always have attention. Thus, when the piping of a house is completed, the pipes should be tested before the fixtures are connected. The test generally used is the water test. In concluding this paper, I wish to say I have endeavored to place before you the importance of sanitation generally; also the importance of the education of the plumber on this subject, and would suggest that in the coming winter educational classes should be formed in connection with the technical classes, and in this way help on our work. And now, plumbers, it is in your hands to forward this all important subject.

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SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.
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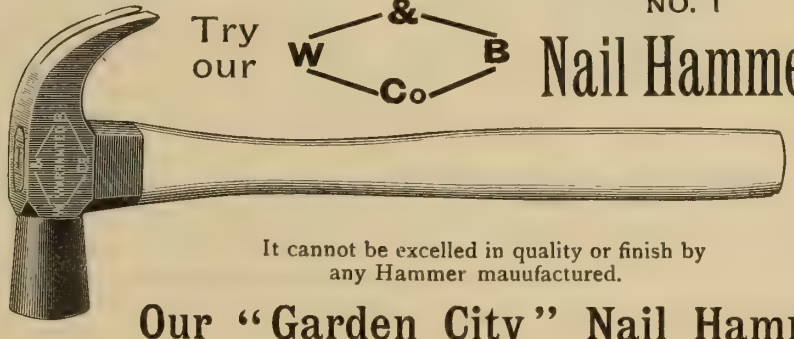
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The Bowman Hardware and Sporting Goods Co., Hamilton, Ont.

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

Leon P. Belair, trader, Montreal, has assigned.

Alex. McLellan, furniture, North Bay, has assigned.

George McDonald, general store, Ridgetown, has assigned.

N. W. Stiles, general merchant, Innisfail, Man., has assigned.

J. M. Nicholson, general merchant, Dundas, P.E.I., has assigned.

Kellend & Elliott, furniture, Hamilton, assigned to Walter Anderson.

G. A. Willett, general merchant, Dalhousie, N.B., has assigned.

John Pruder, general store, Colpoy's Bay, has assigned to R. C. Struthers.

W. D. Drew & Sons, hardware, etc., Gainsboro', Man., have assigned.

Samuel Halstead, tinsmith, Kincardine, has assigned to J. M. Stewart.

Hartman Happel, manufacturer, Berlin, has assigned to J. M. Livingstone.

Hockin Bros., general storekeepers, Dutton, have assigned to C. B. Armstrong.

John W. Clark, general storekeeper, Norwood, has assigned to Richard Tew, Toronto.

F. St. Jean, hardware merchant, Montreal, is offering to compromise at 50c. on the dollar.

D. McCallum, general merchant, Cannan, is offering to compromise at 40c. on the dollar.

Napoleon Dussault, general merchant, L'Islet, Que., is offering to compromise at 60c. on the dollar.

The Chown & Cunnigham Co., of Kingston, have gone into liquidation, and R. R. Crombie has been appointed liquidator.

A portion of the insolvent estate of Dennis Daniels, coal and wood merchant, 710 Yonge street, Toronto, was seized recently by Sheriff Mowat, and is still held by him. The value of these goods is some $2,000, but the executions now in the sheriff's hands and directed against the same estate, amount to $12,018.

James Dean, hardware merchant, 739 Queen street east, Toronto, has assigned to G. M. Gardner. The statement shows secured liabilities of $124, and unsecured $673, with assets consisting of three houses on Queen street, Nos. 739, 741 and 743, valued at $11,000, and stock amounting to $400, leaving a surplus of $2,600. Mr. Dean has been in business for some years. The creditors will meet Wednesday next.

PARTNERSHIPS FORMED AND DISSOLVED.

Halfield & Hurlbert, general merchants, Tusket, N.S., have dissolved.

SALES MADE AND PENDING.

J. H. Gillis, general merchant, Head of Tide, N. B., has sold out.

J. B. Clarke, general merchant, Exeter, is advertising business for sale.

The Standard Foundry Co. of Toronto has been sold out by the bailiff.

The stock of P. P. Raby, plumber, Montreal, is advertised for sale by bailiff.

R. M. Coombs & Co., general merchants, Elkhorn, Man., are reported to be selling out.

The stock of J. T. Craig, general merchant, Oxbow, Man., is advertised for sale by auction.

The estate of John Harris boat builder, Brockville, is advertised to be sold by auction to-day (Saturday).

The bankrupt stock of P. E. Venner, Quebec, was bought by Moise Fiset at 67¼c. on the dollar. The book debts were purchased by J. R. Savignac, of Montreal, at 17½c. on the dollar.

CHANGES.

A. N. LaForrest, tinsmith, Fredericton, N.B., has sold out.

Finerty & Graham, general merchants, are opening out in Carman, Man.

DEAD.

John Miller, flour merchant, Dalhousie, N. B., is dead.

Joseph Michaud, general merchant, St. Alexandre, Que., is dead.

FIRES.

The hardware store and stock of Nevsure, Clinton & Baker, Windsor, Ont., was damaged to the extent of $20,000 by fire Wednesday morning. Loss covered by insurance.

Fire last week destroyed the store and contents of Patrick Devine, hardware merchant, Renfrew, Ont. Mr. Devine estimates his loss in damage to goods and destruction and damage to buildings and interruption of business at this season at $15,000, on which there was only a partial insurance—$2,000 on stock, $800 on the store, and $1,000 on the dwelling house.

WHAT ARE FLUXING ORES.

Ores rich in lead, says the "Engineering and Mining Journal," are often referred to as "fluxing ores," which the silver-lead smelter must have for admixture in his furnace charges. The term is erroneous, for lead is not a flux, the part which it plays in the furnace being to collect the precious metals. There must be a sufficient proportion of lead in the charge—say 12 per cent.—else there will be increased losses of silver in the slag; hence the demand for ores of high grade in lead by the smelters, who need them in order to mix with the silicious, or dry ores. Lime and iron which are used in the furnace charges to combine with the silica of the ores in making an easily fusible slag are fluxes, but that term cannot properly be applied to lead ores unless they are basic in character, i. e., containing more iron, manganese or lime than silica, in which case the basic excess is fluxing.

SOMETHING ABOUT HAMMOCKS.

Few people who use Mexican hammocks know anything about their history previous to their arrival in this country, says House Furnishing Review. Large tracts of country in Yucatan are planted with an evergreen succulent plant indigenous to the country. It resembles the plants of the genus aloe, with which it is sometimes confounded. It grows well in stony soil, and requires little care. The young shoots are taken from the mature plant and planted ten or twelve feet distant from each other.

This space is necessary because when mature the leaves are about five feet long, and, as they are tipped with a very fine point, the laborers must have ample room to pass between them. After three years' growth the first leaves are ready to be cut; the plant continues to yield filament for about twelve years, after which it runs to seed, and the stems are utilized where they stand by planting beans there, so that the vines may twine about them. The hemp derived from this plant is called "Sisal," because it used to be shipped from the port of Sisal, which was afterward abandoned for Progreso, from which place $7,000,000 or $8,000,000 worth of fibre is now exported every year, the greatest part being landed in New York. When the mature leaves are cut they are carried in wheelbarrows to the mill, and fiber is separated by machinery from the green part of the leaf, which is thrown out to serve as fodder for cattle or returned to the soil as manure.

Twenty years ago comparatively few hammocks were made for exportation, but they were, as they are yet the only couch used throughout Yucatan. Beds are considered uncomfortable. The hammocks used there cost from $2 to $30 each. Presently came the demand for cheap hammocks abroad, and the female portion of the community were set to making something very much coarser than the work they were accustomed to—hammocks that they themselves would not have deigned to rest in—worth 50 or 60 cents when finished.

An expert can make three or four of these hammocks a day and receive about 12 cents for each. This article is sold in New York for from $1 to $3. Colored hammocks are made by combining red, blue, and yellow twine, the dyes being obtained from native woods. The twine is twisted by men and boys, who roll the fiber rapidly between the palm of the hand and the nude thigh; beginners tie a piece of leather over their skin.

In the Eastern part of the peninsula a particularly fine, soft hemp is produced. It is called "pita," and is so highly appreciated that none is exported, the people of the country keeping it for their own hammocks. The fashionable young women of Merida, take pride in netting their own luxurious couches.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

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We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

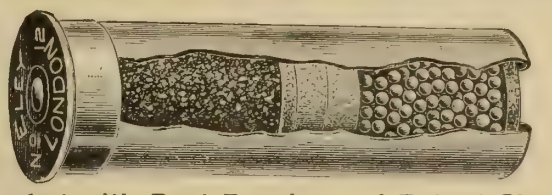
WESTERN BRANCH:

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

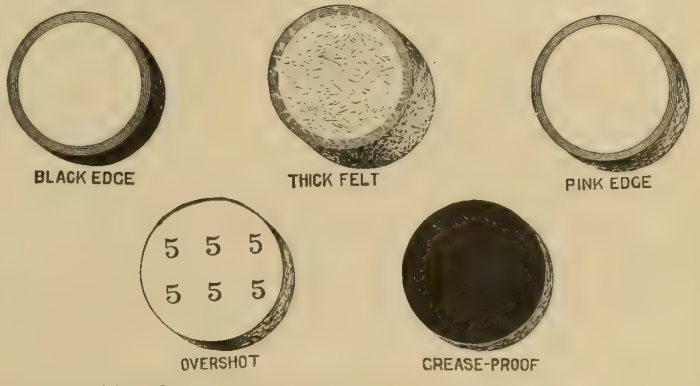
. . ELEY'S . .

CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. Wholesale Only

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

To the Stove Trade

We carry stock and can . . . . . ship promptly.

We have the following patterns for Repairs, PLATES. UNIVERSAL STOVES AND RANGES, lately made by J. M. Williams & Co., Hamilton; SPLENDID BASE BURNER, lately made by the Toronto Stove Co., Toronto; BRILLIANT RANGE and COOK, FORRESTER, CANDY FURNACE, QUEEN RANGE, lately made by Harte & McKillop, Belleville. . . . . .

The Wm. Clendinneng Son Co., Limited,

145 to 171 William Street, MONTREAL, QUE.

Cutlery

SPECIAL VALUE IN

Dickinson's "Damascus Blade" Carvers.
Dickinson's Improved Ivoride Tables, warranted not to shrink or discolor.
Joseph Rodgers & Co.'s best quality Pen, Pocket, and Butcher Knives.

. . . SAMPLES now ready for Fall Trade.

STEEL. Full stock of Jessop's warranted Tool Steel, at lowest prices. . .

A. C. Leslie & Co., Agents
MONTREAL and TORONTO.

You can lose more than we do by not subscribing for this paper.

MUNN'S LIQUID GLUE
IS THE BEST.

THE ART METROPOLE, Agents.
131 Yonge Street, TORONTO.

Clarkson & Cross
ACCOUNTANTS . . .

Established 1864.
26 Wellington St. East, TORONTO

OUR SALES OF
"BURHAM" Portland Cement
For the past 8 months have been
25,499 CASKS.
"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,
McRAE & CO., OTTAWA



BERGER BROS.
Manufacturers of
Tinners' Hardware.
Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.
237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	23½ 24
trip "	25, 25½

Tin Plates—*Charcoal Plates, Bright.*

	Per box
M.L.S. equal to Bradley	
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 00 4 25
I.X., "	5 00 5 25
I.X.X., "	6 00 6 25
I.XXX., "	7 00 7 25
D.C., 12½ x 17	3 75 4 00
D.X.,	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be purchased at 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

12x30 up to 24 gauge	6½ 6½
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¾ " nd thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2¼, 2¾
26 "	2¾, 2¾
28 "	2⅔, 3

Canada Plates.

Blaina	½ bright 2 75	....
Abercarne	2 75	....
Lion	....	...

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head

16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾

Gordon Crown—

16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cent per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6	6	3-5
" ¼ " "	4⅔	5	
" 5-16 " "	4½	4¾	
" ⅜ " "	4¼	4½	
" 7-16 " "	4	4¼	
" ½ " "	3¾	4	
" ⅝ " "	3½	3⅝	
" ¾ " "	3	1-5	
Trace, per doz. pairs	$3 60	5	90
German coil, per 100 ft	1 65	2	70
Jack chain, iron, single, per doz yards	0 13	0	50
Jack chain, double, per doz yards	0 15	....	
Jack chain, brass, single, per doz yards	0 20	1	10

Copper—*Ingot.*

English B.S "	0 12½ 0 13
Lake Superior	0 13 0 13¼

Bolt or Bar.

Cut lengths, round, ¼ to ⅜ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths about fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x48 and 14x60	0 26 0 27

Brazers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 19½ 0 21
" 35 to 45 " "	0 17½ 0 18
" 50 lb and above per lb	0 16½ 0 17

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelte .

Foreign, per lb	0 04½ 0 05
Domestic "	0 04⅝ 0 04¾

Zinc Sheet.

5 cwt casks	0 05½ 0 05¾
Part casks	0 05¾ 0 06

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 04½
Sheets, 2½ lbs, sq. ft, by roll	0 04½ 0 04¾
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04½ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 15½ 0 16½
Standard	0 14½ 0 15½
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 13
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do "	4 75
No. 2 Do "	4 50
No. 3 Do "	4 25

Prepared Paints.
(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.
(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red, (best) " "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " " "	1 25 1 90
Canadian "	

Paris Green, per lb	0 13½ 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure, 8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40
White Shellac	2 25

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 44 0 46

Castor Oil.

Best, per lb	0 07⅞ 0 08

Cod Oil.

Cod Oil, per gal	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list
Munn's, dis. 25 to 30 per cent. off list

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list.
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10 p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 89 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb 0 25 0 30

Handles.

Axe per doz 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

NEW ARRIVALS

30 Cases CUTLERY AND GUNS

ALL NEW GOODS.

Finest Finish. Best Value.



NEW ARRIVALS

20 Casks Cattle and Trace CHAINS

10 Tons Coil Chain.

Five Cars Window Glass.

Bowman, Kennedy & Co., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Finnsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   - Basis—50 to 60 dy 2 30
   - 40dy 2 35
   - 30 dy 2 40
   - 20, 16 & 12 dy 2 45
   - 10 dy 2 50
   - 8 & 9 dy 2 55
   - 6 & 7 dy 2 70
2. American Pattern Only
   - from 4 to 5 dy 2 90
   - 3 dy. (lath) 3 30
3. Canada Pattern Only
   - from 4 to 5 dy 2 80
   - 3 dy. (lath) 3 20
   - 3 dy. A.P. Fine 3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 60 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R. Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 25 per ct.

Pails.

alvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross 1 00 4 25
" Carpenter 2 25 3 60

Picks

Per doz 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L.Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz 1 35 2 00

Pruning Shears.

Per doz 4 00 5 50

Pulleys

Hothouse, per doz 55 1 00
Axle. 22 33
Screw 27 1 00
Awning 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot 3 3½
Sliding Door, " 3¼ 3¾
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9½ 9¾	10¾ 11
¼, 5-16, ⅜ in.	10 10½	11½ 11½
Cotton, per lb.	18	20
New Zealand	9	9½
Russia Deep Sea, per lb..	12¾	13
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 to 40 per cent.
Hack, complete, each 75 2 75
" frame only 75

Saw Sets.

Per doz 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz 3 25 4 00
Bench iron per doz 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P., dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Soap

Sapolia per dozen 1 25

Soldering Irons.

Per lb 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons ..... per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties

Cow, per doz ..... 1 [illegible] 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c

Tinware.

Stamped, dis. Asan list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9 00

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " ..... 0 30 0 5[illegible]
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8,10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4½ 4¾
" 4 " 4 & 6 " "
" Plain twist, 2&3 wires
" Steel thorn and ribbon 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... .... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz 5 80 7 0
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS, KNIVES, FORKS, SPOONS

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

---

SEWER PIPE
WATER PIPE
INVERT BLOCKS

Canadian, Scotch or American

Write for Prices to

THE COLMAN-HAMILTON CO., LTD.

44 Price Street, TORONTO

Also for Fire Brick, Fire Clay, Gas Retorts, Gas Works Supplies, Portland Cement, Keen's Cement, Roman Cement, Mortar Colors.

Phone. 3763 Mention this Advt



PAINTERS

Will find the cheapest Paint Brushes are those having our . . .

Flexible Bridles—

Why? Because the bridle can be taken off and replaced in a moment. The paint circulates and the stump never hardens. You can wear the brush down shorter, therefore it will last much longer.

Ask your dealer for them. Made in round, oval, and flat. All sizes and qualities.

CHAS. BOECKH & SONS

Brush Manufacturers

TORONTO - - ONTARIO

THE HATHEWAY PATENT FENCE WIRE.

Pat. Nov. 19, 1889.



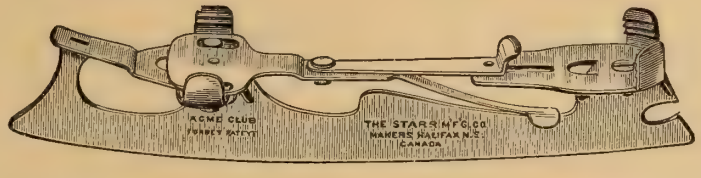
Above Cut Is One-half Actual Size.

The Hatheway Patent Fence Wire, the most popular fence wire throughout the United States, and fast gaining that position in the Dominion of Canada, as it contains all the requisite qualities of a fence wire, being handsome, strong, visible—seen at a long distance; will not sag or get out of shape; allowance for contraction and expansion, heat and cold; being broad, requires less strands to make a complete fence; easily put up, splices itself; will not injure stock. Put up in spools of 120 lbs. each. For sale by all the leading hardware stores in the Dominion.

Manufactured by THE COLLINS MFG. CO., 84 Adelaide st. E., Toronto

---

The Genuine Acme



THE LEADING HIGH CLASS SKATE

All genuine "Acmes" have our registered trade mark "ACME," and the Company's name and address in full, stamped on each runner. Beware of imitations.

The Starr Mnfg. Co., Ltd., SOLE MAKERS

Halifax, Nova Scotia.

: : For Sale by all the Leading Jobbers : :



OXFORD "OXFORD" OXFORD

. . LINES . .

Our Leaders for 1893--are the

Countess of Oxford

. . AND . .

Art Countess

and the BASE BURNERS

DUCHESS OF OXFORD

. and . **KITCHEN WITCH RANGES**

Put these Stoves on Your Floor and Command the Trade. . . . .

The Gurney Foundry Co., Ltd., Toronto

The Gurney-Massey Co., Ltd., Montreal

Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. — 185 St. James St, Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 x 4 Barb
Plain Twist and
Strip Fencing

And Staples for same.

Write for Prices and Discounts.

ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

All Kinds **All Sizes**



FRUIT JARS

PRICES RIGHT. SHIPMENT PROMPT.

Gowans, Kent & Co.,

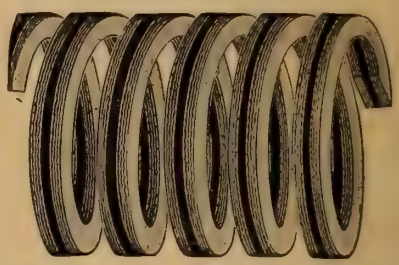
TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., Toronto.

"THE SEAMLESS FLANGED DRIP PAN."



Made of the best quality of Siemens-Martin Pickled and Cold Rolled Steel.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife or cook to litt the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The absence of lapped edge, seams and wire bead, which collect and retain grease and filth of all kinds.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

THOS. DAVIDSON & CO., Montreal, Can.

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, SEPTEMBER 30, 1893. No. 39.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

MAGNOLIA METAL CO.,

London Office: 75 Queen Victoria St.
Chicago Office: 41 Traders Building.
Montreal Office: H. McLaren & Co., Agents

Owners and Sole Manufacturers,
74 Cortland Street, NEW YORK.

In Sorting up for Fall

You should have in Stock . . . .

Good Goods Most Satisfactory to Handle

MANDER BROS. VARNISHES

In Pint, Quart, ½ Gallon and 1 Gallon tins. Always reliable and a profitable line to handle.

BLUNDELL'S ART ENAMEL

Brilliant, Beautiful, improves everything in the household. Send a postal for handsome samole card free.

GREEN SEAL GOLD PAINT

Ready mixed for use.

ESTELLE'S UNIVERSAL GOLD PAINT

Bronze and liquid separate.

GREEN SEAL BRONZE POWDERS

Superior brilliancy in all colors.

WHOLESALE ONLY BY

The house for Fine Paints, Varnishes and Specialties.

Walter H. Cottingham & Co.

MONTREAL

Sporting Powder

Curtis's & Harvey's

F. FF. FFF.

4 6 DIAMOND GRAIN

Pat. Brown. Basket.
Tower Proof Rifle.



CLYDE MILLS CO.'S . .

SMOKELESS

In ½ lb. 1 lb. 12½ lb. 25 lb.

. . PACKAGES . .

RICE LEWIS & SON, Ltd.

Sole Wholesale Agents . . . King St., TORONTO

Copper Cider Kettles

(BRAZED AND HAMMERED.)



PLATE 237.

PRICES ON APPLICATION. CORRESPONDENCE SOLICITED.

MANUFACTURERS OF

Brewers, Distillers, Confectioners . . . Varnish Makers Plumbers and Marine

Copper Works

The Booth Copper Co.

Formerly BOOTH & SON. • 122 Adelaide Street West, TORONTO

STANDARD . .

. . STOVE-PIPE

PATENTED.

Packed 25 joints in a closed crate.
It requires **NO RIVETS OR TOOLS** to put it together.
The seam does not require pounding down.
It is uniform in size, and, being crimped at small end, secures a close and easy fit.
It has a coating which prevents rust.
It can be bought as cheap as ordinary misfitting stove-pipe. - - - - - - - - -
Being nested, secures low freight rate.

Kemp Manufacturing Co.

TORONTO, ONT.

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, SEPTEMBER 30, 1893 No. 39

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

HEAD OFFICE: - - 10 Front St. E.
MONTREAL OFFICE: - 146 St. James St.
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NEW YORK OFFICE: Room 41, Times Building.
Roy V. Somerville, Manager.
EUROPEAN BRANCH:
Canadian Government Offices,
17 Victoria St., London, S.W.
R. Hargreaves, Manager.

John Cameron, General Subscription Agent.

Some lines of trade we find creeping into the domain of the other. In the hardware trade the opposite obtains; it is the other trades encroaching upon it. It does not require much specifying to prove this. One instance will suffice; and that one instance is in regard to gas stoves. The gas stove is, comparatively speaking, a modern invention, but instead of the hardware man handling it the sale in both this country and in the United States is practically in the hands of the manufacturers of gas. No blame is attached to them. If anybody is to blame it is the hardware merchant himself. It has been evident for some years that the gas stove was destined to go into general use; but for some reason or other the hardware merchant has stood idly by and allowed the gas men to go in and enjoy all the advantages of a new and growing trade. If anybody has a right to enjoy a monopoly of the sale of gas stoves it is the hardware man. Gas stoves legitimately belong to his business. If they do not, to what trade do they belong? Because the gas man makes the gas it is no reason why he should control the sale of gas stoves, any more than should the miner sell the ordinary coal stove, or the farmer who raises the wheat the loaves into which it is made. The trade is yet in infancy, and it is therefore not too late for the hardwareman to step in and take a share of what by right wholly belongs to him.

* * *

It is not infrequently found that so-called lower-priced goods are not really cheaper than those with which they enter into competition. Not long since HARDWARE had occasion to point out that there were Mrs. Potts' sad irons on the market which were selling below the other makes, but which were under the standard in weight. This latter fact was not generally known by retail merchants, and the result was a disturbation of prices for a time. A similar condition of affairs has now developed in regard to boiler tubing. The particular phase of the difficulty in this instance is in the matter of gauge. In contracting for boiler tubing it seems there is no specification as to gauge, and this fact has been taken advantage of by someone who is placing on the market tubing that is lighter than the ordinary article. Some say about two gauges smaller. This, of course, sells at a lower price, and as a result dealers in the ordinary gauge are experiencing some difficulty in doing business, and are urging that a gauge should be specified when calling for contracts for boiler tubing.

* * *

The abuse of a thing often induces people to look upon the thing abused as an evil when it really is not such. Speculation is a case in point. In a recent issue of the Digest appeared an article translated from a French paper, which had this same thought running through it. "Speculation," says the writer, "like most of the acts of men, is good or bad, according to the use made of it, according to the character of those who devote themselves to it, according to the measure in which it is employed. No subject is more difficult to discuss, for few matters are so obscure and misunderstood, not only by the public, but by those who, by their business, may think themselves qualified to understand the question." Speculation, as the writer referred to says, in its true sense, is nought but the legitimate exercise of one of the faculties of human activity. It is the excesses that are to be blamed, such, for instance, as those exhibited in Toronto, Winnipeg, and other cities in this country. But these excesses are not the rule. The very exposure that these excesses get and the manner in which they are denounced is an evidence of this. "To speculate is to consider, and, subsequently, to reflect, to make deductions, perform an act of reasoning," is the definition given in the article published in the Digest. In a word, speculation is the result of a process of reasoning, and thus differs radically from gambling, which depends wholly on chance. "Moreover, we must not understand by speculation dealings only in the public funds, in shares and bonds, or believe that it is confined to operations on time. Merchandise of every kind, real estate itself serves as food for speculation." Whatever the retail merchant buys he does so with the expectation of selling it at a higher price than what he pays for it. "Speaking generally," says the writer, "the speculator acts as a regulator. He is the flywheel of the machine who keeps up its constancy of movement. He is as much opposed to its running too slow as to its running too fast. The speculator for the rise steps in when prices seem to him unreasonably depreciated; when, for example, the shares of a corporation, of which the capital is intact, have fallen below par. The speculator for a fall seeks to establish an equilibrium when the enthusiasm is pushing prices to unreasonable heights, is paying excessive premiums, and is helping to raise shares to a price which is no longer in harmony with the revenue they yield. For these reasons I affirm that speculation of all kinds, even that

of the stock exchange, when not carried to excess, is a benefit, and ought not to be discouraged either by law or public opinion." These are wise words.

* * *

What with the World's Fair, fall fairs, and other af-fairs, the country merchant seems to have his time pretty well taken up—visiting them. The only person that seems inconvenienced thereby is the commercial traveler; and he complains that every other of his customers is either away at Chicago or attending the fair in his own neighborhood. But he won't lose much in the long run, for when the country merchant settles down to business again it will be with a mind broader from what he has seen and heard and felt, and with his expectations of winter trade brightened with the fullness of the horn of plenty as exhibited at the fall fairs this season. While he is in this spirit he will naturally buy more liberally than he otherwise would.

* * *

Apropos of fall fairs arises the idea of the influence of these institutions in bringing about a better acquaintanceship between the wholesaler and the retailer on the one hand and the retailer and consumer on the other. One of the drawbacks to trade in the past is the want of a proper understanding between the different branches of the trade, and between retailer and consumer. The one, the exhibitions in the larger cities, such as Montreal, Toronto, Hamilton, London, Ottawa, are gradually indirectly accomplishing. We had a practical illustration of this during the recent exhibition in Toroto. Every day during the two weeks which the exhibition was open saw numbers of country merchants paying their respects to the wholesale men; and some days during the last week the warehouses were actually crowded with them. These yearly visits are gradually becoming more fashionable; and the result of this better acquaintanceship will be a gradual improvement in business methods and the extension of sympathy between wholesaler and retailer. On the other hand, the country merchant by rubbing shoulders with his customers at the local fair gets better acquainted with them, learns more about what they are doing in the way of raising produce and stock, and of the improvements of different kinds that are being made on the farm. One of the ways to build up trade is to show your customers that you are interested in them. There is not a man or woman whose pride is not tickled when an interest is taken in themselves or in their possessions. It's human nature; and it pays the merchant to cater to it.

THE QUESTION OF CUTTING.

The facts published a couple of weeks ago in this paper about the agreement between the different iron manufacturers with regard to bar iron, cut nails, etc., and some difficulty which had arisen with the makers down by the sea caused a leading Montreal merchant to talk pretty freely on the question of cutting to the correspondent of HARDWARE.

"I don't want my name mentioned," said the gentleman, "but when I say that it is not only in iron that merchants feel the baneful effects of cutting, I am sure that a business confrere in any other line who has any experience of it will bear me out. For this reason, although a buyer myself, I am not one of those who are prepared to fall into line and sail against combinations, etc., after the approved fashion of some would-be economists. Of course anything can be carried too far, but I think an agreement of the sort properly carried out is really beneficial to jobbers; and in this category I include the iron agreement. Everyone knows what a merry war there was in former years over cut nails, which were merely used as a leader to tempt orders for other goods, and I am fully satisfied that no merchant who does a perfectly legitimate business wants to see the same state of affairs again. Besides each successive year sees decided advances made in different parts of the country to a more general and better understanding on the subject of prices and profits. The fact that a large number of articles are sold on which the profit is divided between the manufacturer, the wholesaler, the jobber and the consumer, etc., is becoming widely recognized. Many traders also who have not hitherto seriously considered the matter now begin to see that it is both a mistake and immoral to sell goods at a loss. This all means something, and if traders of every class will only throw their influence into the scale to abolish the ruinous practice of cutting, it will be sure to eventuate in placing the mutual business relations between buyer and seller of every grade on a firmer and more friendly footing, to the great advantage of all concerned. For all these reasons I hope to see cutting in bar iron and nails prevented, and I trust that all branches of the trade will unite on this," and there the conversation terminated.

A CANADIAN INVENTION.

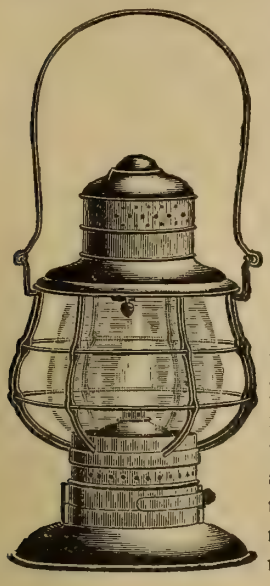
E. Decew and A. E. Carpenter some years ago invented a machine for capping cans, and placed it in the Ontario Canning Factory, Yonge street. The device proved such a success that the inventors had it patented for Canada and United States. This machine is capable of capping 1700 cans an hour, but under ordinary circumstances from 800 to 1000 is the number usually capped. Before the introduction of the capper the work was all done by hand, average number capable of being capped an hour being about 200. Last spring the machine was manufactured in the States, the inventors receiving a royalty. In selling the cappers, it was represented that they could cap a certain number of cans per hour—about 1,000 an hour. the majority of firms, when they commenced to operate the machines, found that they would not perform nearly the amount of work guaranteed. They accordingly applied to the manufacturers, who invariably sent Mr. Burkholder, Main street east, who had been an employe of the Ontario Canning Company, to operate the machine. He could always turn out more cans than guaranteed by the company, but seemed to be the only man capable of operating the machine successfully. The fact has caused considerable complaint among those who have invested in the machine, but as Mr. Decew stated to-day, it was just the lack of Canadian ingenuity in not being able to operate the machine that was the trouble. He stated that he has four men running machines in the factory every day, and capping from 800 to 1,000 cans an hour.—Herald, Hamilton.

SUGGESTIONS FOR THE SHOP.

It is strange what a difference there still exists in the way of turning out work to the best advantage in a machine shop, remarks a contemporary, even when the same article of manufacture is under consideration. This is no doubt due more to the extent to which the business is carried on than to anything else on the part of shop management, for no concern, however well equipped, would fit up for a small order as when the whole shop is to be devoted to one special thing. Take the item of pattern making. We know of one concern in starting in on a new device that paid no attention to cores or core boxes, but turned out a form to cast from, more for the object of getting material to work from than for any assistance from the foundrymen, and had the castings thrown into the machine shop in great numbers. Every mechanic was his own designer of jigs and special tools, and soon the upright drill and heavy lathes were loaded down with home-made attachments for cutting out steam ports and channeling passages for reaching the inside of the work, and no wonder that in the item of brass strips alone an income of almost sufficient to meet the expenses of running one lathe was obtained.

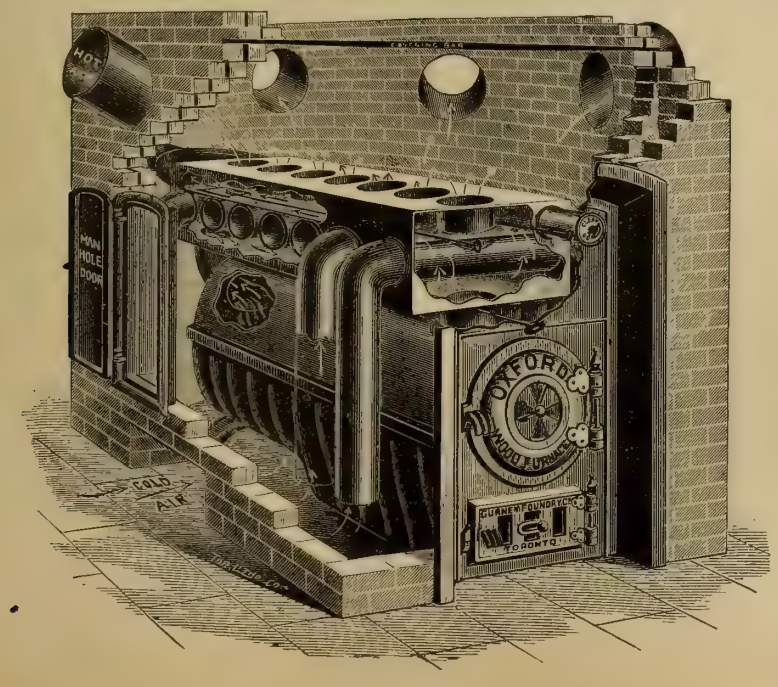
AN IMPROVED RAILROAD LAMP.

A lantern for which H. S. Howland, Sons & Co., Toronto, are having a good demand is here illustrated. It is called No. 39 railroad, and is especially adapted for railroad men, contractors, etc. The lantern has a new feature this year, a patent spring attached to the bale which always keeps the handle in an upright position. This is a decided advantage to any lamp, much more a railroad lamp.

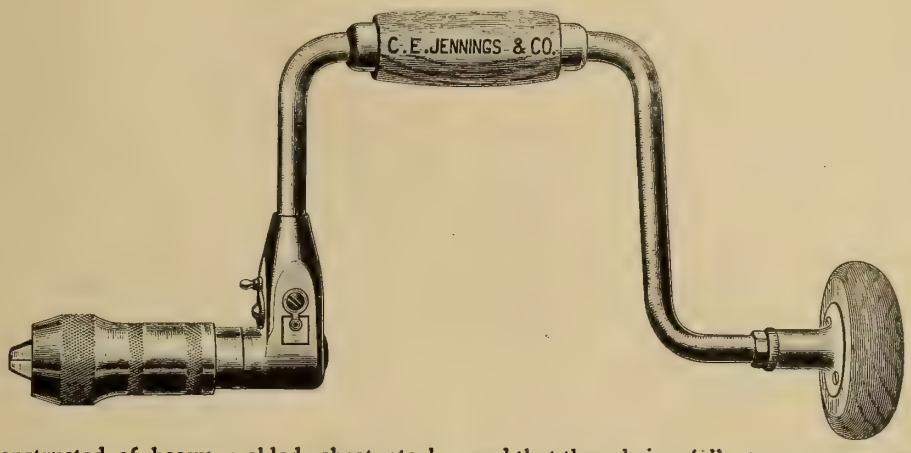


AN IMPROVED WOOD FURNACE.

Gradually are inventive minds bringing about improvements in heating apparatus whereby maximum of heat may be obtained at a minimum consumption of fuel. One of the latest improvements in this particular is noticed in the Oxford Warm Air Wood-Burning Furnace which is being manufactured by the Gurney Foundry Co., of Toronto. "It has been our aim," say the firm, "to secure at once the greatest possible economy, together with thorough efficiency and promptness of action, and we have brought to our aid the experience of some of the most competent furnace men in this country and the United States, and we feel sure that our friends will recognize that we have placed before them a wood furnace that gives promise of revolutionizing the wood furnace trade of this country." The accompanying cut shows the character of the improvements. It will be observed that while the cast iron wood holder of the fire box section has been retained, that the upper part of the fire box or the dome has been constructed of heavy welded sheet steel. The body is one solid casting and without joints of any kind. There are two distinct radiators, both made of sheet steel. By following the line of the pipe radiator, as shown in the engraving, it will be observed that a great surface is secured, with ready means of access for cleaning, and with just enough of resistance to the fire to economize in fuel consumption. A reference to the other form of radiator will show that equally efficient methods for cleaning are provided, together with a very long fire travel. A peculiar feature of this radiator is that the air heated by the inner passage through the radiator does not pass over the firebox surface or the outside of the radiator, but is taken directly from the floor of furnace chamber through drop tubes, as shown in cut, to the radiator, thus avoiding the passage of the same air over the firebox surface, and also through the centre of the radiating surface. It will be noticed by glancing at the arrows that the cold air drawn from the floor is heated by fire passing both under and over the tubes conveying it. In a word, it is claimed that by the improvements noted nearly double the heating surface is secured, and that there being fully 50 per cent. more fire travel than in other similar furnaces, all the atoms of heated products are extracted before they reach the flue.



THE GOODELL BRACE



AN IMPROVED BRACE.

The accompanying illustration is that of The Goodell Brace of which H. S. Howland, Sons & Co., Toronto, are selling a great number. The braces are made of forged steel. Sweep and jaws are nickel plated and are superior in every respect both in material and workmanship, and have several improvements not found in any others. The method of taking up the wear of the head and handle supplies a long felt need, and adds greatly to their value.

THE DOME BOTTOM TEA KETTLE.

This tea kettle is destined to take the lead over all others in the market, as it has several important advantages over the old style kettle. 1. It will boil water in about half the time, saving thereby about 50 per cent. fuel. 2. On account of its shape the heat concentrates in the dome and remains there instead of passing up the chimney. 3. The same quantity of water covers a larger area hence it has more heating surface. 4. Made in a dome shape it is much stronger. The kettles are manufactured from the best 16-oz. copper and XXX tin. In other makes the copper and tin are usually as thin as tissue paper, heavy tin and copper to be specially mentioned. The Collins Mfg. Co., 84 Adelaide street east, Toronto, are the makers.



ANNEALING STEEL.

After steel leaves the hands of the manufacturers, and before it receives the finishing touches of construction, which fit it for its intended use as an edge tool, it is generally submitted to three operations, which principally affect its intrinsic value, because they determine its internal structure. These three operations are annealing, hardening and tempering.

If the steel is of the proper quality, to commence with, and these three operations are nicely performed, the steel will be equal to its duty, but if any of these conditions are not fulfilled, the steel will be of less value and will not be at its highest mark of usefulness. Steel improperly annealed is injured for any purpose.

It may as well be understood at the outset that these operations all have to do with the control of certain characteristics of the mysterious method of which no man has given evidence of a thorough knowledge. We know that steel when cooled quickly from a red heat becomes abnormally hard, that is, it becomes more unpierceable and unindentable than if it was permitted to cool gradually in the open air. We also know that if we delay its cooling from a red heat, it becomes abnormally soft, more easily dented, more easily filed, pierced or bent, than it would have been if it had cooled as rapidly as it naturally would if exposed in the open air.

Reasoning from what has been observed, it has been conceived that steel is a union of iron with carbon, and that the carbon is protean, inasmuch as it shows itself in varied shapes. When the steel is annealed it is supposed that the carbon is in a crude graphitic state, not in an alloy with the particles of iron, but standing in the interstices between them. When the steel is hardened it is supposed that the carbon is in alloy with the iron and actually united with it in substance. In the soft state it has been termed "cement" carbon; in the hard state it has received the name "hardening" carbon. It is the same carbon in protean guise; if one is a normal, and another an allotropic form, it is not reasonable to insist that in the finer manifestation of its appearance—in the alloy which it must have been exalted to its highest nature to have entered into—it is not in its purest form.

From the results obtained, it is supposed that at a certain degree of temperature carbon in the graphitic form sublimes or vaporizes, becomes as thin and penetrating as heat. At, or near, this point the changes take place which produce either softness or hardness, and therefore this is the heat which must be regarded, either in the operation of annealing or of hardening.

When it is urged, as is very common at the present time, that every piece of steel has its own individual, distinct point of temperature, at which it will harden best, it must be understood that the cause of this peculiarity is that these pieces of steel contain something else besides carbon and iron, as well as that they contain different proportions of these two substances; and with this must be borne in mind the very startling fact that a difference of one part in a hundred will make iron steel, or steel cast iron. One of the first who undertook to give any account of the chemical nature of steel gave the proportion of carbon as one to three hundred of iron.

In the process of annealing it is necessary to change the internal structure of the metal by separating the alloy into its constituents and setting and keeping them apart, for when the alloy is existent the steel is hard. On this subject a good and competent authority, J. A. Brinell, says: "Steel carried to a white heat, if its carbon is to be changed to cement carbon, must cool slowly to a temperature lower than that to which unhardened steel must be carried in order to alter its carbon to hardening carbon.

"The change from hardening carbon to cement carbon is always accompanied with a development of heat. 'This is a point that deserves great consideration, as it indicates a great internal alteration.' To convert hardening carbon into cement carbon requires time, as well as the proper temperature, while, on the other hand, the change from the cement carbon to the hardening carbon seems to depend exclusively upon the degree of temperature. The change from cement carbon to hardening carbon takes place very rapidly if the temperature is high enough. On the other hand, the alteration of the hardening carbon goes only more slowly during a greater part, both of the period of heating and the period of cooling."

From the facts here presented, and which have been substantiated by experiment, at least on certain varieties of steel, it would appear that, at these tests, the carbon leaped suddenly into a penetrating vapor when it arrived at a certain temperature, and pervaded the iron as with an explosive force, but that to get it to come out from the iron again, no such force is at all available. It will come quietly out of its own accord, from an innate tendency to take another form, when the right conditions are presented, but it will not be driven out instantly, as it went in.

Taking a piece of steel in its natural condition, from the forging, where it has been subjected to hard blows, it will be more dense than where less pressure has been upon it; it will be harder there, from mechanical causes, just as iron is hardest where it is most hammered. Besides this inequality of hardness, there will be another, caused by the carbon, in certain parts, being, as it happened in cooling to be caught, in more or less of a graphitic state. It is necessary to have the internal strains of this piece relieved before it is finished up into the form in which it is desired to have it appear after hardening. The reason for this is that if they are not relieved before the piece is finished they will relieve themselves when the work is heated to be hardened, and in so relieving themselves, they must change the form of the piece to the extent necessary to give this relief, and in so doing the piece will be deformed, and not appear after hardening in the shape that was desired.

In order to relieve the internal strains, it is necessary to heat the piece to whatever degree of heat may be needed to free so much of the carbon from the alloy as will suffice to make the material sufficiently ductile, flexible, and penetrable to work with the facility required. As the heat increases and continues it may be supposed that the whole of the carbon assumes its most volatile nature and pervades the whole substance of the iron. If now it is suddenly cooled it will be found to be in its most expanded state, for steel is the largest when it holds most of its carbon in alloy, or in the hardening form. But instead of quickly cooling the steel, let its cooling be delayed as much as possible, especially from a bright cherry red, until it ceases to be red in the dark, and in this delay the larger part of the carbon will have escaped from a union which it found growing coercive and fettering as the bounds gradually closed upon it, not so fast but that it got a chance to free itself.

There is no advantage gained in heating steel inordinately in order to obtain greater softness. All that can possibly be attained by heat is to volatilize the carbon and loosen the texture of the iron enough to allow it free circulation. After this, all the softness attainable must come by the extent of time in which the carbon may be allowed to assume its individual existence, or if it is deemed advisable to change the constitution of the material, oxidized material may be heated in juxtaposition, which, by chemical affinity, will lure the carbon away to new combinations. I have seen large quantities of "decarbonized" steel gun barrels and other gun work of various qualities of steel heated to a white heat in practically open furnaces, and have watched it as it

went through the finishing processes, expecting that at least half the barrels would burst at the proof firing, as they were rifled with the oval Lancaster twist, and although my forebodings were not realized, I did not find that the excessive heats had been in any way of much advantage in increased softness. On the contrary, in some instances, especially on machinery steel, it was manifestly of disadvantage, and from crystalization, or some unknown cause, there were hard spots in the work which was more ruinous to cutting tools than any uniform hardness would have been.

I have had steel that it seemed almost impossible to anneal. If it had been at a later period I might have thought I had obtained some of the self-hardening steel by accident, but this was some years ago. It was a bar of Thos. Firth & Son's die steel, five inches square, and I exhausted my art as an annealer in three different attempts that I made to soften it without decarbonization, but without success. I finally gave it up, and worked the bar up into dies at considerable extra expense, but they were thought to be worth all that they cost. I mention this to illustrate what I think is a good rule, and that is, to never on any account or provocation allow the steel to be overheated.

In Lardener's "Manufacture of Metals," published in 1837, will be found repeatedly enunciated, this formula: "The lowest heat at which steel becomes hard is undubitably the best." That is sixty years ago, and it was not spoken of then as a new discovery,but as one that had been known for at least forty years. Does any blacksmith believe that the first one ever created did not find it out before he had fashioned his second reaping hook?

The lowest heat at which steel becomes hard is not in my opinion sufficiently great to set free the carbon in alloy, with such great expansion of liberty as to promote the greatest softness of which the steel is capable without injury to its constitution. The practice of all shops, where there is much annealing of steel performed, will circumstantially corroborate this opinion; for although I am free to confess that I think the steel is almost invariably heated too hot, yet it is very apparent that if there was any practical objection to the excessive heating practiced, there would soon be sufficient attention directed to the matter to put a stop to it. As it is the fact is well known, and languidly admitted, and yet no serious difficulty is experienced. I have even known edge tools to be heated atrociously hot, and yet when they were tempered and tested they were most exasperatingly good, and the only way it could be accounted for was in the mystery of the nature of steel.

The great cause of overheating steel in annealing is the unwarratable fierceness of the fire. It is evident that if the fire itself be not hotter than the steel may be there is no danger of overheating. For this strong draughts and blasts should be avoided in annealing, and the fire should by all means be under perfect control; and the work should be so situated that its temperature can be definitely ascertained by inspection. When the workman can see just how hot his work is, and has perfect means of regulating his fire, he has no excuse for overheating; but the fact is, that in many places the facilities for annealing are of the crudest sort, even in what are otherwise well-regulated factories. With the present facilities of using oil as fuel, and the perfect control of its combustion and application, an excellent system of annealing is highly practicable. Just as good results, but with greater trouble, may be obtained with bituminous coal, either non-cakable or coking, which yield a diffusible heat; next to these coke, and lastly anthracite. Wood is the best of all if the work is not encased. The objection to anthracite is that any live anthracite fire is too fierce for the purpose, the heat is focussed. A paradox which will reward studious investigation is this: Although the best annealing cannot be attained without a greater degree of heat than suffices to sublimate the carbon, yet some degree of annealing takes place in the steel every time there is a change in its temperature.—B. F. Spalding in Age of Steel.

COKE AND IRON PRICES.

Coke producers have voluntarily reduced their prices 35 cents a ton in the Pittsburg district, and this will lead to like action elsewhere. Most of the iron mills consume enormous quantities of coke, and the owners claim that the former price was so high that their running expenses were seriously increased. Now that this cost has been lowered and with the probability of a more reasonable price for labor, the number of active mills will undoubtedly increase. An instance of the general resumption is furnished by the Thomas Iron Company of Pennsylvania, the largest iron plant in the country, and all of whose furnaces save three were blown out in July, but have now been started up again on actual orders. The production of pig iron is undoubtedly increasing,but not to any undue extent and it is now more than probable that the total output for the year will be considerably less than in 1892, and with a wider margin of profit that will extend throughout all branches of the trade.—Stoves and Hardware.

HARDWARE ASSOCIATION.

A called meeting of the retail hardware dealers of the United States was held yesterday in Chicago in Accordance with a prior notice sent from the Pennsylvania Association, and steps were taken toward the organization of a national body. A letter bearing on the subject was received recently by a trade journal exchange, and is here given place in order to elicit an expression of views from those who are interested in the involved questions. The letter reads as follows:

"There can be no doubt as to the advisability of retail merchants organizing for their own protection against grange and department stores, manufacturers who sell direct to consumers, and jobbers who solicit trade from retailers' customers. The distribution of goods by any of these methods is prejudicial to the community into which the goods come, as it destroys the confidence of the customer in the methods and prices of the local merchant. It deprives the merchant of fair competition, to which every dealer is entitled, besides taking cash out of the town, and returning, in the majority of cases, inferior goods which fail to give satisfaction. Fire has to be fought with fire, and until the retail hardware dealers' meeting in Chicago results in an organization, or some concerted action is decided upon by the trade, hardware men can afford to meet these outside prices by demanding cash and adding exchange and transportation to the quoted prices. They can afford to do this for the sake of holding their customers and keeping the cash at home. It should not require a remarkably smart hardware merchant to get hold of the latest catalogues of the grange houses, and with that in his possession he will know what he is working against in quality, assortment and utility. An advertisement in the local papers, stating that the prices of grange and department stores will be met, and better goods furnished for the same amount of cash, would do much toward mitigating the evil."

If the evils complained of actually exist, as appears to be an accepted fact by the correspondent whose letter is quoted, it would appear that individual action on the part of the dealer can provide more satisfactory and substantial relief than the forming of a national and necessarily an unwieldy organization, controlled as it would be by a small executive staff and perhaps by a clique. It might be just as well to try the policy outlined in the above letter before endeavoring to attempt a joint action. So far as can be ascertained, the representation at Chicago from this section was rather slim, and the total attendance was less than had been expected.—Hardware and Stoves, Sept. 21.

NEW INVENTIONS AND DEVICES.

A bicycle on which the steering is done by means of a laterally swinging saddle frame.

A composition for roofing, composed of wood, tar, resin and pulverized stone or slate.

A brake for bicycles by which the lever applies friction wheels to the inside of the rim of the front wheel.

A dust pan with the handle pivoted to it in such a manner than no stooping is required in using the article.

A fireproofing compound composed of phosphate of ammonia and sulphate of ammonia in a solidified form.

A pointing trowel with a long, narrow blade, with parallel sides and a short narrow blade arranged at an angle to the long blade.

An improved belting formed of wire and fibrous material interwoven to present the wire to one face and the fibrous material to the opposite face of the belt.

A new wringer roller, the rubber roller of which has a bearing sleeve held within it, and adapted to turn loosely on the wringer shaft, end nuts screwed into the sleeve being provided with flanges to abut with the ends of the rollers. This construction is designed to overcome the friction strain by the slipping on the shaft of the strain-bearing sleeve of the roller.

A fastening for tools having tapering shanks, comprising a cylindrical metal collar fitting over the lower end of the shank and filling the bore of the handle.

Metal roofing sheets formed with parallel hollow ribs, with interlocking tongues on the edges of the sheets, the construction being such that the fastening rivets or nails will be covered, and the joints rendered absolutely wind and water tight. The sheets may be rapidly applied to a vertical wall or a roof having any degree of pitch, making a very ornamental and extremely strong roofing.

A door hanger, the principle of which relates to an improvement in trackless door hangers, two hangers being used with each door, and the construction admitting of such connection that when the door is closed or entirely open it rests upon the floor, while in its movement from a closed to an open position, or vice versa, the door is raised above the floor or carpet. The device is designed to be simple and durable and not liable to get out of order when fitted to a door.

A method of tool fastening which provides means of securing files and other tools to wooden handles. The tapering shank of the tool carries on its end a hard metal collar, and the shank, with its collar, is adapted to driven into a previously made recess in the handle, the collar fitting very snugly at the inner portion of the recess, and the outer end of the recess being engaged by a portion of the tapering shank, whereby the tool is firmly held in place and prevented from turning.

AN ENGLISH VIEW.

The particulars of two very remarkable performances of American locomotives have reached me, says the editor of London Transport. The "Keystone" express on the Pennsylvania railroad was six hours late on leaving Altoona on its way eastward on July 23. The train consisted of nine cars, and is described as weighing "nearly 1,000,000 lbs." This evidently includes the engine. Let us say that the train alone weighed 300 English tons. The engine took it from Altoona to Harrisburg, 132 miles in 145 minutes. The course lies up the valley of the Juniata, with numerous sharp curves, with a gradient of 1 in 56 against the load at the worst point, and crosses the Alleghanies at a summit level of 2,162 feet. The other run was, if possible, yet more astonishing. It was made by the "Exposition Flyer," of which I spoke recently. Between Buffalo and Chicago this train is timed at 46 1-2 miles an hour, including stoppages. So far, I understand, it has been on time in Chicago every day since it was put on except two, and on both these occasions the delay was caused by "wash-outs." One day, however, it was 55 minutes late on passing Buffalo. But by the time it reached Elkhart, 111 miles out of Chicago, all but five minutes of this had been made up, and the train ran into the Chicago terminus punctual to the minute.

These two exploits suggest an interesting question. Nothing of the kind is of course possible in this country, where drivers, even if not actually forbidden to make up lost time, are at least not encouraged to do it. In practice, as we all know, no English express ever does now-a-days make up more than a very few minutes. Why should it? The driver would certainly get no thanks, while he would run the risk of a reprimand for excessive speed, and be sure to spoil somewhat his position on the coal sheet, a position which on many lines carries with it a substantial money premium. On the other hand I have no doubt that the American engineer is encouraged to be over-reckless by the hope of seeing his name in all the papers as having made a "record" performance. What I should like to know is, whether we cannot get the benefit of the American system without its risks. As everyone knows, the American locomotives have gone on increasing in weight, till 100 tons is—for engine and tender together, of course—nothing out of the common. And more than once of late our English companies have been blamed for declining to imitate them. But the Lake Shore Company, whose line is as flat as our own Great Western, has stood out consistently against big engines. The engine which, with a train of 178 tons, gained 50 minutes in 400 miles on a booked speed of 46 1-2 miles an hour, has cylinders only 17 inches in diameter and weighs only 46 1-2 tons, which is practically the weight of a modern English express locomotive on the great lines. And the performance of this engine, and its class-mates, have moved the "Railway Review—one of the most important technical journals—to write a leading article in praise of light locomotives. My contemporary points out that the heavy engines punish the road far more severely, imply heavier rails, and stronger bridges; and, when they are past main line work, are quite unsuitable for branch traffic, and so have to be sent straight to the scrap-heap.

WEALTH AND LAZINESS.

In all countries and in all times there is a class of mankind who claim that an excess of wealth in some other man's purse is a curse to humanity and a drag on the course of true progress, says a contemporary. Under the guise of sociology and its advancement they urge socialism and all that follows after, ignoring the potent fact that wealth in the majority of cases represents development of the community as well as of the Individual, and forgetting the greater law that the laborer is worthy of his hire whether his work be with his brains or his hands. In a recent article on the Ethics of Wealth, Mr. W. H. Quaintance ventures these opinions:

"The men of wealth and ambition who have built up our great manufacturing industries and extended our great railway systems have thereby given remunerative employment to thousands of men who must otherwise have struggled for a mean existence by a rude agriculture; they have wedded the East to the West, thereby cementing the union; have opened up to settlement the great West and made it possible for the poor of eastern cities and of foreign countries to secure a home, the first great need of civilized man; and have contributed more than any other one class of men to our greatness as a civilized nation. These men are held in execration and contempt, but only by those whose narrowness of view, shortsightedness of vision and contemptible littleness of mind and soul prevent them from seeing the good and incapacitate them from doing a like service."

Envy, laziness, or inability to meet the contingencies of life are always back of the reasons for socialism, while a self-created discontent furnishes the motive power.

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ALUMIMUM·

The new metal, aluminum, is getting cheaper, and, being very light, it is really very much cheaper for its bulk than its price indicates, if we do not correct our natural impulse to regard it as heavy as brass or copper. It is quite considerably sold about England in the shape of thimbles for four and six cents, and ash trays 24 cents, and ornamental articles, such as vases and flower stands, and I have seen tubes made from it, says a writer in the American Machinist. It is used cast as well as in stamped goods. Aluminum has been probably vastly overrated as a material for heavy structures, such as bridges, etc., but this is no fault of the metal, for which there must already be numerous applications if only people would open their eyes to the facts. There are so many small articles for which we may suppose a minimum thickness is required that the lightest metal will often prove cheapest. Aluminum 1-16 inch thick may weigh a third of copper plate the same thickness (copper is about three and a quarter times as heavy as aluminum), so that if copper costs one dollar per unit of weight we can afford to pay three dollars for pluminum, and we get the same bulk, if mere bulk is what is essential. Aluminum is the only example of the metals of the earths, as termed by chemists, which exists in large quantity. Of the metals of the alkaline earths there is calcium, whose specific gravtiy is little above half that of aluminum, and which is also a very difficult metal to reduce, besides having a greater ten to oxidize, so much so as to easily decompose water. There is, of course, an enormous amount of calcium in the world. The city of London stands on about 300 feet in thickness of aluminum oxide, which in turn rests on a still greater thickness of calcium carbonate. Aluminum, though light, is nearly five times heavier than the lightest metal of somewhat similar kind, namely, lithium, but all the other metals of the earths and alkalies are marked by their too great combustibility, of which property the photographer avails himself in magnesium, whence he obtains his flash light. Aluminum alone seems to be useful for mechanical purposes, and it does not, I am informed, combine with mercury, but there does not seem to be a field for it either in quality or price as a substitute for iron. In alloys we have many more to choose from than formerly, such as Delta metal, phosphor bronze, and ajax metal, and the composition of true alloys, as distinguished from mere mechanical mixtures, is better understood. We may suppose all alloys to be mechanical and not chemical compounds, but there is an essential difference between an alloy of two metals in which each metal fills the voids of the other, and a mixture in which one metal is too small in quantity to fill the interstices. In the latter case a vertically cast bar might be a true alloy at one end, and consist of one metal only at the other end. The true alloy resembles in a sense a pailful of coarse sand into which water has been poured. No water appears on the surface until all the vacancies are filled, and as soon as the surface is wetted any further supply of water remains above the surface. This resemblance, however, is partial only, for we may take the copper-tin alloys and note that though some of them are heavier than copper, many of them are lighter, and the heavier are not thereby the stronger, and this shows us that the added tin has done something more than merely fill the voids in the copper, for had it done this simply the specific gravity would have been greater. Just whether alloys are chemical or mechanical in composition seems to be undertain; some undoubtedly are mechanical only, for heavy pressure will separate the constituents of some alloys, the softer metal squeezing out like water from a sponge.

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

The Sarnia Gas Company has reduced the price of gas for fuel purposes to $1 per thousand feet.

The Ball Electric Light Company at London have sold out to the Canadian Electric Light Company.

The contract for the heating apparatus for the new Toronto drill shed has been awarded to Bennett & Wright, of Toronto.

The Brantford Electric and Power Company have been awarded the contract for city public lighting for a series of five years.

At a meeting of the directors of the Galt and Preston Street Railway Company it was unanimously decided to operate the road by electricity.

The Porth Huron fiber works has started to do business again with full force, after having been closed for some weeks on account of the financial panic.

It is said that the counterfeit Canadian "quarters" made of aluminum are being circulated in Winnipeg. They are fairly good imitations of the genuine coin.

The Brantford city council proposes to ask the people to give a bonus of $15,000 towards purchasing a site for the proposed new Waterous Engine Works.

A tunnel 2.49 miles long is to be cut through the Rocky Mountain pass when the Great Northern line crosses the summit. The estimated cost is $2,000,000.

The silversmiths are putting upon the market a fork with which to eat macaroni. It has a broad blade with two prongs, but is hardly equal to landing the slippery stuff in the mouth without practice.

France was very much disturbed by strikes last year. An official return shows that in twelve months there were close upon 300 trade disputes, affecting 108,000 workmen.

Every iron bridge on the C.P.R. between Westminster and Calgary is to be painted white, and a gang of painters have commenced operations. The work will not be completed this year.

Wood for toothpicks is getting scarce, one company making special endeavors to secure it by sending their own men into the woods for it. As a moderate sized stick is good for about a million picks, the consumption, or rather, waste of these little articles must be enormous.

The tracks of the London West electric railway have been laid half way to Oxford street on the Wharncliff road. With the force of 56 men now employed it is expected that the road will soon be completed.

A Montreal despatch to the New York Herald of Saturday says that by the failure of the Manitoba & North-western railway, it is said, the bulk of the fortune left by the late Sir Hugh Allan has been lost. The railroad, which was a pet scheme of Sir Hugh, is in the hands of receivers, and what can be saved from the wreck, it is calculated, will be very little.

It is understood that a new grain elevator company is in process of formation in Montreal, and that the scheme has the promised support of several of the steamship companies, the Canadian Pacific and Grand Trunk railways. The capital of the new company will be $100,000 and it is expected to start operations next spring.

A new puncture proof pneumatic tire is to be brought out in the States, and consists of a band of cotton wool with a special composition wrapped around the inner tube. It is quite impossible to cut it with a knife. There are some doubts as to the resiliency of this tire.

A sensitive paint has been invented which should prove useful for detecting hot bearings in machinery. It is always bright yellow when cold, but changes color on being heated, and at 220 degrees becomes bright red.

The secretary of the Toronto Board of Trade has been notified by the district freight agents of the G.T.R. that commencing on the 15th of November, 1893, and expiring on the 15th of May, 1894, winter storage on grain in Grand Trunk elevators at Toronto and Port Hope will be 1 1-2c. per bushel, and that no further storage will be charged between these dates. Grain stored during the winter months, and remaining in elevators after May 15th, will be charged regular additional storage per bushel.

The Anderson Trading Co., of 56 1-2 King street east, proprietors of the Sharpe Cash Recorder, have issued a writ for $50,000 against the National Cash Register Co., of 63 King street west. The plaintiffs claimed that Mr. Ulrich, the Toronto agent of the defendants, has persistently slandered their machine, thereby entailing them much loss of business. The National Cash Register Co.'s head office is at Dayton, Ohio.

The wholesale and retail coal oil dealers of Winnipeg had a conference there the other day with Mr. Miall, Commissioner of Inland Revenue, regarding coal oil delivery. The petroleum inspection act requires that all coal oil must be sold out of the original package, in other words, the wooden barrel. This, it is claimed, causes great loss from leakage, and from injury to goods sold in the same store. The letter of the law has been enforced in Winnipeg for a short time past, and the trade find it most prejudicial to the interests of themselves and their customers, hence the conference. Mr. Miall will see what can be done in the premises.

The demand for car wheels at the C.P.R. shops has rendered it necessary to place a small stationary engine in the machine shop to supply the motive power for a night service, the ordinary motive power being used during the day time. Work in the foundry is now in full operation, and great progress is being made with the task of casting the large culvert pipes which are to be laid at Palliser, near the western end of this division. These pipes are thirty inches in diameter by six feet in length, each weighing over 2,000 pounds, the distance to be filled being 324 feet requiring 54 lengths to complete the work.—Free Press, Winnipeg.

The trade returns for the past month were issued Saturday. The exports were valued at $13,572,817, as against $13,284,607 in August of last year. The total exports for the two months are valued at $26,256,414, as against $25,960,957 for the corresponding period last year. This is an increase of $295,457. The imports for August were valued at $11,375,862, as against $13,518,575, or a decrease of $2,250,000 in a month. As July showed an increase of $1,250,000, the net decrease in the imports so far this year is $1,000,000. The duty collected to the end of August amounts to $3,745,834, an increase of $55,991.

A Kingston despatch of Sept. 23 says: After three weeks' work the electric railway on Princess street is ready for traffic. On Saturday afternoon at 5 o'clock the first car was started by Mr. Moseby, representing the Toronto electrical works, and ran up and down the streets while thousands of people cheered. The car was full of passengers, including many prominent citizens. While the car was in motion, Miss Katharine Harty, youngest daughter of W. Harty, M.P.P., christened the road by breaking a bottle of champagne. When the road is completed there will be ten cars in service. The plant will be of the very latest design, and will cost about $100,000. Folger Bros., bankers, are the main promoters.

W. H. Rowley, secretary-treasurer of the E. B. Eddy Manufacturing Company, Hull, was in the city on Saturday. In conversation with a Gazette reporter he said that his firm were

now out of the lumber trade altogether. They had closed down the sash factory, which was the last remaining connecting link, and had torn out all the machinery, which they intended to sell. The old sash factory building they were turning into a third paper mill for the manufacture of paper from pulp. They were now busy putting in $68,000 worth of machinery, and would be running as soon as they could possibly get things in order. Both their old mills are running day and night. Last year the firm's wages amounted to $329,000, and with the new mill they would be very much increased for the coming year.—Gazette, Montreal.

The Underwriters Association of New York State, at its meeting on the 12th inst., adopted an increased rate on detached country stores. Where occupied as store and dwelling the proposed rate is $1.50 per annum, and where occupied as a store only $1.75 per annum. These rates, according to rules, must be referred by the district county committees to the several boards in the respective counties, and by them adopted to become of effect. The increase in rates on this class is a most important move and shows that the State Association is fully alive to the fact that country stores have long been unprofitable. It is hoped by underwriters that there will be no delay in putting these rates in force.

Mr. Blue, of the Ontario Department os mines, in an interview a few days ago, with a representative of the Mail, said that mining was rather dull at present in Ontario. Several experts have been through the northern part of the province during the past season for English capitalists, principally on the look-out for gold properties. They all expressed astonishment at the fabulous value placed by prospectors upon their properties. Mr. Blue thinks that the trouble with mining in this country at present is that those who hold claims think they are worth far more money than can ever be realized from them. In many cases they have no money themselves, and they are pursuing a dog in the manger policy. If these prospectors got their heads out of the clouds and consented to sell to capitalists at reasonable figures, there there would be a boom in mining in Ontario, without a doubt, he said.

The regular meeting of the City Commercial Travelers' Association was held in their rooms, St. George's hall, Friday evening. The reports of the treasurer and secretary show the association to be in a good financial position, having a large balance on hand and a steady increase in membership. The annual election of officers resulted as follows: President, J. Owen, by acclamation; first vice, A. M. Piper; second vice, W. Soper; treasurer, R. Maxwell, by acclamation; secretary, S. H. Moore; chaplain, G. B. Curran, by acclamation; marshal, J. Dickson, by acclamation; guard, M. A. Muldrew; board of directors, J. A. McGuane, W. F. Daniel, J. Mortimer, W. B. Dack, R. M. Corrie, E. N. Tyrrell, T. Holman, R. C. Morrison, C. S. Fairbairn, B. McCann, S. G. Martin and J. F. Smythe. The president-elect delivered an address in which he urged the members to still greater efforts for the upbuilding of the association than even in the past.

TASTE IN HARDWARE STORES.

One is pleasantly surprised in going through the eastern cities to see the taste displayed in the average hardware store, says N. Y. Hardware. The bundle of straw separated and scattered all over the floor no longer exists; a line of nails which did once mark the path from the scale to the bin, is no longer seen; bits of twine are picked up, hoes and shovels are always now in place, and the tools, cutlery, etc., are under glass which fairly glistens. The drug store is now, in a comparative sense, with the hardware store; before the former was superlative. And the show windows are almost beyond description. Everything is geometrical, tasty, and of course, inviting. Does it pay? You never saw a hardware dealer who once set his wits to work to improve the appearance of his store abandon the plan. If he thought of such a thing, intuition would lead him to study the ins and outs of the almshouse.

In one town the writer happened to go into a hardware store of the hayseed order. The proprietor had just discharged the boy because he could not afford to pay him. Asking him about the business, he replied: "Times are bad, and the business seems to fall off, but I peg away. There is only one way to do business in this world," said he in a burst of confidence, "and that is, if a man comes into your store, to just hang on to him until he buys something. I don't care for new ideas, new articles or new notions—they don't pay."

Around the corner was another man, who was patiently fixing up a show window with some electrical hardware. Four clerks were busy selling goods. Everything was tasty and neat. The proprietor readily entered into a conversation, and soon drifted to the subject that was most interesting. "It may be," said he, "that I spend too much time on this window, but I like to see things looking neat, and then I notice a good many interested faces outside. I presume they come in afterwards, but the only way I can keep run of results is by the cash register. I need more help, but I am a little careful whom I employ."

There is a moral here somewhere.

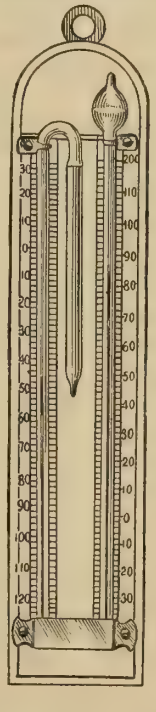
TO USE STEEL SCRAPS.

In the Jefferson Iron Works, Steubenville, O., two men have been inventing for the past six months a process by which scrap steel can be heated and rolled into any shape. Col. A. C. Warden and Thomas Wood are the patentees of the composition used in the new process, which will practically revolutionize the steel business as far as the scrap portion is concerned.

Thousands of dollars have been going to waste in scrap steel, which could not be placed in the converter and remelted for re-rolling, as it would be burned. Some six months ago there were five hundred or six hundred tons of scrap steel at the Jefferson Iron Works, which has been worked up and made into steel sheets again by this process.

AN INGENIOUS THERMOMETER.

The Sixe's Self-Registering maximum and minimum thermometer, of which we herewith give a good cut, is being put on the market by H. S. Howland, Sons & Co., Toronto. This beautiful and ingenious instrument consists of a long cylindrical bulb, united to a tube of more than twice its length, bent round each side of it in form of a syphon and terminating in a smaller oval-shaped bulb. This bulb and part of the connecting tube are partly filled with pure spirits, the lower part of the syphon is fillled with mercury, and the remainder of the tube and the long bulb are completely filled with spirits. A steel index, with hair-spring, moves in the spirit in each arm above the mercury. This instrument is especially adapted for hot-houses, kilns, brine vats, etc., where a uniform temperature must be maintained.



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ANCIENT LAW FOR SHOPKEEPERS.

Has a shopkeeper a legal right to place articles on the footway outside his shop, or even to hang them securely on the front of his shop above the footway, where they cannot be construed as obstructions? Doubtless such an almost unanimous chorus of "Certainly!" would come in response to this query as to quite drown out any possible dissentient voices. And yet, according to a recent decision, the dissentients would be right, and the general opinion all wrong; and so a certain Mr. Gems, a basket manufacturer, who held the affirmative view with the vast majority, has discovered. He was in the habit of hanging his wares over the shop front of his premises, suspended from strong iron holdfasts driven into the wall, the goods projecting some two and a half feet from the front wall. He thought he had a perfect legal right to do the thing. Others did it without let or hindrance; the custom, if not universal, was quite general; and why should not he? But two little sections of two big Acts passed in the reigns of their gracious, if not sapient, Majesties, King George III. and King George IV., were lying in wait for Mr. Gems, like man-traps for the poacher. That is a way these ancient statutes have. They are like some grim old Jack-in-the-box your great-grandfather played with and shuddered over when a child, and which, having passed unscathed through his infantile hands, got packed away with other relics of antiquity, and got smothered in dust and oblivion, until at last, curiosity prompting someone to search these mouldy remains, the catch is loosed by accident and up pops the grinning little imp, chuckling over his immortality and the dismay he still has power to cause. Mr. Gems, like every other sane citizen, is presumed to know the law; but what a vain presumption that is! If he had studied ancient statutes in the intervals of business, he might by chance have discovered that in the 57th year of George III. it was enacted that "if any person hangs out and exposes any matter or thing whatsoever from any house or other building occupied by him, over any part of either of the pavements or over any area, or places any matter or thing from and on the outside of the front or any other part of any house or other building, and does not immediately remove all such matters or things on being thereunto required by the duly constituted authority, he is liable to be summoned and fined." Even when the district superintendent of the vestry of his parish sprung this Jack-in-the-box upon him, and told him to take in his baskets and offend no more, he was advised that these provisions were inconsistent with the Metropolis Local Management Act of 1855, and, therefore, by implication, repealed. But Mr. Justice Day and Mr. Justice Wright, of the Divisional Court, have held otherwise. The old clauses survive to plague the modern shopkeeper. He may still wait for the "duly constituted authority" to touch the spring by notifying him to keep his goods behind the wall, but when he sees the bogey he must capitulate or suffer the consequences.—English paper.

NON-UNION MILLS INCREASING.

The past week has brought out some very important developments relative to the question of unionism in the Pittsburg iron and steel mills. As was stated in last week's issue of the American Manufacturer, the national officers of the Amalgamated Association sent out a proposition to the effect that the wages conference committee should be called together and make the 10 per cent. reduction in the finishing departments which the manufacturers demanded when scale negotiations closed. This was put to a vote of all the sub-lodges of the organization and was defeated by a large majority. The officials say that the vote was general and showed that the opposition to a reduction extended evenly over the various districts. The friends of the Amalgamated Association hoped for a different result. It was thought that such a recognition of things as they now present themselves would do much to stay the dissolution of the union now so plainly apparent, and prevent the further spread of non-unionism. But the workers have decided to concontinue their present course, unwise though it may be. The effect is seen in the withdrawal of three more mills from the union list, those of Brown & Co., the Oliver Iron and Steel Company, and the Pittsburg Forge and Iron Company. It is stated that in all probability others will soon follow. One feature which reflects so strongly on the course taken by the union, is that the mills started this week were not put in operation by help brought from points outside of the district, but the former men returned to work. In the words of one whose unionism was never doubted, and who not long since was one of the national officers, "there was no use in butting against the inevitable," and they made the best move possible under the circumstances. Had the rank and file of the Amalgamated Association taken the same step some months ago it would have been in a much better condition to-day.

From present indications it appears that the non-union movement may spread to the glass trade this time. The regulations long held by the union comprising the glass workers are being strenuously objected to by the employers. The apprentice system is such that the number of workmen is greatly restricted, and the factories that have been non-union for some time are in operation, while those that have recognized the union remain closed, as the workers decline to consider the necessity of a reduction. Already there are rumors of an intention on the part of several manufacturers to resume without any agreement with the union. Taken altogether, this seems to be a bad year for unionism, but ti is made so largely by the unionists themselves. —American Manufacturer.

STARTING UP HEATERS.

There are two methods of leaving steam-heating and hot-water heating apparatus when discontinuing their use in the spring. One method is to leave the apparatus filled with water and the other is to draw off the water while hot, and let the apparatus dry itself out by its own residual heat. Of course in a steam heating apparatus only the boiler and the return mains and risers are thus filled up to a level with the top of a boiler. In a hot-water apparatus the whole system is filled. Water standing in an enclosed space hermetically sealed, after having been exposed for a time to a boiling temperature, will remain sweet indefinitely. But if, as is generally the case in steam-heating apparatus, access of air to the interior of the apparatus is permitted through air valves, and sometimes around the stems of radiator valves which are imperfectly packed, the water may become putrid and acquire the smell common to all stagnant water. The water may be rendered sweet again by continued boiling, but it will require a considerable time by evaporation into the air to free it perfectly from the stagnant odor. Hence, it is often the case in steam-heating plants not provided with automatic air valves connected with drip pipes that in filling the radiators with steam when firing up in the fall a very disagreeable and unwholesome odor is caused to pervade the house. This will not occur when the apparatus is dried out in the spring, and it may be wholly avoided when water has been left in it during the summer season by drawing off the water which has stood in the apparatus and replacing it with clean water before firing up. It is supposed by many that the interior of a heating apparatus suffers less from rust when filled with water and standing cold than when emptied; and this is the reason for leaving the apparatus filled when it goes out of use, but water in a heating boiler should always be ascertained to be pure before the fire is lighted in the fall.—Metal Worker.

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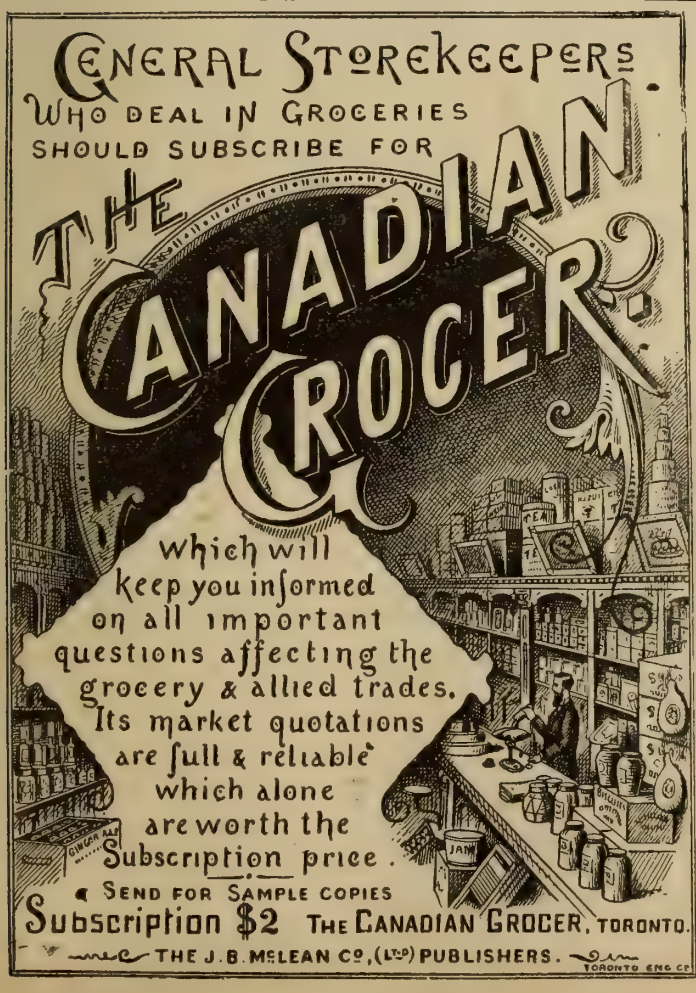
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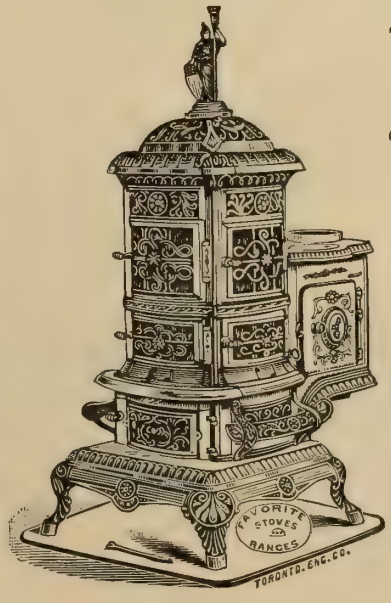
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MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

HARDWARE.

MONTREAL, Sept. 29, 1893.

There has been a fair trade doing in general hardware during the week, and business has in fact shown some slight improvement in some lines. The active features are still baling wire, cutlery and sleigh bells, the movement in the latter showing a noticeable increase. Cow chains and guns and ammunition also still show a fair degree of life. Other lines rule on the quiet side.

WIRE.—With the exception of a good demand for hay baling wire the line is quiet. The goods mentioned, however, have furnished a satisfactory week's business on the whole.

CUTLERY.—Fair sorting orders have been the feature in this line during the week.

SLEIGH BELLS.—The good demand noted for sleigh bells, etc., last week has been continued; in fact, the movement is on the increase, and this promises to be one of the most active lines for the present and near future.

NAILS.—Business in nails is small. A few moderate sized orders are to note for 10 to 20-keg lots of wire nails, but there is little or nothing doing in cut nails. Makers of these also report business to be quiet.

TACKS.—Featureless and unchanged.

CHAIN.—A continuation of the moderate sized orders for cow chains is the only business to note in this line.

HORSESHOES.—Business continues small and unimportant.

SPORTING GOODS.—Demand for guns and ammunition is still one of the features of the hardware market, and the past week has witnessed quite a fair business in them.

TOOLS.—Business in these continues exceedingly quiet.

BUILDERS' SUPPLIES.—Some small lots of hinges and locks are the only articles moving in this line, operations this fall being on a very moderate scale.

PLUMBERS' SUPPLIES.—There has been a fair jobbing business but nothing of a special nature.

WARE.—Some fair-sized lots of white enamelled goods have been moving.

NAVAL STORES.—The movement in these is not large, but fully up to the average for the season. We quote: Turpentine, 45 to 46c.; resins, $2.50 to $5, as to brand; coal tar, $3.75 to $4; cotton waste, 5 1-2c. for colored, and 7 to 10c. for white; oakum, 5 1-2 to 7 1-2, and cotton oakum, 10 to 12c. Cordage—Sisal, at 9 3-4c. for 7-16 and upwards, and 15c. for deep-sea line; pure manilla, 11c. for 7-16 and upwards and 21c. for smaller sizes.

METALS.

The heavy iron and metal market continues quiet, and in no line except Canada plates is there anything special to note. Buyers don't seem in any anxiety about supplies in any of the leading lines.

PIG IRON.—The market for pig iron remains quiet, and the foundrymen claim to have provided for themselves sufficiently. A few car loads of Summerlee, however, have been sold at $18.50 ex wharf, and a lot of Maritime Province pig changed hands at $17. We quote Summerlee, $18.50 to $19; Eglinton, $17 to $17.25; Carnbroe, $16.75 to $17; Siemen's No. 1, $18, and Langloam, $18.50.

BAR IRON.—A fair movement of a small sort is going on in bar iron at the old prices.

SCRAP IRON.Business is unimportant, and so far as large lots go prices are nominal at $15 to $16 for No. 1 wrought.

TIN PLATES.—There is no particular movement to note in tin plates, a few lots of cokes having changed hands at $3.15, but we quote $3.20 to $3.25 in a regular jobbing way. Charcoal are quiet at $3.75 to $4.25.

CANADA PLATES.—The flurry noted in Canada plates last week has not entirely subsided yet, as supplies are very slow in coming forward, and we hear of further sales at $2.50, which we quote as a fair basis for the market as it is at present.

TERNE PLATES.—No change; values nominal at $7 to $7.25.

GALVANIZED IRON.—A fair enquiry is to note for this, and prices are steady at 4 3-4 to 5c.

SHEET IRON.—Business is good in a quiet way, and prices remain $2.40 to $2.60, according to gauge. Russian sheets are quiet and unchanged, 10 1-2 to 11c.

HOOPS AND BANDS.—Business is very quiet, with the price nominally the same at $2.35.

COPPER.—There is no particular activity to note, but the steadiness in price noted last week is maintained, and we quote 11 1-2 to 13c.

TIN.—There has been fair enquiry for tin during the week with sales of round lots at 21 1-2, and we quote 21 1-2 to 22c.

SPELTER.—Spelter has furnished a fairly good movement at $4.75.

ANTIMONY.—Business is small, and prices are rather easier at 10 1-2 to 12c.

LEAD.—There is no change in lead, which rules quiet at $2.80 to $3 for pig lead, and $4 to $4.25 for sheet lead.

ZINC SHEETS.—There is a demand in a quiet way for these at $5 to $5.25.

CEMENT.—A good demand is reported for cement, and several round lots have been moved at full figures both on local and Western account, the market generally being in a better condition. We quote: English brands, $1.95 to $2.10, and Belgian. $1.85 to $1.95. Fire bricks are in good demand at $15 to $21 per 1,000 ex wharf.

CHEMICALS.—The firmness noted in some of the leading lines of heavy chemicals last week is fully maintained, but no further change is to note.

PAINTS AND OILS.

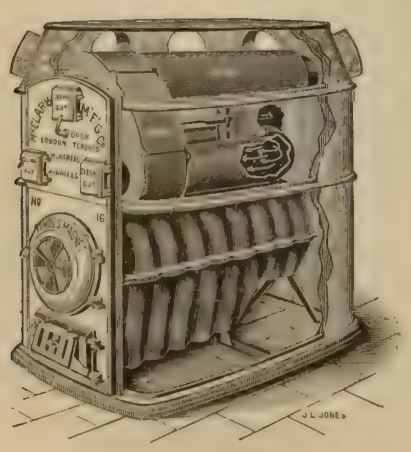
The demand on fall account is beginning to be felt more in this line, and business as a natural consequence has shown quite an increase during the week, while values rule firm. We quote: Choice brands white lead, Government standard, $5; No. 1, $4.75; No. 2, $4.50; No. 3, $4.25; No. 4, $4; dry white lead, 5c.; red lead, pure, 4 1-2c.; No. 1, 4 1-4c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, raw, 60c., boiled, 63c.

GLASS.

There is no change to note in glass but business is picking up a trifle. We still quote $1.35 for first break, but it might be shaded in the case of a genuine round lot. Putty in bulk is quiet at $1.85.

PETROLEUM.

Petroleum continues in good demand, dealers reporting the movement fully



WOOD FURNACE

Famous Magnet

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We confidently ask the attention of the trade to this furnace. Let us send you full particulars regarding it. . . .

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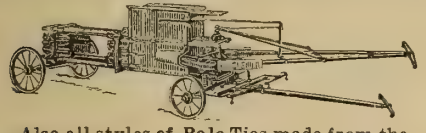
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Coal Hods — Dampers
Stove Boards — Stove Shovels
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You will Insure Success

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Business, by selling

"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.

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Successors to The E. & C. Gurney Co.

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Cutlery

WARRANTED

And the Most Complete Lines of Cutlery of all descriptions.

MONTREAL Markets Continued.

up to the average for this season of the year, while prices are well maintained. We quote Canadian at 11 1-2c. in shed in Montreal for round lots, 12 1-2c. for five-barrel lots, and 13c. for smaller quantities. American petroleum, 17c. in car lots, 18c. in ten-barrel lots, 18 1-2c. in five-barrel lots, and 18 3-4c for single barrels, 2 per cent. off for cash. American benzine, 23 to 25c.; Canadian benzine, 10 3-4c. Petrolea; 12 1-2c. Montreal.

MONTREAL TRADE NOTES.

Painchaud, Squire & Co. note a good sorting business in cutlery and sporting goods.

C. J. Chisholm has got back from the World's Fair looking as though he enjoued his holiday thoroughly.

Advices on tin from abroad state that there has been an advance of £3 to £4 per ton, and that holders are very firm.

It is said that we are shortly to have a new manufactroy of bevelled glass mirrors, etc., in Montreal, in fact, that it will soon be in complete working order.

Foreign advices on cement are much stronger, London being cabled 4s. per ton higher, and Antwerp 3s., making the cost of future supplies higher than the present selling price in Montreal.

W. H. Cottingham & Co. note signs of improvement in the demand for leads and paints. They have been filling some good orders for Mander Bros. varnishes and fine paints during the week.

Wm. Clendinneng, Son Co. call attention to the fact that they are prepared to fill orders on the shortest notice for all kinds of stove patterns for repairs, as they carry a large and extensive stock.

The demand for paints and similar lines is commencing to pick up, which is considered as an indication that others will show a similar improvement shortly in the matter of orders for near by delivery to evade the usual fall advance in freights.

TORONTO MARKETS.

TORONTO, Sept. 29, 1893.

HARDWARE.

No special features have developed in trade during the week. Business is fairly good in the way of small sorting-up orders for general hardware and tinware. Plumbers' supplies are being a little more enquired after, and builders' supplies are doing fairly well in the country, but in the city there is no improvement apparent. Sleigh-bells, skates, axes and ax-handles are going briskly and a good many horse blankets are finding a sale. Certain sizes of wire and rope are still selling. In cutlery a nice business is being done, and a good many tinsmiths' tools are moving. Nails and tacks are receiving the usual attention. Payments continue to show slight improvements.

WIRE—There is a little movement in 14 and hay-bailing sizes, and a number of orders are being received for oiled and annealed, the farmers being again turning their attention to fencing.

ROPE—Small sizes, particularly ½ and ⅝ inch, for halters, are in fair demand at unchanged prices.

CUTLERY—A number of orders are going out in this line, particularly for carvers, with and without cases.

NAILS—There is quite a demand for both cut and wire nails and a good many orders are being placed for horseshoe nails. A brisker business is anticipated next month.

TACKS—Not much doing at the moment, but an improvement is anticipated from this out in carpet tacks.

HORSESHOES—A good business is being done in this line at steady and unchanged prices.

CHAIN—The demand is still principally for cow ties, other kinds receiving litttle or no attention.

SPORTING GOODS—Nothing new, business still being brisk in ammunition, guns and rifles.

WARE—A number of orders are reported for tinware, stove boards, coal hods, etc. An increasing demand is heard for white ware.

PLUMBERS' SUPPLIES—There is a little more doing in this line. Business is getting brighter for lead pipe and there is a brisk demand for iron pipe.

BUILDERS' SUPPLIES—Plain, tarred and felt paper is moving briskly, but in other lines of builders' supplies there is not much doing.

TOOLS—A good many tinsmiths' supplies are going out, but trade generally in mechanics' tools is quiet.

METALS.

There have been no marked changes in this line during the week. If anything there has been a little better enquiry for small lots of pig iron. In most other lines a fair sorting up trade is reported.

PIG IRON—There has been a little more enquiry. Nova Scotian pig iron has been receiving a good deal of attention, and some sales are reported at about $19 25 Toronto. There have been some sales of Carnbroe for import at $19.75, Toronto.

Rogers, Brown & Co, Buffalo, report the Toronto pig iron market as follows: Orders for small lots for immediate delivery continue to come in at a fair rate. Several buyers have shown quite an interest in the future of the market with a view toward covering their requirements for the winter months. Prices are stationary, and owing to a still further decrease in production in the States, are firmer than a month ago, only one-third of the furnace capacity of this country now being in operation We quote on the cash basis f. o. b. cars Toronto, in bond: IX Foundry, strong Coke Iron, Lake Superior ore, $15.05; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14.55; 2 Foundry Strong Coke Iron, Lake Superior ore, $14.05; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17 55; Southern Soft 1, $13.35; Southern Soft 2, $12.85.

BAR IRON—Quite a number of orders are being placed at the $1.95 basis.

HOOPS AND BANDS—There is a moderate enquiry at unchanged prices; for 1 inch and up $2.50 to $2.60 still being the idea.

CORRUGATED IRON
ILLUSTRATED CATALOGUE FREE
METALLIC ROOFING Co.
MANUFACTURERS TORONTO

CORRUGATED IRON—Business in this line has improved considerably for small lots; $4.70 to $5 per square is still the idea for small lots. "Owl" brand is quoted at $3 to $4 per square for patented and $4.25 to $7 for galvanized, according to gauge.

GALVANIZED IRON—Quite a demand is also experienced for this article at 4⅞ to 5c. for 28 gauge with other gauges in proportion.

INGOT TIN—There is the usual demand for this, and the idea as to prices is 21½ to 22c. Some sales of ton and half ton lots are reported at close figures ex-wharf Montreal. Prices are somewhat unsettled. In London the market is lower, while in New York prices have been fluctuating.

INGOT COPPER—There has been a good deal doing at 11¾ to 12c., the outside figure being for small lots. In London the market last week was characterized by great steadiness, and the advance in prices seem well established.

SHEET IRON—Demand good for light gauges at unchanged prices.

SHEET ZINC—There is quiet a demand for this and a more active market may now be looked for. Prices unchanged at 5½ to 5¾c. for 5 cwt. casks and 5¾ to 6c. for part casks.

SPELTER—Dull and unchanged at 3¾ to 5¾c.

TIN PLATE—This article is going out nicely in small lots. The bulk of the import orders have been filled, and most of what is now going out is from stock.

TERNE PLATE—Business in this line is slow and without special feature.

CANADA PLATES—This article is going out freely without any change in prices. We still quote all dull at $2.65, half at $2.75, and all bright at $2 80 to $3 per box for small lots.

SOLDER—Trade in this line continues brisk at 15½ to 16½c. for half and half and 14½ to 15½c. for standard. A good demand is also reported for babbitt metal.

ANTIMONY—There are some enquiries for this, but it is for small lots.

LEAD—No large quantities of this are going out, but there is a fair business doing in small lots.

PAINTS AND OILS.

The feature of the trade this week has been a reduction of 1c. per gallon in the price of linseed oil. The change was made by the association at a meeting held on Friday. The regular price is now 59c. to 61c. for raw and 62 to 64c. for boiled. The outside figures are for shipment to outside points, freight allowed. Demand is good and prices steady at the advance. Quite a brisk demand has developed for white lead, and prices are unchanged at the 5c. basis. In varnishes trade is quiet. Demand for turpentine shows some improvement and prices are unchanged at 44 to 46c. Fish oils are dull and unchanged. In glue there is the usual steady business doing. Trade in Toronto is at the moment rather better than it was at this time last year, while in the country it is probably scarcely too good. Payments fair.

MARKETS.—Continued

GLASS.

Trade is brisk and retailers in the city who have been holding off some months in anticipation of a dull fall trade are beginning to stock themselves. Prices are still on the basis of $1.25 to $1.30 first break. Business in plate glass continues to improve.

OLD MATERIAL.

The metal market continues dull, there being practically no demand for such. Scrap is brightening a little. As the demand for bar iron is slow, the rolling mills do not care about carrying heavy stocks, and dealers in old material are thus compelled to hold their stocks until the demand increases. Prices remain steady at the regular quotations. We quote prices paid by dealers as follows: Agricultural scrap, 60c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40 to 45c. per cwt.. No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings and turnings, 10 to 15c.

PETROLEUM.

Trade continues brisk in Toronto at unchanged prices. We quote: 5 to 10 bbl. lots, imperial gallons, Toronto; Canadian, 12½ to 13c.; carbon safety, 16½ to 17c.; Canadian water white, 17c.; American water white, 18½ to 19c.; photogene, 22c.

The Petrolia Advertiser, in its weekly report, says: Matters pertaining to the crude oil market, as far as the Exchange is concerned, are practically at a standstill. Oil may be quoted at from $1.05 to $1.10. Refined 9¾ to 10c. f.o.b. cars here.

HIDES, SKINS, TALLOW, WOOL.

HIDES—There is nothing new to report in hides, except that large purchases are being made in the western markets by Canadian tanners, but at much lower prices than they can be purchased from any market in Ontario. This is going to have a serious effect on the price of hides, as all tanners who can furnish the ready cash will do much better by purchasing in the Western markets. Butchers are receiving 4c. for No. 1 raw hides and 3c. for No. 2, 4½c. for No. 1 steers weighing 60 lbs. and upward, and 3½c. for No. 2. The selling price is a ¼c. advance on these figures.

WOOL—Transactions in this article are few and prices are depressed. Little or nothing doing with local manufacturers, they buying merely from hand to mouth. Prices are about the same, and we quote: Canadian combing, 17 to 18c.; clothing, Southdown, 20 to 23c.; extras, 23 to 24c.

TALLOW—Demand fair and steady in prices; dealers are paying from 4½ to 5c. according to quality and selling at a ¼c. advance.

SKINS—The chief feature about this business is, that large quantities are now being purchased by Canadian dealers in Chicago. This is having a depressing effect upon the price of superior and extra hides, and dealers may look for lower prices in the near future. Freshly slaughtered butcher skins are fetching 55c., and country lots from 25 to 50c. Chicago skins freshly slaughtered are selling in this market from 15 to 48c.

MARKET NOTES.

The Gurney Foundry Co. have just received an order from McKelvey & Birch of Kingston, for two of their largest Oxford hot water boilers and 75 radiators for the new wings to the Kingston Asylum.

A good many boiler tubes are selling.

The Toronto Glass Co. Ltd., has been incorporated.

A new English glue is being placed on the market by Stewart & Wood.

The McLennan French Paint Co. Ltd. Toronto, has obtained charter of incorporation.

The La Force Pneumatic Bicycle Tire Co. Ltd., of Toronto, has obtained charter of incorporation.

MacArthur, Craig & Co., report large quantities of copper are going out on Western Ontario account.

Dr. Chalmers' church (Presbyterian) at Uxbridge, is having one of Gurney's Oxford wood furnaces put in.

H. S. Howland, Sons & Co. have just received a fine line of Lockwood's E. P. butter knives and pickle forks.

The Dominion Lands Company of Winnipeg are putting in a pair of Oxford hot water boilers with twin connections.

H. S. Howland, Sons & Co. have a complete stock of Baldwin's wads, a large consignment having just reached them.

September's trade with the Gurney Foundry Company has been the largest ever experienced since the firm began business.

Samuel, Benjamin & Co. are putting a new spring hinge on the market, and it promises to take well. At least the price should insure it; and as the firm has sole control of the hinge there is hardly likely to be any cutting.

A. C. Leslie & Co. report the receipt of large orders for carvers, with and without case, and the translucent handled table cutlery. They have had a particularly good run on plain carvers.

The Gurney Foundry Co. have secured from Miller & Co., florists, an order for one of their new Crown Oxford steam boilers, 40 horse-power, to be used in heating the firm's five new greenhouses.

A good trade in grain scoops is reported by M. & L. Samuel, Benjamin & Co. This firm is putting a new line of scoops on the market which is selling well, being, it is claimed, quality considered, the cheapest on the market.

H. S. Howland, Sons & Co. are in receipt of a large consignment of Joseph Elliot's celebrated C. & C. razors and table cutlery, Arkham table cutlery and Westinholmes I. X. L. pocket cutlery.

Jas. Hutton & Co., Montreal, sole agents for Burroughes & Watts, Ltd., London, England, report an increasing demand for their celebrated billiard and pool tables. They are supplying the St. James' Club and the Hotel Frontenac, Quebec, having placed several tables in each of these places.

M. & L. Samuel, Benlamin & Co. are showing good value in ax-handles. The handles in question are hand made, and the Samuel, Benjamin & Co. have purchased the whole output of the factory. It is claimed they show the best value on the market, and a good many of them are selling.

H. S. Howland, Sons & Co., Toronto, report large sales of ammunition. The demand for the salmon color smokeless shells seems increasing.

Spot tin has become temporarily scarce again in London and this has been taken advantage of to put prices up against those who are short pending further arrivals. During last week there was an advance of fully £2 per ton.

AMERICAN MARKETS.

New York, September 29.

PIG TIN.—London cables reported a sharp break in prices in that market on official record of sales of about 100 tons for the day. New York stood firm for a time in the face of adverse foreign advices, and bids were made of as high as 20.95c. for current month delivery. Subsequently a very fair amount of tin that has latterly been nursed of a 21c. market came out, and the policy of making the most of a good thing resulted in sales at some concessions. Thus the official record showed sales of 20 tons spot at 20.90c.; 10 tons delivery Oct. 2nd, at 20.90c.; 10 tons spot at 20.87 1-2c.; 30 tons ditto, at 20.85c.; 30 tons ditto, at 20.87 1-2c.; 25 tons ditto, at 20.85c.; 25 tons sellers' option to Oct. 2nd, at 20.85.

COPPER.—The margin of difference between buyers' and sellers' prices, and consequent uncertain condition of the market, continued, and, in connection with a sharp break in London prices, due largely to late heavy shipments from this side of the Atlantic, gave the market a soft appearance. In fact, it looked very much as though the shipments of old French syndicate holdings of matte weighted the foreign market, and that offerings from current production were too heavy to be taken care of conveniently. In any event, Lake Superior ingot could have been secured for early delivery at 9 3-4 to 9 7-8c., electrolytic at 9 3-8 to 9 1-2c., and casting stock at about 9 1-4c., in round lots.

PIG LEAD.—Business was of very moderate proportions and nothing distinctly new came to the surface in the way of demand or offering. The official bullion price went as low as 3.65c., but on regular trade terms bids were made of 3.75c. for car-load lots of ordinary Western, early delivery, while sellers were stiff at 3.80c. upwards. Comparatively little business resulted, and, while quiet, the market showed fairly good tone, with Exchange contract bids very close to outside quotations on both prompt and near-future deliveries.

SPELTER.—The market was bare of new feature. Enquiries were moderate and chiefly for single car-load lots, the offering was more or less reserved, and neither buyers or sellers changed their respective positions in the slightest degree. From the primary sources of supply there was likewise an absence of any radical change. Ordinary Western

MARKETS—Continued

brands may fairly be quoted at 3.60c. delivered here or at common point.

ANTIMONY.—Demand was without remarkable change and the business effected was at about former prices, or, say, 9 5-8 to 9 3-4c. for Hallett's, 10 1-8 to 10 1-4c. for Cookson's, and 10c. for LX and similar brands.

TIN PLATE.—The movement in ordinary cokes continues fairly brisk, and prices for this class of plates remain quite firm. Otherwise business is slow and the movement of prices quite narrow. Interest in futures continues very tame.

STEEL RAILS, ETC.—The rail market is in statu quo, there being neither business or demand of sufficient volume to fairly test it. Rumor still has it that, while the popular quotation for heavy sections is $29 f.o.b. mill, concessions are being made indirectly. All accounts go to show that new dealings and negotiations are on a very moderate scale, and, while not positively lower, prices continue rather weak.

OLD MATERIALS.—In this line there is an irregular movement, and the entire dealings make a very moderate showing all told. Prices stand about as they have been for some little time past, and still lean more or less in buyers' favor. Old steel rails are quoted at $12.50; old iron tee rails at $14.50 to $15; No. 1 wrought scrap iron, $11 to $12.50 in yard; No. 1 machinery cast scrap at $11 to $11.50; car wheels at $12.50 to $13, all on cars. Wrought turnings at $10, and cast borings at $7, delivered to mill.

PIG IRON.—The movement in American pig iron has not changed materially during the past few days. Deliveries on old contracts have increased slightly, but no more than might naturally be expected in view of the slowness that has been common of late, and new purchases have continued on strictly commonplace lines. Prices show hardly any variation, but, except in the instance of specially favored brands, continue rather weak.

Foreign pig iron is selling in very small quantities only, but, with values well maintained in the primary markets, buyers have to pay full former rates. Scotch pig is quoted laid down here at $21.50 for Coltness, $20.50 to $21 for Summerlee, and $19 to $19.50 for Eglinton, to arrive. Spiegeleisen and ferro-manganese continue very slow of sale, and the market is flat, with prices nominal. Ferro-manganese is valued at $56 to $56.50, and 20 per cent. Spiegeleisen at $25.50 to $26, landed here.

PERSONAL MENTION.

Eli Braund, of Aurora, was in Toronto Wednesday. He was on his way home from Chicago. He had a good time, but was heard to remark: "After all there's no place like home—for peace and quietness.

Mr. F. Monks, managing director of the iron and steel firm of Monks, Hall & Co., ltd., Warrington, Eng., paid a visit to Toronto this week. In company with W. S. Leslie, of A. C. Leslie & Co., who are Monk, Hall & Co.'s agents in Canada, he visited a few of the industries here, and expressed himself favorably with what he saw. Mr. Monk left Wednesday night for Montreal, and after leaving there will visit some of the manufacturing centres in the Eastern States. He is on a trip around the world, and has already visited India, Burmah, China, Japan, Australia, and parts of the United States, including the World's Fair. He said that none of the iron mills in Warrington which closed owing to the coal strike, have yet resumed, but it was expected that they would shortly.

A. E. Bottum, of Bobcaygeon, paid a visit to Toronto warehouses this week.

J. C. Jenkins, Victoria Square, Ont., was on the street this week.

Mr. E. Samuel, of M. & L. Samuel, Benjamin & Co., is at the World's Fair.

Sam. Kennedy, one of Samuel, Benjamin & Co.'s travelers, returned from Chicago this week.

DOES IT PAY TO BE HONEST.

There are unfortunately a great many people in this country who do not think that it does. These people point to some great stock speculator or railroad wrecker that has amassed millions by juggling them away from other men, in proof of their assertion that honesty is an old-fashioned virtue, and that the fortunes made now-a-days are built up with the aid of tricking and sharp dealing. There are, we admit, a few wealthy stock manipulators, but there are hordes and hordes of poor ones. We know an old gentlemen who some twenty years ago was "frozen" out of eighteen thousand dollars by a coterie of operators, but every one of this clique, after long occupying prominent places in the business and social world, has gone into bankruptcy and sunk back to obscurity. The unsubstantiality of a speculator's life is lost sight of by the masses. There are three classes of operators; one, the class best typified by a gentleman of our acquaintance, who on all occasions says that a man is a fool who can't make $5,000 a year, and who is always borrowing small sums for current expenses which are not repaid; a second class is composed of those who strike it rich, pose for a time as great financiers, and then fail, dragging out a weary old age in attempting to recover what they have lost; a third class are those who amass fortunes at this business and hold on to them. A very small percentage of those engaged in running corners or squeezing stockholders belong to this third class. Those men on our stock exchanges and Boards of Trade who do a legitimate brokerage or commission business succeed, if they have the right business qualifications, but those who try simply gambling or sharp dealing seldom come out well in the long run. In mercantile and manufacturing the same rule will hold. The number after a dealer's name in a commercial agency's report that means "tricky and dishonest" is almost always followed by the number that means "failed" or "assigned."

A man may gain a temporary advantage by selling gold-plated goods for solid gold, but he is certain to lose it in the long run. People will find him out, and when they do, they will have none of him. Of the great fortunes built up by manufacturing and commercial establishments, none are to be accredited to firms who have systematically deceived and humbugged the trade. The number of men who think they can succeed by sanding sugar are growing beautifully less every year. Take the catalogues of various manufacturers, or converse with them about their goods, and while it is evident that one make of this or that article is greatly inferior to some other brand, yet the sincerity of the manufacturer in believing his own product better than his competitor's can be readily seen to be genuine and not assumed, in nineteen cases out of twenty.

Dishonest men may thrive for a time, but their Nemesis, while often dilatory, comes sooner or later to most of them. A man who establishes a reputation for honest dealing, for paying his debts, and for selling goods for what they are, may occasionally lose a sale on account of the tricky interference of a dishonest competitor, but he will find his course much the more profitable in the long run.—American Artizan.

RESPECT YOUR SIGNATURE.

How often the merchant or business man is asked to sign his name to a petition, or to give his endorsement to an enterprise of which he has little knowledge, or give a letter of recommendation to someone whose check he would not cash or whose bond he would not sign, says an exchange. It is remarkable how careless most business men are in such matters. Letters of introduction command little attention or respect in this country, for they are so easy to procure. In Europe a letter of introduction opens a man's home to a stranger and often his purse. But Europeans are far more careful than we are in the giving of such letters.

Who has not signed a document or petition simply because he was asked to do so? A favor lightly asked and lightly granted. Who does not know of some instance where a responsible business man had to spend a week or more in trying to undo what he had thus done in a thoughtless moment? The Chicago Tribune, in a recent editorial says:

"There is altogether too much signing of petitions, recommendations and endorsements. If a man's name has any value, he should be careful how he puts it on paper. If he thinks his signature carries any weight, he should refuse to sign if he does not feel inclined to do so, even if his refusal does displease the applicant. It is better to say no than to say yes, and then try to back out of it."

Respect your signature; don't give it to every Tom, Dick and Harry for no other reason than because he requests it. Know what you are signing; and when you endorse a friend, recommend a trusted employe or give a letter of introduction to someone in whom you have confidence, expect to be recognized and respected. Don't cheapen your name by a careless use of it, and demand the same recognition of it that you would ask for yourself.

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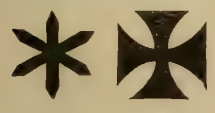
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GETTING A START.

Thousands of young men, says a contemporary, have laid the foundation of a successful business simply by contracting the habit of saving. The latest instance coming to notice we glean from a chapter of "Experiences in the Oil Regions," as told by Thomas Martindale, of Philadelphia, who was a worker in that country twenty-four years ago. He says:

Having no chance of spending much money while engaged in pumping, and as my wages ($21 per week) counted up very fast, and my living expenses (doing my own cooking) only amounted to about $3 a week, I deposited my savings of $200 in the Oil City Savings Bank at four per cent. interest on call.

Provisions and groceries were high then, but nobody seemed to grumble; $20 for a barrel of flour (when it was bought in small quantities), or 50 cents for a can of peaches or tomatoes; and at the same time the purchaser carried the goods without complaint from the store to his "shanty." I myself gave the matter no thought until one day when I was trudging over the mountains with a heavy basket on my shoulder loaded with eggs, a few vegetables and some groceries. I sat down to rest on a rock on the summit, and having a copy of the Pittsburg Commercial with me, I read and re-read it, until the news was all devoured. Then I pored over the advertisements, and, being attracted to the market reports, was struck with wonder when I saw the quotations for groceries and green vegetables in the "Smoky City." I pondered over the apparently low prices, considered the distance from Oil City to Pittsburg (139 miles), and finally decided that if the freight rates were not immoderate and the quotations (which seemed preposterously low) were correct, my opportunity had come—that opportunity which we hear so much about "coming to every man but once," and if he fails to seize it, etc. I felt my opportunity was to take what little money I could scrape together and start a grocery store. How or where, I did not at all think about, or the fact that I was an absolute novice in the business—did not know one kind of tea or coffee from another, nor syrup from molasses. I only knew that the prices then current in Oil City were fabulous, that people must eat, that money was plenty and oil was high, and that I was wasting time and losing "my opportunity" by continuing my occupation of engineer or pumper of "No. 1 well." I then and there determined that I would make a venture as a merchant just as soon as I could find a location and get enough information on the subject of the average grocery store of the oil country to prevent me from falling into fatal mistakes. So for three or four weeks after my mind was full of plans as to how to make the start, how much money it would need, how to gain the necessary knowledge to buy goods (my whole education up to this point having been to develop my ability as a salesman, with no experience whatever as a buyer), and in this condition of mental activity I found the cure for sleeplessness when "on tower" already mentioned, for since then I have never been troubled (under any conditions) with undue or unnatural sleepiness.

MESABA IRON MINES.

The chief reliance of the newly formed Lake Superior Consolidated Iron Mines Company and the factor by which it expects to handle the Bessemer ore trade of the United States lies in its steam shovel mines. These are all properties from which ore of a high grade can be stripped of the earth above and mined by steam shovel. Of this class of properties the new consolidation has five, the Mountain Iron, Missabe Mountain, Biwabik, Adams and Lake Superior, all of which have been described at length in The Iron Age in the past year. Added to these is a possible sixth, explorations now being carried on in sections 25, 58, 17, on lands of the Great Northern Company, indicating the presence of a probably large stripping mine. The new company have no iron mines outside the Mesaba range, and their claim that they can handle nine-tenths of the Bessemer output of this country is based solely on the ownership of these stripping mines, which can handle ore at a remarkably low price. There records were made last week at three of these properties that are of no little significance in this connection. At the Missabe Mountain Captain Florada mined and loaded on cars in seven consecutive hours, working only one ordinary Barnhart steam shovel, 1,500 tons of ore. At the Mountain Iron, in a trifle more than nine hours, 2,500 tons were mined and loaded by one shovel. At the Biwabik, where circumstances were particularly favorable, 3,400 tons were mined by one shovel in 12 hours.

But if the new Rockefeller-Merrit syndicate believes it controls all the stripping mines on the new range, present and to come, it is in a grievous error. Developments are already far enough along on three Mesaba properties, outside the combine, to warrant a belief that they belong in this favored class. One of these is the Iron King, in 17, 19 and 20-58-17, while the others have no names. There are also excellent opportunities in unprospected lands for large finds.

Daily developments at Duluth strengthen the opinions of those in a position to see that an opposing combination of Mesaba interests under the control of the Minnesota Iron Company is being formed. There are abundant opportunities for one or two opposing syndicates, and a second, if ever formed, will have a good deal of Canadian Pacific Railway and Saginaw, Mich., capital back of it.—Iron Age.

THE MODERN PLUMBER.

It is doubtful if there has been an advance within recent years in any other trade equal to that which has been made in plumbing, remarks Metal Worker. To-day there is added to the manual skill of the trade a fund of scientific information and technical knowledge that places a true modern representative of the craft on a level with many professional men. That there will always be workers and thinkers in all trades is conceded, and, though the words "sanitary engineer" are frequently displayed as a sign where they are a misnomer, competent sanitary engineers exist and are the outgrowth of the progress in the trade. Some of the very best are practical plumbers who have read and studied until their applied science is more valuable than that of their more deeply learned brother, who is apt to become theoretical, particularly when the value of the result and the cost of its production are compared. The percentage of valuable thinkers is always unequal to the demand, and this fact will guarantee employment for the sanitary engineer, as the character of the work required is elevated above the education of the average man. This advance in the trade is pleasant to note, and it is reflected by the inquiries received from all sections for information on subjects that ten or twelve years ago were not of interest to the craft. The present seems an era of regulation, tending to better plumbing and sewerage all through the country, and those who would reap the benefit must understand and meet the requirements or be left in the march of progress.

LOCKS IN OLDEN TIMES.

The oldest substitute for lock and key, explains a contemporary, is the latch and bolt, and the latter have been used from the dawn of the most primitive civilization to the present day. At an early date—perhaps 3,000 years ago—the wooden latch was made more secure by introducing a sort of wooden lever with notches to raise the latch. This leaver is regarded as the oldest shape of the key, and is thrust in the lock sideways, writes an exchange. In latter times it was made of iron, and still continues to be used in out of the way places all over the world—in Scandinavia, Russia, Germany, in Upper Egypt, in South America, and probably in our own country. The wooden lock held its own though classic and Byzantine times, but the keys were made of iron or bronze. Roman and Byzantine keys were of the simplest shape, but specimens with artistically decorated bows are also found, and the miniature keys Roman ladies used for their jewel caskets were of exquisite workmanship. Locks first made from metal were introduced during the Gothic period, and artistic door mountings in the shape of ornamental door hinges, locks, plates, etc., became general. The intricacies of the fan lock were carried to the highest perfection; innumerable notches being put in the bit to guard against wiles of the medieval burglar. The same style of keys continued through Romanic times.

MODERN USES OF MICA.

A few decades ago we were seeking practical use and market for the output of mica mines already found ; now we are seeking new mines to supply the multifarious uses to which mica can be applied. Thus the law of necessity changes in its relations to all things. Mica is now as essential to the various uses of electricity as this great force is necessary to human progress. In all appliances for electrical lighting and power the most important reciprocal agent entering into the mechanisms is mica. All armatures are built up with its insulation, whether for dynamos, motors, generators, or transformers. Mica is also an important factor in many branches of manufacture and art. Owing to its peculiar elasticity and toughness, qualities in which it is not excelled by anything natural or artificial, it is used as an absorbent of nitro-glycerine, and when so used explosions by percussion are rendered almost impossible, while at the same time nothing is taken from the energy of the nitroglycerine when exploded by fulminates or similar device. The prismatic or foliated mica is also used by passing it through a mill. This vastly increases the mica's bulk and forms masses of bran-like scales, translucent and beautiful. The French silver mouldings are also made with this ground mica. The unalterable nature of mica, and the fact that it entirely resists the action of corrosive acids, smoke and dust make it a valuable material for edificial decoration. It can be readily colored or metalized, and its transparency preserves in all its pristine beauty anything to which it is applied. This ground mica is also used as a lubricant and axle grease. Coarsely pulverized, it is also used for roofing material, and is fireproofing for iron safes.—N. Y. Hardware.

PUSH AND PULL.

A countryman when asked the old question : "Where did you get that hat?" replied that he got it down to "Push and Pull's." He had mistaken the familiar injunction lettered upon the store doors for the business sign. Notwithstanding the countryman's mistake, the sign was all right, and should not only be posted upon the door, but pasted in the hat of every business man, and and every other man, who hopes to succeed. Push and pull is the order of the day, and it is a watchword good enough for any man. Without push none can succeed. The easy-going, careless, lack-a-daisical mortal will get left in the race ; the indolent shiftless, thriftless, lazy man will remain far behind, and can never hope to "get there" without push and pull. Push to keep the best selected stock if you are a merchant. Pull the old rubbish down from your shelves, and push your goods that you would sell to the front. Push for customers, and push your trade by judicious advertising. Push your accounts to a close collection, and push deadbeats to a speedy settlement, or else push them out of the way to make room for better customers. Push all the push cart peddlers out of your neighborhood, who are cutting an inroad upon your business. Push the cobwebs away from your storeroom, and push all decaying garbage into the scavenger's cart. Push your utmost to promptly serve and please your customers. Then pull yourself together to pull in trade. Pull every string to pay your bills promptly, and finally, brethren, with all your pushing and pulling, don't push one another, but organize and pull together. Push and pull is a good firm to do business with.—Herald of Commerce.

A London, Eng., despatch of Sept. 25, says : The season is rapidly approaching when the demand for coal reaches its largest volume, and as the demand increases coal merchants advance their prices, for, owing to the strike of the coal miners, the supply is not equal to the demand. On Saturday the prices were advanced 2s. per ton, and to-day a further advance of 2s. was made. It is feared that even should the strike shortly end it would be some time before prices reach their normal level, and the rates even now prevailing are almost prohibitive to the poor. Should the winter set in early much suffering will result from the scarcity of mined coal. The Miners' Association at Pontefract, in Yorkshire, where the strikers' riots have been most violent, passed at a meeeting to-day this resolution : "In view of the general destruction of trade through the high-handed action of the colliery capitalists the Government ought, through a vote of the House of Commons, to declare that all mineral deposits belong to the nation, since, if immediate steps are not taken to work the coal mines, the Government must do it to prevent the wholesale starvation of the people."

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PAPERS ON THE GEOLOGY OF IRON ORES.

A number of papers have recently appeared which bear on the geology of iron ores, and deserve connected mention. Over a year ago Prof. J. P. Kimball began, in the American Journal of Science (September, 1891, p. 231), a contribution on the "Genesis of Iron Ores by Isomorphous and Pseudomorphous Replacement of Limestone," which was concluded in the American Geologist for December of the same year. Dr. Kimball presents strong arguments for the origin of many ore-bodies, especially the stratified, by the replacement of calcium carbonate with anhydrous, ferrous carbonate directly. He emphasizes the important, chemical reaction by which hydrous, ferrous carbonate, instead of anhydrous, falls whenever ferrous salts are precipitated by an alkaline carbonate, and from this argues that the bedded and lenticular masses of siderite have originated by molecular interchange. In the second part the conclusions are applied to many important ore-bodies, including the Subcarboniferous limestone of Eastern Kentucky; the Juragua ores of Cuba; ores at Leadville and Hot Springs, Col.; the Clinton ores; the Carboniferous limestone ores; the Siluro-Cambrian limonites, Cornwall, Penn., magnetite; Lake Superior and Missouri specular ores, and many foreign examples. Many of the above applications are justifiable and right, but the Clinton ore has been shown by C. H. Smith, jr., to whose paper we pass shortly, to be in many of its outcrops of quite different origin. He would explain the now exhausted specular ore of Pilot Knob, Mo., as a replaced limestone, would also have a practically undemonstrable thesis. Nevertheless, where it can be applied the replacement of limestone furnishes us with a cause of whose chemical bearings we have some reasonable comprehension.

A somewhat different conception of origin is afforded by the paper of Professor Van Hise on the "Iron Ores of the Marquette District of Michigan." (American Journal of Science, February, 1892, p. 116). The author continues the researches begun by Prof. R. D. Irving and himself years before in the Penokie-Gogebic district. He shows that the ores in the Marquette region are in two formations, the Lower and Upper Marquette. In the lower Marquette 4 varieties of ore body are recognized: (1) deposits on the contact of quartzite conglomerate and the ore-bearing formation; (2) deposits resting on soap rock, which grades into massive diorite; (3) deposits resting upon dikes of soap rock, which follow along or cut across the ore-bearing formation; (4) deposits interbedding the jasper or chert. The iron is thought to have been derived from lean, cherty, carbonate beds, and to have been precipitated, especially where the solution came to rest above some impervious layer, such as soap stone (altered diabase) dike, this being the commonest. In the Upper Marquette various other pervious rocks have furnished the footwall. In some instances it is a black slate, in others an intrusive basic eruptive, and in still others a surface volcanic. The ores occupy troughs on these or on the sides of synclinals, and exhibit all stages of change from unaltered carbonate through limonite to hematite. The author applies the same general explanation to the other hematite districts, but adds that he himself has given them as yet less personal attention.

H. V. Winchell, of the Minnesota Survey, has recently classified in a tabular statement all the possible theories for the formation of iron ores (American Geologist, November, 1892, p. 277). The scheme is a grouping of the various forms of origin set forth in Bulletin VI. of the Minnesota Geological Survey, 1891, p. 223, wherein a very complete review is given of theoretical views. Some 18 different ones are cited, of which 14 have been previously summed up by A. A. Julien (Proc. Phila. Acad. Nat. Sci., 1882, p. 335). The main divisions of the table are mechanical and chemical. Under the first are the subheads: 1. Extra-terrestrial or cosmical; 2. Terrestrial. Under the second: 1. Changes in situ; 2. Removal by chemical action and subsequent deposition. Mr. Winchell seeks to classify a variety of ideas, which in many cases have few natural affinities. It must be admitted that all the views cited have been at one time or another advanced, and as an historical summation the table has its value; but when speaking of "ores" one should not mean all iron minerals. Ores are only those in amounts to be of practical value. Meteoric irons are, for example, rare curiosities. Subterranean dikes or other igneous eruptions can hardly be considered of mechanical origin, though placed under 2 of this heading. The two subdivisions under Chemical would appear pretty near the same thing. The table gives at a glance practically all that has been advanced explanatory of iron-ores, but many of the ideas are more ingenious than sound.

C. H. Smith, jr., brought out in the American Journal for July, 1892, p. 487, an abstract of his thesis on the Clinton iron ore, which was presented for the Ph. D. degree to the faculty of the School of Mines in 1890. Much had been previously written about the Clinton ores, and the impression was widespread that they had generally resulted from the surface weathering of a highly ferruginous limestone, that became, at no great depth, too low grade to be of value. These views are undeniably correct for Alabama and other Southern districts. Others had regarded the Northern deposits as replacements of limestone, and one writer, Dr. Newberry, had likened them to the oolitic limonites of the Swedish lakes. Dr. Smith brings out the fact, not generally appreciated, that the ore at Clinton, N.Y., is a siliceous ore, and that it is oolitic and formed by small concentric layers of ferric oxide, interlaminated with thin shells of chalcedonic silica, and all deposited around a small grain of quartz as a nucleus. He then infers with justification that it is a shore deposit, and probably formed as hydrated peroxide, and became dehydrated to hematite in time.

H. V. Winchell has given us a very valuable and timely account of the enormous bodies or iron ore lately opened in the Mesabi Range, Minn. (The Mesabi Iron Range, Twentieth Ann. Rep. Geol. Sur., Minn., 111-180, and republished in part in the Trans. Amer. Inst. Min. Eng., Autumn, 1892.) The ores are soft or hard hematite and limonites which rest on the underlying, Pewabic quartzite of the Animikie group, and are associated with a cherty, jaspery quartzite, called by Winchell taconyte. Over the ore in the geological section are greenish, siliceous slates, and cherts, but resting immediately on its accessible portions, is a heavy mantle of glacial drift, up to 75 feet thick, which has hindered the discoveries. Above the slates and cherts comes the Animikie black slates and still later than these are the great masses of gabbro. Under the Pewabic quartzite are the unconformable green Keewatin schists and still lower the granite of the Giant's range.

Mr. Winchell pronounces the deposits true beds, and refers them to a form of origin by replacement of some pre-existing rock, presumably a very siliceous and ferruginous limestone, but he is free to admit that unchanged masses of it are yet to be found. To account for the presence and discover the source or these enormous amounts of iron ore and silica are by no means simple problems, but the explanation suggested is at once an attractive and a reasonable one. The ores are largely bessemer and are so soft that they can, in large part, be dugby steam shovels in open cuts. From all accounts they would seem to be, perhaps, the largest of the Lake Superior deposits.

Some very interesting papers have of late been written by Prof. J.H.L. Vogt, regarding the origin of bodies of titaniferous magnetites that are associated with rocks of the gabbo family of excessively basic developments of igneous magmas. The greater number of his contributions are in Norwegian and Swedish, but a resume in German is given in Vol. 1, No. 1, p. 4, of the new Zeitschrift fur Praktische Geologie, January, 1893, and in several subsequent numbers. To the same form of origin, bodies of nickelferous pyrrhotite, in similar wall rocks, are referred. The papers are illustrated with many interesting cross-sections of Scandinavian mines and with references to ore-bodies elsewhere in the world. The idea is a good one, and will doubtless be found quite widely applicable. The immense bodies of titaniferous ores now valueless, and receiving no practical treatment, furnish a tempting field. In this connection mention should be made of the recent investigations of Mr. Auguste J. Rossi—an account of which was published in the Trans. Amer. Inst. Min. Eng., Feb.,1893, entitled, "Titaniferous Ores in the Blast-Furnace." Mr. Rissi cites many analyses and occurrences and brings out the curious fact that phosphorus and sulphur are extremely low, or lacking in these ores and that alumina rules high. Just in what way the elements are combined is a most interesting question, and it is quite possible that some hitherto unsuspected compounds may exist.—J. F. K. in School of Mines Quarterly.

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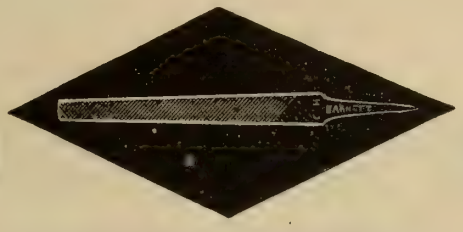
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BESSEMER PROCESS IN SWEDEN.

At the Engineering Congress held in Chicago recently, Prof. Richard Akermann, of Stockholm, presented a paper on the above topic. He stated that the Swedish Bessemer steel makers have the advantage of iron comparatively free from phosphorous and sulphur, while in many cases it was not necessary to add manganese in the converter, as the iron carries a sufficient proportion. The plan of taking iron direct from the blast furnace to the converter is generally followed, and, in fact, originated in Sweden. A consequence of the low percentage of silicon in the pig iron is that the boil, or violent ebullition of the carbon generally begins from half to three minutes after the blow has begun, and the ordinary time for the entire blow is not more than from 7 to 10 minutes, not counting the time used in taking samples. The area of the tuyere-holes, which in Sweden are very large as compared with the charge of pig iron, contributes in large measure to this result. This area generally amounts to from 30 to 35 square centimetres per ton of pig iron; exceptionally, it may, on the one hand, reach 50, and, on the other hand, 15 square centimetres per ton. That the proportion just now mentioned is so large depends, however, by no means, on an absolutely large total tuyere-area, but simply upon the small charges, which in general do not amount to more than 3,000 to 3,500 kilogs of pig iron. The converters are proportionately small, their diameters being about 1.5 to 1.6m., but at the bottom only 1.2 to 1.3m., while the interior height from the bottom to the mouth usually varies between 2 and 2.5m. (6.56 and 8.2 feet). For more than 20 years, rotating converters exclusively have been used in Sweden, and for the better preservation of heat they always have the mouth on the side. For the same reason the mouth of the converter is always very narrow, being often only 0.2 to 0.25m., but occasionally 0.3m. in diameter. The total area of the tuyeres amounts generally to 80 or 120 square centimetres, and is most often divided up into from 70 to 200 holes, for the most part 9 to 16mm., but now and then 6 to 15mm., in diameter. The pressure of the air is most frequently between 400 and 1,000 mm. of quicksilver (equal to 7.8 and 19.6 pounds per square inch) and the blowing engines are generally of from 600 to 900 horse power. To avoid loss by the formation of ladle skulls is the object of Caspersson's converter ladle, which has, since 1880, been used with greatest success at the majority of the Swedish Bessemer works. It consists of a narrow ladle furnished low down on its side with a lateral opening that fits the mouth of the converter. Immediately after the blow, the ladle is brought up to the converter mouth and made fast by means of wedges in the lugs. The converter is then turned down still farther, so that a part of the bath metal runs into the converter-ladle, while most of the metal remains in the converter. It is precisely on this circumstance, coupled with the smaller depth of both occasioned thereby, that the advantages of the converter-ladle depend. A ladle, being never as hot as a converter at the end of a blow, operates, therefore, always to chill; but as the converter-ladle is quite small, its power to chill the metal bath, the incomparably larger part of which remains in the converter after it has been turned down, is far less than that of an ordinary ladle, which receives all of the molten mass. The result is that the liquid Bessemer metal can be allowed to remain in peace and quiet longer, to permit the gases to escape, and without fear of partial freezing before being tapped into the molds, than before the advent of the converter-ladle; at least, longer than was possible with a product only as moderately hot as the Swedish Bessemer metal generally is, especially since the quantity handled in Sweden at each blow, as has been shown, is comparatively very small, and consequently the cooling effect of the ladle is proportionately great. By the aid of the converter-ladle, ladle-skulls can be prevented. But to this great advantage may be added another, viz., that the product is somewhat freer from blow-holes, partly because with the converter-ladle a longer time is given for the escape of the gases and for the more complete separation of the slag by rising to the surface, and partly on account of the more moderate speed of the stream of metal incident to the smaller depth of bath. Since the converter-ladle, during teeming, is fast and immovably fixed to the converter, it is evident that the former cannot, like an ordinary crane ladle, be carried over the molds, but that the molds must be brought under the converter, either on car sor on a turn-table. To prevent the formation of bad and faulty ingots, Mr. Caspersson has complemented his converter-ladle with a so-called strainer-funnel. It is furnished with a handle, and lined with refractory material, and has withdrawable, chamotte bottom, which is provided with many larger or smaller holes, the number of which is larger in the same degree as their diameter is smaller. When teeming takes place, there is first laid upon the mold a cast iron disc, with an opening in the middle corresponding in size to the changeable funnel bottom, and a little side hole, which affords a chance for the gases separated during teeming to escape, and also for the man who directs the tapping to judge when the molds have been suitably filled. The preheated funnel is placed over the central opening and the metal, tapped out through the converter-ladle into the strainer-funnel, is divided by means of the holes in the bottom into more or less numerous streams of smaller or larger size. This division of the metal occasions, during its passage down into the mold, both a more complete removal of gases and greater cooling than takes place in the ordinary mode of tapping. The finer the strainer holes the more effective does its work become.—American Manufacturer.

THE NIAGARA FALLS ENTERPRISE.

The inception of the Niagara Falls enterprise was an idea that in its scope and nature was of such magnitude and interest as to be one of the added wonders of modern achievements, says Age of Steel. Its progress has been quietly noted with a marked decrease in what suspicions there might be as to its successful completion. There have been no signs of parade or precipitation in the process of construction, which is characterized by prudence and thoroughness. The initial work is rapidly approaching completion. The tunnel, 23 by 21 feet in inside measurement and 8,265 feet in length, is finished. The canal, 500 feet wide, 1,200 feet long, and 17 feet deep, faced with massive masonry, is also completed, and the giant turbine walls representing the 5,000 horse-power unit, to be fixed at the head of the tunnel, are in course of construction. The original idea was the transmission of electrical currents in comparatively local limits. The scope of the plan was widened, and its ultimate object now is to have from 600,000 to 1,000,000 horse power available from this central plant, and by means of duplicate transmission systems, to secure a flow of current as continuous as that of the great cataract itself. In the distribution of this enormous power the general plan as outlined will be similar to that prevailing in the distribution of gas and water, the difference being that in place of big mains, there will be big cables to tap. These cables are to be run along the line of the Central railroad in the State of New York, or along the Canadian border. Local corporations are being formed for operating power in various cities, the organization of which will progress as the territory is covered. Scientists and experts are practically unanimous in the conclusion that this is not only possible in the instance quoted, but that long-distance transmission of powerful electrical currents will eventually be as common as the sending of electrical signals over great lengths of wire. The availability of this energy at remote distances from its central source can noc fail to have a marked effect on manufacturing industries both in an economic and productive sense. This is an accepted eventuality, which with all qualifying conditions duly weighed, cannot fail to be of the greatest importance in industrial expansion.

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel.

Steel, Peech & Tozer, Ld.,

Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,

Agents.
MONTREAL AND TORONTO.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.
Keene's Coarse, Parian and Superfine Cements.
SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.
FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,
CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

FIRE!

McCAUSLAND & SON

Beg to inform their customers and friends that they are in a position to fill all orders with promptness and dispatch, notwithstanding the recent fire in their premises. . . .

72 to 76 King St. W.

. Mixed Paints .



TRADE MARK

The Unicorn Brand

Has now the leading reputation for purity and durability in Canada.
They are sold all over the Dominion.

Manufactured only by
A. RAMSAY & SON, MONTREAL
ESTABLISHED 1842.

Canada Iron Furnace Co., Ltd.

Manufacturers of
CHARCOAL PIG IRON
MONTREAL.
BRAND "C. I. F." THREE RIVERS
PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

STOP!

Do not turn another page before we have told you what we can do for you.

OUR HERCULES METAL

Is the best in the world. Does not heat and suits all kinds of Machinery.

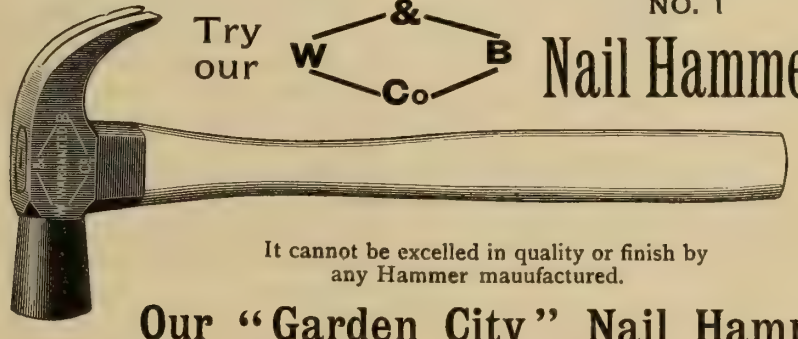
Our Solder is used by all the leading Plumbers, Roofers and Tinsmiths.

..TRY US..

TORONTO SMELTING and REFINING WORKS
92 and 94 Queen St. E., TORONTO.

THE WHITMAN & BARNES MFG. CO.

Canadian Branch: St. Catharines, Ont.



Try our W & B Co NO. 1 **Nail Hammer**

It cannot be excelled in quality or finish by any Hammer mauufactured.

Our "Garden City" Nail Hammer

GET OUR PRICES AND TRY OUR GOODS

Is the best and cheapest "Solid Cast Steel" Hammer on the market. . . .

We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .

High Grade Guns

We have just received a large shipment of W. W. Greener Guns, hammer and hammerless, which we

AT REDUCED PRICES

OFFER TO THE TRADE

at greatly reduced prices. Catalogue and discount sheet free to dealers on application.

Try Our Loaded Shells.

Agents for American Wood Powder
" " Hamilton Blue Rock Birds

HEADQUARTERS FOR

Guns, Fire-Arms, and Sporting Goods

The Bowman Hardware and Sporting Goods Co., Hamilton, Ont.



A GREAT LOSS?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

J. Redford, manufacturers' agent, Halifax, has assigned.

N. Johnson, tinsmith, Lynden, has assigned to F. F. Lyall.

C. B. Wright & Sons, cement and lime, Hull, Que., have assigned.

Geo. A. Willett, general merchant, New Richmond, Que., has assigned.

Wm. R. Chute, general merchant, Clementsvale, N.S., has assigned.

A Valleyfield, Que., general merchant named Wm. B. Parker, has assigned.

A demand of assignment has been made upon Chas. S. Gagnier, paints, Montreal

Joseph Fortier, general merchant, Capelton, Que., is offering to compromise at 45c. on the dollar.

The estate of R. Gurd, manufacturer of brooms, London West, is to be sold by auction on 2nd prox.

A demand of assignment has been made upon J. A. Meager & Co., general merchants, Aston Station, Que.

P. P. Raby, plumber, Montreal, is reported absent, and a meeting of creditors has been called for Tuesday next.

PARTNERSHIPS FORMED AND DISSOLVED.

Banks & Hardie, coal, etc., Montreal, have dissolved.

Mansell & Co., manufacturers, Montreal, have dissolved.

Munroe & Bates, manufacturers of blacking, Montreal, have dissolved.

John Fallow & Co., lumber, New Richmond, Que., have formed a joint stock company under the style of the Fallow Lumbering Co.

Hammond & Moffatt, saw mill and lumber, Knowlton and Bolton Glen, Que., have dissolved and have been succeeded by F. A. Hammond & Co.

J. B. Charron and L. Charron have registered a partnership in Montreal to carry on business as coal and wood dealers under the style of J. B. & L. Charron.

SALES MADE OR PENDING.

L. B. Montgomery & Co., mill and engineers' supplies, Toronto, are advertised to be sold out by bailiff.

The stock of Cartier Sigfroid, general merchant, St. Francis du Lac., Que, is to be sold by auction 3rd prox.

The general stocks of John Pruder, Colpoy's Bay, and Hockin Bros., Dutton, are to be sold by auction on 2nd prox.

The furniture stock of Kellond & Elliott, Hamilton, has been sold to Mrs. T. Kellond.

J. M. Gordon, of Beaverton, is offering to compromise at 60c. on the dollar. The stock is to be sold by auction on the 29th inst.

The bankrupt stock of furniture of J. Cohen of Sarnia was purchased by J. B. Watson and C. Sanders for 52½ cents on the dollar.

CHANGES.

E. Lefevre, general merchant, Bothwell, is removing to Parkhill.

J. Finklestien & Co., general merchants, are opening out in Winkler, Man.

A. H. Curry, Pilot Mound, Man., is selling out and going into oatmeal milling.

A general store is being opened out in Moose Jaw, Man., by a Mr. McLeod.

Mrs. S. A. McNab, general store, Woodville, has been succeeded by Nash & Calverly.

J. U. Clemens & Co., general merchant, New Dundee, have been succeeded by Shantz & Clemens.

FIRES.

P. McCracken, blacksmith, Glencoe, has been burned out.

Neveux, Clinton & Barter, hardware, Windsor, Ont., have been burned out.

The premises of the Bridgetown Foundry Co., Bridgetown, N. S., have been damaged by fire.

E. G. Prior & Co., hardware, and James Vair, tinware, both of Kamloops, B. C., have been burned out.

The stock and store of David Farlardeau, general merchant, Sillery Cove, Que., has been destroyed by fire.

M. Creighton's five-storey roller grist mill, at Comber, Ont., was destroyed by fire Sunday morning. The mill was built at a cost of $12,000, and was insured for $6,000.

DEATHS.

J. E. Pulford of J. E. Pulford & Co., hardware, Winnipeg, is dead.

The Carnegie Twenty-third street mill, Pittsburg, shut down Monday last in all departments. On Saturday the laborers were all paid off in full. They were notified that their places would be open for them under different arrangements. The new rules are that twelve hours, instead of ten, shall constitute a day's work, and the rate of pay 10c. per hour instead of $1.25 per day. There was a great crowd of men present to-day, but for some unexplained reason the mill was not started.



All kinds of Office and Store Fittings and Furnishings

TIN PLATE PRODUCTION.

The Washington correspondent of N. Y. Journal of Commerce writes: The tin plate report for the fiscal year, which ended June 30th, will be made public in a few days at the Treasury Department. This report covers the the quarter ending June 30th last, which is an additional quarter since the report which caused so much controversy and was only recently made public. Colonel Ayer, the special agent of the Treasury Department on tin plate, submits the figures for the entire fiscal year in two forms. According to his old rule of including plates dipped in this country, but made from imported sheets, and according to the new rule of excluding such plates and counting only those both made and dipped in the United States. The result by the new rule shows the American production to be considerably short of the amount required by the McKiney law to keep the duty in effect after October 1, 1897. Colonel Ayer is still hopeful that the necessary American production can be reached within the four years left for the development of the tin plate industry. The law required that the American production should in some one year before October 1, 1897, equal one-third the imports, less articles made from imported plate and re-exported. The cessation of imports after the high duty took effect in 1891 made the year 1892 that of the smallest importations during the prescribed period. The net imports of that year were about 240,000,000 pounds, and one-third of the amount would be 80,000,000 pounds. The report for the fiscal year shows the production from American plates to be about 45,000,000, which is a good deal short of the required amount, but the production for the last two quarters has been about 25,000,000 pounds, which would indicate a production of 50,000,000 pounds before January 1st, and, in Colonel Ayer's opinion, holds out the promise that the figures will soon reach 80,000,000 pounds

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas.
F. SCHOLES, Man. Director.

THE CANADIAN RUBBER CO'Y

Of Montreal and Toronto.

CAPITAL, - - $2,000,000.

MANUFACTURERS OF



First Quality Rubber Boots and Shoes, Superior Quality Rubber Beltings, including The Forsyth (Boston Belting Co.) Seamless Rubber Belting. For which we are Sole Agents and Manufacturers in Canada.

We hold the Patent and Sole Right to Manufacture in Canada

THE PATENT PROCESS SEAMLESS TUBE HOSE

WE MAKE ALL OUR HOSE BY THIS PROCESS.

ASK THE MERCHANT YOU DEAL WITH FOR IT AND TAKE NO OTHER.

Rubber Packings, Valves, Gaskets, Etc.

Head Office and Factory: Montreal; **J. J. McGILL, Man.**

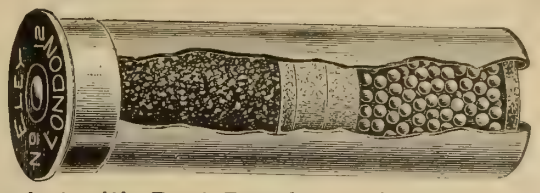
WESTERN BRANCH :

Corner Front and Yonge Streets, TORONTO.

J. H. WALKER, Manager.

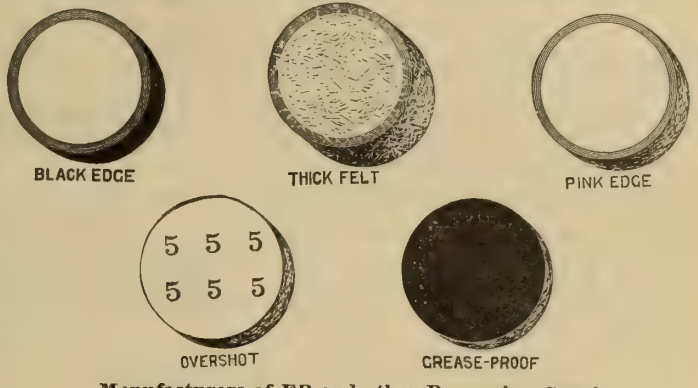
. . ELEY'S . .

CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. **Wholesale Only**

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

To the Stove Trade

We carry stock and can . . . . . ship promptly.

We have the following patterns for Repairs, PLATES. UNIVERSAL STOVES AND RANGES, lately made by J. M. Williams & Co., Hamilton ; SPLENDID BASE BURNER, lately made by the Toronto Stove Co., Toronto ; BRILLIANT RANGE and COOK, FORRESTER, CANDY FURNACE, QUEEN RANGE, lately made by Harte & McKillop, Belleville. . . . . .

The Wm. Clendinneng Son Co., Limited,

145 to 171 William Street, MONTREAL, QUE.

Cutlery

SPECIAL VALUE IN

Dickinson's "Damascus Blade" Carvers.
Dickinson's Improved Ivoride Tables, warranted not to shrink or discolor.
Joseph Rodgers & Co.'s best quality Pen, Pocket, and Butcher Knives.

. . . SAMPLES now ready for Fall Trade.

STEEL. Full stock of Jessop's warranted Tool Steel, at lowest prices. . .

A. C. Leslie & Co., Agents

MONTREAL and TORONTO.

You can lose more than we do by not subscribing for this paper.

MUNN'S LIQUID GLUE

IS THE BEST.

THE ART METROPOLE, Agents.

131 Yonge Street, TORONTO.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others' Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	23½ 24
trip "	25. 25½

Tin Plates—*Charcoal Plates, Bright.*

	Per box
M.L.S. equal to Bradley	
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 00 4 25
I.X., "	5 00 5 25
I.X.X., "	6 00 6 25
I.XXX., "	7 00 7 25
D.C., 12½ x 17	3 75 4 00
D.X.,	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

	Per lb.
C okley Grade—	
.X.X., 14x56, 50 sheet bxs	6½c, 7c
14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6¼ 6½
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base Price
Common Bar, per 100 lb	$1 95 ....
Refined " "	2 35 2 65
Horse Shoe " "	2 60 2 75
Band " "	2 50 2 60
Hoop " "	2 60
Swedish " "	4 00 4 25
Sleigh Shoe Steel	2 50
Tire Steel	3 00 3 25
Machinery	2 75 3 00
Cast Steel, per lb	0 10 0 14
Russian Sheet "	0 10½ 0 11
Tank Plates1-5 and thicker	2 00 2 25
Boiler Rivets	4 50 5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¾ " nd thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2¼, 2¾
26 "	2¾, 2¾
28 "	2¾, 3

Canada Plates.

Blaina	½ bright 2 75 ....
Abercarne	2 75 ....
Lion	....

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head

16 to 24 gauge, per lb	5, 5¼
26 gauge, "	5¼, 5½
28 " "	5½, 5¾

Gordon Crown—

16 to 24 gauge, per lb	5, 5¼
26 gauge, "	5¼, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4¼ 4⅜
" ⅜ " "	4¼ 4½
" 7-16 " "	4 4¼
" ½ " "	3⅞ 4
" ⅝ " "	3½ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 12½ 0 13
Lake Superior	0 13 0 13½

Bolt or Bar.

Cut lengths, round, ¼ to ¾ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 19½ 0 21
" 35 to 45 " "	0 17½ 0 18
" 50 lb and above per lb	0 16½ 0 17

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelte .

Foreign, per lb	0 04½ 0 05
Domestic "	0 04⅝ 0 04¾

Zinc Sheet.

5 cwt casks	0 05½ 0 05¾
Part casks	0 05¾ 0 06

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¾
Bar, 1 pound	0 04½
Sheets, 2½ lbs, sq. ft, by roll	0 04¾ 0 04¾
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04½ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 15½ 0 16½
Standard	0 14½ 0 15½
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 13
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do. "	4 75
No. 2 Do. "	4 50
No. 3 Do. "	4 25

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red, (best) " "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " " "	1 25 1 90
Canadian "	

Paris Green, per lb	0 13½ 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure,	
8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40
White Shellac	2 25

Linseed Oil (in bbls)

Raw, per gal	0 59 0 61
Boiled "	0 62 0 64

Turpentine (in bbls)

Selected Packages, per gal	0 44 0 46

Castor Oil.

Best, per lb	0 07½ 0 08

Cod Oil.

Cod Oil, per gal.	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list
Munn's, dis. 25 to 30 per cent. off list·

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer·
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ¼ lb. bags	1 00
Best thick brown or grey felt wads. in ¼ lb. bags	0 70
Best thick white card wads. in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross.... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33½ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		8.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb . 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross..... 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mortar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

NEW ARRIVALS

30 Cases CUTLERY AND GUNS

ALL NEW GOODS.

Finest Finish. Best Value.



NEW ARRIVALS

20 Casks Cattle and Trace CHAINS

10 Tons Coil Chain.

Five Cars Window Glass.

Bowman, Kennedy & Co., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   - Basis—50 to 60 dy..... 2 30
   - 40dy..... 2 35
   - 30 dy..... 2 40
   - 20, 16 & 12 dy..... 2 45
   - 10 dy..... 2 50
   - 8 & 9 dy..... 2 55
   - 6 & 7 dy..... 2 70
2. American Pattern Only
   - from 4 to 5 dy 2 90
   - 3 dy. (lath)..... 3 30
3. Canada Pattern Only
   - from 4 to 5 dy 2 80
   - 3 dy. (lath)..... 3 20
   - 3 dy. A.P. Fine 3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

	per gross
Square, round and octagon	3 38 4 00
Diamond	12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 60 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 35 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9½	9¾ 10¾ 11
¼, 5-16, ⅜ in.....	10	10½ 11½ 11½
Cotton, per lb.....		18 20
New Zealand.....		9 9½
Russia Deep Sea, per lb..		12¾ 13
Jute ..... " ...		08 08½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

	per set	
Mrs. Potts,	75	80
" N P. "	1 00	1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D, dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 to 40 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Sapolio

In ½ or ⅓ gross boxes, per grs. 11 30

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4¼
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S. & W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9 00

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
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THE HATHEWAY PATENT FENCE WIRE.

Pat. Nov. 19, 1889.



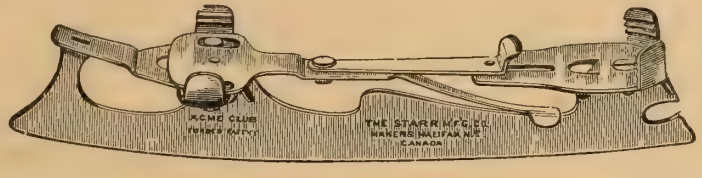
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The Hatheway Patent Fence Wire, the most popular fence wire throughout the United States, and fast gaining that position in the Dominion of Canada, as it contains all the requisite qualities of a fence wire, being handsome, strong, visible—seen at a long distance; will not sag or get out of shape; allowance for contraction and expansion, heat and cold; being broad, requires less strands to make a complete fence; easily put up, splices itself; will not injure stock. Put up in spools of 120 lbs. each. For sale by all the leading hardware stores in the Dominion.

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DUCHESS OF OXFORD

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KITCHEN WITCH RANGES

Put these Stoves on Your Floor and Command the Trade. . . . .

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2 x 4 Barb
Plain Twist and
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"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

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Iron, Steel, Brass, and Copper . . **Wire**

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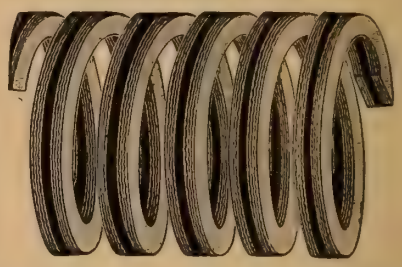
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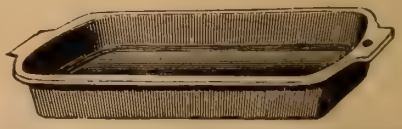
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"The Seamless Flanged Drip Pan"



Improved Rolled on Edge.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife to cook or lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

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SIZES.....	8 x 10	8 x 14	10 x 15	12 x 17
Per Doz.....	$1.91	$2.33	$3.20	$3.73

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CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, OCTOBER 7, 1893. No. 40.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

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Is the First Varnish in the Country To-day

There are a few varnishes that wear well, but they must be mixed or "fixed" before they can be used. Other kinds work all right but are not durable. MANDERS' is the only varnish that is always right at all seasons, and under all conditions.

READ what one of the oldest and most reliable carriage builders in the country says about Manders' Varnish:

"Manders' has proved to be the safest varnish to use right through the year. In my experience of over twenty years it is the best in every respect. I have tested it in comparison with the best American and English makes, and it is superior to all. Its durability is unquestionable.

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Lower Proof Rifle.



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In ½ lb. 1 lb. 12½ lb. 25 lb.

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Steel-Clad Baths

Manufactured and Patented in

CANADA,

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Also Patented in Australia.

AGENCIES AND WAREHOUSES AT

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PATENTED.

Packed 25 joints in a closed crate.
It requires NO RIVETS OR TOOLS to put it together.
The seam does not require pounding down.
It is uniform in size, and, being crimped at small end, secures a close and easy fit.
It has a coating which prevents rust.
It can be bought as cheap as ordinary misfitting stove-pipe. - - - - - - -
Being nested, secures low freight rate.

Kemp Manufacturing Co.

TORONTO, ONT.

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, OCTOBER 7, 1893 No. 40

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

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The trade of the Dominion continues to be of an interesting character. This is evidenced by the returns for August just issued by the Government. Compared with the same month a year ago the aggregate trade is not so large, being valued at but $24,948,679, or $1,818,503 less than in 1892. The falling off, however, is entirely due to the imports, the exports showing an increase of $324,210 over those of August, 1892. Comparing the exports and imports of the month in question, it is found that the former exceed the latter to the amount of $2,196,955, the figures being $13,572,817 and $11,375,862 respectively. In dutiable goods, however, the imports during August last were $146,641 larger than for the corresponding month of 1892, the preponderance of total imports for the latter over the former August being due to increases of $1,455,465 in free goods and $743,980 in bullion. A further analysis of the respective reports shows that the principal articles exhibiting decreases during the month of August last were: Agricultural implements, animals, brass and manufactures of, breadstuffs, coal and coke, copper and manufactures of drugs and medicines, earthen, stone and chinaware, fancy goods, dried fruit, lead and manufactures of, leather and manufactures of, metals, composition and manufactures of, paints and colors, paper and manufactures of. Among the articles which show increases are: Ale, beer and porter, books, pamphlets, candles, cordage of all kinds, manufactures of cotton, fish, furs, glass and glassware, gunpowder and explosive substances, iron and steel and manufactures of, jewelry and watches and manufactures of gold and silver, oils, manufactures of silk. In exports the increases were $99,157 in products of the mine, $391,093 in fisheries, $864,853 in agricultural products, $39,326 in manufactures, while the decreases were $844,600 in products of the forest and $218,812 in animals and their products.

* * *

The pig tin market in both London and New York has managed to climb a little higher, but the present week did not open auspiciously, dull trade and lower prices being the features at both centres. The New York market for some days previously had not been supported quite so actively by the large holders, and this alone was probably sufficient to cause it to respond so quickly to the conditions which developed in London. It was the arrival of a quantity of tin from the Straits that imparted the easy feeling to the English market. The visible supply, as published Monday by the N. Y. Metal Market Report, will scarcely assist in strengthening the market. This supply is shown to be 15,815 tons on October 1, a gain of nearly 900 tons over September 1, and 800 tons over October of 1892. The total visible is made up of 2,500 tons foreign tin in London, 1,250 tons, in second hands in Holland, 6,880 tons in America, or total spot stock of 10,630 tons; and of the 5,185 tons afloat, 3,935 are for Great Britain, 1,080 for Holland, and 170 for America. It has been alleged for some time that the tin market was being manipulated, and if this is so—and the evidence rather points that it is—a few little developments like that which is now influencing the market will put it in something like its nominal condition.

* * *

Bradstreet's report of failures in Canada and Newfoundland during the nine months of the present year are not altogether satisfactory. In number they exceeded those of 1892 by 36, the totals for the 9 months of the two years being 1,323 and 1,287 respectively. Liabilities aggregate $13,162,843. This is an increase of $3,872,184 compared with the same 9 months of 1892. But the increase in this respect is nearly counterbalanced by a gain of $3,591,284 in the assets, the total of the latter being $7,552,157, or, nearly 50 per cent. larger than in 1892. The most adverse feature of the returns is the increase in the Ontario list, where the liabilities are in excess of those of last year by about 80 per cent. But the bitterness of this pill is sweetened by the fact that the assets are a little over 97 per cent. larger than in 1892. In Quebec province there was an increase of 17 in the number of failures, and, while the assets were smaller by $109,000, the liabilities showed the gratifying decline of $693,000. For New Brunswick and Nova Scotia the report is more favorable than a year ago, but the same cannot be said for the remaining provinces. Prince Edward Island shows nine more failures, an increase of $32,550 in liabilities, and but a gain of $5,350 in assets. In Manitoba the number of failures are equal, at 53, and although the liabilities increased by nearly a million and a half, the assets, on the other hand, show a gain of nearly two millions. In the North-west Territories there were seven more failures, an increase of $80,232 in liabilities, and a gain of $20,560 in assets. British Columbia had ten more failures, a gain of $103,959 in liabilities, and an increase of $44,669 in assets.

* * *

Canadians have no need to be discouraged because of the figures adduc-

ed by Bradstreet. Of the total increase in liabilities, nearly one half is is traceable to one source alone. We refer to the collapse of the Commercial Bank at Winnipeg. Then an increase of $874,630 in the liabilities of Newfoundland, which is no more a part of Canada than are the West Indies, is another little contributor. Thus, from two sources alone are accounted two-thirds of the total increase in the liabilities. Moreover, there are the ever increasing number of merchants to be taken into consideration. But outside the causes attributed, none probably has contributed more to the augmentation of the list of failures than the gradually increasing exactness of the wholesalers in dealing with their accounts. There was a time when the wholesaler would carry accounts long past due without much ado, while compromises had often merely to be offered to be accepted. All this has now changed. A prompter meeting of obligations is demanded, while most wholesalers and manufacturers will not agree to a compromise under a certain percentage, while some will not agree to a percentage at all, especially if the debtor has been shiftless, lacking in experience, or a practiser of questionable business methods. No, Canadians have no need to be alarmed or discouraged, especially when they look around them at the conditions prevailing in other countries, the United States in particular, where the failures since the beginning of the year have increased at an alarming rate. For instance, the number of failures in that country for the nine months of 1892 were 7,378; in 1893 they were 11,174. In 1892 the liabilities were $76,971,771; in 1893 they were $324,087,768. The assets were $39,209,701 last year and $225,758,881 this year. Canada is all right. Its condition is healthy. What we want is faith in the country, the adoption of good business methods, and the pursuance of a careful business policy. It is in endeavoring to carry out these two last named ideas that is causing the plucking from the trade garden of so many weak and insolvent business concerns.

* * *

The patiently-awaited report regarding the tin plate production of the United States for the fiscal year ending June 30 last was submitted to Secretary Carlyle last week. Much of the keenness of the expectation was taken off some weeks ago when the Government ruled that foreign black plates dipped in the United States did not make them "tin plates produced in the United States." As HARDWARE pointed out at the time, this virtually killed the hope that the production would equal one-third the importations, as provided under the McKinley Act, in order to save the duty from being abolished. But when the decree of the Government became known, it was a foregone conclusion that tin plates produced from domestic black plates would fall far short of the requisite proportion. Hence the comparatively little concern regarding the report just issued. And well might it have been a foregone conclusion with them, for the report in question shows that the product from American plates was about five-eighths of the amount necessary to enable manufacturers to meet the one-third requirement under the law.

THE TORONTO PLATE GLASS FAILURE.

One of the surprises of the week in Toronto commercial circles is the failure of the Toronto Plate Glass Importing Company.

The firm first began business in Yonge street about seven years ago, when it was known as the St. Helens Glass Co., with Mr. Edwin Hill as the controlling spirit. About five years ago they moved into their present premises, at 135 to 137 Victoria street, when Mr. Hill, of Hill & Weir, printers, became a silent partner, the firm being changed to The Toronto Plate Glass Importing Company. About two years ago Mr. William Ferguson, a brother-in-law of Mr. Robert Kilgour, was admitted a partner and Mr. Weir retired. The compostiion of the firm has since then remained unchanged.

The firm in its incipiency did not branch out very extensively, getting most of its supplies from local jobbers. After Mr. Ferguson became a partner, however, business was pushed more actively, and the firm became extensive importers. And, if recent developments are a criterion, they undertook to do more than their capital warranted. To make matters worse, one of the walls of the firm's warehouse collapsed a year or more ago entailing a loss of some seven or eight thousand dollars.

During the last couple of years the firm's business increased rapidly, but it was at a sacrifice of profits. In fact, if what other dealers in glass say is true, it has been for some time systematically underselling the trade. "I know," said a hardware man, "it has even injured us." "Yes," said a large glass jobbing firm, "the Toronto Plate Glass Co. has been systematically underselling the trade for some time. It is a common thing for people coming in here for quotations, to say, after being given prices: "Oh, I can get it for so and so at the Toronto Plate Glass Co.'s. To give you an instance how they did business: It furnished the glass for the Exhibition Association at about 2 per cent. above actual cost. Why no firm can do business like that and succeed."

A statement of the firm's affairs has not yet been prepared by the assignee, Mr. E. R. C. Clarkson, but the liabilities are estimated at about $60,000. Pilkington Bros., of St. Helens, England, are among the chief creditors, being owed something like $15,000. The Traders' Bank is said to be mulcted for $11,000, and Mr. Robert Kilgour holds a chattel mortgage against the firm for $14,042.

QUARTERLY IRON MEETINGS OPENED.

The quarterly meetings of the different branches of the association of iron makers commenced in Montreal on Tuesday last, and at the time of writing the correspondent of HARDWARE gathered that no important changes were anticipated. The firms represented were the Montreal Rolling Mills, the Ontario Rolling Mills, Hamilton; Graham Nail Works, Toronto; Peck, Benny & Co., Pillow, Hersey & Co., and Abbott & Co., Montreal, from which it will be seen that the information given exclusively in HARDWARE some weeks ago with reference to the Maritime Province makers was correct. The lines so far discussed are bar iron, cut nails and horseshoes, and no change was made except in horseshoes, which were advanced 15 cents per keg to the basis of $3.65, bar iron and cut nails remaining at the old standard. Wire nails, spikes, etc., tacks, and other small goods have yet to be considered, but the trade in Montreal at least don't seem to anticipate any important changes. The session will take up the entire week.

GAS FOR HEATING AND COOKING.

In a recent discussion on the extension of the use of gas as a fuel, before an association of manufacturers, as reported by the London Gas World, one speaker made the following remarks: "All are deeply concerned in the development of cooking by gas, and the more attention they devoted to this part of their business the better it would be for the interests of those they served. Another speaker, who had pushed the use of gas stoves, said that his experience with gas fires was not a very encouragine one. About five years ago he started fitting up gas cookers—he did not encourage fires because he did not believe in them altogether. He had them all through his own house, but he thought they were too expensive for common use. When consulted upon the subject, he told people that if they were prepared to pay for a gas fire they could have it. No doubt gas fires were very nice for an office, so that papers might be kept free from dirt, or for use in a bedroom for an hour at night; but for other purposes he would not have them. On the other hand, he advised every householder to have a cooker. The domestic servant was the difficulty in the city where he was situated, which was, perhaps, more peculiarly situated than other towns in this respect. Many of the ladies there did little or no work in the kitchen—they left everything to the servant. When a gas stove was tried it was often given up owing to its expense; and thus it was condemned because of the neglect of the domestic. Householders ought to be encouraged to use these stoves. He was always willing to give instructions to anyone who thought of introducing one. He had connected the cooker he had at home with a meter to see how much gas was being used, and to discover what the expenditure would be in a given time, and he found that the quantity of gas consumed was 500 cubic feet per week, over a period of four or five years. This was for all the cooking for a family of six people. Compared with other houses the expense worked out very much to the same figure. He would like to see cooking by gas more general throughout the country. The use of gas might also be advocated for boiling rings and for bath heaters. Many of the latter apparatus were in use that were inexpensive and very effective. The application of some of the principles of improved coal stove construction by American manufacturers to their heating stoves renders them more economical than the gas fires referred to above and not subject to the same objectionable expense. The information given on the consumption of gas for cooking can be duplicated by many families here, and even more favorable experience cited. With a more thorough acquaintance with the advantages of gas for fuel the sale of gas stoves will be increased. The use of gas stoves in the tenements of the poorer classes in New York is more general than is supposed and is extending. The cheap stoves that have been purchased largely as an experiment have been an agreeable surprise to their users and the demand for a better grade stove is increasing as the result.

NEW INVENTIONS AND DEVICES.

A shutter worker providing a simple and compact construction whereby the shutter may be opened or closed from within the room, and locked and unlocked in both its open and closed positions without requiring the window to be opened. A shaft extending through the window frame, and provided with a handle within the room, has a connection with the hinge of the shutter involving a novel construction and combination of parts, whereby the shaft may be easily turned to open or close the shutter. The construction is such that the shutter may be easily lifted off when necessary.

An oven door with a window especially designed for stove and range ovens. It is so made that the edge of the glass will be kept comparatively cool, and the whole body of the glass will be evenly heated, and thus prevent breaking. With this view the glass is supported and held in an asbestos or other non-conducting flexible packing, in such maner as to allow for its expansion and contraction, while a free circulation of air is provided for around the edges of the glass, which nowhere comes in direct contact with the metal.

A new form of steel lathing, or rather substitute for lathing, for holding plaster. It is made from steel sheets 6x2 feet, a convenient size for handling. The plain sheet, although light and pliable when treated by a new machine for converting it into a lathing substitute, becomes very stiff and rigid. The machine cuts slots and raises ridges and corrugations in a peculiar manner, as seen in the section; the metal is not cut away or across the fibres, hence the full strength of the material is retained, and the sheet becomes as still as a one-half inch board. The appearance of the lathing is the same on either side, and the manner in which the sheet is slit affords a firm hold for the plaster, and is not liable to cut off the key. It is equally useful for vertical partitions or horizontal ceilings, and is fixed by a few wire nails.

A stove caster, among the features of which are a bracket provided with means for securing it to the stove leg, a hollow nut inserted in this bracket and adapted to be screwed in or out, lowering or raising the stove leg, and a caster spindle inserted in the hole in the nut.—Stoves and Hardware.

BOOKKEEPING EXTRAORDINARY.

The following account of eccentric bookkeeping is given by a Western exchange:

"Talking about bookkeeping," said Milt Brisbine, whom everybody knows, "there used to be a man in Yankton whose system of keeping accounts was wonderfully efficient. He kept a hotel and he could neither read nor write. He did not know how to spell his own name, but he did a thriving business and collected every dollar of his accounts. Once, years ago, when I first came to this country, I went to his hotel and stopped there two weeks. When I left he presented me with a statement of what I owed him, and it was a curiosity. He had copied it from his ledger. At the top of the sheet there was a rude picture of a soldier on the march, and after it three straight marks. Then there was a scene showing a man at table eating. Then appeared a bed with a man in it. In the amount column there was a picture of a doll and after it the two letters RS. After the picture of the man eating there were forty-two marks. After the view of a man in bed there were fourteen marks. I looked at the account, then at the proprietor, and told him it would take me a week to answer that conundrum. I was completely stumped, and when that hotel man deciphered the account for me it was this:

"The picture of the soldier walking meant March, and the three marks supplied the date, March 3, when I began boarding. The man at table with forty-two marks after it indicated that I had eaten forty-two meals. The man in bed with fourteen marks showed that I had slept in the house fourteen nights. The doll with RS after it meant 'dollars,' and in the figure column appeared the figures 14, which was the amount I owed him. And it was a true bill."

HYDROGEN IN RADIATORS.

As a possible source of danger that may have been overlooked hitherto, a writer in Science mentions the formation of explosive gas in the hot water apparatus used in heating houses. Several quarts of gas each week were produced last winter in the radiators of two neighboring houses, the quantity being greater over a fire of anthracite than one of bituminous coal. The tests applied gave the impression that the gas was nearly pure hydrogen. It was evidently due to the decomposition of the water by the rusting of the pipes, which might be expected to take place most rapidly over an intensely hot fire of anthracite.

PUSHING AUTUMN GOODS.

The following, by P. Hodgkinson, received the first prize offered by the Ironmonger, London, for the best essay on "Pushing Autumn or Winter goods."

The present age is one of small profits and necessarily quick returns. It is the duty of every ironmonger to keep the goods belonging to the hardware trade in the trade as much as possible. To effect this he must have good windows, well selected and complete stock, and at the same time care must be taken to keep the prices down as low as those of his competitors, using tact and push at all times, or he will be left far behind. It is my wish to point out a few departments which give good results for any extra attention that may be bestowed upon them.

Ammunition: The shooting season is upon us, but perhaps it is not too late to call attention to this department, which may easily be added to the ironmongery business, as it does not require much capital, and at the same time comes at the season of the year when many are not overdone with trade. Cartridges, powder, shot, etc., are required more or less by most farmers, as well as by sportsmen. Cartridges may be loaded at very short notice with the machines now to be had, and with ordinary care will give the very best results to the shooter. A few card-lists, with prices, distributed with the quarterly accounts, and with the help of an vertisement in the local paper periodically, will, I venture to think, soon raise a demand.

Lamps, and the goods connected therewith, should receive special attention now. The stock should be complete, and care taken that all accessories are made up. Last year's lamps with broken containers should have new ones fitted, and old stock should be re-marked. The success of this department depends very much, like many more things, upon how goods are displayed. It is well to have the lamps standing complete, with clean globes and chimneys. The bottom of the window should be covered with some kind of cloth; green baize does admirably, forming a good contrast with the brass or copper of the bases. The globes should be of tasteful design, not necessarily expensive. A plain lamp, if fitted with a pretty globe, often results in a sale. There are some very rich designs in globes, etc. Murano shades of citron and old-gold color, for instance, have a good effect for the better class of lamps. It is very important that each one in the window should have a plain price-ticket attached, so that the value may be seen at a glance from the street. Price-tickets, which, I think, are particularly suitable for ironmongers' use, are to be had colored, and the figures in gold, black, etc. They are not easily soiled, and are at the same time inexpensive. The lace and silk shades sell well when shown on some of the higher table and floor lamps, and add considerably to the attractiveness of the window. The colors most used are yellow in the various tints, red and salmon. The pleated paper shades are much sold, and will well repay occasional display. To help the sale of lamps the shop may, to a large extent, be lighted with them, so that the customer may be shown the various burners in use. This also makes a good advertisement for the oil, the salesman having the opportunity of pointing out its superior brilliancy. Petroleum stoves may be exhibited in the same manner; the cathedral type, fitted with a central draft burner and talc chimney makes a really elegant source of heat.

Coal boxes form a considerable item with the furnishing ironmoger during the winter. Great care is required in buying these as they soon lose their new appearance, old stock often resulting. They are best exhibited on the floor, and should have underneath them some drugget or carpet rather than the bare dusty floor. Each one should be plainly ticketed. The drapers usually make a leading line in these, which is no doubt a good plan of getting the public into your shop.

White enamelled ware is making great strides, and deserves extra attention. A window filled with the various articles made of this material, and marked in blue with rubber stamps, causes attention, with the desired result.

Fancy brass goods are increasing in demand. As Christmas approaches a large sale may be expected for presents. The very tasteful designs in clocks, gongs, mirrors, and book-slides are particularly saleable. These, in conjunction with brass kerbs, afternoon-tea kettles, fire-brasses, etc., make a most attractive show if displayed in a well-fitted window on cloth, as suggested for lamps.

Fenders, I think, seem to be neglected very much by the ironmonger; the housefurnisher, apparently, is more at home in this department. There is no reason why this should be the case, but it probably arises from the stock being badly kept, often incomplete, and the patterns not as new as they should be. It is a good plan to have racks for each size where space permits, so that the state of the stock can be seen at once, as well as be more accessible to the salesman. Each fender should be plainly marked underneath the plate with size and price, as well as have a label attached. This is handier to get at, but at the same time is liable to be cut off when unpapering.

Electroplate is a recognized department of the furnishing ironmonger, and is one which the public know least about. To do this business it is absolutely requisite that the window and cases in which the electroplate is displayed should be air tight. Too much attention canot be given to this, and I think it is best to employ a shopfitter of known repute to make cases. If they are not airtight endless trouble is the result. Tarnished goods are spoiled when cleaned by the inexperienced, often ending in old stock. The window for plate should have the glass shelves arranged so as to give as large a front as possible, and that the goods may easily be seen. Broad shelves take a large quantity, but the goods at the back are unable to be seen, and those to the front are awkward to get at. For the bottom of the window black velvet is good, and not so likely to fade as colors. The cases (and shelves contained therein) in the shop, if not very light, should be papered white, which has a good effect on ruby glass or electroplated mounted pottery.

Brushes are turned over oftener than almost any part of the stock, and a show of these, together with leathers and sponges, should be made periodically on a stand in the shop, especially in the spring and autumn. They should be marked at a much lower profit than the ordinary run of goods, as the stock is turned over much oftener.

I would now say a few words regarding buying. It is to the advantage of the ironmonger that he should consult the salesman who has to sell the goods in question, especially where the principal is not able to be very much at the counter personally. As taste differs in every individual, the assistant will naturally take an interest in selling any article he has had to do with buying, and being in close touch with the customers he should be well able to advise with advantage. At the same time it gives him an interest in the business which he would not otherwise have. In all displays of certain classes of goods it is well to make a comprehensive show, so that an intending purchaser may expect to find what he requires without difficulty.

Counters, I know, in many shops, are inconveniently small, giving the salesman much trouble and anoying the purchaser when too close to others. This especially the case when ladies are buying furnishing goods, or, it may be, a piece of plate for a present. If convenient one room should be set apart for household ironmongery, and be of such dimensions that at least one size of each class of goods may be at hand. Politeness is a very necessary ingredient in the successful salesman, and care should be taken that nothing is sold that will not answer the required purpose. It is desirable to let no customer go from the shop because some-

thing he requires is not in stock; the salesman should use every effort to take the order, and not allow his client to go elsewhere and eventually divide his custom with a rival in the trade. The above is almost as important when the customer is quite unknown and the article trivial, as he may prove a more profitable one in the near future.

In making up stock (which should be done well before the season opens), in the case of tinware, etc., a stock-book should be kept with the articles arranged in order, and space left to fill in the quantity of each article in stock and the quantity ordered. This will give the buyer a good idea as to which size and how many should be kept in stock, and at the same time ensures each class of articles being looked at.

SOME POINTS IN PLUMBING WORK.

High-pressure hot water apparatus for heating buildings, consisting of small wrought iron pipes, 7-8 inch internal and 1 1-4 inch external diameter, hermetically sealed, are to be found in many houses in England and Scotland, writes an expert in London Ironmonger. These go out of repair occasionally, or perhaps some extension or alteration is needed, and the ordinary plumber is sent for to do the needful work. Here the advice of Mr. Punch to one about to marry is appropriate, and that advice to the plumber is, "Don't!" The real way in this instance for the plumber to escape out of the difficulty is boldly and honestly to say that high-pressure heating apparatus is not in his line, and that a specialist should be sent for. When you consider that in some of these apparatus the pressure rises to 3,000 lbs. on the square inch, it will appear quite plain that special knowledge and experience are required in order to deal with the pipes and joints which have to bear such a strain. Occasionally, such apparatus starts a series of explosive noises very alarming to anyone in the building with it, and again the ordinary plumber is sent for. The cause of the noise is a collection of air in the pipes, the remedy being to pump out that air by a special pumping gear—an operation very easily performed by an expert, but liable in the hands of any ordinary plumber, to result in mischief. A case came under the writer's notice where such an apparatus was entrusted to a plumber, who found that the pipe coil forming the boiler had burned out. He proceeded to make a new coil-boiler with iron steam pipe, and made his joints with red lead. When the apparatus was started to work it was found that the pipes were full of red lead, and that the pressure forced it out through the joints, and water followed it, resulting in collapse of the whole apparatus.

Low-pressure hot water apparatus for heating buildings may safely be undertaken by any plumber, and, provided that he has studied the principles of circulation of hot water in apparatus od the kind he may gain some credit. and profit thereby.

If in any church or building complaints arise that the apparatus does not heat properly, the cause may be traced to insufficient boiler power, to insufficient depth of boiler pit, or to the common fault that the various return pipes are joined into one return at the top level of the apparatus. The remedy for the first fault is, of course a more powerful boiler; for the second, either to lower the boiler pit and the boiler as much as is needful, or to place the supply tank on a high level and cause all the hot water to flow first up to this tank, and thence to fall to the various parts of the system on its way back to the boiler. For the third fault the remedy will be to carry separate return pipes from each run direct into the boiler.

The water in flowing through pipes develops an opposing force called friction, and this force must be overcome by some other force, otherwise the water will not flow. The overcoming force in the case of circulation of hot water is gravitation brought into action by heat. The heat expands one column of water in the flow pipe and renders it lighter than the cold column of water in the return pipe. The lighter hot column does not rise of itself, but the heavier cold column falls by the attraction of gravitation, acting on it with more force than it exerts on the lighter hot column, and it pushes up the lighter hot column on its circulating course, and in doing so enters the boiler, where it in turn becomes lighter by heat expansion, and is itself pushed up by the succeeding heavier cold column, and so on as long as the heat is applied. Manifestly, therefore, the longer the two columns are, one hot and the other cold, the greater er will be the difference in weight, the faster will gravitation draw down the heavier and push up the lighter column. Plumbers may thus seen the season it is necessary to sink boilers a sufficient depth below their circulating pipes to induce quick circulation in the apparatus.

The writer was called recently to examine a church heating apparatus, where the fault was slow circulation, with a cold church and perished congregation. The boiler pit was lowered three feet, and the same boiler reset. Instantly, the apparatus from being a failure was turned into a complete success, owing to the quickened circulation. In a nursery garden several forcing houses were provided with heating pipes from a powerful boiler. Those nearest the boiler heated too well, the others were left cold. All the return pipes had been joined into one pipe at ground level, and connected by one pipe to the boiler, with the result that the return pipe quickly became as hot as the flow, and circulation nearly ceased before the distant houses received any heat. To remedy this the return pipes from each house were carried separately to the boiler, and although only one flow pipe was provided for all the houses, each of the separate return pipes did its own work and the most distant house heated as well as the nearest house. The knowledge of the special causes of failure in such apparatus brings frequently more credit to the plumber than a general acquaintance with the routine of ordinary lead work.

There is another common fault to be found in low-pressure hot water apparatus. Forgetful of the fact that the hot water expands when heated, no provision is made for this expansion. Twelve gallon supply tanks, fitted with overflow pipes, are placed where fifty gallon tanks are needed, consequently the hot water overflows in waste, and fresh cold water has to be added daily, bringing with it fresh deposits to coat the boiler. Often when a full-sized expansion tank is provided and an overflow pipe arranged, the water supply is laid on through a ball-cock, so fixed that the expansion tank is allowed to fill nearly up to the overflow, and consequently when heat expands the water it immediately passes away to waste through the overflow. When the water contracts on cooling more or less, in comes a fresh supply of cold water which overflows again and again. Sometimes a constant waste may thus be observed—a waste not merely of water, but of heat, for it is hot water that thus runs away, and cold water that flows in to replace it. The remedy, of course, is to provide a tank large enough to receive the expanding water, and with the ball-cock cold supply so set that while the apparatus is cold before the furnace is started there shall not be more than six inches of water in the tank, leaving all the spare space in the tank for the expanding volume of water to rise into without waste or overflow occurring.

The water in such a well-constructed apparatus is thus seldom changed, deposit ceases, and the life and power of your boiler is vastly increased. In the following chapters it is intended to refer to some of the difficulties confronting plumbers in sanitary plumbing practice. In every branch of plumbing difficulties must occur, but there is no real difficulty which cannot be surmounted one way or another. Knowledge of the laws of nature will provide a key to open every lock. Each lock may be different from every other lock. Some are common locks that almost any common key will open; some are lever-locks, more complicated; and some appear to be so difficult to open that the trouble is too great. But there are natural keys fitted for every lock, and natural science or kowledge tells us how and where to find them.

THE RADIOPHONE.

Just now an interesting addition to the scientific curiosities in the Electricity Building of the World's Columbian Exposition is Bell's radiophone, by which conversation is transmitted through space on a ray of light, no wires or electricity being used in any portion of the apparatus. Many readers are probably familiar through descriptions with the photophone, by which a telephone is caused to respond to the variations in intensity of a light ray falling upon a serenium cell placed in a local electric circuit. Professor Alexander Graham Bell succeeded in transmitting articulate speech in this way by means of a beam of light,which a mirror reflects, vibrate, the vibrations being of the same kind as those produced by speaking through a membrane. He used a thin mica or glass plate as a diaphragm, which, by being silvered, served at the same time as a mirror. The reflected ray of light, as it fell upon the selenium cell at the distant point varied in intensity in unison with the sound waves which caused the vibration of the diaphragm mirror. The varying intensity of the light produces in the selenium cell a corresponding variation in the resistance of the local circuit, and the varying current which results therefrom is translated into sound waves by the telephone, which correspond exactly with the sound waves which vibrated the diaphragm.

Bell's experiments and publications regarding the photophone stimulated further investigations, and it was found, according to an article in the Electrical World, that the transmismission of sound was possible without using selenium cells and galvanic batteries, and that non-luminous heat rays were capable of producing sound. The latter fact caused Mercadier to use the word "radiophone" instead of "plotophone." A thin plate of any material serves as receiver in the radiophone, the sound produced by this plate being transmitted by means of a tube to the ear. It was soon found that the receiver's plates were not made to vibrate transversely by the intermittent rays of light, but vibrated like ordinary sound-plates. One and the same plate, for instance, is capable of giving the highest or deepest notes equally well; the breadth and thickness of the plate do not influence the pitch nor the sonorousness or timbre of the sound, except as it affects the intensity of the sound; it was found to be immaterial of what substance the plates were made but the slightest alteration in the surface made a considerable difference; scratched or oxidized surfaces increased the intensity of the sound very much, while a silver glass plate gave no sound at all. As a rule those plates proved more effective which absorbed the rays most strongly. Very good results were obtained by using plates the surfaces of which were covered with India ink, platinum black or soot; paper which in its ordinary condition gave no sound did so when the illuminated surface was covered with soot. The great sensitiveness of surfaces covered with soot caused Tainter to form the idea of substituting soot for the selenium in a selenium cell. Professor Bell, however, pursued his investigations looking to obtain sounds without the addition of local circuit, and his latest production, that which is now about ready for exhibition in the Bell Telephone pavilion in Electricity Building, may be briefly described as follows:

In the north-west gallery, overhanging the main floor a few feet, there has been erected a small platform upon which the sending apparatus is placed. This consists of a focussing arc lamp of the ordinary pattern, whose rays, rendered parallel by a lens, are reflected from a thin diaphragm mirror to the receiving instrument about 80 feet or 90 feet away, at the north end of the Bell telephone pavilion. The reflecting mirror is a disk of very thin glass, silvered on its reverse side, and held in a heavy brass frame by means of washers of ordinary blotting paper. Opening into the chamber in the rear of this mirror is an ordinary speaking tube, into which the sounds are uttered, causing the mirror to vibrate as would the diaphragm of a telephone transmitter. These rays, reflected in parallel lines, are received at the further end by a parabolic reflector, in the focus of which is placed a glass bulb containing a small portion of ordinary burnt cork. This bulb is blown into the end of a glass tube about one fourth of an inch in diameter and four inches long, the other end of which is open, and to which is attached an ordinary phonograph hearing tube which extends into a small cabinet, where the listener, removed from external noises, receives the message. The only adjustments required are that the rays be directed from the mirror in the gallery in an axial direction into the parabolic reflector, and that the bulb containing the burnt cork be brought to the focus of the parabolic mirror. This latter is accomplished by pushing the glass tube in or out until satisfactory results are obtained. Certainly nothing could be simpler than this; but although the instrument is of great scientific interest,it has no apparent practical value.

The transmitted words as heard through the hearing tubes lack sharpness of definition and have a somewhat muffled sound, which is probably due to the tube effects. The conversation can, however, be fairly understood if one knows beforehand about what is to be expected, but it would be difficult to follow an expression for which one was not prepared.

In Boston, under exceptionally favorable conditions, articulate speech was transmitted by means of the radiophone to a distance of about one-eighth of a mile, but this distance is beyond its range under usual conditions. The first experiments in the Electricity Building were over a distance of about double the present, but it was found that in order to get suitable results for the heterogeneous crowd at the World's Fair, even this distance had to be shortened.

Professor Bell has given the following explanation, says Invention: When the intermittent beam strikes upon the receiver the particles are alternately heated and cooled. When they are heated they expand, and consequently the intervals which are filled with air are diminished; when the light is intercepted the particles are cooled and the spaces between them enlarged. Air is squeezed out from the interstices between the particles in the first case and drawn in in the latter; the enlarging of the intervals causes rarefaction of the air in the cork particles, and the outer air rushes in; the contraction of the interstitial spaces causes condensation and escape of air contain. These two effects are still further increased by the heating and cooling of the air in the intervals alternately, whereby the volumes are alternately increased and diminished. By these means alternate waves of compression and rarefaction are produced in the surrounding air, and it is to this that the sound which is emitted owes its existence.—Journal of Commerce.

ELECTRIC FANS.

As the summer passes we see more and more of the electric fan. It has come to stay, and seems to mitigate, to some extent at least the oppression of a hot and stuffy room. It produces merely a circulation, not a renewal of the air, but its results are decidedly beneficial. When we look back only a decade and see the impossibility of the introduction of such a fan, simply from lack of motive poweer, we may more fully appreciate how rapid has been the introduction of this article of comfort and convenience. Each season brings out new designs, but all of the general type of the disk or propeller face, with motors of more varied descriptions. No great change is, however, likely to result in prevailing styles, and more thorough circulation with true ventilation (a renewal of the air) will doubtless come through the adoption of electrically driven incased paddle fans to force cool, fresh air into the apartment.—Metal Worker.

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IN SPITE OF THE LAW.

American capital continues to flow into foreign built steamers in spite of our navigation laws, which were designed to force all such investments into vessels built of American materials and by American labor. On September 12 two British built steamers were launched for American owners. One was a steel screw vessel of the mot approved construction, the Chickahominy, for the Chesapeake and Ohio Steamship Company, Limited, London, which is practically an American concern. The second was another steel screw vessel, 334 feet in length, for the New York and Pacific Steamship Company, Limited. Either the laws designed for the protection of American shipbuilders should be enforced or else they should be effaced and saved from ridicule. There is already a large fleet of American owned vessels sailing in foreign trade under alien colors; and, if our capitalists cannot be forced into buying their ships here, nothing is gained by denying them the right to American register. Let our ships be American in name as well as in fact.—N. Y. Journal of Commerce.

RAILWAY EXTENSION.

Some railway work is going on in Western Canada this year, notwithstanding the stringency of the money market abroad. Superintendent Whyte of the Canadian Pacific Railway this week announces the completion of the "Soo" road, and the company will begin to receive traffic for transportation over this road. Though the "Soo" extension is not primarily a local road, it will have some local value in opening up a new district in South-eastern Assiniboia, which as yet is practically without population. The road has been built to give the Canadian Pacific a short and direct route between Western States points and the Pacific Coast. The Canadian road has handled considerable traffic to and from Chicago, St. Paul, Minneapolis and other points South, and the Pacific Coast. This traffic came via the Great Northern to Winnipeg, and thence westward to the coast via the Canadian Pacific. With the extension of the Great Northern to the coast it became necessary for the Canadian Pacific to secure some other means of reaching cities south of Winnipeg, in order to hold the coast traffic. This has been done by the extension of the Minneapolis, St. Paul and Sault Ste. Marie railway northwestward from Minneapolis, across the States of Minnesota and North Dakota to the Canadian boundary, and thence continuing in a northwesterly direction through Southern Assiniboia to a junction with the main line of the Canadian Pacific. The road enters Canadian territory at a point which has been named Sterling, a few miles south of the new coal mining town of Estevan, and connects with Canadian Pacific railway main line at Pasqua, west of Regina. It will give the Canadian Pacific a much shorter route between the Pacific coast and Minneapolis, St.Paul, etc., than the route formerly used via Winnipeg. As the "Soo" line extends eastward from St. Paul and Minneapolis to Sault Ste. Marie, connecting there with the Algoma branch of the Canadian Pacific, it practically means that the Canadian Pacific is given an alternate route between the east and the west, south of Lake Superior, in addition to the route north of this lake.—Commercial, Winnipeg.

The Russian Mint has stopped receiving silver, and the importation of foreign silver coin into Russia is forbidden.

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

Fenelon Falls railway bridge is rapidly approaching completion.

Hydraulic mining is busily progressing in Cariboo, those engaged in it being cheerful in their anticipations of good results.

The Windsor Electric Railway Company is equipping three cars with 30 horsepower motors. The ones now in use are 20 horsepower.

The first horse railroad was made in 1829. Now every country town has its street car line, and even Constantinople and Jerusalem have such facilities.

There are renewed rumors that a dry-dock may shortly be constructed near Nanaimo for the accommodation of the large number of vessels yearly frequenting that port.

The oil dealers have just had made a photograph of a relief map showing the oil bearing districts of the United States. It is a map seven feet long and 50 inches wide, and shows the States in which there are oil wells.

The nail machine was invented in 1775. At the present day it is estimated that 4,000,000,000 nails are annually made by machinery in Great Britain alone and from a fourth to a half this number in the United States.

The contract for the steel superstructure of the railway bridge across the Sault Ste. Marie canal has been awarded by the Department of Railways and Canals to the Hamilton Bridge Company. The contract price is understood to be in the neighborhood of $25,000.

An echo of the famous Homestead strike was heard in the United States District Court at Pittsburg the other day, when Judge Buffington refused to naturalize Hugh Ross, a native of Scotland, on the ground that indictments are still pending against him for offences connected with the riots. This decision will affect a number of unnatualized Homesteaders similarly situated.

"Death in the Thimble" was the heading of a newspaper paragraph one day this week. It had reference to a danger latent in the ordinary brass thimble commonly in use in the feminine sewing-world. The danger has betrayed itself tragically. A woman had a slight scratch on the finger, on which she placed a brass thimble, and commenced sewing. Ere night she had succumbed to blood-poisoning. "No doubt," adds an exchange, "the risk run of using corroded brass is no slight one, and it would be well if women would bear this tragic death in mind, and substitute the silver thimble for the more dangerous one of brass."

The exports of coal from Great Britain in August were 2,368,908 tons, a decrease of 746,582 tons, or 24 per cent., from August, 1892. For the eight months to August 31st, the exports were 19,778,944 tons, an increase of 267,584 tons, or 1.4 per cent. over the corresponding period of 1892. The coal shipped for steamers in foreign trade was 699,889 tons in August and 5,370,805 tons for the eight months.

An attempt is being made in England to utilize the power absorbed in the application of the brakes to tram cars so as to render aid in re-starting the car. A spring is charged, which can be released, and will start the car without the aid of horses. A forward and not a recoil movement is at once given to the wheels, but its action can be reversed in case of need—such as to overrunning points at junctions.

A good rule in fixing the sizes of steam pipes in heating is to allow the area of a one-inch pipe for every one-hundred square feet of heating surface to be supplied. Another rule, which has been used with good results, is: Make the diameter of the pipe in inches equal to one-tenth of the square root of the heating surface in square feet.—Ex.

It has just been ascertained that the working of the electric railway in London can positively be felt as far away as the north of Norfolk, the motion being conveyed by the telegraph wires along the whole distance—about 120 miles. It has also been found that underground gas pipes suffer from the current conveyed by wires used for electric lighting, and that explosions are not unlikely to occur from this cause.

Owing to the over-production and severe competition in the German coal trade, a syndicate ofcolliery owners has recently, according to an English paper, been formed in the Rhenish provinces and Westphalia, embracing nearly the whole of the mines. Not less than 170 mines are included in the combination, having an annual output of 37,000,000 tons, valued at about £15,000,000, and employing 150,000 workmen. All these mines are managed commercially on a uniform system, the syndicate regulating the division of output among the combined mines, and fixing prices. This is undoubtedly the largest syndicate in existence, and the progress of this gigantic economic factor is be-

The imports of metals into Great Britain for the month of August included 18,236 tons copper, 17,610 tons lead, 4,123 tons zinc, 45,395 cwt. tin, and 421,370 tons iron ore. For the eight months ending August 31 the imports included 147,213 tons copper, 126,629 tons lead, 429,538 cwt. tin, 36,833 tons zinc, 445,619 tons pyrites and 2,968,687 tons iron ore. The exports for the eight months to August 31 included 435 tons copper and 1,000,785 tons of iron and steel.

The Ontario Water Meter Co., of Toronto, has filed a suit against the city. They claim unmentioned damages, and allege that the city's breach of a certain agreement made with them has injured their business. The company's solicitors are also asking the court for a mandatory injunction to compel the city to place Hersey water meters in the services of A. W. Williamson, D. G. Bowman, A. T. Johnstone, J. J. Woods and the Canada Landed and Investment Company.

The German cutlery grinder, says an exchange, is a very superior workman, and in razors he has not a peer. The English workman will not spare the time to do the work well, consequently the blanks are sent to him from Sheffield to grind. The English stand over the work, the stone being set low. On the other hand, the German has his stone set right before his face, and can see his work very closely. His touch is very delicate, and he can grind a blade as thin as a sheet of paper, and make the best razor in the world.

John Risdon, of Risdon Bros., and J. C. Livesey, formerly G.T.R. roadmaster, have entered into partnership as hardware merchants, and will conduct the business heretofore carried on by Risdon Bros. The firm will be known as Risdon & Livesey. Mr. John Risdon, who has been many years in business is thoroughly posted on the needs of the trade, and Mr. Livesey is a gentleman who has a large circle of friends, and both are capable, pushing business men, and in their centrally located store in the Bromell block, will doubtless do a large business.—Journal, St. Thomas.

The bill to prevent the use of barbed wire for fences in roads, streets, lanes, and other thoroughfares, has been introduced in the British House of Commons. The object of this bill is to empower any local authority or any person to serve notice in writing upon the owner or occupier of such land, requiring him within a given time to take down and remove such barbed wire. If the occupier fails to comply with such notice, the local authority may apply to a Court of Summary Jurisdiction, which may, by summary order, direct such wires to be removed. Cleft oak or other solid fences, on or over which barbed wire may be fixed for the protection of the property enclosed, are exempt from the operations of this act.

ing watched with the greatest interest. The syndicate declares that it will not throw coal away at a loss to foreign countries, as was the case with the Coke Syndicate, which last year obtained 12 marks a ton at home, and exported coke at 6 marks. The previous existence of coal syndicates in Germany however, has scarcely been beneficial to mining industry, for last year several State Railways, and even the Imperial Government, were supplied with British and Belgian coal.

It is told of C. P. Huntington, that recently, upon his receiving a small package, a relative discarded the paper and twine, throwing them into the waste paper basket. Mr. Huntington arose, and, continuing his talk with some gentlemen present, apparently unconsciously took the paper out of the basket, neatly folded it, and taking care of the string, placed them both in a drawer for further use. One of the party remarking that close economy, Mr. Huntongton replied that between that and extravagance there was a wide gap. But Mr. Huntington in '49 ran a hardware store in California, and paper and twine were not readily obtained, and he probably acquired the habit of closely saving those two articles.—Ex.

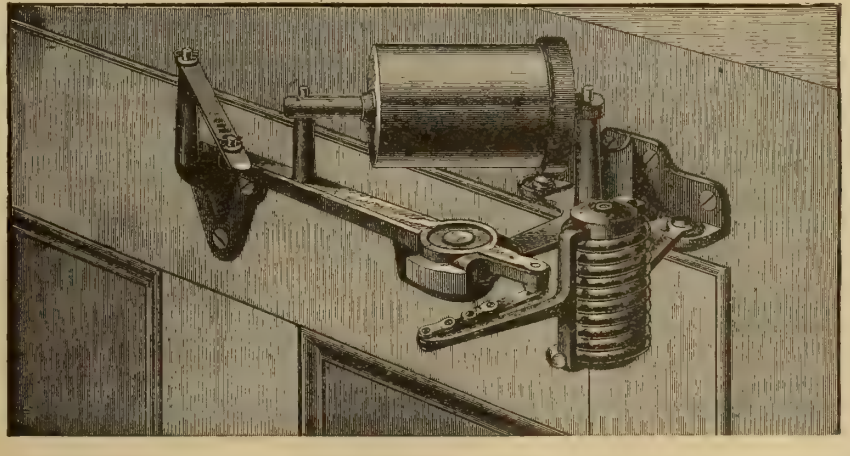
A vegetable growth in the water mains of St. Paul, Minn., has lately been the cause of some trouble. The first case was discovered by the superintendent, in one of two service pipes in a single trench supplying a double house. A complaint was made of bad water, which flushing failed to improve. One of the pipes delivered pure water and one supplied a muddy liquid that was of no use. This fact led to the conclusion that one of the services was foul; and the remedy applied on this supposition proved effective. The boiler of a portable engine was connected with the faucet of the kitchen sink from which the muddy water came, and a steam pressure of seventy pounds forced against the thirty-five pounds water pressure for thirty minutes—thereby driving the water out of the pipe. Since that time the pipe has always delivered clear water, and twelve similar cases have been successfully treated in the same manner. Great care has to be taken that there are no leaks in the service pipes, and that none of the fittings are open during the steaming process.—Ex.

Port Arthur's electric railway is now completed. It connects the three towns, Port Arthur, Fort William and West Fort William, and is eight miles in length. Through trains began running Sept. 27 from the C.P.R. station at Port Arthur, to the C.P.R. station at West Fort William, and an hourly service is to be inaugurated between the three towns. The building of this railway is an interesting experiment in municipal enterprises. It was built, is owned, and will be operated by the town of Port Arthur, Fort William having the right to buy one-half at any time within five years It is expected that connecting the three towns this way will be a formidable factor in uniting, consolidating, and building upon the shores of Thunder Bay and the banks of the Kaministiquia one united city, which will undoubtedly be the metropolis ofAlgoma, the Canadian Duluth and Superior—the Chicago of Canada's North-west.

Mr. Allan has submitted to the Admiralty within the last week or two a design for a new vessel which was suggested to him by the sinking of the Victoria. The design is what is called a "Rammer"—that is to say, a vessel that would be used in war for the sole purpose of dashing in against an enemy's warships and ramming them. The vessel would be about 34 feet in length. She will not show more than five feet above the water, and she would have a nominal speed of 18 knots. She would, it is said, be a capital sea-boat, in the sense of being able to ride out any kind of weather. Mr. Allan's suggestion is that a fleet should be accompanied by several of these vessels, and that the part played by them in an engagement would be deadly in the extreme. The shape of the ram would, it is stated, enable it to be withdrawn immediately after the blow had been delivered, so that the "rammer" would not go down with her victim.—Ironmonger.

HOUSE DOOR CHECK AND HINGE.

The accompanying cut represents the "Home" door check and spring, applied to hinge side of door. This spring is being supplied to the trade by Messrs. H. S. Howland & Sons. The same spring



can be used for either right or left hand doors and either side of door, by using a different bracket. The objections to other door springs and air checks in the market have been their high price, complicated construction and difficulty of applying. These are overcome in the "Home." It is strong and durable, can be applied and adjusted by anyone, and is much cheaper. Another advantage of the "Home" is that it will hold the door open when it passes the right angle. It is especially desirable in dwellings, on doors leading from dining room to kitchen, also in churches, hotels, banks, hospitals; in fact, on any door, large or small, desired to close without slamming.

BLAST FURNACE.

According to returns just to hand, says an English paper, out of a total of 80 furnaces built in South Staffordshire, only 27 are now in blast. In Cleveland, as shown in another paragraph, at the end of August there were 89 furnaces blowing, and 54 out of blast, or damped down, as against 86 blowing and 65 damped down at the end of August, 1892. In the Cumberland and Furness districts, out of a total of 75 built, 34 are blowing, whilst 41 are out of blast. On turning to Scotland we find that out of a total of 120 furnaces built, only 39 are blowing, as against 81 out of blast or damped down, this being due to the fact that Scotch ironmasters, during the past few weeks, have, in many cases, found it more profitable to sell their coal than to use it for iron smelting, and in others, fearing a continuance of the strike, preferred to hold their stock of coal. Whether the damping down will be continued depends entirely on the state of the coal market, and as we find prices of coal in Scotland going back, we do not anticipate the damping down will be continued to any great extent. In the West Riding of Yorkshire, according to returns received, there are only five furnaces in blast out of a total of 38. In Derby, Nottingham and Leicester we find 18 are reported in blast, whilst 43 are either damped down or blown out. In other districts there is a proportionate number of furnaces damped down in consequence of the scarcity of fuel, and their return to activity will depend upon the course of the coal trade.

FUTURE OF STEEL RAIL TRADE.

A conspicuous steel manufacturer who has been interviewed lately on his return from Europe has drawn a very gloomy picture of the future of the steel rail trade. His principal argument seems to be that the amount required for renewals of old lines is annually becoming less and less, as those lines are now practically all laid with steel. He is credited with the statement that the steel rail trade must depend more and more upon new lines and extensions of old lines. We believe that this is an entirely erroneous view of the situation. As a matter of fact the requirements for renewals have been the most important source of consumption for many years, and it promises to grow in that respect in the future. The replacement of iron by steel has not been a leading factor for years, the principal consumption being that due to the substitution of new steel rails for steel whose service in the track has been exhausted or for good steel rails too light to bear the heavier traffic imposed upon it.

A few figures will show that the position ascribed to Mr. Carnegie is untenable. Let it be assumed that the average requirements for a mile of new newals. From the total production of sidings, is, roughly, 100 gross tons. Deduct from the production of steel rails the quantity thus used. The balance represents the requirements for renewals. From the first production of rails we have first deducted the quantities which were made for street railroads.

Surely this does not look as though new mileage were the salvation of the rail producer. Nor has the disappearance of the old iron rail much to do with renewals. "Poor's Manual" has for years shown how many miles of track in the United States are still laid with iron rails.

Although iron rails were displaced by steel on nearly 8,000 miles of track more in 1890 than in 1889, the consumption for renewals jumped only 320,000 tons, and although it dropped back nearly 9,000 miles the next year, the renewal requirements fell off only 420,000 tons. Let it be noted that although less than 1,000 miles of iron track disappeared in the two years 1891 and 1892,there were put into old roads over 830,000 tons of new steel rails in 1891 and very close upon 1,000,000 tons in 1892.

We believe that these figures prove pretty conclusively that the steel rail trade need not look with dismay upon the disappearance of the old iron rail as sure to rob it of much of its employment, nor need the makers depend upon the builder of new roads as their principal customer. The renewals of worn out and light steel rails have been the main reliance in recent years and will be until the next railroad building craze. The normal renewal consumption of the United States is between 800,000 and 1,000,000 tons, and is likely to grow slowly rather than to decrease.—Iron Age.

MACHINERY SALES AT THE WORLD'S FAIR.

The commercial side of exhibiting at the World's Fair is one of the subjects usually and very properly kept in the background. If every exhibitor was to look for quick commercial results,and to undertake no display unless he was pretty thoroughly satisfied that he would be reimbursed his outlay by the time the show was over, there would perhaps never be a universal exposition worth looking at. The very people taking part would be makers of novelties of the catch-penny order, for which there is a good sale wherever crowds can be collected. Most exhibitors engage in an affair of this kind for the sake of the permanent results flowing from such an advertisement of their products, or to contribute to the glory of their country, of whose every achievement they are proud, or for the gratification of personal pride in showing to representatives of the world at large some triumph of ingenuity or of patient, persistent, indomitable application. And yet there is hardly an exhibitor who does not hope for some immediate return on the investment necessary to make an attractive exhibit. Even those who enter the lists from motives of patriotism and for personal glory are gratified to have their enterprise rewarded by substantial recognition. The inventor of the most igenious piece of mechanism in the world may be flattered by the homage of the crowds that throng to see it, but such pleasure is as "tinkling cymbals and sounding brass" to the gratification felt by the receipt of orders for the duplication of the device from practical people who appreciate its true value.

The World's Fair has thus far been a great success in attracting visitors, notwithstanding the stress of financial trouble throughout the country. There has also been a fair representation of foreign visitors, though by no means so large as had been expected. Exhibits have been quite thoroughly inspected by these visitors, who seem to have almost made it a religious duty to see everything in any way worth seeing. Registers kept by exhibitors of machinery generally are well filled showing that they cannot complain that they have been altogether thrown in the shade by the numerous lighter attractions provided by the World's Fair managers. But when the question is asked as to the direct commercial result of the exhibits made, the answers returned show a wide variation. There are, for instance, some large makers of machinery very popular in certain trades who state that they have not taken an order for a single machine, although their exhibit is a good one, covering their entire line,and each machine can be shown in actual operation, doing its most perfect work as a matter of course, as it is run by an expert from the factory. Others report a few sales, but by no means what they expected when they looked forward to the World's Fair and heard the extravagant estimates made of the probable attendance. There are some, however, who are well pleased with what they have accomplished in booking orders and who will go home when the Fair is ended well satisfied with the commercial results, and ready to prepare for the next universal exposition with a great deal of enthusiasm.

The financial stringecy is, of course, held primarily responsible for the lack of orders from visitors. Many exhibitors of standard machines report their callers making the remark very frequently that they "need just such a machine, but the times are now too hard and work is too slack to think of buying one." The manufacturers of machines somewhat out of the ordinary line, or making a decided improvement on the tools of the same character heretofore in use, have been more fortunate. Their orders may be affected to some extent by the unsettled financial conditions, but they are nevertheless doing very well, and find no fault with the business outcome of their World's Fair venture. If it were possible to get from all the American machinery exhibitors exact reports of the domestic and foreign orders entered, we believe the aggregate thus shown would be quite satisfactory and would be a conclusive argument in favor of making exhibits at such expositions. The fragmentary knowledge we have thus far been able to obtain covers sales made to almost every civilized country on the globe and to some that have thus far not been classified under this head in the geographies.—Iron Age.

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TACKS, SHOE NAILS, ETC.
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ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
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These words and brand are on every box. None genuine without this Trade Mark. We warn our friend against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

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STOVE PIPE POLISH

Nonsuch, Rising Sun, Jacoby, Mirror.

STOVE PASTE

M. L. S. Crown.

STOVE PIPE VARNISH

Butler's, Crystal Black, Ever Ready, Resplendent, Easy Shine.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Oct. 6, 1893.

HARDWARE.

Trade in general hardware during the week has been of moderate but fairly satisfactory volume, while in some particular lines there are increases to note. The most satisfactory feature, however, is that a steady sorting up demand keeps up for all kinds of seasonable goods, which is effective in keeping the order counters in the various warehouses from being entirely empty at any time. There is no striking change in values to note, but at the time of writing the association of iron manufacturers have commenced holding their series of quarterly meetings. Bar iron and cut nails have already been considered, with no special change in each, but in horseshoes an advance of 15c. per keg to a basis of $3.65 has been decided upon. Tacks, wire nails, spikes, etc., have yet to be considered, and whether any change in values will result is hard to say, but the general impression is that nothing of a striking nature will transpire. The more active features in a jobbing way at the moment are lines of winter goods, such as sleigh bells, the movement of which has expanded if anything. Skates, also, commenced to attract more attention this week, and now are one of the active lines, but although these are samples of the most active, the orders that are being received call for goods of a general character in a sorting up way, so that business is fair on the whole. Sporting goods are not so active as they were. Reports with regard to payments appear to be fairly satisfactory.

WIRE—There is only a quiet movement in wire. At the time of writing makers are holding their quarterly meeting, but it is not considered as probable that any important changes will occur. In the meantime buyers are holding back.

CUTLERY—There has been a fair demand in a sorting up way for cutlery, and a good deal of table goods have gone out during the week.

WINTER GOODS—The demand already noted for sleigh bells continues in full force, the week witnessing quite a business. Orders are mainly for assorted lots of string bells, but shaft and saddle designs are receiving a fair share of attention also. Skates also have commenced to show life during the week, and an increased demand is anticipated for them from now out.

NAILS—Makers say that orders from wholesalers are fair on the whole both for cut and wire nails, but jobbers report business on the quiet side. The cut nail men met on Tuesday, but no change in price was decided upon. Wire nails had not been considered by the association at the time of writing.

TACKS—A few small orders are reported by jobbers, while makers state that business is quiet with them also. The latter hold their quarterly meeting this week to consider the question of prices, etc., but no important change is anticipated.

CHAIN—There is nothing special to note about business in chain. No line shows any noticeable degree of activity.

HORSESHOES—Business continues on the quiet side with jobbers, and makers do not report any particular activity. At their meeting on Tuesday, however, the latter decided to advance prices 15c. per keg on the article, making the selling basis from makers' hands now $3.65.

SPORTING GOODS—Business in these has fallen off during the week, but it was expected, and the movement in them is likely to show a gradual decrease from now along.

TOOLS—Furnish no business of importance.

SUPPLIES—Plumbing and building supplies have been quiet during the week with nothing of a special nature to report.

WARE—A few orders for enamelled preserving utensils continue to come in, but business shows a tendency to shrink up.

NAVAL STORES—The demand is not brisk but ship chandlers appear to be satisfied with the movement that is passing which is of a general jobbing character. Turpentine, 45 to 46c.; resins, $2.50 to $5.00, as to brand; coal tar, $3.75 to $4; cotton waste, 5½ for colored, and 7 to 10c. for white; oakum, 5½ to 7½c.; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep-sea line; pure Manilla, 11c. for 7-16 and upwards and 12c. for smaller sizes.

METALS.

The general metal market shows the same dull feeling with the business that is doing of very moderate dimensions. In fact buyers do not appear to be anxious about supplies of any of the leading lines, recent purchases of most being now considered sufficient. Metals have undergone very little change and prices of a week ago can be repeated all round almost.

PIG IRON—Pig iron drags along in the same dull manner and complaint is general about unsatisfactory business. An occasional sale of Summerlee at $18.50 ex-wharf sums up all there is doing in Scotch pig while in domestic pig offers have been made at $17, but buyers are very slow. We quote: Summerlee, $18.50 to $19; Eglinton, $17 to $17.25; Carnbroe, $16.75 to $17; Siemen's No. 1, $18, and Langloam, $18.50; Ferrona pig $17.

BAR IRON—The movement in bar iron is quiet but prices are well maintained, the makers holding their quarterly meeting Monday and deciding to make no change from the $1.95 busis. Jobbers say that trade is quiet, but makers claim to be satisfied with the orders that they are receiving.

SCRAP IRON—There is no change in scrap iron, business being nil and prices nominal at $15 to $16 for No. 1 wrought scrap.

TIN PLATES—Demand for tin plates is not satisfactory, while supplies here are said to be ample for prospective wants. Recent small sales of cokes were on the basis of $3 15 to $3.25. Charcoal remains at $3.75 to $4.25.

CANADA PLATE—Stocks of this article are still in small compass here, and prices are firmly held at $2.50 with a fair enquiry.

TERNE PLATE—Terne plates are quiet and unchanged at $7.25 to $7.75 according to grade.

GALVANIZED IRON—A moderately good enquiry is still to note for galvanized iron and prices remain as before for the business doing at 4¾ to 5c. for No. 28 gauge.

SHEET IRON—Business is quiet in sheet iron and prices rather lower. We now quote common sheet iron at $2.35 to $2.40. Russian sheet iron is steady at 10½ to 11c.

HOOPS AND BANDS—There have been some fair-sized lots moved during the week and prices are steady at $2.35.

COPPER—Business is quiet and the steadiness already noted is maintained. We quote 11½ to 13c.



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Famous Magnet

NO. 14 AND 16

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Offer for Sale

"Pioneer" and "Sloss" PIG IRON

These are fine foundry irons, being strong and large scrap carriers.

Also all the well-known—

Scotch Brands,
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and Railway Cast Scrap.



"Build to-day then, strong and sure,
With a firm and ample base."
—Longfellow.

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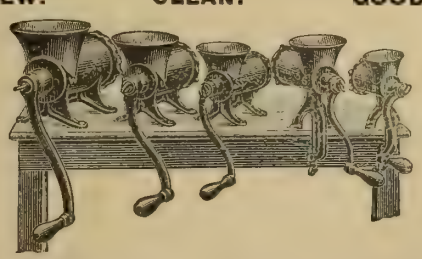
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MONTREAL Markets Continued.

TIN—Some moderate-sized lots of ingot tin have been moved during the week at steady prices—viz., 21½ to 22½c.; bar tin remains at 25c.

ANTIMONY—Only a small jobbing trade doing and prices unchanged at 10½ to 12c.

SPELTER—Business rules quiet and prices are rather easier, $4.75 having been cut, and we quote $4.60 to $4.75.

LEAD—A moderate demand from plumbers, with prices steady at $2.80 to $3 for pig lead and $4 to $4.25 for sheet lead.

ZINC SHEETS—A quiet demand exists, with prices steady at $5 to $5.25.

CEMENT—The cement market is firmer owing to the advance in freights, and we quote prices 25 to 30c. per cask higher. Stocks are sufficient, but there is a good demand both for local and export account. We quote English brands $2 10 to $2.20 and Belgian $1.95 to $2.05.. Firebricks are in good demand at $15 to $21 per 1,000 ex-wharf.

CHEMICALS—Heavy chemicals are all firm in tone owing to the influence of the colliery troubles in Great Britain. Caustic is firm at $2.30½ to $2.50 for 60 per cent. and $2.55 to $2.75 for 70 per cent. Bleaching powder looks like advancing and is firm at $2.50 to $3; white soda crystals are gaining strength.

PAINTS AND OILS.

The feature in this line has been some cutting in linseed oil, raw having been sold as low as 58c. and boiled 61c., but the easiness, it is understood, was not due to any natural cause, and prices at the time of writing are expected to advance 2c. again to their former level. Business in leads and paints continues of good volume and prices are firm. We quote: Choice brands white lead, government standard, $5 to $5.25; No. 1, $4.75; No. 2, $4.50; No. 3, $4.25; No. 4, $4; dry white lead, 5c.; red lead, pure, 4½c.; No. 1, 4¼c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, raw, 59c., boiled 62c.

GLASS.

The glass market remains much the same. Business shows some improvement, but prices rule on the easy side, although we still quote $1.35 as the nominal basis.

PETROLEUM.

Refined petroleum is moving out in a satisfactory manner, the demand being fully up to the average for this season of the year. Prices hold steady. We quote Canadian at 11½c in shed in Montreal for round lots, and 12½c for five barrel lots, and 13c for small quantities. American petroleum, 17c in car lots, 18c in 10 barrel lots, 18½c in 5 barrel lots, and 18¼c for single barrels, 2 per cent. off for cash; American benzine, 23 to 25c; Canadian benzine, 10¾c Petrolea; 12½c Montreal.

MONTREAL TRADE NOTES.

In tin plates there are no merchants' roofing to be had here at all.

Makers continued cut nails at their former basis at the meeting held here on Tuesday.

Light stocks of Canada plate are still one of the characteristics of the situation here.

The Messrs. Pilkington intend adding a new branch to their glass business here very shortly.

Francis Hyde & Co. note further sales of their line of garden edging in white enamel, black and terra cotta. It is a novelty that is taking well. The same firm have received a very complimentary testimonial from R. P. Fleming, Esq., resident engineer of the Montreal Sanitary Association, on the quality of their Scotch fire clay drain pipes.

General surprise was expressed among the trade here at the news that the Toronto Plate Glass Co. were in difficulties.

The bar iron men at their meeting this week did not change the basis of sale from makers' hands, which remains at $1.95.

W. H. Cottingham notes some good sized sales of Manders' varnishes. The orders run to all the eight or nine different descriptions.

McArthur, Corneille & Co.'s advices from Great Britain note the possibility of very much firmer prices on all lines of heavy chemicals.

Wm. McMaster, the general manager of the Montreal Rolling Mills Co., returned to town on Monday from a week's visit to the World's Fair.

The Dominion Wire Co. note sales of some fair lots of barbed wire during the week. The farmer will soon have time to attend to his fencing.

The Canada Iron Furnace Co. state that their works at Rodner are fully as busy as last year at the same time, the call for their charcoal pig being on the increase.

TORONTO MARKETS.

TORONTO, Oct. 6, 1893.

HARDWARE.

The expression of trade has not changed materially since a week ago. Business continues to be of a fairly satisfactory character, but devoid of any special features. What is doing is of a sorting up nature and is mainly of fall specialties and grain scoops. Sales of plumbers' supplies continue to show slight improvement, but it is more particularly in the country. The lamp goods dealers' harvest is on, and he is reaping fairly well. A good demand is reported for wood measures. An advance of 10 per cent. is announced in American axe-handles, and owing to the coal strikes in England there has been an advance of from 15 to 20 per cent. in the larger sizes of chain. Payments are not as satisfactory as desired.

WIRE—There is still a little doing in oiled and annealed wire, but it is as a rule for small quantities only.

ROPE—A fair business is being done in halters, but rope generally speaking is dull with prices steady.

CUTLERY—A brisk trade is reported in this line. Butchers' knives, pocket knives and knives and forks of the cheaper class are in the greatest demand. Ivory and the better class of cutlery are expected to sell better in another month when the demand usually sets in for the Christmas trade.

NAILS—Trade is steady in cut, wire and horseshoe nails, but there is no special feature to note. The manufacturers are meeting this week in Montreal, but there is not much interest taken in the fact, as no change is expected to be made in the price.

TACKS—There is a good sale for those in kegs, but business is small in ordinary kinds.

HORSESHOES—Trade continues steady in this line, but without special feature to note.

CHAIN—Demand continues good for cow ties, but otherwise business in this line continues as before, quiet. Owing to the strike in England the price of coil chain has stiffened considerably, in the larger sizes at least 15 to 20 per cent.

SPORTING GOODS—Ammunition, rifles, guns, etc., continue in brisk demand.

WARE—Tinware is still going out fairly well, and the same may be said of pearless ware. Other kinds of ware are not much wanted.

PLUMBERS' SUPPLIES—Further slight improvement is reported in country trade, but city trade remains much as before. There is not much contract work, most of the supplies being for jobbing purposes.

BUILDERS' SUPPLIES—In this line business continues to be of the same featureless character.

TOOLS—Trade flat, the little demand that there was last week for tinsmiths' tools having been for the moment satisfied.

METALS.

There is a fairly good trade doing in metals. In pig iron there is a little doing in the Nova Scotia article, but the strike in England continues to interfere with transactions of business in import orders. Bar iron does not seem to be as brisk as it was. A feature of the ingot tin market is the fair quantities of the Straits article that is going out. Copper is a little firmer.

PIG IRON—There is not much demand, but for the little there is in the way of import orders it is difficult to satisfy owing to the miners' strike in England. There are some sales of carlots of Nova Scotia pig at $19.50 to $20. Carnbroe is nominal at the same range of prices.

BAR IRON—Demand appears to have slackened off some, but prices remain unchanged at the $1.95 basis.

HOOPS AND BANDS—Business has improved in this line, a free movement being reported this week. Stocks are somewhat low, and we quote prices $2.50 to $2 60 as before.

CORRUGATED IRON—Trade rather quiet, there being fewer inquiries, $4.70 to $5 per square is still the idea for small lots. "Owl" brand is quoted at $3 to $4 per square for patented and $4 25 to $7 for galvanized, according to gauge.

GALVANIZED IRON—Business is reported good in this line, and prices are unchanged at 4⅞ to 5c. for 28 gauge, with other gauges in proportion.

INGOT TIN—Been some fair quantities of Straits going out this week at about 21 to 21½c.

INGOT COPPER—This article is a little firmer in the English market and there is some business doing here at 11¾ to 12c.

SHEET IRON—In black sheet the movement is fair only, and prices are on the basis of $2.50 to $2.60 for 22 and 24 gauge. Russia iron, both genuine and imitation, is in active request, while the supply of the latter is not equal to the demand.

SHEET ZINC—Quite a number of cask lots have been moving at about 5¼ to 5¾c. We quote part casks at 5¾ to 6c.

MARKETS—Continued

SPELTER—Some sales of domestic have been put through at about 4½ to 4⅝c. Foreign is quiet at 4¾ to 5c.

TIN PLATES—While a lot of tin plate is being sold here, it is reported that manufacturers are not doing much. Stocks here are fairly well assorted.

TERNE PLATES—Business continues slow, and jobbers are of opinion that the volume of business in this line is not up to the usual standard this fall; 7¼ to 7½c. is the idea as to price.

CANADA PLATES—Stocks are light in Canada, and prices are somewhat stronger at $2.65 to $2.75. Prices might be shaded a few cents for lots, but not much.

SOLDER—There is not much doing and prices are unchanged at 15½ to 16½c. for half and half and 14½ to 15½c. for standard.

ANTIMONY—There is not a greal deal doing,and the little demand there is, is only for small lots at 12 to 12½c.

LEAD—Some good sales of pig are reported at 3¼ to 3½c.

GLASS.

There is quite a movement in the smaller sizes, but there is nothing to note beyond this; $1.25 to $1.30 is still the price for first break.

PAINTS AND OILS.

Trade continues fairly brisk, and more so than a week ago. The improvement is more marked in the country than in the city. For white lead demand is not heavy, but it is fair for the season; 5c. is still the base price. In prepared paints there is little or nothing doing. Varnishes slow and unchanged in price. There is a little more doing in turpentine than a week ago, but it is in small lots mostly; prices unchanged at 44 to 46c. Trade is hardly as brisk as it was in linseed oil, but business is fair for the season at 59 to 61c. for raw and 62 to 64c. for boiled. There is nothing particularly new to mention in glue. There is the usual demand, and white glue continues scarce and dear.

OLD MATERIAL.

Dealers in old material report that large quantities of scrap and light scrap copper are offering, but the demand for such remains light. Prices unchanged. We quote prices paid by dealers as follows: Agricultural scrap, 60c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40 to 45c. per cwt.. No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings and turnings, 10 to 15c.

PETROLEUM.

The Petroleum Advertiser, in its weekly report, says: "The market is unchanged, and crude may be quoted at $1.05 on 'Change or $1.10 delivered. Refined 9¾ to 10c. f.o.b. here, in car lots. We await an awakening from this monotonous state of things, and expect it in the way of a jump upwards in crude before long."

On the Toronto market a gradually increasing trade is reported in burning oils, while the demand for lubricating oils is being well maintained. We quote: 5 to 10 bbl. lots, imperial gallons, Toronto; Canadian, 12½ to 13c.; carbon safety, 16½ to 17c.; Canadian water white, 17c.: American water white, 18½ to 19c.; photogene, 22c.

MARKET NOTES.

Ingot copper is a little firmer.

Turpentine is about 2c. dearer in the South.

American ax-handles have advanced 10 per cent.

The Toronto Smelting and Refining Works report a large and increasing sale "Hercules" metal.

A good sale of "Perfection" barbers' and horse clippers is reported by H. S. Howland, Sons & Co.

M. & L. Samuel, Benjamin & Co. have a fresh lot of the new Rapid cork screw and lemon squeezer.

A large stock of American auger bits, in 8 and 9 pieces has been just received by H. S. Howland, Sons & Co.

Coil chain is dearer in England on account of the coal strike. The advance in the large sizes is about 15 to 20 per cent.

H. S. Howland, Sons & Co., Toronto, are just in receipt of another consignment of Electric carpet sweepers.

Samuel, Benjamin & Co. report large sales of the Columbia toilet clipper, and claim that this is evidence enough of the efficiency of the machine.

Exports of copper from New York during September were 11,900 tons and from Baltimore 2,000 tons, making total exports for the month 13,900 tons.

A cheap coat and hat rack is being put on the market by Samuel, Benjamin & Co. It is made of copper wire, and the price will be within the reach of all.

The Toronto Lead and Color Co. is putting a line of stove pipe varnish on the market in tins, bottles and jars. The quality is said to be extra good, and already a large demand is reported for it.

"Our orders to date for horse blankets and sleigh bells." said one of H. S. Howland, Sons & Co.'s representatives, "greatly exceed those of any other year." They report their assortment in these lines complete.

Samuel, Benjamin & Co. remind the trade that those who need to assort their stocks of "Hudson" and "Star" apple pearers had better send them in promptly, as their stock is getting light.

H. S. Howland, Sons & Co. are in receipt of large orders for cow ties. This, the firm take as an evidence that the patterns it is handling are meeting with the approval of the trade. The Messrs. Howland also report the receipt of large orders from all parts of the country for shells loaded with "Dead shot" and Schultz smokeless powders.



AMERICAN MARKETS.

NEW YORK, Oct. 6, 1893.

PIG TIN—There were no new developments in the market for pig tin. Speculation was tame, apparently because of absence of incentative for venture in either direction regular trade demand was on strictly conservative lines. In short it looked as though the general tendency was to quietly await developments and avoid anything in the nature of speculative entanglements. This feeling seemed to have been intensified by the conflicting reports as to present supplies and possibilities of tariff legislation. Thereby acting as a restraint upon sentiment that has been worked up by late clever and successful movement on the part of the "bull" party in the speculative arena. London cables came lower and exerted a certain amount of sentimental effect, but spot tin was nevertheless held at full former price, and November delivery was at about 0 15c. premium. Early in the day a sale was recorded on the Exchange of 25 tons for delivery next week at 21.15c., in the face of sub-rosa offering at 21c. net cash for spot stock.

COPPER—Nothing new developed in the market for ingot except that speculative bids were a trifle higher, and superficial evidence that efforts to buy at the ideas of value entertained by some speculative operators are futile. New export business is moderate and home trade demand continues slow, but sellers seemed not only more reserved, but inclined to look for higher prices. The popular quotations were 9⅞ to 10c. for Lake Superior ingot, 9⅜ to 9½c. for electrolytic, and 9¼ to 9⅜c. for common casting stock.

PIG LEAD—The market was quiet and without visible change. Outside lots seem to have been about all cleaned up, and producers are at present offering in a somewhat indifferent manner. To all accounts buyers do not bid higher than $3 70 for round lots, or $3 75 for single car loads, while sellers stand out for $3.80 with some showing of firmness. The Western markets, to all accounts, were quiet, but rather steadier. London cable to the Metal Exchange was £9 12s. 6d. for soft Spanish.

SPELTER—From the West there were advices similar to those received previously this week, noting very firm holding of ordinary brands, but the demand in this city and vicinity is without visible improvement, and prices were no higher on actual sales. The popular quotations were $3.75 bid, $3 80 asked, for car loads deliverable this month or next. The London price was wired to the Metal Exchange as being £17 2s. 26d. for good merchant brands.

ANTIMONY.—Business continues moderate, but sufficient to keep prices quite steady at about 9⅝ to 9¾c for Hallett's, 10⅛ to 10¼c for Cookson's, 10 to 10⅛c for LX and similar brands, and 10¼ to 10⅜c for French "E B." and U. S. French Star.

TIN PLATE.—There was no improvement in the demand for spot goods, and interest in future deliveries continues extremely tame. Futures also remain dull. Prices are, however, kept quite steady, particularly in the inestance of the most useful lines of ordinary cokes.

VIEWS AND INTERVIEWS.

I fell into conversation Thursday with a well-known hardware man around Toronto regarding the failure of a certain firm. "I think, you know," he remarked, as he quietly thrust his hands into his pockets, "that they didn't know how to buy right; and the result was they became overstocked. I would say to retailers: Keep your stocks light but well assorted. The jobbers in Toronto and elsewhere are carrying large stocks, and orders can be filled at sight. Goods bought often always look fresh and clean. The man who turns over his stock two or three times a year can afford to do business a little closer, and, furthermore, not being so anxious to make sales in order to raise money to meet his liabilities, he can be more careful about to whom he gives credit."

"Now here is a nice line of lumber and board rules," said a representative of H. S. Howland, Sons & Co., as he picked up a bundle that was lying on a packing case in the warehouse. "It is manufactured in the States, and is, you see, named the Lufkin Rule. It has been on the American market for some time, I believe, but this is the first time we have handled it. They have been asked for so much by American lumbermen doing business in Canada that we were compelled to get them in. Bending them double has no effect upon them, and you will notice the peculiar whiteness about them. But the pecularity of this rule is this: All the figures are burned in with electricity, so that they are not only clearer but they cannot be erased. This does away with the old system of stamping, which sometimes damages the rule."

* * *

"There's something nice in the way of a curry comb that we are selling," said a jobber to me. "You see the ordinary handle is done away with and instead we have two holes here for the fingers and a sort of a hook here for the thumb. I think it is great improvement."

* * *

"This is something that we are selling a good many of," said a representative of Samuel, Benjamin & Co., as he laid his hand on a meat cutter. "It is the Enterprise, and the sale is good both for the American and the Canadian; also for the American stuffer.

"No, there is nothing new that I know of," said a jobber in reply to a query of mine. "Well, yes there is," he added at second thought. "There is a scarcity of turpentine in the South, owing to the slowness with which production is coming forward, and prices down there are a couple of cents a gallon higher. What affect it will have on this market cannot be said."

BYSTANDER.

GALVANIZED WIRE NETTING Quotations given for Import orders

A. C. LESLIE & CO., Montreal and Toronto. CUTLERY Full assortment in stock; best values in all lines, especially in Carvers. . .



The Celebrated Clauss Bread, Cake, Paring and Carving KNIVES. The only genuine. Made of very finest steel. Fully guaranteed to all purchasers.

Merchants write us for terms. Patented in the United States, England and Canada. Clauss Shear Co., L. Box 324, Toronto

PERSONAL MENTION.

J. A. W. Allan, of Newmarket, was on the street this week.

Wm. Ramsay, of the Metalic Roofing Co., is visiting the World's Fair.

Mr. McEdwards, of McEdwards & Moore, St. Catharines, was seen touring the warehouses this week.

Mr. H. Welbanks, one of Picton's progressive hardware merchants, was in Toronto a few days ago.

Fred. C. Dormison, representative in the Lower Province for Walter Cottingham & Co., sailed for England Wednesday last. He will be absent a couple of months.

Mr. E. Samuel of Samuel, Benjamin & Co., returned Tuesday from the World's Fair, and Mr. S. Samuel, of the same firm, is taking his turn viewing the sights at the White City.

Mr. Vancamp, the Hastings hardware merchant who was burned out a week or so ago, was in Toronto this week selecting a fresh stock. The goods were for prompt shipment.

T. W. Boyd, jr., of T. W. Boyd & Son, the well known Montreal sporting goods house, sailed for Europe Tuesday evening, October 3rd, by steamer Lake Superior. His friends wish him a pleasant and prosperous journey.

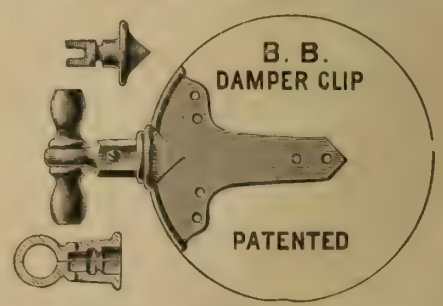
Mr. Arthur King, foreign representative of Mander Bros., will be here in January next. Mr. King travels through every country in the world for Mander Bros., and has just recently returned from Africa, Egypt and other Eastern countries, where he has had a most successful trip. His last visit to this country was in 1891.

ORGANIZATION OF RAILWAYS.

The organization of an association of railway managers, as recently projected, is in line not only with the new habit of the age, but with what seems to be a desideratum in railway policy. The co-operation of some 500 or 600 officials in charge of more than 190,000 miles of railway in the United States and Canada would certainly be to the advantage both of the public and the companies. In the matter of economics, wage standards, competition, labor harmony and in other ways where such an association would be manifestly helpful, there is a wide field both of problem and conflict for such a body. In an organization of this kind railways have been almost recklessly dilatory. Its subordinate officials have not been so slow in falling into line. Car accountants, train dispatchers, road masters, car builders, machinery superintendents, passengers and freight agents and traffic managers have effective organizations, but the general managers are without such a helpful coalition in what is really the responsible executive of railway management. In dealing with many of the unsolved problems of transportation, in promoting its efficiency and in the removal of existing evils, no men could be better equipped or qualified than those who know the business best, and are the acknowledged masters of its complicated science.—Age of Steel.

A VALUABLE INVENTION.

Berger Bros., the well known inventors and manufacturers of eave trough, hangers, and other specialties in the line of tinners' hardware, 237 Arch street, Philadelphia, are introducing a new Damper Clip, which will no doubt have a large sale and is likely to supersede others now in the market, being simple in its construction and cheap; it consists practically of only two



pieces bolted together, clamping a wood handle at one end and the usual damper shaft at the other. The means employed to hold the handle at a given point close up to the pipe in a solid firm locked grip on the shaft in such a manner as to be quickly removed or applied. Must be seen to be appreciated. Parties using dampers should send for sample.

FIGURING ON AN ORE SCARCITY.

The Chattanooga Tradesman opines that the furnaces supplied with ores from the Lake Superior region will not be able to get ore enough to make the average output in the next half year or so, and that southern furnaces will find an unusual demand for their product. It says:

The prospect ahead of the Southern iron trade, we should say, is excellent, better than it has been at any time in the last two years. The Tradesman regards it inevitable that the country will demand for consumption not less than 9,000,000 gross tons of pig iron in 1894. The Northern and Eastern furnaces will not be able to make anything like an average output, because they have not in sight and will not have, for months to come, supplies of ore to work up. The mines in the Menominee, Gogebic and other Lake Superior ranges have been practically all closed during the summer. The deep ones are full of water that will require six weeks to two months for cleaning out. That would leave, possibly, a month for mining and moving ore to Cleveland before navigation closes. It is simply impossible that the furnaces in the Cleveland, Mahoning and Shenango districts can secure nearly a full supply of ore to run them through the winter. Navigation will not open before May 1, and the result will be the furnaces in the districts mentioned, that make, including the Lehigh districts, about 70 per cent. of all the iron produced in the country, will begin their next summer's work with bare stock houses and must run in a hand-to-mouth fashion, until the ore product can overtake and pass the consumptive demand. This is certain to make a demand, at fair prices, to say the least, for every ton the South can produce.

Calculations based on the inability of furnaces tributary to Lake Superior mines, to get ores, are sure to be disappointed, as a little figuring will show.

In the year ending May 1,, 1893, there were forwarded to furnaces from Lake Erie ports 6,102,125 gross tons of ore. That was the largest amount of ore ever sent to furnace yards from lower lake docks in any one year. In the year ending May 1, 1892, the amount was 5,802,496 tons, and for the year ending May 1, 1891, 5,148,669. These amounts represent practically the amount of ores smelted in the years named in the blast furnaces of Ohio, West Virginia, Pennsylvania, and New York that run on Lake Superior ores. It is not necessary to say that there is no expectation that the consumption of iron ores by the furnaces in question in the year ending May 1, 1894, (when navigation opens), will be even an approximation of the amount smelted in the year ending with May 1, 1893. But supposing the demand were as usual, what are the facts as to the supply?

There were still on dock at Lake Erie ports May 1, 1893, 2,095,797 gross tons of ore. Best estimates of the amount shipped and to be shipped from upper lake ports this season make the total 5,000,000 tons. An exceedingly low estimate of the amount that will come to Lake Erie ports would be about 4,000,000 tons. As a matter of fact nearly 3,500,000 tons have already been received. Adding 4,000,000 to what was on dock last spring gives a total of 6,095,797 tons, or within a few tons of the largest year's consumption of ores by the furnaces supplied from the Lake Superior region. Southern pig iron might have a larger sale than usual in the event of the Northern furnaces to which it refers remaining out of blast; but there is no likelihood that they will allow the trade which they have heretofore supplied, to go to the South for its foundry and mill irons when once it is ready to resume melting or puddling. Certain it is that Northern furnaces will not be kept out of blast for lack of ores.—Iron Trade Review.

THE UNDERGROUND WIRE.

The placing of electric wires under the surface of the ground rather than in the air is a matter in which the difference of opinion has been sharply drawn on the cost rather than the advantage, remarks Age of Steel. On the latter there can only be at best but a fractional difference of opinion, while as electrical agencies multiply the pressure of public sentiment will eventually be a compelling factor in its favor. That there are grave risks to life and property in the present method of suspended wires no one doubts, while their steady increase in our city areas is virtually cobwebbing the air with what in case of fire or storm calamity would be obstructive in the one instance and disastrous in the other These hazards are the more apparent as their agencies multiply, and their remedy or removal now that construction is of such enormous magnitude, must necessarily involve a sacrifice of values and a heavy outlay of labor and money. A change of methods, however, is simply inevitable. It may be postponed and disputed, but sooner or later the force fo public sentiment will sweep away our copper cobwebs and place the vital wires where they are neither unsightly nor dangerous.

In the placing of wires for electric lighting and power distribution the subway or underground system has taken two forms; one, the solid or built-in system, and second, the drawing-in or conduit system. Edison has furnished the only important example of the first system, the conduit method being, however, in more general favor, its advantages equalizing the difference in cost of construction. In the two methods, insulating and non-insulating, the difficulties of maintenance in the first have given the other a practical control of the situation. The conduits of the latter are divided between wood tubes, terra cotta pipes, cast or wrought iron and cement lined with sheet iron pipes. Each of these have their special qualities, and are in favor as a matter of judgment or of local condition. In an able and elaborate paper read on this subject before the recent electrical congress at Chicago by Prof. D. C. Jackson, the various typical forms of service are logically defined. He describes the simplest of all conduit construction as that of the common gas or steam pipe, either laid bare on the ground or in a bed of concrete, the great advantage being in its flexibility. Wooden conduits, as used in Philadelphia, Chicago and Brooklyn, have the manifest advantage of accessibility, as the wood can easily be cut away at any point to make a connection; the durability of the treated wood conduit probably lasting for 30 years or more, that of the untreated being about a half of that period.

The cement-lined pipe for smoothness and cheapness makes a satisfactory conduit where the special arguments in favor of iron pipe do not apply. The authority quoted, in summarizing, says: "For use where there is room for a good-sized conduit without many bends or where the amount of tearing up the streets is not excessive, the vitrified clay conduit seems to be the best, as its smooth ducts are easy to draw cables into; where, however, the streets are filled with a mass of pipes of all kinds, and a conduit may be broken into by workmen at any time, the flexibility and strength of the iron pipe are necessary, notwithstanding its greater first cost and probable greater rate of deterioration."

A correct estimate of cost of the conduit systems named is not easily obtainable, as it necessarily varies with local conditions. The cost of excavation, refilling, material and labor are conditional. There are differences in pavement, depth of conduit and other items entering as factors in the work of building or laying conduits. The expense account, however, though of considerable importance, is by no means final as determining the results, it being a foregone conclusion that the underground wire must eventually modify if it does not altogether change the present prevalent system.

The hardware store of D. Cinnamon, Oshawa, was entered by burglars the other night and a number of revolvers and razors was carried off.

BETWEEN PLATE AND PROJECTILE

The splendid results achieved recently at Sandy Hook by 8-inch Holtzer shells of American manufacture, when fired against a heavy steel target, convince ordnance officers that the army has now a second and independent source of supply of the best projectiles, placing it thereby on a par with the navy.

Two projectiles made by the Midvale steel works went through a 9-inch nickel steel plate "like a knife through cheese," as one expert expressed it. The first, after passing also through three feet of oak backing, was lost, somewhere in the sand probably; the second went through the same plate and backing, then through about twenty feet of packed sand, and was found in almost perfect condition. Not a scratch or flaw could be seen upon it. To the eye the sharp point was not blunted in the least. But this excellent result must not lead us to forget the fine performances of two big 12-inch American made Carpenter shells, which, discharged from a navy rifle at Indian Head not long ago, went, one of them, nearly through and the other entirely through a 17-inch Bethlehem nickel steel curved plate, representing the barbette armor of the Indiana, and both were wholly uninjured, the point of the first projectile remaining sharp.

What used to be called the battle of gun and plate of late years has become largely one of plate and projectile. There is no limit, of course, at least in firing from land batteries, to the size of ordnance that may be employed,and hence to the charge of powder; and, since, on the other hand, there are practical limitations to the thickness of steel armor that can be carried on a ship, the gun seems tolerably sure to get the best of the rivalry. But when the triumph of the gun appeared assured, the plate made a great gain by certain new processes of manufacture. The best known of these are, in the first place, the introduction of alloys into the steel used for gun material, the most famous of these being nickel; and, secondly and chiefly, the hardening of the surfaces by special processes, the most successful of which is the Harvey carbonizing process, while in England an analogous invention is that of Capt. Tresidder.

The effect of such improvements in plates is to break up the projectiles. The question, therefore, no longer becomes that of securing a gun powerful enough to attack the plate, but of getting a shot or shell for the gun which will not be broken to pieces by the tremendous impact before it can get through. Years ago it became necessary, with the increased heaviness of the charges and hardness of the plates, to augment the toughness of the projectiles. The Whitworth steel shells soon became famous, and also the chilled iron of Tregarini. Then the Palliser armor piercing projectiles achieved celebrity, and now the foremost place may doubtless be said to be occupied by the Holtzer and Firminy shells, the St. Chamond also being well known.—Journal of Commerce.

PERHAPS THEY WON'T TINKER.

One of the brightest of the weekly newspapers on our exchange list is the Hill City Tin Miner, from which the following clipping is taken: Years ago the condition of the iron and steel market was looked upon as a good barometer, indicating the tendency of the times. If the price of manufactured iron was high, then every other branch of the market felt an upward tendency. It is believed by many business men yet that iron is thee best indicator of the market. If this be a fact, then the indications are much more favorable than they have been during the past month. There has been a stronger movement in iron during the past two weeks than in anything else. The northern ranges have been shipping ores and several of the largest mills have been making preparations to resume operations. This is somewhat curious. The manufacture of iron is affected in more ways by tariff tinkering than any other business, and when the mills and mines shut down a short time ago it was announced that the fear of tariff tinkering was the prime cause. Now since Congress assembled there has been an ominous silence not only in Congress but also in the press in regard to tariff matters. The phrases "robber tariff" and "robber barons" have entirely disappeared from their columns and now the mills are beginning to work. There is something suspicious about all this.

A NEW INDUSTRY.

The Gazette is informed that there is a probability that a new and strong company of United States capitalists are considering the erection of cordage works in at least two places in Canada. Within the past few days a representative of an extensive cordage and binder twine company has been in this city making enquiries as to the cost of a site and other details of the business. It is understood that he is very favorably impressed with St. John as a manufacturing center and also with its advantages as a distributing port for the Maritime Provinces. The idea would be to equip the factory at St. John with machinery to manufacture cordage for the use of vessels and for fishermen's supplies, lath yarn and the like. For the manufacture of binder twine the company will likely establish a second factory at Hamilton or London as either of these localities would be an economical distributing center for binder twine, which is altogether consumed in the West. It is the same reason that St. John has been selected as the point of manufacture for the heavier goods. The excellent railway facilities possessed by St. John, to which are added the lower cost of coal and other economies, would enable the St. John factory to place its product in Montreal or Quebec at prices as low, if not lower, than the article could be manufactured at either point. In conection with the report it was also stated the American company have been endeavoring to interest gentlemen in this city who are already identified with the cordage interest in the new enterprise. When Mr. John Connor was seen he admitted that a gentleman had waited on him and talked of establishing a cordage works but he declined to state whether he or his brothers had been approached with a view of sharing in the enterprise. Should the works be established it would mean an entirely new industry and would have no connection with the industries now established.—Gazette, St. John, N.B.

OIL GAS FOR MELTING STEEL.

Mr. T. V. Lloyd, furnace builder and retort setter, of Cardiff, South Wales, now in this country,has invented a producer for manufacturing gas from crude oil for heating open-hearth steel furnaces. The apparatus consists of four square retorts, 2x2 feet inside by 6 feet long, set vertically between the regenerators and the chimney, so that the waste heat, after passing through the checker work, heats the retorts. Dampers are arranged to allow the air, which is reversed every half hour, to pass through the checkers, instead of being transmitted from the flues of the retorts, thus avoiding destruction and cooling of the apparatus.

The retorts are filled in with checker work, 1 1-2 splits, set on edge, and are fitted with top and bottom mouthpieces. The oil is admitted through the top cover into a brick tube, 3 inches in diameter, formed in the centre of the retort. A small jet of steam is admitted in the same chamber, to force the oil to the bottom of the producer. The bottom mouthpiece is fitted with a perforated lid, placed inside the cover,for distributing superheated steam. The oil is then decomposed as it passes through the checker work. The hydrocarbons are then drawn off by an exhauster, which is passed to a governor, and then to the furnace, and is admitted in the same manner as natural gas at the neck of the furnace. The apparatus is so arranged that the retorts can be heated by oil to generate gas for the starting up of a new furnace. The producer is entirely in charge of the lever man, and all dampers and valves of furnace and producer are worked from an elevated platform.—American Manufacturer.

SCARCITY OF COAL IN ENGLAND.

The scarcity of coal in England, due to the miners' strike, has led to a further rise of one shilling per ton on the London Coal Exchange. The demand is strong, but business is trifling, inasmuch as virtually no stocks are offering. Holders of inland coal refuse to sell, preferring to wait a further advance, which many believe is certain to come by Friday next. Merchants today readily bought the poorest quality of Scotch coal at one guinea per ton, and doubtless they will retail it at 30 shillings per ton. Only sea-borne coal is available. An abundance of coal is being raised daily in Wales, Scotland, Durham and Northumberland, but transportation is difficult, and the prices asked are enormous. Little Welsh coal is not expected to reach London for many days to come, largely on account of the demarcage of vessels. A block of empty trucks on the North-eastern railway temporarily seals up the Durham supply. The trade in Scotland coal has lately received a great impetus. Much of the coal brought from Scotland to the Thames is being sent by rail to the Midlands, where a coal famine prevails.

The decline in the traffic receipts of the various railways owing to the strike is very suggestive. The Midland Railway's receipts for the last week show a decrease of £64,789 as compared with the receipts for the corresponding week in 1892 Other declines last week were: London and Northwestern Railway, £29,844; Great Northern Railway, £18,797; Manchester Railway, £18,231. The total decrease in the Midland Railway's receipts for the last twelve weeks, as compared with the receipts for the corresponding period last year, is £422,994.

Meanwhile the sufferings of the colliers and factory workers are becoming intense. It is computed that there are twenty thousand women and children on the verge of starvation. Many of these subsist on raw vegetables, having no coal with which to cook their food. Several pawnbrokers in the strike district have given up business because they have not enough capital to enable them to advance money to sufferers on chattels.

In the Castleford district a relief committee is vainly trying to feed two thousand families rendered destitute by the stopping of the strike pay.

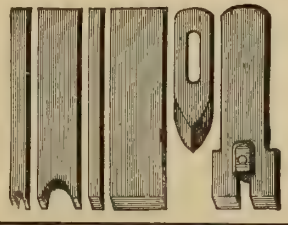
Meetings of Federation miners were held last week in a number of the strike districts to appoint and instruct delegates to the strikers conference to be held in Derby on Friday. At all of these meetings resolutions were adopted in favor of resuming work in all collieries whose owners will allow the old rate of wages, provided the owners promise not to interfere with the levy for funds to be made by the Federation officials on all members. These resolutions were not, however, supported unanimously. Moreover, it is not likely that the mine owners will accede to the Federation's conditions.

CHEMICAL-COATED WIRE-NAILS.

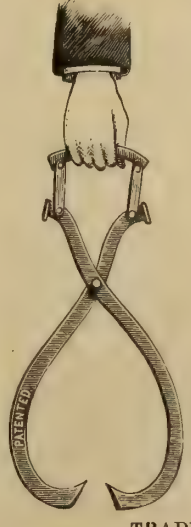
Manufacturers and users of wire nails are interested in an improvement which consists in coating such nails with a chemical. The nail is made of somewhat lighter gauge than the average standard wire nail, but has the same number of nails to the pound and is sold by the count, instead of by the weight. Thus, a certain number of nails is guaranteed to the keg, and this number is branded on the keg, so that the user gets just as many nails as of the regular standard nails. The nail itself is coated with a preparation which gives it extraordinary holding powers. It is said that, when the nail is once driven in, it is almost impossible to pull it out again. For box-makers' use and other purposes it would seem to be a most excellent article.—Iron Industries Gazette.

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IMPROVED METHODS OF MOLDING.

Up to thirty years ago very few of the improved methods of molding now practised had been introduced in the foundries, nor had any one competent foundryman or engineer attempted to supplant the cumbrous and ungainly equipments of the past by the very elegant and efficacious appliances now found in mammoth model foundries. The ponderous and slow wooden cranes have, by a gradual process of evolution merged into machines of wonderful efficacy, and are now almost automatically controlled. The overhead trolley for conveying molten iron direct from the cupola to every part of the foundry is an improvement on the old system of hand carrying necessitated by the magnitude of some foundries in which the distance from the cupola to the furthermost parts of the shop is great; and, where such appliances cannot be applied conveniently, we see well-kept tracks with switches in every available direction, on which handy trucks, specially constructed for this purpose, are used for conveying, with ease and dispatch, every material used in foundry operations. For the time-honored wheelbarrows has been substituted the conveyor, which hauls everything to its destination entirely clear of the foundry floor. Where once all the iron and fuel were carried by hand to the cupola scaffold, we have now, in some places at least, elegant provision of either electric, steam or hydraulic appliances for performing this work. The old rule-of-thumb methods of charging the cupola have at last given place to the more sensible and economical system of weighing all material in correct proportion. Attention has been given to many minor things also. We have seen even the riddle superseded first by the common upright screen and then by the swinging and sliding machine riddles, and now the revolving screen is to be seen in many foundries. Cleansing mills, provided with an exhauster to carry off the dust, have superseded the primitive method of scrubbing sand off the castings with stone and wire brush. Loam mills of infinite variety and degrees of effectiveness are to be seen, where once the click of the chopper was to be heard. Some of the modes devised for clamping together the flasks, seen now almost everywhere, are ingenious in the extreme, and it is pleasing to observe how common at this time is Nasmyth's great invention, the geared ladle. Once it was thought that hay and straw rope must always be twisted in the primitive fashion; but this also has yielded to the spirit of invention, and the rope spinning machine is throwing off bands, well spun and true. Machines too numerous to mention have been invented during the past thirty years, which, without the aid of a costly pattern, will make either spur, bevel, miter, mortise or worm wheels. The extraordinary progress of the cast iron pipe industry, with reference to equipment, has been such as to make that branch of molding almost independent of skilled labor. The same may be said of many other classes of work where large quantities of duplicate castings are in demand, such work being now produced in the several molding machines with a facility and despatch impossible by the old methods of ramming by hand.

The invention of plaster blocks paved the way for the improved systems of plate molding which immediately succeeded them, introducing the interchangeable modes of flash pairing and the earlier kinds of stripping plates, the latter principle constituting the chief element of success in the modern molding machine.

One of the greatest aids to modern founding is the system of tests, chemical and physical, to which, in some firms, the pig iron is subjected before it is charged into the cupola. When eminent chemists inform us that whatever quality of iron the iron founder demands can be furnished by the furnace manager, it would seem that it only remains for the foundryman to acquire such chemical knowledge as will enable him to know the exact measure of every element needed to produce the desired quality of iron, and thus, by chemical analysis, determine all his mixtures. Keep's tests are no doubt the most comprehensive of any of the physical tests for this purpose which have yet appeared, as they embrace every element necessary for discovering the nature and quality of cast iron.

At present we seem to be on the eve of great changes; and it is somewhat difficult and hazardous to predict the channels which future progress in iron founding will take. Owing to the system of dividing labor, now becoming so prevalent, it is simply impossible for the ordinary workman to master the details of founding; this, coupled with general lack of education, leaves him, in a measure, incompetent to manage even ordinary establishments intelligently; but how utterly incompetent are such men for becoming heads of the magnificently equipped foundries now being constructed. To operate such establishments it has been thought advisable, by some, to change the order somewhat, and engage the services of an educated engineer, so that the efforts of the foreman molder shall be directed in paths which run in harmony with known physical laws.

When so much has been accomplished by the uneducated founder in the past, what are we entitled to expect in the future from this added intelligence? Time will show. The age is pregnant with ideas. The full blaze of scientific knowledge is lighting up dark and hitherto mysterious nooks in which nature has hidden many precious secrets. To suppose that the useful and noble art of iron founding will not share in the riches thus lavishly obtained would be to rank it as among the least progressive of the mechanic arts; whereas recent advances show that it is no longer wedded to ancient ideas and methods, but is eager to embrace any and all sound improvement.

The consideration of the possibilities in foundry practice forces itself upon the attention of practical men who now thoroughly understand these possibilities. Indifference is giving way to active research and investigation, with reference to the supply of suitable material and equipment. Schools of technology will yet be brought to see the importance of giving the foundry more substantial recognition. One of the best modern molding machines owes its existence to experiment, conducted by its inventor, in the foundry of the Stevens' Institute—a fact which might be profitably borne in mind by the faculties of other technical schools, which, as a rule, are woefully deficient in means for teaching the art of founding.

The introduction of some late inventions for melting iron indicates the march of progress in this particular very forcibly. Every effort is now put forth to prevent the immense waste of heat which occurs in ordinary cupola melting, by a disposition of the tuyeres such as will burn the ascending combustible gases without heating the fuel to incandescence, in which instance the developed heat pre-heats the iron and fuel before it reaches the melting zone. What may we not expect in the prevention of heat waste, when we find that electricity has at last been successfully applied for melting cast iron? It is claimed for the "Taussig" electric system of melting cast iron in exhausted chambers that oxidation and creation of air bubbles are avoided, and that the cost for driving the dynamos is 50 per cent. less than would ordinarily be required for melting by the best practice.

The advent of the chemist in the foundry marks a new era in iron founding, and is perhaps the surest indication of a desire for thorough advancement, as, by his aid, the indecision and doubt hitherto existing must ultimately cease. Mixing of the different brands of cast iron, as well as the alloying of cast iron with other metals, to obtain a higher degree of homogeneity, or any other special quality in the resultant casting, will, under such qualified direction, be more easy of accomplishment.

Given superior direction, we may confidently anticipate the time when, by the united efforts of the scholar and the trained artizan, the art of iron founding, in neither equipment nor skill, shall be second to any of the iron industries.—S. Bolland, in Engineering Magazine.

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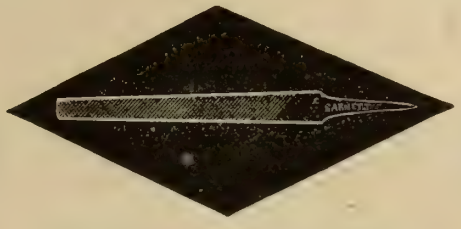
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THE PRICE OF ZINC.

In plotting the curves of the prices for the principal metals in the United States during 1893, there will be some very extraordinary lines, certain of them having fallen to a lower point than ever before recorded. Thus copper has fallen below the level to which it sank after the collapse of the French syndicate; lead has been lower than it fell after the Corwith failure in 1888, and almost to the panic price of 3c. in May, 1879; pig iron is about down to bed rock at $14.50 for 1X Foundry here; while tin and quicksilver are both very low, though these metals have not declined so much proportionately as some of the other metals. We have already commented upon this side of the financial crisis of the summer of 1893 in previous issues, but a fortnight ago there was an event in the metal market of such unusual character that it deserves further mention. We refer to the continued decline in the value of zinc, which carried the price for that metal below that for lead.

It is not extraordinary that zinc should be quoted lower than lead, but it is uncommon. In looking over the statistics of the average monthly prices of the two metals in "The Mineral Industry" for 1892, we find that since 1874 the value of zinc first declined below that of lead in September, 1881, in which month the former averaged 5.125 cents per pound, and the latter 5.16. This happened again in September, 1885, and several times during 1886, which year was remarkable, the average for lead for the whole twelve months (4.63 cents) exceeding that of zinc by 0.23 of a cent. In August, 1887, and September, 1888, lead was again sold higher than zinc,and in September, 1887,the average for the 2 months was the same. August, 1893, was extraordinary, however, in having zinc quoted for less than lead, when both were below 4 cents!

Two weeks ago the price of lead in New York was 3.675 to 3.75c., having risen in a fortnight from 3.30c., on account of restriction in production, as we foretold in our issue of August 19, The condition in the zinc market has become about as bad as it could be, however, and the price continued to fall, until finally, at the end of the month, 3.275 to 3.30c. (East St. Louis) was reached, this being equivalent to 3.525 to 3.55 in New York, and lower than the price in London. Ordinary brands of spelter were quoted in London on August 17th at £17 5s. per gross ton (3.74c. per pound); the next week there was a drop to £16 15s. (3.63c.), through fear of importations from America, but during the week following the price recovered to £17 2s. 6d. (3.71c.). When spelter, which it cost more to produce in the United States than in Europe, actually sells at a lower rate here than abroad, the weakness in our market is forcibly shown.

As to the chances for improvement we hesitate about expressing our opinion. Things are bad among the brass-workers, and among the galvanizers, from whom came the great increase in the demand for spelter last year, business seems to have had a very serious setback. At the same time production has been large. According to a statement published in our market report August 19th, the output in the first six months of 1893 was stated to be 45,794 short tons, against about the same amount in the corresponding period of 1892. If these figures be correct the output of spelter during the first half of the present year was much greater than during the last half of 1892, and this notwithstanding the strike commencing June 1st among the coal miners of Kansas, cutting off the fuel supply of the Kansas-Missouri works.

Since the middle of June the production of spelter has been restricted sharply, but the stocks have been large and pressing for sale. The productive capacity of the Mississippi Valley States has been increased so largely during the past two or three years that, without doubt, the demand can be met easily as soon as it springs up again. We do not look for so great a rise proportionately in the price of spelter, therefore, as in that of lead—when the country begins to recover from the recent panic—and we fear that the zinc smelters will have hard times for many months, during which only the best designed works will yield much profit.—Engineering and Mining Journal.

HEATING WITH HOT AIR.

It is advisable and always economical to use a larger furnace than will just do the work, says an American stove firm, as the saving in fuel and increased durability will show; it is also decidedly advantageous to use two smaller furnaces where the flues are irregularly located and considerably distant.

Houses are frequently built with a narrow front to economize space, but run back very deep, and when built in rows, as in cities, the rear portion is yet narrower, to get air and light, and still deeper, making the use of one furnace inadvisable. This is also applicable to country houses with a very broad front, with rooms each side of a hall, and the flues in the outer walls, where two furnaces will give much better satisfaction and results.

A furnace should be so located that the hot air pipes will be of as nearly equal lengths as possible, shortening, if any, those running toward the northwest, or colder side of the house, making their pitch or ascent as great as possible. Never allow them to run on a level, but dig down and lower the furnace, so as to secure a decided elevation for the pipes, which ensures a more rapid flow of hot air, heating the building more easily and with less fuel. All bends in hot air pipes should be made with round elbows and curves, as air follows a curved line infinitely more freely than an angular line, however easy; they also should invariably be round in shape, and those intended for heating downstairs slightly greater in diameter than those for upstairs, a 12-inch pipe being required for downstairs, where a 10-inch pipe would be ample for the same size room above. The upright flues should be round, or square if possible. A flue eight inches in diameter, or 7x7, is of immensely greater power, and has decided advantage over one 4x12. Hot air pipes are usually run directly into the upright flue, making a sharp, abrupt turn for the air. This should not be. Small or long narrow flues should be made larger at the bottom, with a round opening, so that connection can be made by running a round elbow into the bottom, securing a free, easy passage for the air, securing its best effect, and avoiding a loss of heat from slow passage to the register. No furnace will work satisfactorily without a liberal supply of pure cold air. When this air is taken from the cellar, see that the cellar is not hermetically sealed during the winter season. If the floor above is made cold by having a window open, take out one pane of glass and connect a pipe or tube with the opening, and run down to within six or ten inches of the floor. This will enable the furnace to be supplied without discomfort above. When a cold air box or tube is used it should be provided with a damper (but this damper should be made that when shut one-third of the box will be open) so that it can be partly closed when the wind is blowing directly into it, and in size it should be equal to at least two-thirds of the combined area of the hot air outlets.

THE ELECTRICAL HORSEWHIP.

It seems doubtful, says an exchange, whether objection can be brought against the latest form of horsewhip, which is constructed so as to give a slight electric shock to the animal. The handle, which is made of celluloid, contains a small induction coil and battery, the circuit being closed by mean of a spring push. The extremity of the whip consists of two small copper plates insulated from each other, each of which is provided with a tiny point. The plates are connected with the induction coil by means of a couple of fine insulated wires. As a means of surprising a sluggish animal into doing his best work without the infliction of physical pain, the electrical horsewhip will by many be hailed with gladness.

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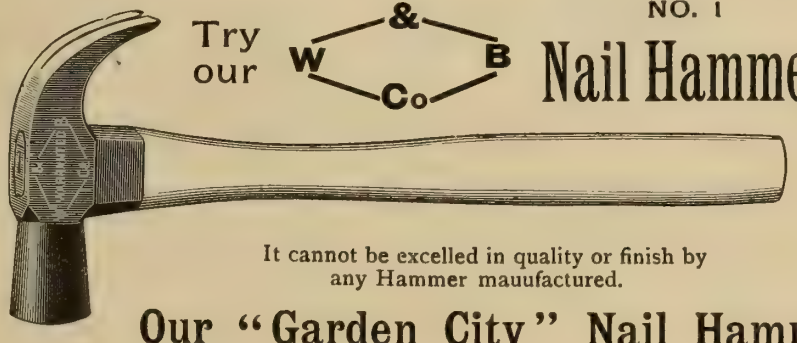
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BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

Placide Raby, plumber, Montreal, has assigned.

Maise Girard, general merchant, St. Celestin, has assigned.

The Auer Incandescent Light Mfg. Co., Montreal, is liquidating.

Enos L. Munro, general merchant, Whitehead, N.S., has assigned.

Hull & Ferguson, general merchants, Fort Erie, have assigned to Alex. Munro.

E. Benoit & Co., contractors, (etc., Montreal, have compromised at 15c. on the dollar, cash.

M. St. Amour, tinsmith, St. Scholastique, Que., is offering to compromise at 30c. on the dollar.

The creditors of A. McDonald, furniture dealer, Cornwall, have decided to wind up the estate.

A demand of assignment has been made upon Napoleon Herbert, general merchant, Standon, Que.

The estate of John W. Clarke, the insolvent Norwood general storekeeper, will probably be would up.

Chas. S. Gagnier, painter, Montreal, has assigned, with liabilities of $3,800, at the demand of J. C. Lascotte.

F. E. Delabissioniere & Co., general merchants, Batiscan, Que., are offering to compromise at 30c. on the dollar.

J. A. Meagher & Co., general merchants, Aston Station, Que., are offering to compromise at 50c. on the dollar.

W. J. Taylor, painter, Toronto, has assigned. He owes about $1,000, and his assets are nominally in excess of that sum.

A demand of assignment has been made upon E. Blanchard & Co., hardware, etc., Montreal, and consent of abandonment has been fyled.

These general merchants of Nova Scotia have all assigned: John P. Rooney, Clarence; D. C. Chisholm, Kentville; T. B. Messinger, Torbrook; John Miller, Yarmouth.

The Merchants' Bank is a creditor of the firm of A. R. McKinley & Co., window shade manufacturers, Toronto, who recently assigned, and has instituted a suit to test the validity of he assignment on the ground that the claim they hold precluded any such proceeding.

The stock and machinery of the boot and shoe manufactory of Cooper & Smith, of Toronto, will be sold at Suckling's auction rooms on Friday, Oct. 13. The sale is ordered by the sheriff. The statement, which has been prepared by Mr. Cross, shows the liabilities as follows: Molsons Bank, $147,823; Ontario Bank, $18,683; estate of John Smith, $122,154; sundries, $55,415; taxes and rent, $3,000. The assets consist of stock amounting to $77,247; machinery, $33,507; real estate, Sherbourne street residence and 850 acres Manitoba land, $51,700; bills receivable which the banks hold as collateral, $98,000; accounts received, etc., $94,431; non-trading debts, $16,652; total assets, $370,548; total liabilities, $347,075. This leaves a surplus of over $23,000.

SALES MADE OR PENDING.

The general stock of Robert Douglas, Maitland, N.S., has been sold.

The stock of Beland & Morrier, general merchants, Capelton, Que., has been sold.

The stock of D. McCallum, general merchant Canaan, is advertised for sale by tender.

The general stock of F. H. Francis, Headingly, Man., has been sold at 53c. on the dollar.

The stock of James McArthur, furniture dealer, Yonge street, has been sold by the bailiff.

The stock of Dennis Daniels, coal and wood, Toronto, is advertised for sale by the bailiff.

The general stock of S. Cartier, St. Francois du Lac, Que., has been sold at 80c. on the dollar.

The stock of boots and shoes of Mr. McNichol, Brandon, Man., has been sold at 47 1-2c. on the dollar.

The stock and book debts of McBean & McGregor, Napinka, have been sold, the former at 58c. and the latter at 33c. on the dollar.

The bankrupt stock of seeds, etc., of George Griffin, valued at $1,905.36, was sold in London last week by Auctioneer Jones, at 40 cents on the dollar. F. J. Darch was the purchaser.

CHANGES.

J. D. Cochrane, general merchant, Petitcodiac, N.B., has sold out.

A. J. Crosby, general merchant, Waverly, N.S., has removed to Halifax.

J. R. Varcoe, general merchant, Sonya, has been succeeded by C. W. Varcoe.

William Roseburgh & Sons, hardware and house furnishings, are selling out.

Wm. Cairns, general merchant, Bagot, Man., has been succeeded by J. C. Lawrie.

J. Whyte & Son, foundry, Peterboro', have been succeeded by John King & Co.

G. W. Ormerod, coal and wood, York, is giving up business and going to Michigan.

The Keith & Fitzsimmons Co., Ltd., is applying for a charter of incorporation.

James R. Welch, general merchant, Wentworth, N.S., has been succeeded by W. C. Brown.

John Ivarsen, blacksmith, etc., has opened at Selkirk, Man. So has R. C. Kemp, tinsmith.

PARTNERSHIPS FORMED AND DISSOLVED.

Papineau & Archambault, plumbers, Montreal, have dissolved.

Adam C. Gray and Wm. C. Gray have registered a partnership in Montreal to carry on business under the style of the Windsor Shade Mfg. Co.

FIRES.

N. J. Parker & Co., general store, Waverly, have been burned out.

The saw mill of John McConachie, saw mill and grocer, Huntsville, has been burned.

The large glue factory of J. T. Huber & Co., Berlin, Ont., was burned Monday. Loss $20,000; insurance, $3,000.

The axe factory at Canning, N.S., owned by Blinkhorn & Sons, was burned last week. The loss is $7,000; insured for $1,000.

DEATHS.

William Irwin, of the asbestos firm of Irwin, Hopper & Co., who was well known in mining circles throughout the Dominion, is dead, at the age of 38. Pleurisy was the cause of death. He was a son of James Irwin, founder, formerly a well-known Montreal citizen.

A FRENCH METHOD OF HEATING.

To sum up these new methods, the teachings of M. Somesco, suggest that the natural porosity of the walls, especially the outer walls, should not be destroyed. These walls should be decorated, not with paper and paint, but with porous non-conducting substances, such as wooden drapery. The outer walls on the side nearest to the inner surface should be hollowed throughout, thus constituting a double wall, with a space of about four inches between the two walls. A heating contrivance, of the description found most expedient or economical, should be placed in the basement of the house. A warm air chamber or shaft traveling round the base of the outer walls should supply to the hollow in the walls air taken from the outside and warmed at the point of admission in the wall to a temperature of from 100 to 120 degrees Fahr. This should maintain the temperature of the inner wall at from 80 to 90 degrees Fahr. Then he considers, the walls will radiate sufficient heat through the rooms to enable the inhabitants to constantly open the doors and windows, and to breathe cold, fresh outer air without inconvenience. As a rule fires will be unnecessary, dampness will be completely banished from the house, and to maintain some moisture in the air it would, he thinks, be expedient to decorate the house with numerous evergreen plants. The inhabitants should then be able to benefit by unlimited ventilation, and could breathe pure, cold, and fresh air, coming upon them directly from the outside.—Popular Science Monthly.

TRADE SALES.

Several bankrupt stocks were sold at Suckling's Tuesday. The dry goods stock of James M. Gordon, of Beaverton, was knocked down to John J. Holmes, of Creemore, for 65 cents on the dollar, and A. Gordon bought the boot and shoe stock of the same firm for 60 cents on the dollar. The fancy goods and glassware stock of I. Benjamin, 228 Queen street west, was bought by M. Bachrack for 33 1-2c. on the dollar. G. Weese secured the stock of Mr. Hazza, tailor, 307 Yonge street, at 38c. on the dollar.

SHEPARD'S PATENT EXCELSIOR STOVE PIPE DAMPERS.



FOR STYLE, FINISH, DURABILITY and CONVENIENCE, Positively Unequalled. Will always Maintain its Tension on Pipe.

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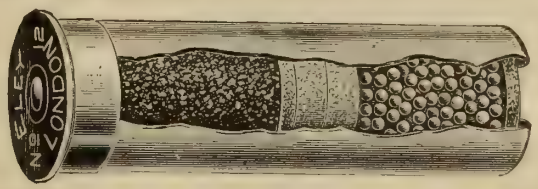
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Spindles held in by new method and do not get loose by warping of damper plate.
Friction on outside of pipe, at both ends of spindle.
Acorn tip at end of spindle not only ornamental, but covers hole in pipe that is punched for spindle.
Spindles flat and do not turn in plate.
The shoulders or damper plate are made more flaring than usual, so as not to rub against the fin or rough edge around the hole made in pipe for spindle.
Nickel Plated or Japanned, "Always Cool" Ventilated Handles, substantial and ornamental, and unlike wood handles do not drop out.
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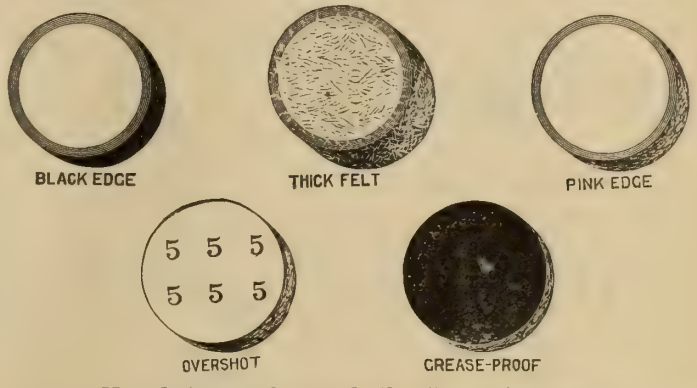
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. . ELEY'S . .
CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. Wholesale Only

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

To the Stove Trade

We carry stock and can . . . . . ship promptly.

We have the following patterns for Repairs, PLATES. UNIVERSAL STOVES AND RANGES, lately made by J. M. Williams & Co., Hamilton; SPLENDID BASE BURNER, lately made by the Toronto Stove Co., Toronto; BRILLIANT RANGE and COOK, FORRESTER, CANDY FURNACE, QUEEN RANGE, lately made by Harte & McKillop, Belleville. . . . . .

The Wm. Clendinneng Son Co., Limited,

145 to 171 William Street, MONTREAL, QUE.

RAZORS, SCISSORS

POCKET KNIVES

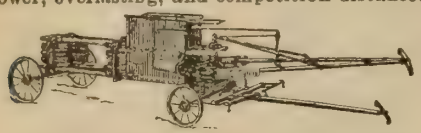


TABLE KNIVES

BUTCHER'S KNIVES

DEDERICK'S PATENT STEEL SHELL HAY PRESSES.

Made of Steel—lighter, stronger, cheaper, more power, everlasting, and competition distanced.



Also all styles of Bale Ties made from the Best Steel Wire.

Manufactured by BOYD & CO., Huntingdon, Q.

MUNN'S LIQUID GLUE

IS THE BEST.

THE ART METROPOLE, Agents,

131 Yonge Street, TORONTO.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	23½ 24
trip "	25, 25½

Tin Plates—*Charcoal Plates, Bright.*

	Per box
M.L.S. equal to Bradley	
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 00 4 25
I.X., "	5 00 5 25
I.X.X., "	6 00 6 25
I.XXX., "	7 00 7 25
D.C., 12½ x 17	3 75 4 00
D.X.,	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

C okley Grade—	Per lb.
.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6½ 6¾
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¾ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2¼, 2½
26 "	2¾, 2¼
28 "	2½, 3

Canada Plates.

Blaina	½ bright 2 75
Abercarne	2 75
Lion	

Iron Pipe.

Wrought 62½ and 5 p.

Galvanized, 40 to 40 and 5 per cent.

Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head

16 to 24 gauge, per lb	5, 5½
26 gauge, "	5¼, 5½
28 " "	5½, 5¾

Gordon Crown—

16 to 24 gauge, per lb	5, 5½
26 gauge, "	5¼, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4½ 5
" 5-16 " "	4¼ 4¾
" ⅜ " "	4¼ 4½
" 7-16 " "	4 4½
" ½ " "	3¾ 4
" ⅝ " "	3½ 3¾
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 12½ 0 13
Lake Superior	0 13 0 13½

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 19½ 0 21
" 35 to 45 " "	0 17½ 0 18
" 50 lb and above per lb	0 16½ 0 17

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelte .

Foreign, per lb	0 04½ 0 05
Domestic "	0 04⅝ 0 04¾

Zinc Sheet.

5 cwt casks	0 05¼ 0 05¾
Part casks	0 05¾ 0 06

Lead.

Imported Pig, per lb	0 03½ 0 03¾
Domestic "	0 03¼
Bar, 1 pound	0 04¼
Sheets, 2½ lbs, sq. ft, by roll	0 04¼ 0 04¾
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04¼ 0 04½

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 15½ 0 16½
Standard	0 14½ 0 15½
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 13
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do. "	4 75
No. 2 Do. "	4 50
No. 3 Do. "	4 25

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 20
2nd qualities "	1 00
Barn (in bbls)	0 65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.cwt	1 35 1 40
" " (J.F.L.S.) "	2 75
" " Royal "	1 10 1 15
Venetian Red, (best) "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " } " "	1 25 1 90
Canadian " }	
Paris Green, per lb	0 13½ 0 15
Burnt Sienna, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure,	
8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra " "	0 90
Brown Japan "	0 55
Brown Japan, Turpentine p. gal.	0 71
No. 1 Carriage "	1 30
Gold Size Japan "	1 00
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40
White Shellac	2 25

Linseed Oil (in bbls)

Raw, per gal	0 59 0 61
Boiled "	0 62 0 64

Turpentine (in bbls)

Selected Packages, per gal	0 44 0 46

Castor Oil.

Best, per lb	0 07⅞ 0 08

Cod Oil.

Cod Oil, per gal	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list

Munn's, dis. 25 to 30 per cent. off list

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer-

Rim Fire Cartridges, Dom. 50 and 5.

Rim Fire, Military, net list, Amer.

Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.

Central Fire Cartridges, Dom. 30 p.c.

Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.

Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per 1 lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 0 01½ 0 01½
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.25	.....	1.85	
26 to 40	1.40	2.70	2.10	
41 to 50		3.10		4 70
57 to 60		3.40		5.20
61 to 70		3.70		5.70
71 to 80		4.10		6.30
81 to 85		4.50		6.90
86 to 90		4.90		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb . 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

NEW ARRIVALS

30 Cases CUTLERY AND GUNS

ALL NEW GOODS.

Finest Finish. Best Value.



NEW ARRIVALS

20 Casks Cattle and Trace CHAINS

10 Tons Coil Chain.

Five Cars Window Glass.

Bowman, Kennedy & Co., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

Per keg 3 65

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   Basis—50 to 60 dy..... 2 30
   40dy..... 2 35
   30 dy..... 2 40
   20, 16 & 12 dy..... 2 45
   10 dy..... 2 50
   8 & 9 dy..... 2 55
   6 & 7 dy..... 2 70
2. American Pattern Only
   from 4 to 5 dy 2 90
   3 dy. (lath)..... 3 30
3. Canada Pattern Only
   from 4 to 5 dy 2 80
   3 dy. (lath)..... 3 20
   3 dy. A.P. Fine 3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

	per gross	
Square, round and octagon	3 38	4 00
Diamond	12 00	15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 60 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 35 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Star R & L Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz.....	55	1 00
Axle.	22	33
Screw	27	1 00
Awning.....	35	2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz.....	1 00	1 85
Conductors' "	9 00	15 00
Tinner's solid, per set....	....	72
" hollow, per inch	....	1 00

Putty

Bladder, per 100 lbs	2 00	2 25
Tins, lbs	2 50	2 75

Rail.

Barn Door, per foot....	3	3½
Sliding Door, "	3½	3¾

Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz	7 50	11 00
Wade & Butcher's "	3 60	10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9½ 9¾	10¾ 11
¼, 5-16, ⅜ in.....	10 10½	11½ 11½
Cotton, per lb.....	18	20
New Zealand.....	9	9½
Russia Deep Sea, per lb..	12½	13
Jute ..... " ...	08	08½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set	75	80
" N P. "	1 00	1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 60

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 to 40 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz	2 10	4 50
Foot, "	40	3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 to 50 p.c

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz	1 15	1 35
" tinned,	1 35	1 60
Tin Rim, " "	2 30	2 45
" black, "	1 80	2 25

Snaps

Harness, German, dis 35 per cent		
Acme, "	3 00	5 00
Lock, Andrew's "	4 50	11 50

Sapolio

In ¼ or ½ gross boxes, per grs. 11 30

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English	1 80	5 00
Iron, American	1 35	2 35

Spoons and Forks.

Tea Spoons.....per gross	7 50	12 00
Dessert " ..... "	21 00	.....
Table " ..... "	30 00	30 00
Dessert Forks.... "	24 00	.....
Medium " .... "	27 00	.....
Table " ... "	36 00	.....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4½ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz		1 75
No 1, Stove Paste, per gross		9 00
" 2 " " "		4 80

Stone.

Washita, per lb	0 25	50
Hindostan, per lb.....	0 06	07
" Slips, per lb		9
Labrador, per lb	....	0 13
" Axe, "	....	0 15
Turkey "	....	0 50
Arkansas "	....	1 50
Water-of-Ayr "	....	0 10
Scythe, per gross.....	3 50	5 00
Grind, per ton	15 00	18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz.	$2 75	$5 50
English Pat. Leather	5 50	9 75
Chesterman's, each	0 90	2 85
" steel, each .	0 80	8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ per cent
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.

Mouse, per doz.....	0 35	1 50
Rat "	2 00	4 50

Trowels.

Disston's, discount 10 p.c.

German, per doz	4 75	9 00
Brade's "	00	10 50

S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9 00

Twines.

Bag, per lb	0 12½	0 20
Wrapp'g, mottl'd, pr. pack.	0 50	0 60
" cotton, per lb ..	0 18	0 20
Mattress, per lb	0 33	0 45
Staging "	0 27	0 35
Broom "	0 30	0 55
Binding, flax, per lb	....	.....
" jute "	....	.....
" Blue ribbon	.....	0 12½
" Red cap.....	.....	0 11½
" Crown.....	.....	0 10½
" Silver Composite	0 09	

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz.....	4 00	6 00
Bench, parallel, each	2 00	4 50½
Coach, each.....	6 00	7 00
Peter Wright's, per lb	0 12	0 13
Pipe, each	5 50	9 00
Saw, per doz.....	6 50	13 00

Washer Cutters.

Per doz..... 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart	4½ 4¾
" 4 " 4 & 6 " "	
" Plain twist, 2&3 wires	
" Steel thorn and ribbon.....	4¾ 5
"Lock Barb," 4 point	.... 0 04½
Ditto Glidden 2 point	.... 0 04½
Galvanized Barb, "Lyman," 2 to 4 points.....	..... 0 04½
Steel staples	0 04½ 0 04½

Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Genuine, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.

Tower's Engineer, each ..	2 00	3 00
" S., per doz.....	5 80	7 0
G. & K.'s Pipe "	....	6 00
Burrell's " each	....	3 40
Pocket, per doz.....	1 25	2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

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SEWER PIPE
WATER PIPE
INVERT BLOCKS

Canadian, Scotch or American

Write for Prices to

THE COLMAN-HAMILTON CO., LTD.

44 Price Street, TORONTO

Also for Fire Brick, Fire Clay, Gas Retorts, Gas Works Supplies, Portland Cement, Keen's Cement, Roman Cement, Mortar Colors.

Phone. 3763 Mention this Advt



PAINTERS

Will find the cheapest Paint Brushes are those having our . . .

Flexible Bridles—

Why? Because the bridle can be taken off and replaced in a moment. The paint circulates and the stump never hardens. You can wear the brush down shorter, therefore it will last much longer.

Ask your dealer for them. Made in round, oval, and flat. All sizes and qualities.

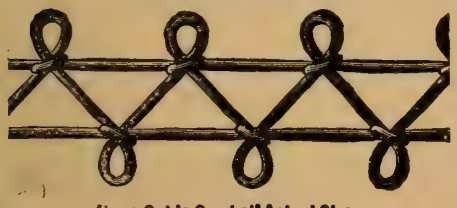
CHAS. BOECKH & SONS

Brush Manufacturers

TORONTO - - ONTARIO

THE HATHEWAY PATENT FENCE WIRE.

Pat. Nov. 19, 1889.



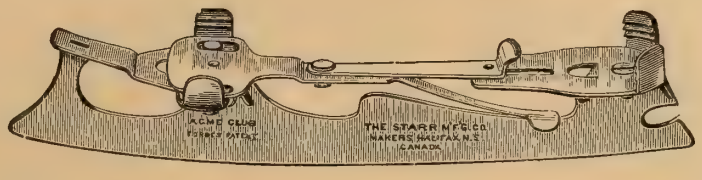
Above Cut is One-half Actual Size.

The Hatheway Patent Fence Wire, the most popular fence wire throughout the United States, and fast gaining that position in the Dominion of Canada, as it contains all the requisite qualities of a fence wire, being handsome, strong, visible—seen at a long distance; will not sag or get out of shape; allowance for contraction and expansion, heat and cold; being broad, requires less strands to make a complete fence; easily put up, splices itself; will not injure stock. Put up in spools of 120 lbs. each. For sale by all the leading hardware stores in the Dominion.

Manufactured by THE COLLINS MFG. CO., 84 Adelaide st. E., Toronto

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The Genuine Acme



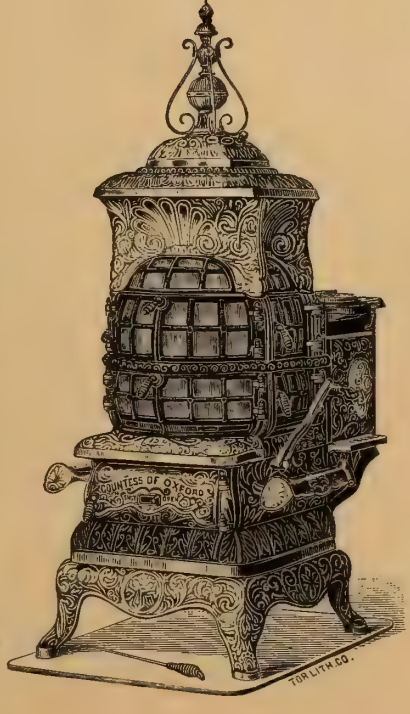
THE LEADING HIGH CLASS SKATE

All genuine "Acmes" have our registered trade mark "ACME," and the Company's name and address in full, stamped on each runner. Beware of imitations.

The Starr Mnfg. Co., Ltd., SOLE MAKERS

Halifax, Nova Scotia.

: : For Sale by all the Leading Jobbers : :



OXFORD "OXFORD" OXFORD

. . LINES . .

Our Leaders for 1893--are the

Countess of Oxford

. . AND . .

Art Countess

and the BASE BURNERS

DUCHESS OF OXFORD

. and .

KITCHEN WITCH RANGES

Put these Stoves on Your Floor and Command the Trade. . . . .

The Gurney Foundry Co., Ltd., Toronto

The Gurney-Massey Co., Ltd., Montreal

Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St, Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 x 4 Barb Plain Twist and Strip Fencing

And Staples for same.

Write for Prices and Discounts.

ESTABLISHED 1880 INCORPORATED 1883 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

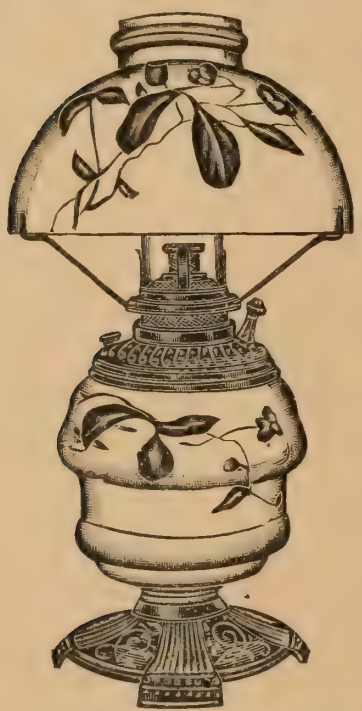
BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

A COSY ROOM



A Glimpse of Comfort

A Hint of Rest

—ARE

Bright suggestions which connect . . themselves with .

..THE..

"Pittsburgh" LAMP

The brightest of all bright lights received from

THE "PITTSBURGH."

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Gowans, Kent & Co.,

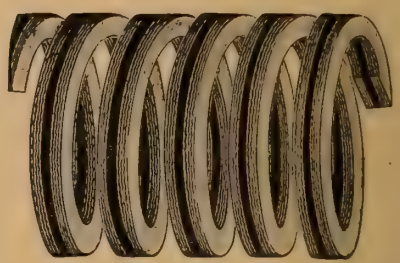
Sole Agents for Canada. TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., Toronto.

"The Seamless Flanged Drip Pan"



Improved Rolled on Edge.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife to cook or lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The improved rolled on edge making it easy to handle.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

SIZES.....	8 x 10	8 x 14	10 x 15	12 x 17
Per Doz.....	$1.91	$2.33	$3.20	$3.73

THOS. DAVIDSON & CO., Montreal, Can.

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, OCTOBER 14, 1893. No. 41.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

MAGNOLIA METAL CO.,

London Office: 75 Queen Victoria St.
Chicago Office: 41 Traders Building.
Montreal Office: H. McLaren & Co., Agents

Owners and Sole Manufacturers,
74 Cortland Street, NEW YORK.

Mander Bros. Varnish

Is the First Varnish in the Country To-day

There are a few varnishes that wear well, but they must be mixed or "fixed" before they can be used. Other kinds work all right but are not durable. MANDERS' is the only varnish that is always right at all seasons, and under all conditions.

READ what one of the oldest and most reliable carriage builders in the country says about Manders' Varnish:

"Manders' has proved to be the safest varnish to use right through the year. In my experience of over twenty years it is the best in every respect. I have tested it in comparison with the best American and English makes, and it is superior to all. Its durability is unquestionable.

Send for Price List to the Wholesale Agents for Canada

Walter H. Cottingham & Co.

FINE PAINTS AND VARNISHES

MONTREAL

Sporting Powder

Curtis's & Harvey's

F. FF. FFF.

4 6 DIAMOND GRAIN

Pat. Brown. Basket.
Lower Proof Rifle.



CLYDE MILLS CO.'S . .

SMOKELESS

In ½ lb. 1 lb. 12½ lb. 25 lb.

. . PACKAGES . .

RICE LEWIS & SON, Ltd.

Sole Wholesale Agents . . . 2 King St., TORONTO

Copper Cider Kettles

(BRAZED AND HAMMERED.)



PLATE 237.

PRICES ON APPLICATION. **CORRESPONDENCE SOLICITED.**

MANUFACTURERS OF

Brewers, Distillers,
Confectioners . . .
Varnish Makers
Plumbers and Marine

Copper Works

The Booth Copper Co.

Formerly BOOTH & SON. : 122 Adelaide Street West. **TORONTO**

STANDARD . .

. . STOVE-PIPE

PATENTED.

Packed 25 joints in a closed crate.
It requires **NO RIVETS OR TOOLS** to put it together.
The seam does not require pounding down.
It is uniform in size, and, being crimped at small end, secures a close and easy fit.
It has a coating which prevents rust.
It can be bought as cheap as ordinary misfitting stove-pipe. - - - - - - - -
Being nested, secures low freight rate.

Kemp Manufacturing Co.

TORONTO, ONT.

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, OCTOBER 14, 1893 No. 41

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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John Cameron, General Subscription Agent.

Theosophists tell us that the soul after death returns to earth and enters the body of another individual; and that just what its moral condition was when it vacated the body of Jones will be its condition when it enters the Smith tenement of clay. A similar transmigratory condition seems to have been going on with the spirit of the defunct National Coadage Company or Trust as it is familiarly termed. Scarcely had this powerful organization shuffled off its mortal coil or name than the cordage men of the country got their heads together, called up the spirit of the old organization and put it into a new one which they have named the Cordage Trade Mutual Protective Association. The organization was perfected in New York the other day, and the report of the committee, which was subsequently adopted, did not hesitate to say that the object was to obtain "absolute and exclusive control of the sisal and other materials, with the incidental purpose of regulating the prices of the manufactured product" of the United States.

* * *

Talk about counting the hairs on one's head, but an instrument has just been invented whereby the number of dust particles in a room may be ascertained. The ingenious instrument can be stowed away in the vest pocket, and its chief features are a glass cylindrical tube with counting stage and magnifying lens, in connection with an air pump which admits of the introduction of measured quantities of air. The bottom of the cylinder is a micrometer disk and is illuminated by a spot mirror. This enables the fog particles that fall on the stage to be illuminated while an image of the spot covers the field. The result is that by the reflection of ordinary skylight from the surface of the mirrored part, the drops are seen shining with brilliant opal hues on a nearly black field, and are counted easily.

A Binghampton Methodist church is much exercised regarding the propriety of ladies riding bicycles. The unfortunate cause of the disturbance is the taking to the silent steed by a lady member. She is a widow. Whether charming or not the despatches do not state. And although she has been known as an active worker in the church, pastor and officials have characterized her conduct in riding a wheel as unladylike, unchristian and a disgrace to the church. The end is apparently not yet, for the friends of the "unchristian-like" bicyclelist will likely carry her case before the next conference, while the Young Women's Christian Association has established a bicycle club in open defiance of those who disapprove of lady 'cyclists. The bicycle was made for woman as well as for man, and all the denunciations of church and state cannot gainsay it. Bicycle riding gives ladies health and strength, confidence and independence, and anything that does this cannot be an evil. Hardware men should try to catch more of this trade than they do.

* * *

It is all very well to hold every man innocent until he is found guilty; but it is unwise to assume that every customer will pay his debts until he has been tried and found wanting. Before a customer is given one dollar's worth of credit the fact should be established that he is able to pay. Men do not go into business for fun; they go in to make at least a living. And to accomplish even this in our day and generation demands constant alertness; and one of the directions in which this needs to be exercised is in the ascertaining of the standing of customers. The wholesaler demands some sort of explanation from the retailer as to his financial standing; and why should not the latter demand something similar from the consumer. True it is a delicate thing to undertake, but it is only right, and what is right cannot be wrong. When you give a man credit you trust him with your goods. If he is an honest man he will pay you for them; if he is not he will try and evade doing so. Some people will get goods and never pay for them no matter how watchful the retailer may be, but the more careful he is the smaller will be his losses from bad debts, and the time to begin to exercise this faculty is when the customer desires to open out an account with you. It is certainly best to know something about the character of the customer and his ability to pay before he has obtained one dollar's worth of credit, but every merchant is the best judge of how far he can make this a hard and fast rule. It is certainly the safest plan to sell no goods on credit until you are assured that there is at least a reasonable prospect of your being paid for them. One thing is certain: the person who would take umbrage at being politely questioned regarding his or her ability to pay, when asking for credit, would be safer off than on your books.

* * *

What was affirmed in regard to the financial crisis in the United States has been confirmed by the statistics adduced by Bradstreet's giving the total failures in the country for the past nine months of the year. But bad as is the condition revealed, it is probably no worse than most people expected. The total failures for the nine months aggregate 11,174. This is 51 per cent. more than in the corresponding period of 1892 and 26 per cent. more than in the same period of 1891. In liabilities the enormous total of $324,087,768 was reached, about four and a quarter times the aggregate indebtedness of the 7,378 embarrassed con-

cerns of 1892, and nearly two and one-half times the total indebtedness of the 8,866 insolvents of 1891. The assets for the nine months aggregate $225,758,881, or 70 per cent. of the liabilities. This proportion is imprecedentedly large, and is about the only redeeming feature about the report. For the nine months of last year the proportion of assets to liabilities was 51 per cent.; and the same obtained the previous year, while in 1890 it was only 48 per cent. In 1889 the proportion was 50 per cent. and in 1888, 53 per cent.

AN EXPLANATION.

Mr. Edwin Hill, one of the partners of the Toronto Plate Glass Importing Co., denies certain statements that were published in an article in last week's issue of the HARDWARE MERCHANT regarding the assignment of his firm. The statement therein made that the firm had systematically undersold the trade was what he particularly took exception to. To this he gives an emphatic denial.

"Instead of sacrificing our profits in order to get business we have actually been getting better profits than our competitors, having handled a special glass which others do not handle. And it was the trade in this special glass that we made particular efforts to cultivate. The glass that the certain jobbing firm told you we sold at 2 per cent. above actual cost to the Exhibition Association was supplied to their contractor, was English glass, and was sold at a handsome profit. Furthermore, we practically were alone in the sale of this glass, and consequently we would have no reason to sell at such a small margin of profit as 2 per cent."

As a proof that his business was a good paying one, Mr. Hill produced a book in which were entered the different sales made by the firm, together with the percentage of profits accruing to each. These entries certainly revealed good profits on the sales therein enumerated.

"No, our assignment is not due to any sacrific of profits," added Mr. Hill, as he dropped the book into his pocket, "and the firm is willing to show anyone the figures to prove this. The real cause of the trouble is that the money employed by Mr. Ferguson was borrowed, and no assignment was necessary if this had not been so. In fact if the lender had not sought a kind of security I was bound to refuse in fairness to all the creditors, I have no doubt the firm would be in a good shape to-day. As it is the creditors will be well looked after and probably get 100 cents on the dollar."

THE QUARTERLY IRON MEETINGS

The various associations of heavy hardware makers have been holding their meetings in Montreal during the past week, and have wound up their conferences, as expected, without any important alterations in value. Whatever change there has been, with the exception of one line, being toward a modified cost. The meetings were attended by representatives of the Ontario Rolling Mills Co. of Hamilton, Montreal Rolling Mills Co., Pillow, Hersey & Co., Peck, Benny & Co., the Barnum Wire Co. of Montreal, and the Graham Nail Works of Toronto.

The first important change in the card rates, as we noted last week, was that in horseshoes, which have been placed on a basis of $3.65. Bar iron remains as before at $1.95, with the usual drawback of 5c for car lots and 10c. for 100-ton lots. Cut nails were not touched, and the same is to remark in connection with wire nails, the card rates and trade discounts for which remain precisely as before.

In small goods the only change is in copper tacks, for which the discount has been placed at 62½ per cent. Other lines are unaltered. Pressed spikes are the same, and there has only been some trifling change in the case of discounts for railway spikes, the changes being in favor of buyers. Bolts, nuts and rivets are unaltered as before. Plain wire remains at its former basis also.

As far as can be gathered, the meetings were harmonious, and although some cases of cutting in bar iron and nails were spoken of, investigation proved that the complainant had been misinformed, for in the instances of alleged cuts the buyer in the case had ordered the necessary quantity of stock to entitle him to the rebate complained of, as per the standard agreement.

THE LATE W. H. HUTTON.

Lieut.-Col. Hutton of Montreal is dead. The sad event occurred Monday morning last, and was rather sudden. General debility seems to have been the cause. Sunday, which was his 59th birthday, deceased attended church, and took a short walk in the afternoon. Shortly afterwards he complained of a dizziness, and went to bed. He never rallied, and passed away next morning at the hour already stated. The deceased was formerly a member of the firm of James Hutton & Co., the well-known hardware firm of Montreal. He was born in Sheffield, England, on October 8, 1834. He was the son of Wm. Carr and Mary Ann Hinchcliffe Hutton. He was educated at the Pension Silly, at Vevey on the Lake of Geneva, Switzerland. As soon as his education was completed he entered the hardware trade, coming to Canada in 1856, and joined his uncle, the late James Hutton, who represented many large hardware firms. Mr. Hutton was a member of the Church of England. At the formation of the Victoria Rifles he was an ective worker, being one of the first members to join in 1862. After the St. Albans raid he served with the provisional battalion upon the Windsor frontier from December, 1864, to May, 1865. He was at the front in 1866 and in 1868 became Lieut.-Col. of the Victoria Rifles, and retired in 1870, shortly before the second raid, leaving Major A. R. Bethune in command. Mr. Hutton was married to Cornelia Middagh, daughter of the late Jos. Henshaw of Brooklyn, New York. The deceased was a member of the A. F. and A. M., and was worshipful master of St. Paul's lodge (English) from 1867 to 1870, and was D.D.G.M. of England since the death of the late Judge Badgely.

A TRAVELER'S EXPERIENCE.

BY HARRY.

To relate all one hears that is humorous and sees that is funny, would, I am sure, fill a good sized book. "As we journey through life we stop by the road." About three years since, the writer experienced a terrible night. The good lady of the house at her usual early hour retired. So also did the others occupying apartments under the roof. Somewhere about the midnight hour terrific screams were heard by most of the household. There would be a delay for a moment, and then another frightful yell. "And now for action," said I, "and with one spring I landed in the centre of my room, and in so doing overturned a table that contained a large glass lamp upon it. I need not tell you the result. To my horror, the poor woman was all the time yelling unmercifully. No doubt the collision in my room terrified her the more, if that could be. Something must be done, and at once, I thought. So with the aid of a half dozen matches I managed to secure my great coat, boots and hat. Out of number ten I bolted into the hall, and just then there was more yelling. "Man in the room! man in the room! help, help!!" I made a "B" line for the room, wondering at the same time if the intruder would be a heavier weight than myself. Arriving at poor Mrs. Syenaved's door, I assured the good soul that I, the heaviest traveler in the house, was outside the door, and would capture the bold, bad man. I bad her arise, light a lamp, and order the ruffian out. After a moment's hesitation Mrs. S. was on her feet, with light in hand, and what a discovery! The splashing of water in the wash basin had ceased. All was quiet. The woman was as pale as a sheet. I was brave to the last (outside the door). But the end had come. Consequently my services were not required. The poor little mouse that had made all the noise had fallen into the water, and was drowned.

RETAILER A PUBLIC BENEFACTOR.

BY ONE OF THEM.

Are the retail merchants of to-day a necessity or a nuisance? This question has suggested itself to my mind quite frequently when hearing or reading of the varying success or failure of the "Patrons." Assuming that I have a true conception of sound business principles, I shall try to show that they are an essential and necessary element in the busy world of to-day. Perhaps the most effective way to do this, will be, first to show the policy of "Patron" tenets in reference to trade matters. The "Patron" claims that he is being defrauded by the retailer charging him too much for his merchandize, and presumes to fix a percentage at which he will purchase the necessaries of life from the retailer, or else he will go directly to the wholesaler and purchase his goods in large quantities, so as to get them cheaply. Getting a number of his neighbors together, they organize a lodge, and agree to make the retail merchant supply them with goods at the "Patron" price, or they will buy from the jobber. Why this attempt to regulate a trade about which the "Patron" knows little or nothing, when there are evidences every day, in the numerous failures of retail dealers, that not only are the profits not too high, but rather they are positively cut too low for men to live by and pay their creditors? Simply the result of a few discontented, selfish agitators who find the people ready listeners to their plausible tails of excessive profits, easily made fortunes, etc.

When the intelligent portion of the "Patron" organization have carefully considered the situation, they cannot fail to see that they are but trying to teach ducks to swim, when they interfere with and seek to regulate the retail trade.

Who is it that helps to consume the produce of the "Patron?" That, by paying taxes upon a heavy stock of goods, helps to keep the "Patron's" tax low? That keeps such a stock constantly assorted and renewed, according to the tastes and requirements of the "Patron"? That patiently awaits the "Patron's" pleasure for the pay for his goods? Surely when we think of the innumerable benefits conferred upon the general public (Patrons included) by the retail merchant, despite all his imperfections, we shall readily accord him his true position in society—viz., one of its most useful members.

Just suppose, for instance, that the retail men could pass away, what advantage would anyone derive therefrom? To transfer the retail trade to the "Patron" stores or lodges, would be but a nominal change. The Patrons would simply try to be retailers. Then the retail merchant of to day is not only a necessity, but if he conduct his business honorably and diligently in the sight of God, he is a public benefactor and a blessing to society.

There is the possibility that a retail merchant may be a nuisance, by forcing his wares upon customers beyond their ability to pay for them; by deceiving his customers with misrepresentations, etc.; but we believe, from experience, that this class is the exception, and that the retail dealers of today are fully on a par with their fellow humanity.

A TIMELY SUGGESTION.

Mr. A. T. Drummond of Montreal, in an article in a recent number of the Queen's Quarterly, makes suggestions for the improvement of the postal service, some of which appear to possess considerable merit. With reference to registered letters he calls attention to a matter that has frequently occasioned remark. The payment of 5 cents for registration insures nothing. If the letter goes astray, the authorities will endeavor to trace it, but if it cannot be found that is the end of it—the sender is at the loss of his money. In England this is not the practice. Every registered letter is insured to the extent of at least $25 there, and by a sliding scale of payments up to 22 cents the safe delivery of $250 can be insured. Mr. Drummond thinks that this system should be adopted in this country. There can be no doubt that our present means of transmitting money through the mails is unsatisfactory, and that the insured registered letter system seems to be the ideal one for small sums

ADVERTISING FOR AN ASSISTANT.

Sometimes it is a spur, and sometimes just the opposite, to know precisely what is required of us. When an employer asks nothing but what is just and reasonable, then a catalogue of these just and reasonable qualities should act like the gas in a balloon, and send us mounting higher and higher; but when we pass the limit of reasonableness we are prone to ask if even an angel would "fill the bill." We do not think any one will say, however, that the subjoined list of qualifications, which we take from an advertisement for an assistant, exacts more than human capacity or more than an employer may reasonably hope to find in an employe without wings. "He must be strictly temperate and of good habits. One who has a disposition to see how much rather than how little he can do. One who is ambitions to work and thoroughly learn the business. One who will be patient and attentive to customers. One who has a taste for reading the trade journals with a view to being well informed. One who is neat and orderly. One who will try to make himself so useful that we cannot dispense with his services. One who is honest with a fair amount of common sense. One who is interested in the goods he is selling and can make them interesting to others. One who will not laugh at a customer if he calls for 'consecrated' lye or 'graduated' sugar. One who can command the confidence and respect of all with whom he comes in contact. All applications must be in writing."—Ironmongery.

ELECTRIC ARC LAMPS.

The number of papers in regard to arc lamps read at the Electrical Congress, would appear to indicate, says Journal of Commerce, that considerable study is being given to this now almost universal means of outdoor illumination, yet it is probably a fact that notwithstanding the extent of the use of arc lamps they have received less attention from electrical engineers than has any other important piece of electrical apparatus.

This condition arose at first, perhaps, from the very rapid introduction of arc lighting and the necessity of supplying some kind of a lamp for commercial purposes, says Electricity. Customers at first had very little idea of what constituted a good lamp, and so long as it continued to run without too much flickering and without going out too often the customer was satisfied. This led to the manufacture of a class of very cheap lamps, and in a good many cases everything possible was sacrificed to produce lamps with few parts and of low shop cost, without much regard to efficiency or reliability. The result of this was plainly evident in the number of lamps which could be seen almost any night.

In some cases the shop cost of lamps was reduced to about five dollars, but very few of these are to be found today. The tendency is now in the direction of improving the mechanism which even in the best of lamps is a delicate and somewhat uncertain point, and complaints about lamps going out are still familiar to central station men, although not nearly so common as formerly.

A good deal of the work in this line appears to have been done by people who had but little idea of the requirements of a good arc lamp, and this is the patent records. The number of lamps and devices upon which patents have been taken out is well up in the thousands, but as very few of these have found any practical application it is to be inferred that most of them are of but little value.

In fact, the different kinds of lamps in use to-day are limited to a very small number, and the most of these are turned out by half-a-dozen companies.

WINDOW DRESSING.

"I have always felt that the good window dresser is the man who can make a very good display with a very small stock of each particular article." So says an appreciative reader of Ironmongery, who asks us to do as much to encourage good window dressing in the smaller establishments as we have done in the past for the larger. What we have chiefly had in mind in exemplifying this branch of shop-keeping has been the medium or average establishment, leaving it to the individual, according to his varying circumstances, to derive such suggestions as he could put into practice. There is no stock of hardware, however small it is, if the business is worthy of being called an ironmonger's, which does not lend itself to good, as distinct from slovenly, window dressing. The commonest articles can be arranged wity symmetry, and so made attractive, which they will not be if tossed into a window without regard of arrangement. As soon as we can get the sketches drawn, we will illustrate what we mean by taking a few of the most ordinary lines of an ironmonger's stock and presenting two contrasting pictures, one showing how these common articles can be put together in an attractive way, and the other, which we too frequently see, a mere tasteless agglomeration, a fatuitous—we might say fatuous—concourse of atoms. Meanwhile, we would protest most earnestly against the erroneous notion that only large and varied stocks are being capable of being so disposed as to arrest attention and invite custom. With them, doubtless, more frequent changes may be made; but that is the only advantage in their favor, and even that is not so great an advantage, if one would reflect how great a variety of window arrangements may be made with precisely the same articles by the exercise of ingenuity and invention.—Ironmongery.

BLOCKING AN ANVIL.

It is important that the anvil be attached securely to the block, particularly where large irons are to be forged and bent. One of the simplest of the secure methods is to pass two flat bars through the block about six inches from the top, the centers of which are about one-half an inch wider apart than the length of the base of the anvil. Punch holes and cut in the threads before putting the bars in place, the holes being spaced to the width of the base. Bore holes through the wood for bolts; then make plates that will clasp the corners of the base, and pass bolts through these to the holes in the bars and run the bolts down tight. The underside of the corner irons should be cut away so as to have a bearing on the wood only on the extreme outside edge.

IRON INDUSTRY IN NOVA SCOTIA.

The development of the iron business in Pictou county should prove an incentive to those interested in iron in Cape Breton. Only a year ago the extensive iron works at Ferrona, Pictou county, were established, and to-day there is one of the finest enterprises in Canada located at that place. Ferrona is reached by the I.C.R., and is some five or six miles from New Glasgow. After leaving the I.C.R., the railway of the New Glasgow Iron, Coal and Railway Company, the company owning and operating the industry, is taken up to the iron works. The railway of this company is 15 miles in length, and taps the valley of the East River, one of the finest farming localities in the Maritime Provinces. The New Glasgow Iron, Coal and Railway Company gives employment to some 500 men in connection with their magnificent plant at Ferrona. The company uses 300 tons of coal each day for coking purposes, 200 tons of ore, and 100 tons of limestone, coming from the deposits which the railway taps further up the East River. Passenger trains run over the line, which has half a dozen different stations on the road, and is of incalculable benefit to the farmer, in affording means of access to a lucrative market. The splendid plant at Ferrona strikes the observer as almost occupying the position of a town itself. The furnaces, the stock house, the coke ovens the engine house and the offices of the company cover indeed quite an acreage. The furnace turns out about 90 tons of pig iron each day. There are four casts in the 24 hours. When the cast is running out the molten matter finds its way into the pigs all ready for its reception, and when cooled and culled adds one more tier to the pig iron ready for transportation and manufacture into steel. The moving mass of fire as it seeks its prepared abiding place is one of the most attractive features of the whole work, because, for one thing, it is the climax—the practical outcome of all the previous material and labor—the production of man's art and thought as it comes in touch with the arranged elements of nature. The furnace is charged with the regulation quantities of ore, limestone and coke. There is a coal washing plant where all the coal is purified before being cooked, being thus eliminated of sulphates, phosphates, etc. There are 50 coke ovens in Ferrona, into which the coal thus purified is dumped and made. The coke plant is one of the finest in America. It is of German design, and is managed by Mr. Zirker, who formerly held a responsible position in the famous Krupp gun works in Germany. There are all the modern improvements of utilizing the waste gases from the blast furnace and coke ovens for generating steam and heating the hot blast stoves. At one time this hot gas was belched out and lost, but it is now utilized, no coal now being used for generating steam. There is a laboratory on the grounds, in which Mr. J. D. Fraser, son of Manager Graham Fraser, is the chemist, and who analyzes the iron ores, limestone, coal, coke, pig iron and slag for the furnace. All these things are necessary so as to know what is being done. Everything to-day in this business is told by analysis, not by rule of thumb. The New Glasgow Steel Works obtain their pig iron for manufacturing into steel from Ferrona. This home supply of pig iron is something never before accomplished in Canada. Heretofore all pig iron was imported from Scotland, Norway, Sweden and Spain. As a result of the supply from Ferrona, the steel works at New Glasgow is certain to more than double its present capacity in the course of a year or so, being no longer obliged to depend upon the importation of pig iron. Instead of one blast at Ferrona, there will soon be three or four. The steel works at New Glasgow employ about 500 men, and thus the iron and steel works combined give labor to more than 1,000 men. These two immense enterprises are under the same vigorous manager, Mr. Graham Fraser, to whose energy, courage and foresight is due the great iron development of Pictou county. Mr. Harvey Graham is the energetic secretary of the Ferrona Iron Works, whose place during part of this season, during the former's absence in Upper Canada on business connected with the works, has been efficiently filled with Mr. Frank Rice, a Cape Breton boy. The accountant at Ferrona is Mr. F. M. Pauley, who will be remembered by a number of old time friends in North Sydney. The splendid condition of the iron industry in Pictou has many lessons for the people of Cape Breton. There is every evidence of there being iron in large workable quantities in this county. It now remains for our friends here to seek for means for developing these rich resources of ours, and by every possible manifestation of push and courage on our own part be enabled to invite push, courage, and capital from abroad.—North Sydney Herald.

D. Teehan, the Southampton hotelkeeper whose premises, with others, were destroyed by fire a week or so ago, has purchased the whole of the burned block and will erect a new hotel and stores thereon. He proposes to occupy the space of one store as offices British Columbia. The office is now being fitted up, and when completed will be one of the most convenient in Vancouver.

FACTS OF TIMELY INTEREST.

The ever recurring disputes between labor and capital, and of which an instance is furnished by the fight made by the ironworkers to obtain last year's wages in the face of a lowered market, have been made the subject of of an article by Abram S. Hewitt, of New York, who, starting in life as a mechanic, has risen by individual effort until he is now one of the largest employers of labor in the country. He therefore speaks from both points of view, and he shows by conclusive figures that the position of the workman has improved in a far greater ratio than has that of capital. Two extracts from Mr. Hewitt's article are here given:

"When I was a boy my father was a mechanic. I was familiar with the wages of mechanics. I lived among them and was brought up with them. Masons, carpenters, and cabinet makers used to be paid 40 years ago $1.50 per day; that was the current rate of wages. Now the wages run from $2.50 to $4. I think $3 per day a fair average for mechanics' wages to-day in the city of New York. In every branch of business, blacksmiths, engineers, machinists, everybody that I have to do with, are certainly getting twice as much as the same class of men got fifty years ago. Now, wages are relative. It might be that twice as much wages were not in reality, would not buy as much as the wages of fifty years ago. As a matter of fact, the necessaries of life have diminished in almost the same ratio that the wages of labor have gone up; for instance, flour wheat in 1860 ranged from $1.35 to $1.70 a bushel, and it ran along, fluctuating, of course, with seasons, until 1893 it fluctuated between 57 and 80 cents a bushel. Wheat is the best measure there is of the cost of living. Wheat, or corn, is the basis upon which all other articles of food are priced. Therefore, this enormous increase of wealth has gone very largely into the possession of the wage earners of the world, and particularly of the United States. I have not time to construct a spheroid which would show by lines across it how the income is distributed among the various classes of the community, how much of it goes to the capitalist, that is, those who lend money or employ labor; how much of it to those who work for wages or salary; how many there are who get none of it. The result would be, however, that fully 90 per cent. of the entire income of the United States would be found to be paid out for labor and salaries. About one-tenth goes to capital in one form or another as remuneration for having saved it up to carry on useful enterprises."

This is not merely an estimate, but is the result of a careful study of the subject by one accustomed to deal with statistics in their relation to all economic questions. Even with the reductions in wages made necessary by the market conditions, the average iron worker has a wider margin between income and expenses than he had a year ago, and still another advantage accruing to his position is the freedom from uncertainty which too frequently confronts the employer in his business relations.—Stoves and Hardware.

PROFITS ON SMALL ORDER.

We have before us a complaint which we know is echoed by a great many in the trade, and, therefore, deserves something more than a passing notice at our hands. It is a complaint of the meagerness of the discount allowed the retailer by many manufacturers of special goods. "To show you," our correspondent writes, "what tempting terms some manufacturers give us poor, downtrodden ironmongers, we enclose you a memorandum received this morning which speaks for itself." It appears that in this case the dealer asked for quotations for one machine, the list-price of which was £2, and he was allowed a discount of 10 per cent. Now, this is one of those incidents constantly arising in business which are the product of modern inventiveness and of modern competition. The ironmonger is, probably, of all tradesmen, least able to reconcile himself to them, because, on nearly all his staple lines, he gets such heavy discounts. He has been spoiled, so to speak, by custom. But there are numerous trades which flourish on a staple discount as small as that quoted in this particular case, terms which would overwhelm the ironmonger with despair. We must not forget that manufacturers feel competition as well as retailers, and are compelled in self-defence to adjust their prices and their wholesale terms to meet it. It must not be forgotten either that makers of patented specialties have to bear the cost of advertising and pushing their goods themselves,for few will do it for them. Do they not understand that an order for a single article from a tradesman means, nine times out of ten, that he is simply accommodating a customer, and, that done, will not turn his hand over to to sell another? But the manufacturer is rare, indeed, who will not make every concession the cost of his goods will warrant to the retailer who will take them up and push them. We may be asked—Why, then, unless we are prepared to risk a larger order, should we bother about the matter at all? All we can say is, what we have said over and over again, that it is worth while obliging a new or an old customer for a profit of four shillings, or for no immediate profit whatever, if it is worth while having customers at all. Heaven knows, we wish ironmongers never enjoyed less than 50 per cent. of clear profit; but we must take things as we find them, and among the inconveniences of modern trading is to be reckoned a closer relation between cost of manufacture and trade terms.—Ironmongery, London.

FUN IN THE SHOP.

Recently a lady drove up to our shop in her carriage, bringing with her a piece of cast iron, part of a range, which had got broken, and left it with us, with the request that we would "please stitch it for her at once, as it was needed."

The other day a customer entered the shop where I am an assistant, and asked me for a thing for making holes in moleskin trousers before the needle went through. At first I was puzzled, but the idea struck me that it would be a bradawl he wanted, so I turned them out; but he said that "wa'na the thing; it was just like a darning needle wi' a handle," so I showed him a shoemaker's straight awl, and that suited him.

The following order, which betrays its German origin in every line and nearly every word, is the most remarkable compound of mixed German and English that ever came under my notice: "Mr. Glark blees sent me one of jur 7.9 jene revolvers und on box of cardridges on box of cardridges as juick ju cann i will sent the mony on as sohn i resiev it the revolver und cardridges blees obleidg as juick ju cann send to" etc. The address on the envelope is a curiosity indeed. Substituting English letters for the German script where employed, it runs:

"Mr. Glark
for Street Exeter
Nearle obosite
Market Plaz
Tule Shopp."

—Ironmongery.

SHEET IRON SCARITY.

It is not improbable that the conditions existing in sheet iron may be found to have extended to other branches of the iron industry, to wit, a scarcity of supply in first hands and among the distributors. The mills have been shut down for a much longer period than usual, and although the demand has not been particularly active, its volume was sufficient to cause a considerable draft upon the stocks and to leave the individual mills with far less than they usually have on hand. Our reports are generally to the effect that jobbers and retailers are not overly well supplied, especially in the Western markets, and the springing up of any pronounced demand would undoubtedly place the manufacturers in a position where they could not immediately meet it.—Stoves and Hardware.

HOW I HAVE DONE IT.

A good, well assorted stock, nicely arranged, and kept in good order, is indispensable to success, writes a hardware man in ironmongery. So arrange the stock as to have, as far as possible, everything at hand. "A place for everything, and everything in its place," is a motto we ironmongers cannot dispense with. Some shops are pictures of order and neatness; others the reverse. During the hot weather I sprinkle the floor of my shop frequently. This is very refreshing to customers coming in out of the boiling sun. I often hear them remark: "How nice and cool your shop is!" The same remark will often be made with regard to neatness and order. Ladies, especially, will notice these things. They don't like to bring their new dresses into a dirty, untidy shop. They will always give the preference to the cool, clean shop.

Always keep, say, half-a-dozen leading lines on the counter, and introduce them to each customer. At the end of the week put them all away and replace them with a fresh lot, and so on from week to week. Some will, no doubt, dub you a "Cheap Jack," if you adopt this system; but never mind that. The introduction of something new will often not only effect the sale of it, but be an introduction to something else. Knowing that you keep the run of novelties people will frequently ask if you keep so-and-so. The result will often be a good order, whereas, had you no novelty to introduce, your customer would have left the shop and placed his order elsewhere. A full and well assorted stock will often induce customers to buy what they did not come in for. Let it be known that you are the man who can and will do the thing right, and that they can depend upon getting what they want at your shop.

Keep a kind of revolving show at your door. By this I mean have a complete change outside your door every Monday morning. In this way will in turn show most if not all of your stock that will admit of exposure. Some ironmongers seem to have a way of sticking at their door the same goods week after week, regardless of seasons. These goods become that dirty that they are not only unfit to be seen, but in many cases unsaleable. Far better show nothing at all, as people get the impression that both yourself and goods, as well in the shop as at the door, are a dirty lot. Change your show in front once a week.

Punctuality is important—open your shop to the minute. Country people rise early and often want goods, such as haymaking tools, builders' ironmongery, etc., and such people are generally in a hurry, and don't like being kept waiting outside the shop; let such know that your shop is always open to time.

The prompt delivery of goods sold should not be overlooked. When people buy anything they generally like to have it at once, whether they want it for immediate use or not.

Strict personal attention to business is absolutely necessary. Don't leave your business to others. Customers like to see the principal. Let him, therefore, be at his post. He can do what no one else can, can quote prices, right wrongs, secure orders, and, in a word, no one can quite fill his place.

Don't encourage loafers about the shop. In every town are to be found retired tradesmen, etc., who have nothing to occupy their time, and are too fond of "popping in," as they say, "just to have a chat," which means, when once they get a footing, an endless yarn about matters you probably either know all about or don't wish to know. The busy ironmonger cannot afford to waste his time in this way, and the sooner he gives his friend (or shall I say enemy?) the "straight tip" the better. This can generally be done without giving offence, but, be that as it may, let it be done, but by all means in the most agreeable manner. I used to be daily pestered with one or two of these time wasters, and when they "popped in" at the front I used to make it my business to "pop out" at the back, consequently they had only the chairs to talk to, and soon gave it up.

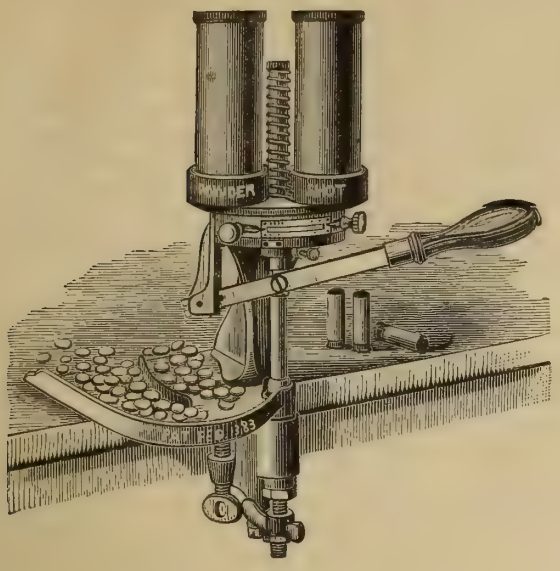
If you are of a witty and jocular turn of mind it is safe to crack jokes with some customers freely, but it must be done wisely. If you watch your customers you will almost infallibly know where and when to let the joke come in. There are comparatively few people who do not enjoy fun, and a joke can often be used to turn away a client's anger and create an outburst of laughter, and so "calm the troubled breast."

At all times and under even the most trying circumstances keep yourself under perfect control. This, you will say, is more easily said than done; granted, but it is astonishing what can be done if only the mind is bent upon doing it.

No one who has a living to get can afford to insult his customers. If he can afford to do so he has certainly no need to do so, and if he continues to do so he certainly won't be long in business. I have heard shopkeepers again and again say to their customers, "If you don't like it, leave it." Few customers need to be told that twice; they will, in nine cases out of ten, do as you suggest, and tell others to do likewise. Humor customers in every possible way and exercise great patience with them. This will pay you a hundredfold both financially and mentally. Remember your shop was opened to oblige customers, and not to insult them. The manners and ways of shopkeepers are often the topic of conversation at evening parties, dinners, on the cricket and lawn tennis grounds, in the railway trains, etc., and the "cockey," insulting, independent tradesman will soon find that the polite, civil, even-tempered, obliging man a little farther down the street has captured three parts of his customers. Talk about the "patience of Job"! I am sure every shopkeeper to be successful needs a very fair sprinkling of it; and if poor old Job had been alive, and kept a shop in the nineteenth century, I think it's more than probable he would have more than once asked the question, "Is life worth living?" I should answer, "Yes, if you treat all alike with uniform civility and courtesy."

An occasional trot round among one's customers will be productive of much good. Often customers stay away from your shop, for why you know not; but by paying them a personal visit, you can often get at the secret, and put things right. I called upon a customer last week who had for some time withheld his custom from me; the reason, which was exceedingly simple and trivial, was explained, and the customer resecured, with a definite promise to give me his next order and future custom. Had I not paid him a visit, he would not have paid me one, and I should have lost his custom permanently.

Don't employ a parcel of dull and stupid assistants, apprentices, porters and mechanics. Such are a positive curse, and dear at any price. An uncouth, uneducated, untidy lot of employees will soon scatter all one'c customers. Employ good men, and pay them well; look upon them as being as good as yourself; treat them well, and not like so many dogs, as is too often the case. Be affable, agreeable, free, and natural with them; be in sympathy with them. Encourage assistants by giving them a commission, say of 5 per cent., on all returns above a certain amount. This will encourage them to push, in order to swell the returns, and thus secure for themselves, as well as for yourself, a larger margin of profit. Give your porter so much per dozen for all the repairs he collects and all the orders he brings in. This will encourage him to push about among the customers, and it is astonishing what even a porter can do. By this means employer and employe will be brought to work hand in hand and shoulder to shoulder. If you, in a practical way, show that you have at heart the interests of your employes, you will soon find the same interest in your welfare existing in the hearts of your employes. This system will "knock into a cocked hat" that driving, grinding, screwing, grumbling,



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bullying style that one so often sees. The golden rule, "Do to others as you would be done by," always pays, and will bring about very happy results wherever it it put into practice.

Having lost money through neglecting to return empties—for we all know that at times the labels get torn off, and sometimes the empties get broken or lost—I now make a point of returning all empties every Monday morning. This I find answers well, and saves lumber, trouble and loss. When each crate or cask, as the case may be, is unpacked, we put it together and direct it. It is then ready for the carrier on Monday, and only needs to be entered on the carrier's book, and signed for when collected.

Always keep a tin of vaseline—for this is the best thing you can use—at hand. When an article shows signs of rust, clean it and apply vaseline; dirty, rusty articles are a disgrace to any ironmonger. Customers like clean, new goods. Keep a good supply of all kinds and sizes of nails weighed up in 7-lb. parcels; this will enable you to serve customers quickly. These can be weighed up in spare moments.

Have your shop well lighted with the best regenerative lamps you can buy, such as the "Meteor-Wenham." Customers always prefer to go into a well-lighted shop, and not into a dark, dismal hole where neither they nor you can see what you are doing, selling or buying. Buy each season's goods early, and display them in good time; people will then know where they can get them. If your orders are not placed early, the possibilities are you will not get them in by the time you want them, and consequently lose the sale of them.

THE CORDAGE SITUATION.

The amount of binder twine which has been carried over is causing much speculation among the trade, and a number of calculations have been made to enable some conclusion to be arrived at concerning the amount. Of course all such figuring is the merest guesswork, since everything has to be estimated, there being not one factor in the problem that is absolutely known. That an extraordinarily large quantity has been carried over is accepted by all, but the ideas held by different individuals vary greatly. One Western binder twine manufacturer puts the quantity at 25,000 tons. A well-posted twine man who has recently returned from the West, says, that after having made as careful a calculation as possible, he concludes that 20,000 tons are held in in stock throughout the country although the information that he had previous to personally looking over the field led him to believe that the carried over twine would not amount to over 15,000. The largest amount mentioned —and it is doubtless the furthest from the actual amount—is contained in a "conservative" estimate published by the Boston News Bureau, the figures being 40,000. Whether the real quantity held is 25,000 or 2,500 tons, the effect has been to make people nervous about entering contracts for a supply for next year, and we shall hardly see prices established in October or November this year for the season of 1894. It is doubtful whether any considerable business will be transacted before January or February, while there is a prospect that the time will be even later.

Query: If the National Cordage Company earned 9 per cent. upon the $25,000,000 capital stock on the business it has transacted during the time stated, with a large percentage of its mills idle continually from May 4, and the bad debts it has had to write off, how much did the independent manufacturers, whose plants have been in operation a greater portion of the time, and whose bad debts have been much less, earn upon their unwatered stock during the same period?—Cordage Trade Journal.

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

The plant of the Canadian General Electric Co., London, Ont., is nearly completed.

Bobertson's hardware store, Ayr, was burglarized recently and about $100 worth of guns and knives stolen.

Nails are hardening and the pointers on barb wire are for a stiffer market and a sharper demand.—Hardware Reporter.

Alumnium plates are used in Germany to engrave and etch upon, and it is spoken of as a probable substitute for zinc and lithographic stones.

The Toronto City Council has decided to exempt from taxation the real and personal property of the Toronto Glass Co., Ltd., for a period of ten years.

A movement is on foot among Winnipeggers to endeavor to secure the proposed Canadian branch manufactory of the McCormick Manufacturing Company for Winnipeg.

The Starr Manufacturing Co. (Ltd.) of Halifax has just made its fourth large shipment of genuine Acme skates to Europe this season per S. S. Moruca, consisting of 97 cases.

The jury in the case of the Cobban Manufacturing Company of Toronto against the C.P.R. have returned a verdict for the plaintiff in the Assize Court for the full amount of claim, $1,487.

The bridge which spans the Thames at Dorchester Station has been condemned by the county commissioner, and the traffic is now stopped. Tenders will be received for an iron and a wooden bridge.

The British Columbia Iron Works have secured the contract for building the boilers for the Esquimalt Marine Railway Company. This is a company that has been formed at Victoria to construct a ship's railway for repairing ships.

Sheriff Mowat's motion to have an issue directed to settle the ownership of the estate of A. R. McKinlay & Co., was Friday last postponed for one week. The executions now in the Sheriff's hands against the firm amount to over $12,000.

The Butte & Boston is said to have yielded 2,200,000 pounds of refined copper and 90,000 ounces of silver in September. The profit on the output will be largely increased upon the completion of the new works at Great Falls.

Burglars broke into M. Stewart's hardware store, Tilbury, the other night, and stole $150 worth of goods. The missing articles consist of revolvers, clippers, knives and general cutlery. This is the second time this half-year that Mr. Stewart's establishment has been visited by midnight raiders.

The Boston and Montana Mining Company is said to have produced 3,400,000 pounds of refined copper and 46,000 ounces of silver in September, its largest output, and presumably, at the lowest cost. It is estimated that the September income will yield a surplus of $50,000 above the month's proportion of charges.

A Brantford despatch says: It is stated on good authority that the Waterous Engine Works Company will not accept a $15,000 bonus from the city. They do not like the idea of a free gift of this sort. The conditions for building a larger factory and employing more hands will depend upon the city buying the present works, which are valued at $50,000.

The White Star steamer Cufic brought to New York recently the largest steel casting ever imported into this country. It is part of the hydraulic forging plant at the Carnegie works at Pittsburg, and is designed for the manufacture of plate armour for the United States Navy. It weighs 64 tons, and measures 16.6 x 11.6 x 3.6 feet, and was made by Sir Joseph Whitworth & Co., Openshaw, England. A special car for its transportation had to be constructed by the Pennsylvania railroad, and as soon as this is finished the casting will be taken across the river on a float and sent to Pittsburg.

The St. Thomas Motor Company has instituted a suit against Graham Symington, of St. Thomas, to recover possession of electrical machines and for damages for holding them. The defendant leased certain premises in St. Thomas to the Featherbone Co., which is now defunct. This company had bought dynamos from the motor company, and they remained on the premises after the company assigned. The motor company had a lien upon the dynamos, but Symington would not deliver them up, as he had a claim against the lessee. The defendant sets up a counter claim and asks $500 damages for possession.

The British tank steamer Batoum, commanded by Capt. Luckham, which arrived in New York last week, will take away 2,700,000 gallons, or 70,000 barrels of oil, in bulk. This is fully 800,000 gallons more than any other tank steamer in the world can carry. Her cargo would load eight large English ships. Her engines are amidship, this being different from other tank steamers, and she has a very complete electric light plant. The pilot who boarded her at sea saw her electric masthead light twenty miles away. She was built this year in Sunderland, and made the voyage across in twelve days and six hours. She is chartered by the Standard Oil Company to trade between New York and England. It required three of the larget tugs of the Mutual Company to tow her from Quarantine to Bayonne, and, when loaded, six tugs will be needed to take her to anchorage off Staten Island.

The C. P. R. is applying for a right of way down Home street, Vancouver, for a tramway, which it is proposed to build through Lulu Island. A great many rumors are prevalent as to the railway situation here. It is said that the tramway in question will be extended as far as Blaine, in Washington state, and also that it will connect with the proposed Chilliwack Railway, connection to be made at Lagner's Landing. It is also thought that the proposed street line, asking for privileges of operating telephone and telegraph and an electric or steam railway to Westminster, is being promoted by the C. P. R. Co. The latest proposition, however, is to build a narrow gauge railway to Cariboo from the main line of the C. P. R. The Premier of the province has announced it, and it is understood that the officials at this end have had instructions to make full reports on the scheme. If so, it will make a tremendous difference to Cariboo, and revive the gold fever of early days.—Ex.

H. F. White, the absconding secretary-treasurer of the Walkerville malleable iron works, was brought to Windsor by Government Detective Rogers and Detective Ford of Chicago early Saturday morning. White was taken to the Police Court at ten o'clock. While the date for trial was being fixed White sat on a chair with his head bowed on his hand. His moustache has disappeared, his hair is almost white, and his whole appearance shows that he is a mere skeleton of his former self. The hearing will take place on Monday, October 16. At the first the amount of White's shortage was given as $2,000. It is now ascertained that the amount will reach fully $15,000. Mr. Hiram Walker personally loses $5,000. This was a note White got him to endorse a few days before he absconded. Mr. Walker has already made the amount good to the bank. Then there were merchants in Windsor who, in order to oblige the gentlemanly Mr. White, indorsed notes for him which they are now called upon to pay. Including these the amount may reach $20,000.

TRADE SALES.

J. W. Jones of London, last disposed of the household furniture of J. W. Bayne, York street, London. At his rooms he sold the general stock of Hockin Bros., of Dutton, valued at $3,340, to Mr. Hockin, of Dutton, at 79 cents on the dollar. The general stock of John Pruder, of Colpoy's Bay, valued at $2,868, was sold to R. C. Struthers (for a customer) at 60 cents on the dollar. Robert Gurd's insolvent stock of brooms, etc., was sold to D. Andrews, city, at 35 cents on the dollar, while the book debts brought 51 cents. Mr. Jones also offered the property on the southwest corner of Colborne and Cheapside streets, but as the highest offer was $840 it was withdrawn.

FUTURE OF ALUMINUM.

In contravention of a previous article on The Future of Alumnium" read the following from the New York World :—

Mr. Edison was asked at his laboratory a few days ago if aluminum would not solve many of the problems of science when it should ultimately become as cheap as iron, as it is soon destined to be.

"No," he said, "there is nothing in it. No matter how cheap it may become it will be of no practical use in machinery or construction."

"How is that?"

"Aluminum has no strength," replied Mr. Edison. "You might as well use lead. It is as soft as lead. Its only peculiarity is its lightness, and it will only be useful in making ornamental objects. It has fallen in price from some $15 a pound to about the price of brass, 50c. a pound ; and it is cheaper than brass because you can get more to the pound. Having no strength, this new metal, as it has been called, is not available for machinery."

"Can it be used for building steamships?"

"No ; because it lacks the strength, and weight does not count in the construction of a ship. An aluminum ship would hardly be stronger than one made out of paper. It only gains strength when alloyed with some other metal, like copper."

"What is the metal of the future?"

"Nickel steel is the coming thing," answered Mr. Edison, without hesitation. "It consists of steel with an addition of about five per cent. of nickel, which gives it ductility and increases its hardness and resistance. It is now used to some extent in battle ships and guns. It makes splendid armor. The Harveyized steel is one variety of this metal. Steel will crack. Nickel steel you cannot crack. Iron you can bore, but nickel steel is hard to bore."

"It will then make the burglar-proof safe for which the world has been waiting?"

"No," said Mr. Edison, "you can no more make a burglar-proof safe than an unsinkable ship. Even with a safe which you can neither bore or crack, the burglar with a dynamite cartridge has it at his mercy. The burglar can carry in his pocket what is equal to 100 horse power. Ten pounds of coal may have the same horse power as a dynamite cartridge, but the coal in burning expends the power over a long time, while the dynamite concentrates it in a fraction of a second. No sooner is some new resisting substance found than we go to work and learn how to destroy it. This is the history of armour and guns ; and they are now experimenting as to how the nickel-steel armor may be pierced. Indeed, nickel-steel has already been turned against itself, and is being made into guns, for which it is admirably adapted. The modern battle-ship with the nickel-steel armour gains in space and strength and lightness."

IRON FORGING AND THE SOUTH.

It is somewhat strange that there has not been greater effort in the South to make the forgings that are used in her shops and manufacturing establishments. All other branches of iron making have been undertaken and have been made successful, but, for some unaccountable reason, a properly equipped forge has never been put in operation in this section. We print below an extract from a letter written us by a gentleman who is now in charge of one of the largest forges in Pennsylvania. The opinions of one so thoroughly acquainted with the subject he discusses are well worth consideration :

"It is evident that the South will eventually become the centre of the iron industry of this country. While the South cannot import ores and compete with the Northern manufacturers of steel, with their immense plants and splendid lake facilities, there remains open to Southern iron producers a very large market which should be taken advantage of in every way.

"So far as I can learn you have no forge in the South and, necessarily, all this class of trade is sent to the North. It is very plain, therefore, that a forge in your section would be a paying investment and a builder up of home production and industry. There is a very large percentage of the forge business that cannot be made in steel, and there are also a large number of mechanical and civil engineers who have no use for steel in forgings. A forge built in connection with a rolling mill is the best, but such connection is not absolutely necessary, as a forge can live alone.

"The class of work for a forge would be forging for all kinds of engines—locomotive, marine and stationary—tools, rolling-mill work, links for cotton presses, etc. Car work, such as axles, followers, archbars, body bolsters, king-bolts, center plates, corner plates, equalizers, drawbars, drawheads, etc. —at present the Southern car and railroad companies send North for nearly all of these. If a mill were built in connection with the forge the actual cost of followers, body bolsters, archbars, truck frames and links and pins could be largely reduced, as the same could be made direct from the rolls, which would save the cost of reheating and handling. To put up and start a forge with proper machinery for finishing the work mentioned would require $50,000. A forge costing this amount would be capable of making anything desired ; however, a very good beginning might be made with $35,000, increasing the investment as the trade demanded.

"The South is rich in mineral resources, and yet the Southern railroads look to the North for their supplies. Economy demands, it seems to me, that this money be kept at home. Our factory has lately received an order for forgings to equip five hundred freight cars, including axles. These axles are to be of steel, but there are a number of roads that do not use steel axles, and, in iron, the South could compete successfully with the North. The price of forgings ranges from three cents to thirteen cents per pound, and a thorough study of the matter will prove that there is much more money to be made in forgings than in bar or structural iron. I believe that a discussion of this matter in Dixie will result in great good for the South."

It is quite possible that the rosy predictions of steel enthusiasts have had something to do with retarding development looking to better utilization of our iron product. Steel making in the south has not been brought to an entirely successful condition. We confidently look forward to a time when this industry can be conducted in the South upon a sufficiently economical basis to admit of general introduction, but, as our correspondent points out, it is not probable that this will be done until we can do without foreign ores. There can be no question about the wisdom of making a part of our iron product into forgings and supplying Southern demand for material of this kind.—Dixie.

A new system of disinfecting town sewage is being tested by a London firm, specially with a view to dealing with the drainage of seaside towns. The idea, says an exchange, is that of electrically treating sea-water, and thereby effecting such chemical changes as to render it a powerful disinfecting solution. A portable "Squires" engine is being used, with a dynamo bolted to its carriage for supplying the electric current, and the new disinfectant is pumped into the sewers by the same engine, the firm's hydraulic sewer flushing apparatus being employed so as to obtain the greatest effect. A somewhat similar system is in use in a town some 20 miles above New York, and through which passes a stream from which the water supply of the city is taken, and has been found to afford a most economical means of effectually destroying organic germs caused by sewage pollution. Should the experiments prove all that is anticipated a great saving in the purchase of disinfectants will be made, and the apparatus being comparatively inexpensive, should go a long way towards solving the problem of how to render sewage innocuous at small cost.

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MANUFACTURERS OF
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TACKS, SHOE NAILS, ETC.
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ELECTRIC SIGNALLING THROUGH SPACE.

In a paper read at the Chicago Exhibition recently, and reported in the Electrical Review, Mr. W. H. Preece, F.R.S., the chief electrician of the English postal service, described the progress of his experiments in transmitting electric signals without the aid of a conducting wire. The first success was obtained by means of copper wire insulated with gutta percha. Each face of the square was 440 yards in length, and the squares, each provided with a battery, telephone and suitable key, were laid on a level a quarter of a mile apart. On closing the circuit in one of the squares and signalnalling by the Morse code, "buzzing dots and dashes" were heard by the operator connected with the distant square, and telegraphic communication was carried on backwards and forwards through the intervening space. Experiments made clear that the signals were due to electro-magnetic induction, and not to any electro-static effects. Afterwards longer distances were worked through in the Bristol Channel. Near Cardiff are two islands—Flat Holme, three miles, and Steel Holme, five miles from shore, the former island having a lighthouse upon it. "On the shore two thick copper wires combined in one circuit were suspended on poles for a distance of 1,267 yards, the circuit being completed by the earth. On the sands at low-water mark, 600 yards from this primary circuit and parallel to it, two gutta percha covered copper wires and one bare copper wire were laid down, their ends being buried in the ground by means of bars driven in the sand." On Flat Holme island a simlar wire was laid down for a length of 600 yards. On shore a portable steam engine worked an alternator, sending off 192 complete alternations per second, and of any desired strength up to 15 amperes. The currents were broken up into Morse signals by mens of a suitable key. By these arrangements communication was easy between the shore and the island, one of the first messages transmitted conveying news of the death of an eminent electrician. Afterwards there was an attempt to converse with the more distant island,over five miles away, when the signalling, although just perceptible, was not sufficiently clear to admit of intercourse, but it was seen that in order to increase the speaking distance only a modification of the apparatus was necessary, and the possibiltiy of telegraphy without wires was established. The new plan is not adapted, as was thought it might be, for communicating with lighthouses if standing upon solitary rocks or small islands, as a considerable length of wire would be required, extending parallel to the shore wire, and which would in some cases have to be cumbrously buoyed out seawards, but other applications of the method are of importance. Communication is possible by this method between England and France, and in time of war a blockaded port or beleaguered city may be spoken with from a distance. Also it is pointed out that divisions of an army separated by rivers or even by a hostile force may communicate with each other, and that a new resource may be added to navigation by laying down near shore along a given fathom line a cable through which automatic signals are passed, and which signals will be picked up by a vessel during fog, and its position thereby defined.

RAILROAD PROFITS.

The traveling and shipping public show little concern about the inflation of railroad values, except so far as this inflated valuation is made the basis of charges. Charges are bases on what the traffic will bear in the judgment of the managers, who are sometimes broad and far-seeing, and sometimes narrow and short-sighted. But the rates that the roads are able to collect depend mainly on the amount of business to be done and the amount of competition for it, and very little on the amount of stock and bonds. In some cases stock has been wanted to circumvent a charter provision that the profits above a certain rate of dividends should go into the State treasury, and here the public interest has suffered. In a few cases the stock has been watered so that the exceptionally large profits should not excite invidious comment, but few railroads in this country have this excuse for stock inflation. Pretty much all the hostile legislation of the States and the nation the railroad companies have brought upon themselves by stock inflation, which was popularly supposed, and not without some excuse, to be the occasion for high charges, or the screen thrown over vast profits. The railroad companies would have fared better on the whole had they dealt more honestly and frankly with the public, and they would have had less ground for complaining of the venality of legislatures had they not procured the election of so many purchasable members of those bodies.

The rate of dividends declared indicates nothing of the profit of the railroad business. But the fact that, according to the Inter-State Commission, 60 per cent. of the stock paid no dividends last year, and over 15 per cent of the bonds paid no interest, means a good deal. It means, if true, that very little railroad capital pays well, and much of it pays nothing, while the railroads have added vastly to the value of agricultural lands, and have created many of the Western cities. Yet the financial methods of no small portion of the railroad companies have afforded a plausible excuse for the complaints of many agricultural and some commercial communities that they were subjected to extortion in order that dividends might be paid on stock that represented no investment. If the moral character of the State legislatures has deteriorated in the past 40 years, as there is too little room to doubt that it has, the decadence is partly due to the methods employed by railroad corporations for getting concessions, most of which they ought not to have had. This has given strength to the clamor for adverse legislation, most of which is unwise, and some of which is an invasion of private business by the Government.—N. Y. Journal of Commerce.

ACCURACY OF TOUCH.

There are plenty of men who will, by the impression carried through a pair of calipers and the fingers' ends, determine, within a very small percentage, the amount of pressure which shall be required to be exerted by a hydraulic press in order to force on to its shaft an engine crank or a locomotive driving wheel; a measurement in which a thousandth part of an inch variation in diameter causes much more variation pressure than is permissable. Indeed,on some kinds of work done in the machine shops a thousandth of an inch has now become the most commonly employed of measurement; a unit which is divided and subdivided into at least ten parts in order to express the degree of refinement arrived at. This, of course, far surpasses the frequently mentioned but supposedly superfluous hair-splitting operation, since an ordinary human hair is about two and a half thousandths of an inch in diameter. The paper upon which this page is printed is about three-thousandths of an inch thick, and one ten-thousandth part of an inch is therefore one-thirtieth the thickness of this sheet. Considerably smaller variations of size can be detected by the trained sense of touch, or rather, by the variation in resistance of a pair of calipers passed over the work, and it is even possible for the sense of magnitude and the sensitiveness of the finger ends in relation to it, to be so highly developed as to detect, unaided, and by merely rolling a small steel ball between the thumb and finger, a variation of true spherity amounting to 1-12500 of an inch, or about one thirty-seventh part of the thickness of the paper of this page; Ambrose Webster, a machinist of Waltham, whose business is the making of machinery and tools for watch manufacture, having demonstrated his ability to do this.—From The Machinist (Men's Occupation), by Fred. J. Miller, in the September Scribner.

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—OF—

PILKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
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These words and brand are on every box. None genuine without this Trade Mark. We warn our friend against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, TORONTO

ENGLISH HOUSE: **SAMUEL, SONS & BENJAMIN**
164 Fenchurch St., London, E. C.

STOVE PIPE POLISH

Nonsuch, Rising Sun, Jacoby, Mirror.

STOVE PASTE

M. L. S. Crown.

STOVE PIPE VARNISH

Butler's, Crystal Black, Ever Ready, Resplendent, Easy Shine.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

Montreal, October 13.

HARDWARE.

There has been no change in the conditions of trade since our last report. A fair degree of activity is to note in all lines of hardware, more especially in winter goods. The various quarterly iron meetings to which we referred last week have been concluded, and as we expected, no very important change is the outcome. We mentioned the change in horse shoes last week, and the only other alterations that have been made were in copper tacks, which are 62 1-2 per cent. discount, and some unimportant changes in the case of discounts for railway spikes. All other lines, such as cut nails, wire nails, pressed spikes, bolts, nuts, rivets, and wire remain at the former rates. Reports with regard to payments are much the same.

WIRE.—There has been a small business in annealed baling wire, but the general movement is slow. The makers at their quarterly meeting, as expected did not make any change in prices, which remain on the same basis as during the previous quarter.

CUTLERY.—There is a moderate demand for table cutlery, but other lines do not instance much activity.

WINTER GOODS.—The demand keeps up for sleigh bells, skates, etc., which continue to be one of the more active features of the market.

NAILS.—A moderate business is doing both in cut and wire nails. Makers as expected at their meeting last week decided to continue the rates of the last quarter.

TACKS.—Business continues of small proportions, being restricted to a few small sized orders. The only change that the makers decided on at their meeting last week was in copper tacks, the discount on which is now 62 1-2 per cent.

HORSESHOES.—Local jobbers have been looking up their stocks during the week and do not find them heavy. Demand, however, is quiet, and business of small proportions. We noted the change in the card rate last week.

SPORTING GOODS.—The demand for guns, ammunition, etc., is, as noted last week, not so brisk as it was, but trade in them has not been an absolute blank for some fair sized orders have been sent out.

TOOLS.—Business is dull and uninteresting, with no call for any kind except an occasional order now and then.

SUPPLIES.—Plumbing and building supplies continue quiet, with nothing special to mention in either line.

WARE.—There is some demand for tinware but it is not remarkably active. A few lots of enamelled preserving utensils also continue to move, but business in this line is distinctly on the decrease.

NAVAL STORES.—The movement in these is small and confined solely to a small demand on local account. We quote: Turpentine, 44 to 45c.; resins, $2.50 to $5.00, as to brand; coal tar, $3.75 to $4; cotton waste, 5 1-2c. for colored, and 7 to 10c. for white; oakum, 5 1-2 to 7 1-2, and cotton oakum, 10 to 12c. Cordage—Sisal, at 9 3-4c. for 7-16 and upwards, and 15c. for deep-sea line; pure manilla, 11c. for 7-16 and upwards and 12c. for smaller sizes.

METALS.

The heavy iron metal market continues in the same unsatisfactory state. There is very little doing in Scotch pig and a small business in Nova Scotia iron. The statistical position of pig iron in Scotland continues strong, but the fact does not appear to have much influence on values of makers' brands. In tin plate there is nothing special, the business for importation being practically closed and supplies are considered to be ample for our requirements. Canada plates have eased up again, the temporary scarcity of a week or two ago having been overcome by increased receipts. On the whole the situation is a very quiet one.

PIG IRON.—The pig iron market continues in the same dull and unsatisfactory state, with the sale of an occasional lot of Summerlee ex wharf at $18.50, but it is claimed that this has been shaded in the case of a large lot as much as 25c. per ton. In native iron Ferrona pig has been placed at $17.

BAR IRON.—Bar iron has shown rather more life during the week, several goods sized lots changing hands on the standard basis.

SCRAP IRON.—The market for scrap is dull and featureless with prices nominal at $15 to $16.

TIN PLATE.—There is an ample supply of tin plate and business is small, importations being practically finished for the season. The tone of values is easy at $3.15 to $3.20 for cokes, and charcoal $3.75 to $4.25.

CANADA PLATES.—Business is somewhat quieter, and, with fresh supplies to overcome the temporary scarcity, the price has reacted again to the basis of $2.45.

TERNE PLATES.—There is no change in ternes, which are nominal at $7.25 to $7.75.

GALVANIZED IRON.—Demand for galvanized iron has been satisfactory and prices are steady at 4 3-4 to 5c. for No. 28 guage.

SHEET IRON.—There is a quiet trade doing in black sheets on the basis of $2.25 to $2.40, while demand for Russian sheet iron has been rather better during the week. Prices of it remain unchanged at 10 1-2 to 11c.

HOOPS AND BANDS.—There is nothing new in hoops and bands, business being of a moderate sort. We quote as before $2.35.

COPPER.—This article is steady with business quiet. We quote ingot copper 11 1-2 to 13c.

TIN.—Tin has not furnished any important sale during the week, and we quote prices steady, 21 1-2 to 22c., with bar tin 25c.

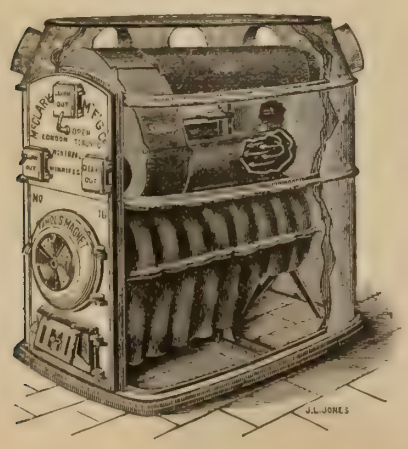
ANTIMONY.—There is only an enquiry for very small quantities. Prices remain 10 1-2 to 12c.

SPELTER.—The market is quiet, and we quote last week's price, $4.60 to $4.75.

LEAD.—Occasional sales of pig lead at $2.80 to $3 is all there is to note. Sheet lead remains $4 to $4.25.

ZINC SHEETS.—There is a moderate movement at steady prices, $5 to $5.25.

CEMENT.—There is a good demand for cement at the advanced prices, and orders are coming in freely for fair sized lots at from $2.10 to $2.20 for English and $1.90 to $2 for Belgian brands.



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Famous Magnet

NO. 14 AND 16

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London, Toronto, Montreal, Winnipeg

ADAM HOPE & CO., HAMILTON

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"Pioneer" and "Sloss"

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These are fine foundry irons, being strong and large scrap carriers.

Also all the well-known—

Scotch Brands,
Broken Car Wheels,
and Railway Cast Scrap.

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Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.

FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,

CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

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They are Leaders and Sure Profit Makers.

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Successors to The E. & C. Gurney Co.

HAMILTON - - ONTARIO.

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M. MAYER, Propr.

NON-XLL

Cutlery

WARRANTED

And the Most Complete Lines of Cutlery of all descriptions.

MONTREAL Markets Continued.

Stocks on spot are light but some good shipments are close at hand. There is only a moderate demand for firebricks with good supplies on the market, quotations ranging from $16 to $20 per 1,000 ex ship.

PAINTS AND OILS.

There is a good business doing in leads and paints at steady prices, the volume of trade passing being fully equal to that for the corresponding period last year. A moderate business is doing in linseed oil at last week's prices. We quote: Choice brands of white lead, Government standard, $5; No. 1, $4.75; No. 2, $4.50; No. 3, $4.25; No. 4, $4; dry white lead, 5c.; red lead, pure, 4 1-2c.; No. 1, 4 1-4c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, raw, 59c., boiled, 62c.

GLASS.

The glass market has shown some activity in a small way during the week. We quote the $1.35 basis, but this price would be possibly shaded in the case of a round lot. Putty in bulk continues at $1.85.

PETROLEUM.

There is a fair movement in petroleum but prices are lower. Wholesalers are cutting prices for Canadian, selling single cases at 12c and the refiners have had to follow suit. Refined petroleum is moving out in a satisfactory manner, the demand being fully up to the average for this season of the year. We quote Canadian at 11 1-4c. in shed in Montreal for round lots, and 12c for small quantities. American petroleum, 16 1-2c. in car lots, 17c. in 10-bbl. lots, 17 1-4c. in 5-bbl. lots, and 17 3-4c. for single barrels, 2 per cent. off for cash. American benzine, 23 to 25c.; Canadian benzine, 10 3-4c. Petrolea; 12 1-2c. Montreal.

MONTREAL TRADE NOTES.

Mr. Jas. Crothern is reported to be one of the largest holders of Canada plates this fall.

Mr. F. Massey, of the Gurney-Massey Co., says that the stove trade this fall is about the average one.

Southern advices are of a decidedly stronger tenor in turpentine, but there is no change in the spot prices.

Simpson, Hall, Miller & Co. are now practically established in their new quarters on Notre Dame street.

H. McLaren & Co. have been placing some good lots of Magnolia Metal for bearings with the Street Railway Co. here.

The Fox cutlery is meeting with a favorable reception wherever it is introduced, according to Painchaud, Squire & Co.

Frothingham & Workman state that the demand for sleigh bells and skates is if anything in excess of that for the corresponding period last fall.

Advices to commission agents here state that Glasgow stocks of pig iron are very much lower than at the corresponding period for several years.

Wm McNally & Co. have some large lots of standard English and Belgian brands of cement close at hand. They report the market firm at the advanced prices.

McArthur, Corneille & Co. state that they are advised that the shipments of cutch from Calcutta are 20,000 bales less than for the corresponding period last year.

W. H. Cottingham & Co. are receiving testimonials every week from carriage builders who have been using Mander's varnishes. They direct attention to advertisement in this connection.

The Wm. Clendinneng, Son, Co., Ltd., have been filling quite a few orders for stove fittings recently. They are prepared to execute orders for all store dealers at the shortest notice for the lines specified in their "ad."

The Glenboig Scotch fire-clay drain pipes, of which Messrs. Francis Hyde & Co. are the agents, are meeting with general commendation from sanitary experts, being exceptionally free from kiln cracks or other defects, and the glaze both inside and outside is fine.

TORONTO MARKETS.

TORONTO, Oct. 13, 1893.

HARDWARE.

Business does not exhibit as much activity as a week ago, although at the same time the movement is fully up to the average. Demand is still principally for horse shoes, horse nails, rope, halters, cow ties, grain scoops, axes and ax-handles. A good demand is also reported for gas fixtures and lamp goods. Generally speaking there is a good sorting-up trade doing. Hay-baling wire continues to receive a little attention. In rope business is quiet and prices lower. Fair assorting orders are still reported for cutlery. Nails are in fair request. Horse shoes have been advanced about 15c. per keg all round, and there is a brisk demand reported. There is not much doing in ware except tinware. Plumbers' supplies are looking up, but builders' supplies are as dull as ever. Payments are generally reported to be a little more satisfactory than a week ago, but there is yet plenty of room for improvement.

WIRE—Principal demand in this line is for hay-baling wire, although some orders for ordinary fence wire are being received.

ROPE—Although there has not been much business doing in this line, prices have been advanced ½c. per pound. We now quote: Sisal, 9 ~~to 9¼~~c. for 7-16 in. and larger, 9½ to 9¾c. for ¼, 5-16, ⅜ in.; New Zealand 8½ to 8¾c., jute 7¼ to 7½c.; manilla, 10¼ to 10½c. for 7-16 and larger, 10¾ to 11c. for ¼, 5-16, ⅜ in.

CUTLERY—Nice assorting orders are still being received, but no special features have developed.

NAILS—No large orders are being received either for cut or wire nails, immediate wants having been supplied. Horseshoe nails are going out freely without any change in price.

TACKS—There is the usual quiet fall trade doing in this line at unchanged prices.



HORSESHOES.—Orders have been coming in this week at a lively rate, although the bulk of them were taken before the travelers were notified of the advance. The advance was 15c. per keg, Montreal, Toronto, Hamilton, London, all being affected to that extent. The Toronto price is now $3.80 per keg.

CHAIN.—Cow ties are still going out fairly well, but in coil chain there is scarcely anything doing.

SPORTING GOODS.—Trade is keeping good in this line, although there is no special feature to note.

WARE.—There is a fair business doing in tinware, but the demand is principally for fall specialties. In peerless and enamelled ware trade is moderate only.

PLUMBERS' SUPPLIES—Trade in this line has improved considerably during the week, both on city and on country account.

BUILDERS' SUPPLIES—Business in this line continues as dull and featureless as ever.

TOOLS.—Trade in all kinds of mechanics' tools is flat.

METALS.

Business continues fairly good in metals, and there has been no material changes to note during the week either as regards volume of business or prices. In pig iron the movement is confined largely to American and Nova Scotian products. Bar iron is in fair demand. In galvanized iron there is a brisk trade doing. Much the same applies to sheet zinc. Tin plates are in good request, but in Canada plates business is of an assorting character.

PIG IRON—There is some American iron coming in, and fair quantities of Nova Scotian are being delivered at around $19. One lot of 100 tons of Nova Scotian is reported to have sold at $18 75 Toronto. Summerlee is quoted at $20 50 to $21, and Carnbroe at $19 75 to $20, Toronto.

Rogers, Brown & Co., Buffalo, report the Toronto pig iron market: This week has recorded a season of exceptional quietness as far as sales are concerned. There has been some enquiry, but a waiting policy seems to have again seized the trade. Purchases are being put off from ten days to a month, carloads or fifty tons being ordered forward for immediate needs. We quote for cash f. o. b. cars Toronto, in bond: IX Foundry strong Coke Iron, Lake Superior ore, $15.05; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14.55; 2 Foundry Strong Coke Iron, Lake Superior ore, $14.05; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17 55; Southern Soft 1, $13.35; Southern Soft 2, $12.85.

BAR IRON—Demand keeps fair at the $1.95 basis. There is quite a lot of sleigh and shoe iron and steel moving.

HOOPS AND BANDS—Demand is only moderate, no large sales being reported; $2.50 to $2.60 per cwt. for 1 inch and upward is the idea as to price.

CORRUGATED IRON—Much as before; $4.75 to $5 per square is still the idea for

MARKETS.—Continued

small lots. "Owl" brand is quoted at $3 to $4 per square for patented and $4.25 to $7 for galvanized, according to gauge.

GALVANIZED IRON—There is a brisk demand reported for this article. People are anxious to place import orders before close of season, as freight rates advance Nov. 1. We quote $4.75 to $5 for 28 gauge.

INGOT TIN—Trade quiet. Lamb and flag is quoted as low as 21¼ to 22c. with straits still lower.

INGOT COPPER—The market still rules low for this; standard brands are quoted ordinarily at 12 to 12½c., but round lots can be got a shade lower.

SHEET IRON—Not much doing. The advance of 10c. per cwt. has been maintained. We quote 22 to 24 gauge $2.50 to $2 60, and 26 gauge ¼c. extra.

SHEET ZINC—Is going out freely at 5½ to 5¾c.

SPELTER—There is not much doing, although a few sales are reported for import at about 4½ to 4⅝c.

TIN PLATES—Are going out freely, both in charcoal and coke.

TERNE PLATES—Trade continues to be smaller in volume than is usual.

CANADA PLATES—Orders for this are only of an assorting nature, most retailers throughout the country having received the shipments which were ordered through their dealers for import direct. We quote all dull at $2.65, half polished at $2.75, and all bright at $2.90.

SOLDER—Much as before. We quote 15¼ to 16½c. for half-and-half and 14½ to 15½c. for standard.

ANTIMONY—Demand continues light and prices low, the ruling figures being 11 to 12½c.

LEAD—A few good sales of round lots are reported at private figures; ordinarily 3 to 3¼c. is quoted, but large lots have been shaded.

GLASS.

Nothing materially new has been developed in this line. Trade is fair and principally in the smaller sizes. Double diamond has so far had a larger sale this fall than last. As to price, the idea is still $1.25 to $1.35 for first break. Business continues good in plate glass, although not many orders for carlots have been booked.

OLD MATERIAL.

Dealers in old material say: "Although we complain of dull markets here, we have every reason to be thankful we are not in the States, for old material is really in a deplorable condition owing to the monetary depression in that country." However dealers are looking forward to a change in the near future. Prices unchanged. We quote prices paid by dealers as follows: Agricultural scrap, 60c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40 to 45c. per cwt.. No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings and turnings, 10 to 15c.

PAINTS AND OILS.

Some improvement has developed, and trade is now fairly brisk in both city and country, and payments are reported to be pretty good for this time of year. Demand for white lead continues fair and much about the same as a week ago, with the base price unchanged at 5c. Varnishes are a little quieter than they were, but there is no change in prices. The feature of the week has been an advance of 2c. per gallon in turpentine, the price now being 46 to 48c., the latter figure being for outside points, freight allowed. In spite of the advance there is rather a better demand for turpentine than there was a week ago. There also appears to be a better enquiry for linseed oil; prices remain unchanged at 59 to 61c. for raw and 62 to 64c. for boiled. In prepared paints there is some movement in small lots, but trade on the whole in this line keeps quiet. There is not much doing in glue or fish oils.

PETROLEUM.

Trade continues brisk in Toronto at unchanged prices. We quote: 5 to 10 bbl. lots, imperial gallons, Toronto; Canadian, 12½ to 13c.; carbon safety, 16½ to 17c.; Canadian water white, 17c.: American water white, 18½ to 19c.; photogene, 22c.

The Petrolia Advertiser, in its weekly report, says: So many of our prominent oil men are at the World's Fair that the Exchange is practically deserted. The only buyers of crude are the refiners, who insist upon it being delivered in their own tanks. Outside speculative buyers are now unknown. This week the Imperial Oil Co. have lowered the price from $1.10 to $1.07. How long another and more serious drop in price may be averted depends entirely upon the action of the producers, who seem to have become thoroughly demoralized and utterly indifferent to their future position—anxious only to find a sale, at the best price they can get, for their product as quickly as it can be pumped, wholly regardless of the effect such tactics may have upon their future existence.

HIDES, SKINS, TALLOW, WOOL.

HIDES—Trade in hides continues much the same. Prices remain unchanged. Butchers' are receiving 4c. for No. 1 raw hide and 3c. for No. 2, 4¼c. for No. 1 steers weighing 60 lbs. and upward, and 3½c. for No. 2.

SKINS—Nothing new to report in skins. Freshly slaughtered butcher skins are fetching 55c., and country lots from 25c. to 50c. Chicago skins, freshly slaughtered, are selling on this market from 25 to 50c.

TALLOW—Fair demand, supply a little scarce; dealers are paying 4½ to 5c. according to quality.

WOOL—Little or nothing doing in this article; local manufacturers are a little cautious in buying at present. Prices are unchanged. We quote: Canadian combing, 17 to 18c.; clothing, Southdown, 20 to 23c.; extras, 23 to 24c.

MARKET NOTES.

Rope is ½c. a pound lower.

Horseshoes are 15c. higher at $3.80 per keg.

A new machine for facing and tapping loops has been put in by the Gurney Foundry Co.

Thomas Davidson & Co. are getting out an improved milk can bottom for next season's trade.

J. H. Dunlop, the nurseryman, is putting in one of the Gurney Foundry Co's largest 40 h. p. Oxford Crown steam boilers. Before placing his order with the Gurney company he paid a visit to some of the large factories in the States.

Thomas Davidson & Co. of Montreal are said to have sold more stove boards during September than for some time.

Samuel, Benjamin & Co. have got in their stock of grain scoops, and they are said to be showing exceptionally good value.

M. & L. Samuel, Benjamin & Co. are just in receipt of a supply of the new Rapid lemon squeezer, and are prepared to fill orders.

The Gurney Foundry Co. are placing three of their large Oxford hot air furnaces in the warehouse of Philp & Eckardt, Front street west.

The Gurney Foundry Co. are building a new annex to their molding shop. It will accomodate 25 men, and when completed will give, it is said, the Gurney company the largest stove plate shop in Canada.

H. S. Howland, Sons & Co. have just received a large shipment of Halifax skates in the following brands: Star No. 0, No. 7, No. 10, No. 14. The firm announces that back orders will secure prompt attention.

H. S. Howland, Sons & Co. are selling a number of the "Giant" store truck. This truck has not been long in the market, but is proving a most saleable and useful article, and no store is complete without one.

The Daily Metal Market Report of Wednesday says, regarding the tin market: London values 5s. higher. The New York market opened steady; 20.55 bid for spot, with holders asking 20.65, but prices did not respond to the advance abroad. There seems to be too much tin in weak hands to warrant any advance in our market unless London prices can be advanced another £2 or £3 per ton. Market closes dull; spot offered at 20.65, October at 20.70, and November offered at 20.85.

AMERICAN MARKETS.

New York, October 13.

PIG TIN.—The break in prices that took place on Saturday and Monday awakened a little more life in the speculative branch of the market, and enquiry as to the forces at work that led up to the result go to show that manipulation, with a view to disconcerting a few prominent operators, was more conspicuous than any other manoeuvre. It is remarkable, however, that very little tin has been dislodged thus far. Meanwhile the movement of stock into the channels of consumption is comparatively fair, and spot supplies are steadily diminishing, making the statistical position stronger in the face of bear manipulation. Early in the day there seemed to have been something more than a bare chance of buying at 20.60c net cash for prompt or current month delivery, although very little tin was offered at less than 20.75.

COPPER.—The market for ingot was again very quiet and without distinctly new feature. The leading producers,

MARKETS—Continued

it is asserted, are practically out of the market for the time being, but this allegation seems to have become threadworn and has little effect as against the plain fact that smaller producers not only have copper to sell, but accept reasonable bids. As matters stand, some good brands of Lake Superior ingot may be secured at 9 3-4c., possibly at a shade less, in the face of quotations of 9 7-8 to 10c., and common casting copper at 9 1-4c in wholesale quantities.

PIG LEAD.—Of common Western sales to the extent of about 300 tons were reported at 3.55 to 3.60c., and in one or two remote instances 3.50c. was said to have been accepted, reflecting altogether a weak and unsettled market.

At the close the demand was slow and trading basis in actual lead showed little if any advance over the "official" bullion quotation. London cable to the Metal Exchange quoted £9 12s. 6d. for soft Spanish.

SPELTER.—Light sales and slow demand were again the prominent features. The offering did not appear heavier or more urgent than it was on Monday, but continued extreme indifference of buyers left the market in a dull, weakish condition, with 3.65 to 3.70c. apparently the best prices that could be obtained for ordinary Western brands. London cable to the Metal Exchange quoted £17 for good merchant brands.

ANTIMONY.—There is little change in the character of the demand, and prices remain almost stationary at 9 5-8 to 9 3-4c. for Hallett's, 10 1-8 to 10 1-4c. for Cookson's, 10 to 10 1-8 for LX and similar brands.

TIN PLATE.—The demand for cokes keeps up remarkably well, including a fair degree of interest in future deliveries, and prices for that class of stock remain very firm. Bright charcoals and ternes fail to share in the movement, however, and purchases seem to be made easily at former rates.

PIG IRON.—Business in both foundry and mill grades continues on a moderate scale. The demand is spiritless also, and competition is keen enough to keep values low and irregular all along the line. Concessions of 25 to 50c. from the figures generally quoted are made occasionally, particularly in the instance of Southern brands. Scotch pig iron is selling in retail quantities only, and prices show very little change. On lots to arrive the quotations are $21.50 for Coltness, $20.50 to $21 for Summerlee, and $19 to $19.50 for Eglinton. Spiegeleisen and ferro-manganese, 80 per cent., is offered at $56 to $56.50, and 20 per cent spiegeleisen at $25,50 to $26.00 landed here.

STEEL RAILS, ETC.—The situation in the rail market is unchanged. Only small sales are making, the demand continues light, and sales agents still quote $29 f.o.b. mill for heavy sections. Rail fastenings find slow sale, and prices are still rather weak.

INTEREST ON OVERDUE ACCOUNTS.

A correspondent, whose letter appears elsewhere in this issue, writing us as to his experience in charging interest on overdue accounts, touches the one weak point in the matter, and that is the impossibility of collecting interest if its payment is contested by the debtor, unless actual or presumptive knowledge of such being the terms of the sale is brought home to the purchaser. That is, unfortunately, the law of England, however unjust in principle it may be. The rule is doubtless based upon the fact that, if a dealer sells an article for cash, his right of action accrues at once, and if the price is not paid he can enforce immediate payment by suit. Practically, of course, he is debarred from pursuing such a prompt remedy by the injury he might inflict upon his trade by a course so uncompromising, and the result is that if the purchaser chooses to ignore the clear understanding upon which he got possession of the goods he can delay payment until compelled by proceedings at law to make it, and be quit of all liability for interest meanwhile. We should say, however, that the tradesman could enforce his right to interest on the account if he could prove clearly that the purchaser had notice of the terms, but such notice would not be inferred from the fact that the terms appear in print on the invoices or letter head, or circulars sent out by the tradesman. The most feasible method of bringing such notice to the purchaser would be by a registered letter, the receipt of which could be proved. We believe this is a correct statement of the legal rights of the parties in this matterr, but it is one of considerable importance, and we should be glad to hear from any of our readers who can throw any additional light upon it. In the effort to bring about prompter settlements of ironmongers' accounts, however, the moral effect of announcing that accounts are payable or quarterly, and that interest will be charged on those overdue, must be considerable, and would always furnish a plausible ground for energetic measures of making collections. For that reason we should not discontinue the practice, however difficult of enforcement it might be.—Ironmongery.

PERSONAL MENTION.

Mr. P. Bertram of Hamilton, was seen touring the Toronto warehouses this week.

Mr. F. D. Benjamin of M. & L. Samuel, Benjamin & Co. is visiting the World's Fair.

Mr. R. C. Fisher, with Rice Lewis & Son, Ltd., returned to business Thursday after enjoying a well-earned holiday.

Mr. Otto Weiler of Victoria, B. C., was in Toronto this week. He was en route to the World's Fair, but called around to pay his respects to the trade.

These are among the country merchants noticed on the street this week: F. W. Taylor of Sandford, Mr. Fitzgerald of Fitzgerald & Co., Colborne, H. Keys of Weston, C. Mason of Richmond Hill, B. R. Brown of Lansing, Ont.

Mr. H. Frankel of Frankel Bros., iron dealers, George St., has just returned from an extensive visit to the World's Fair, where he has received much valuable information pertaining to the iron trade, and which no doubt will be developed in their extensive trade here.

THE IRON SITUATION.

A very remarkable feature of the times, and which is going on silently, is the cheapening of iron production in this country. The price of an iron like our own Southern No. 1 in Glasgow is $12.75 more than what it costs by two dollars to lay the latter down in Cincinnati. In Pittsburg the ore comes 1,000 miles, and the Bessemer product rules at less than one dollar per ton for the same in the West Cumberland District of England. It is said that orders for finished iron and steel would be gladly taken from England for the American product, if they could at the moment be got. The reason for this is our cheap fuel, our recent reductions in the price of labor, and the low cost of railway freight. A leading paper in England says significantly that if America "can come so near to us with laws made apparently for the purpose of affording extreme wages to the laborer, it might be fair to reason that if they were modified, their products in this direction would come to us not in driblets, but in a steady continuous flow."

There is one point that is, however, overlooked by the foreigner. With cheap iron comes ships of our own make, and unless the depression with us lifts speedily we will soon pass into an epoch of that character that will be astonishing.

The iron now on its way to England goes from Anniston, Ala., to New Orleans and to Derby, in that country. The selection of this route is a trial one, the hope being that even cheaper freights can be secured.—N. Y. Hardware.

The towns of Petrolia, Woodstock, Welland, Chippewa, Lindsay and Collingwood have been added to the list of places designated by the Order in Council of the 26th June, 1893, as places at which petroleum may be imported in tank cars.

Kerosene will take iron rust and fruit stains from almost any kinds of goods, without injuring the fabric. Wash the soiled spot in kerosene as you would in water. The spots must be washed in the kerosene before they have been put into soap and water, or it will do no good.

Complaint has been made to Customs Department that at at many ports where different series of manifestations are issued collectors are omitting to prefix the distinguishing letters, and collectors have been instructed that the utmost care must be exercised in future by the officers of the various stations, in order that the manifests from each of their stations may be received at the receiving port with the prefix letter thereon, thus enabling the inspector on arriving at such receiving port to satisfy himself that the numbers for the various series are absolutely complete.

VIEWS AND INTERVIEWS.

"There's a nice rifle we're handling now," remarked one of Samuel, Benjamin & Co.'s salesmen as he picked up the weapon. "It is the Marlin repeating rifle of 1891, and the beauty of it is that it can be adjusted either for rim or centre firing in a moment." And then he laid it across his knee and proceeded to demonstrate what he alleged.

* * *

"No," said a broker to me as he leaned back in his chair, "we are not doing much in pig iron. There is, however, a good deal of American pig coming in. In the west the market is almost abandoned. Of course some of the big manufacturers of machinery, safes, etc., who cannot afford to run any more risks than possible, are still taking Summerlee. But these are about the only ones who are.

* * *

"Well, trade in tin has not been so good this season as usual," said a dealer, "the trouble is the can manufacturers have not been making as many as usual. July and August should have been big months, but they were not."

* * *

"Yes, you can buy solder at almost any price," said a salesman to me, "but you must remember that solder can be got in three or four different qualities, and it is all owing to the difference in the proportions entering into its manufacture. Of course the larger the proportion of lead the cheaper the price. In the standard the proportion of tin is something less than 50 per cent.

BYSTANDER.

FIRE INSURANCE.

Of the many subjects closely affecting the interests of the trader, remarks our English contemporary, few are so little understood as the principles of fire insurance. In most cases the insurer gives general instructions to an agent to effect his insurance. He receives his policy, which he seldom reads, puts it in his safe, and contents himself with punctual payment of the annual premium. The agent on his part is in many cases quite unaware of the legal points and fine distinctions arising on an insurance against fire, and has his mind fixed solely on the liberal commission which he receives for obtaining the proposal The result of this carelessness on the one hand and ignorance on the other is that it frequently happens that when a fire occurs the insured finds that by a fatal blot in the terms of his policy he is barred from legal claim, and is dependent solely upon the generosity of the office in which he supposed himself insured. The majority of the existing offices, be it said, are in almost every case disposed to take generous views, it doubtless pays them in the end to do so, and they seldom take advantage of a mere technical defence to a just claim. Nevertheless, the trader is in a far better position, a more dignified position, too, if he has taken proper precautions in obtaining his policy, and has in his power the legal right to compel a fair settlement. Many points requiring care arise in the proposals for a fire insurance policy. The nature of the business carried on, the construction of the premises, the correct address, the interest of the assured in the premises, are all matters in which a very slight error may imperil the whole of the benefit of the policy. More difficult, and perhaps more important still, is an accurate division of the various classes of goods or property desired to be insured, and the allocation to each of the amount adequate to cover loss. In many cases while the total amount is more than sufficient to cover the total value, the various items may be so divided that while the amount on one class of property is unnecessarily large, the amount on another may be too small, and the ultimate result might mean serious loss. Great care should be taken in securing a proper description and division of properties. We venture to say that not one in ten of our readers has read the conditions on the back of his fire policy, and yet these conditions may have a very serious bearing upon his position in case of loss. We take one instance out of many which might be quoted. Many policies contain what is called an "average clause." This means that the liability of the company is the same proportion of the actual loss as the amount of such loss is of the value of the property. For instance, a stock worth £1,000 at the time of fire is insured under an "average" policy for £500; if the actual loss by fire were £600, the liability of the company would be only £300 as their policy being half the total value, the liability would be only half the total loss. The conditions adopted are usually the same in all the leading companies, but in some there are special clauses, the effect of which is harsh and unfair. Another difficulty felt by many insurers is the modus operandi which should be followed in case of fire; in doubt and difficulty many traders content themselves with leaving the matter in the hands of the company or their agents, and it may be doubted whether they always thus secure fair treatment.

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A YEAR'S BANKRUPTCIES.

The tenth report by the Board of Trade under the Bankruptcy Act of 1883 was issued recently. It states that the total amount of receipts on account of bankruptcy proceedings during the year ending 31st March last was £153,081, and the expenditure £165,400, being an increase of revenue of £5,258, and an increase of expenditure of £4,391. If the dividends on cancelled stock be added to the revenue, there is a surplus of income over expenditure of £15,192. Figures are given showing that the Bankruptcy Act of 1883 has proved far less costly to the taxpayer than the preceding Act of 1869. So far as the Bankruptcy Department of the Board of Trade is concerned, the nominal vote annually taken from Parliament has never yet been touched. Not only have all its expenses been paid from fees, but £352,610 has, during the last nine years, been transferred from fees account to compensate the general revenue for expenditure in respect of bankruptcy proceedings on other votes. The total number of receiving orders in the year 1892 was 4 635, an increase of 419 on the previous year. The liabilities stood at £8,663,031, an increase of £200,090; while the assetts were £3,078,393, a decrease of £74,026. The estimated loss to creditors was £6,691,641, an increase of £261,104. Under the Deeds of Arrangement Act of 1887, the number of deeds for the year was 3,333, an increase of 325. The liabilities amounted to £5.957,022, an increase of £864,574; while the assetts stood at £2,937,315, a decrease of £169,440. The estimated loss to creditors was £3,998,812, an increase of £977,534. While these increases are manifest, the average amount of liabilities on each estate has, under the Bankruptcy Act, decreased from £2,031 in 1890 to £1,890 in 1892, and under the Deeds of Arrangement it has increased from £1,692 in 1891 to £1,787 in 1892. The average estimated loss to creditors of each estate has also diminished under the Bankruptcy Act from £1,525 to £1,443; while it has increased under Deeds of Arrangement from £1,004 to £1,199. The annual amount of insolvency is still far below that of the period governed by the preceding Act from 1869 to 1883, and the average amount of liabilities on the failures is also much smaller. The increases, says an English contemporary, compared with 1891, are hardly to be wondered at when regard is had to the various causes of commercial and agricultural depression, and the figures would probably have been considerably greater but for the fact that some portion of the insolvency which would formerly have appeared in the bankruptcy statistics now appears in connection with the winding-up of limited companies. The greater stringency of recent bankruptcy legislation is tending to improve the position of creditors, while rendering it less easy for reckless or fraudulent debtors to escape the penalties of misconduct. The decrease in the number of schemes of arrangement other than compositions, which, prior to the Act of 1890, frequently contained no security for payment of any dividend, but were mere devices for evading the provisions of the Bankruptcy Act, is clearly a matter for satisfaction.

HINTS FOR CLERKS.

A correspondent of the Michigan Tradesman gives a little of his personal experience with clerks, making a point of the fact that intelligent clerks who have tact, patience and an accommodating disposition will never be a drug on the market, and will find it it only a question of time when their efforts will be suitably rewarded. Speaking of the good points of this particular young man, he says:

"I have watched him closely, and have been more than pleased at the tact and intelligence which he displays in dealing with different customers. In fact, I find myself studying his manner and noting the quiet but effective methods he uses to make sales. One of his strong points is the patience and good humor with which he treats any disparaging remarks about the goods or prices. If the customer complains that the saws are rusty from handling or the price of barbed wire is a quarter of a cent higher than somebody else is offering it for, he does not dispute or avoid the statement, but assumes a sort of half-worn, half-amused look, and, while acknowledging and deploring the rust, still so deftly explains the good points of the saw as to convince the customer that the rust is a matter of small moment in view of its good qualities. As regards the difference in price, he puts himself in the place of the customer and admits that a quarter of a cent a pound is worth saving, but at the same time drops a hint as to giving generous weight, and so secures the sale without cutting the price.

"Another of his strong points is his accommodating manner with customers in small matters without immediate gain. If a carpenter wants a ten-cent file to sharpen his saw with, he takes an interest in the subject and procures a saw from the case to ascertain the proper size required, and six times out of ten the customer will spend a dollar or more before he leaves the store, because of his pleasant and accommodating manner."

EFFECTS OF FREE IRON ORE.

Capt. John Val Lance, one of the early operators on the Wisconsin end of the Gogebic range, and also identified with Menominee range properties back in the eighties, has been in this section during the week. Mr. Val Lance is in the employ of the Spanish-American Company on the island of Cuba, and, knowing he was competent to give an unprejudiced opinion in the premises, the Sentinel questioned him as to what effect the removal of the 75 cents per ton duty on iron ore would have on the mines of the Lake Superior country. "Close most of them," was the prompt reply of Mr. Val Lance. "The Cuban companies can sell ore in all seaboard cities, and even in Pittsburg, at much below that at which the cheapest of Lake Superior companies are now selling. How can we do it? In the first place, Cuban labor is cheap, and it doesn't require an expert miner to break ore on top of ground and shovel it into tram cars in the open air. The Spanish-American company's iron mines butt up against an excellent natural harbor, and the ore is carried in tram cars direct fom the spot where it is broken and dumped into the vessels—the same as in certain districts in Spain. Cuban ore deposits, as a whole, are probably the richest in quality in the markets. We require no timbers, pumps, hoisting engines or shafts, the purchase and maintenance of which represent a big share of the cost of producing Lake Superior ores. There is no theory about the matter of Cuban companies being able to undersell Lake Superior mines in Pittsburg and other Eastern markets if the present duty on iron ore is removed. Cuba is sending in ore to-day, and Cuban operatives know just how much it costs to get their product to the very heart of the American iron market. Yes, the Mesaba might compete with us for a year or so, but steam shovels dig big holes as well as miners, and it will not be very long before they, too, will be compelled to go underground for their ore, and increase its price to pay for shafts, pumps, etc. In Cuba the ore is above ground instead of under it, and the supply is inexhaustible. Free ore would be a good thing for us, but a bad move for the Lake Superior districts."—Milwaukee Sentinel.

NECESSITIES FOR VENTILATION.

If we divide air into 10,000 parts its composition would be as follows: Oxygen, 2,096; nitrogen, 7,900; carbonic acid, 4 parts. Therefore a room containing 2,500 cubic feet of air contains one cubic foot of carbonic acid. When by respiration, exhalations, and other causes this amount is increased to two and one-half cubic feet (or one part to 1,000), it becomes sensible to the nose, and the air in the room must be said to be close, or, perhaps, to some "musty." According to some authorities a full grown man will exhale through the pores of his skin and from his lungs nearly three-fourths of a cubic foot of carbonic acid per hour. Now let us suppose the room above referred to, to be a sleeping room, not ventilated, occupied by two persons eight hours each night. If the doors and windows of the room were closed during the eight hours the natural portion of carbonic acid would be increased to about thirteen cubic feet (or one part to 200), and the occupants would arise in the morning with depressing headaches. A person coming into the room from outside would declare the air to be "foul." Now this is an ex-

treme example, as people usually leave a door or window open to admit some "fresh air."

While the need for ventilation in the day living rooms of a residence is not precisely exacting, there can be no question concerning the necessity for systematic and regular ventilation for sleeping apartments. Five or six persons sleeping in as many average size sleeping apartments in one night will exhaust the vitality from and vitiate two or three times as much air as the whole average size house contains. The air may be freshened somewhat by raising the windows, but that practice is dangerous in results. is a prolific source of colds and sickness, and as a means for ventilation is totally unreliable—not to mention the morning's discomfort of arising in a cold room.

Accurate ventilation will freshen and mix the air every twenty or thirty minutes, will not create unpleasant drafts, but imperceptibly change and mix the atmosphere and keep it wholesome.—From Catalogue of J. F. Pease Furnace Co.

MINING IN PERU.

It is only within the last few years that the more modern metallurgical methods have obtained any foothold in Peru. The first move in this direction was made some 14 or 15 years ago, when a large stamp mill for dry crushing was sent from the United States; owing, however, to the Chilian war, it has never been erected. Semi-modern appliances certainly existed previously at the Cerro d'Pasco, where there is a large camp, and one of the most advanced. Here, however, many of the old methods are still in vogue; the arrastra and a speecies of impoverished Chilian mill are still the most used, and nothing but the more easily beneficiat-ores are treated. Dry crushing and amalgamating plants have been put up in six other centers, all of which are at work and doing well. Smelting operations have as yet only been carried out successfully in two places, one of which is at Casapalca, some 95 miles from Lime, on the Oroya railroad, at a height of 13,670 feet. Various attempts previously made on a small scale, and with probably inefficient appliances,at a similar height, had proved failures; and at Yauli only a moderate degree of success was attained, though the charge had been so well prepared and was of such a character that an absolute failure in smelting would have been well nigh impossible. Dr. Percy, I believe, refers to smelting at great heights, and deemed it impracticable. but it is only a question of providing for the peculiar conditions involved in the fact that not more than 54 per cent. of the air (and consequently the oxygen) we have at sea level is obtainable. When these conditions were carefully calculated and allowed for success attended the first trial of a 10-ton furnace at Casapalca. By augmenting the blowing power to balance the deficiency of oxygen at this height no unusual trouble was found in the water jacket itself. Roasting furnaces are capable of only doing half the work performed by them at sea level, thus entailing a greater cost in additional plant, coal and labor to oxidize a charge sufficient to supply the demand of the shaft furnace. Most of the silver ore in Peru is refractory, being in great part compound sulphides, generally in combination with arsenic or antimony. For this reason preliminary roasting is necessary, not only for smelting, but for amalgamation. All furnaces at present used for roasting as a preliminary to amalgamation are of the reverberatory type. Any innovation in the shape of mechanical roasters has been looked at askance, for the class of labor and variety of ore render the simpler furnace the more certain, although probably not the more economical.

Notwithstanding that the bulk of the lodes worked not only now but in times gone by have been the richer and narrower, there remains some very rich ones, which, in future, are likely to become prominent factors in the silver production. Two are well worthy of notice. The Carahuaca is a segregated lode carrying a mean width of 75 feet for a distance of about 2 1-2 miles, and having some outcroppings plainly visible for 4 3-4 miles. In such a width there is a great deal of poor rock, but on the other hand pockets have been discovered, from time to time, one of which, within the last few years, has produced over $425,000. The average value probably does not exceed, say, 30 oz., and it is for beneficiating this average ore that the works I have alluded to on Remy's system are being erected. Another notable lode in the San Christobal, of the Caylloma district, a fissure traceable for over three miles, extensively worked for this distance by the old people, and in some parts to a depth of over 200 feet.—Arthur L. Pearse.

FUEL OF THE FUTURE.

Fritter—"What are your ideas about the fuel of the future?"

Twitter—"That is a question that does not concern me. I have conscientiously tried to make my life such an exemplary one as to relieve me of all fears of going where fuel will be needed in the future."

Fritter—"You quite misunderstood me. I am thinking of the rise in coal and the necessity, sooner or later, of devising something to take its place. In the event then of a continued rise in coal, what do you think it would be best to burn?"

Twitter—"In such an event I should unhesitatingly advocate burning the coal dealers."—Boston Courier.

WITHHOLDING INFORMATION.

Notwithstanding the indisputable evidence that a change of ideas is profitable, many men otherwise liberal treasure up for their own exclusive use the information derived from personal experience. It is a well-known fact that the most advanced students in all fields are inspired with new ideas from those who seek their aid, and are in return ever ready to give all information in their power. With such examples on every hand a merchant is often found who will not help another, though in a different line, with a suggestion that would save his name and business. There are many salesmen who will let another lose time and sleep accomplishing results that could be readily accomplished by a mere hint from them. There are tinners, plumbers, and heating men who have learned little things, sometimes themselves, but more often from others, that they could give without disadvantage, yet withhold while seeing their fellows suffer great inconvenience from the lack of the information. Though often enough this withholding of information is due to a mean spirit, in far too many cases it is due to indifferent interests or lack of ambition. If you know something that could be as valuable to others as it is to you just see if you don't profit most in the end by giving it to several. "He has got to leave his gold where it won't melt" is often exultingly said of the despised miser, but how much more despicable is the man whose mind is stored with golden information and who daily refuses while living to rise equal to the dead miser by leaving his hoard to become valuable to others when it can no longer benefit him.—Metal Worker.

A NEW ELECTRIC STOVE.

Among the new electric heating apparatus now on the market, remarks an exchange, is an electric stove, which has somewhat the appearance of a round steam radiator, but of peculiar construction. It is suitable for heating offices, stores and residences. It is three feet in height and rests on a nickel-plated top. The radiating surface is broken up into numerous small projections, with the result, it is claimed, of making it a rapid heater, and an economical consumer of current. The connections are made underneath the stove, and the heater is provided with a switch, by which the degree of heat may be regulated. The stove itself is a hollow cylinder, and, as the castings are of thin metal, it takes but a short time for heat to generate.

MANGANESE STEEL.

The use of manganese steel for mine-car wheels is stated to have shown very favorable results as to durability. As is well known,the wear to which mine-car wheels are subjected in some coal mines is excessive, owing to the practice of "spragging" the wheels to slide down the steep grades. The life of the ordinary chilled wheel under these conditions is very short, but it is stated that with a year's continuous use the manganese steel wheels show no perceptible wear, and are apparently in as good a condition as ever. Another point in favor of the manganese steel is stated to be their lightness, as they weigh only about two-thirds as much as the ordinary iron wheel.

PROMISING MINERAL FINDS.

Two mineral finds, which, if present excellent indications be confirmed by successful practical results must prove of the greatest value to the Province, have recently been reported from districts on the Island and Mainland respectively. In the former case the discovery is one of gold quartz ore, said to exist in abundance and of high grade in and about the China Creek and Hiwatches districts of Alberni. In the creek Chinamen and others have for some time been working alluvial gold with fairly good results, and an occasional prospector would bring to Nanaimo or Victoria reports of rich veins of gold bearing quartz among the mountains beyond. Only very recently, however, after the advent of a rather larger number of prospectors, were these reports apparently corroborated sufficiently to interest and secure expert investigation by a provincial assayer. The Hon. Colonel Baker, Minister of Mines, accordingly, a fortnight ago, despatched W. H. Carmichael, Provincial Government Assayer of Mines to the alleged new gold field, directing him to make careful investigation on the spot.

So Mr. Carmichael made for the field of operations, and after a long and somewhat anxious mountain ride reached the present mining camp, almost 20 miles from Alberni and beyond China Creek. The camp itself stands 2,025 feet above the sea, but the gold quartz indications were found on mountains beyond of considerably greater height. Here Mr. Carmichael entered an open country, clear of timber, but full of huge boulders, with a ravine nearly full of snow packed hard, lying 12 to 20 feet deep. On the side of the mountain where most of the prospecting work is being done, Mr. Carmichael found a distinct quartz vein workable by tunneling, and running high up the side of a great hill, which he named Mount Saunders. The ledge here averaged 4 feet 6 inches in width. Mr. Carmichael followed this up and afterwards discovered other quartz veins, stained with iron, running along the mountain, with indications that they continued further to Hiwatches Creek. Most of the ore he found refractory and therefore needing special mechanical treatment, but in some smaller veins the gold could be seen free in fair quantities. Mr. Carmichael also thinks that through obstruction by huge boulders China Creek has changed its original channel. He therefore believes that when the old bed shall have been retraced, alluvial gold finds, probably as good as those of China Creek, may be expected.

Exceptionally good decomposed iron quartz gotten in this district has, as Mr. Carmichael reports, shown as much as $2,326 of gold to the ton, surface quartz $5 to the ton, and ore taken 2 feet in the quartz, varying amounts from $6 to $40 a ton. Silver is also in many cases intermixed, but not in large quantities, and the provincial assayer adds that to develop the resources of the district two good pack trails are needed, after the making of which rock crushing machinery should be brought in.

The second important mineral find is reported from the Upper Sumas district of the mainland, where after some years of desultory work by individual coal prospectors of scanty means, active operations will shortly be begun by an organized company. The coal vein is stated to vary in width, from 5 to 12 feet, the mineral being free from dirt, whilst there is also reported as connected with the seam, a twelve-inch vein of fire-clay. Assuming the approximate accuracy of these reports, the immense importance of the find to the mainland can scarce be exaggerated.

It is yet, however, premature to assert that we have in these instances two absolutely assured mineral fields of the greatest value, the one destined to prove of especial benefit to the island, the other to the mainland. All that can be said is, that present indications seem very hopeful indeed, though before any great work of development can be done in either case there will need to be an introduction of very considerable capital. It is therefore above all things advisable, that full practical tests be made on a modest scale in each case ere large inducements are offered for the incoming of any great amount of capital. Our province has in the past suffered severely from wild-cat mining schemes, based on utterly delusive reports, and every effort should, therefore, in these cases be made to secure full and accurate investigation and honest report. The Minister of Mines may in his official capacity do much to procure this, primarily for the benefit of the investing public, secondarily for the general benefit of the province, as one of the most promising mineral regions of this continent.—B. C. Commerce.

ELECTRIC LOCOMOTIVES.

One of the special features of "Railroad Day" at the World's Fair was a test of power between an electric and steam locomotive. In this tug of war between two competing factors in motive power the result was declared in favor of the steam locomotive. As to the conditions of the test, its fairness or unfairness, and its authority as determining the superiority of one or the other, we are not informed. The fact, however, remains, that in the test of strength as carried out, the superior power was on the side of the steam locomotive. The experiment, of course, is by no means conclusive, but may be accepted as indicating the fact that the problem of the development and introduction of electric locomotives is as yet a question of time and progress. There is, as might be expected, considerable prejudice against what promises to be a new departure in methods. This can only reach the vanishing point when facts make opposition a folly. It is simply human nature to resist innovations. This is observable in all the preliminary steps of progress. The steam locomotive met the same resistance. Scientists blocked its way with grave doubts and ominous predictions, while the popular and uninstructed mind was as usual a noisy negative to Watt and Stephenson. The sea-farer objected to the iron ship, and the seamen are yet to be found who would rather handle huge spaces of canvas than exchange a sail for a smokestack. In every mechanic's shop we find men who are faithful to the old and clumsier tools of their earlier days, and have a prejudice against those of modern make in spite of their proven advantages. All this is in logical accord with one of the instincts of human nature, but in a broad sense are the conservative safeguards of all progress. When unreasonable and unnecessary, it is folly, but up to that point it is a beneficent law. Without this brake on the wheels of progress we would probably know more of the ditch than the highway. Aside from all commercial and mechanical considerations, this sentiment of sticking to old and established methods will always count as a temporary obstruction to what eventually may prove the better or the best. It is, however, a matter of more than ordinary significance that one of the pioneer railroads of the United States should lead the way in the use of electric locomotives. The Baltimore and Ohio Railroad, an historic pioneer in the construction of steam locomotives, has built immense electric locomotives for service in its costly tunnel running under the city of Baltimore. This tunnel is lit up by 4,000 incandescent lamps fed from the same central station that supplies power to the locomotive. The latter consists of three separate trucks coupled together to form one motor. Each locomotive is to have twelve drivers, and the weight on them will be from 90 to 100 tons. The cost of operating is as yet an undetermined question, though in the limited tunnel service in which the locomotives will be used, that if more costly than the steam service, will have other compensatory advantages. It will probably be in such special forms of service that the electric locomotive will have its introduction. The process must necessarily be slow. The change of motive power involves heavy outlays of money, and this alone, as a commercial consideration, is a hesitancy in progress. As between steam and electricity, there is room for both, with the question of ascendancy a matter of future settlement.—Age of Steel.

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Coil, 7 sizes, Trace, Halter, Tie Out, Post, Heel, and Cow ties, Tie Weights and Evener Chains, etc.

Manufactured by

The B. Greening Wire Co., Ltd.

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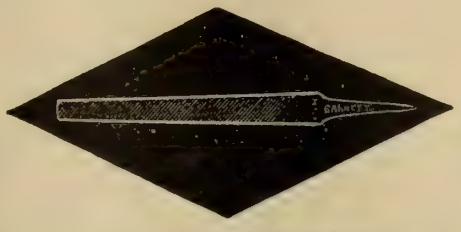
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HESPELER, ONT.

- Blacksmiths' Tools
- AND
- Tube Expanders

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BLACK DIAMOND FILE WORKS,



21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

——MANUFACTURERS OF——

MILL SAWFILES WITH TWO ROUND EDGES FOR BAND SAWS.
DOUBLE ENDED TAPER SAWFILES.
MACHINE BAND SAWFILES.
GREAT AMERICAN CROSS-CUT SAWFILES
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EVERY OTHER DESCRIPTION OF SAW FILES.

Hard Wear Paper FOR Hardware Men

Manillas, Brown Wrapping,
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Leather Manilla, Etc., Etc.

PAPER

We can supply Paper of all Grades, in any size or weight, at the best prices and most favorable terms. Write us for samples and quotations.

TORONTO BRANCH : 29 Front St. West.
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THE E. B. EDDY CO., Hull, Canada

SOME POINTS IN PLUMBING-WORK.

Plumbers have many technical difficulties to contend against, and, as they must tackle and overcome them often in the very heart of the household—the kitchen—a great outcry is made at the inconvenience caused by the necessity for putting out the kitchen fires. The servants, perhaps, give warning, and leave when the plumber is called in, and thus the latter is considered a specially troublesome workman, to be avoided as far as possible. Now, in the first place, to get rid of this bad name every plumber should aim at securing good work, and he should also try to do that work with as much consideration for those about him as possible. He should be neat and tidy in his ways, not spreading his tools all over the place, and when dirt must be made he should see that his mate keeps it within reasonable bounds and removes it quickly. He can, at all events, keep himself tidy and workmanlike, and see that his mate does the same. Plumbers have little idea of the effect upon their own good fortune which close attention to this point would ensure.

There are some districts in England where hard lime water only can be found, and this water causes much trouble and brings discredit to plumbers. Kitchen-boilers become encrusted with the lime deposit, and often fail and leak. Pipes conveying the hot water for circulation or supply become solid with carbonate of lime deposited therein. Circulation ceases in time, and sometimes explosions occur. Plubmers are asked to prevent this state of things, and if they cannot succeed in getting soft water, what are they do do? Let us consider this briefly. The boilers or water-backs usually fixed behind kitchen ranges are very small,and are generally expected to furnish large volumes of hot water at early morning and late night for baths, etc. The intense heat of the flame is then driven round the boiler under a strong draft while the damper is open. The circulating pipes are too long and too small to carry off the water and to circulate it rapidly. The water boils, carbonic acid gas is driven off, and lime thus deposits rapidly in the boiler and circulating pipes.

The proper practice for a plumber is to provide a boiler and cylinder for such circumstances, as large as convenient, without sharp corners exposed to flame, and with access and cleaning doors well arranged. This boiler should have the fire exposed surface regulated ed to suit the work required. With lime-waters the fire surface should be less rather than more than is needed; in other words, if you arrange your system so that the temperature of the water in the boiler shall not exceed 180 degrees Fahr., you will do much to prevent lime deposit and consequent failure, and you may safely reason with your employer that it is better to have a large supply of warm water and a small deposit of lime than a small supply of the intensely hot water and a large deposit of lime. The circulating pipes may be of tinned copper or of wrought-iron screwed steam pipe, 1 to 1 1-2 inch bore, and every length near the boiler should be arranged with a cleaning plug, easily accessible. iThe cylinder may be placed as near the boiler as convenient to shorten the circulating pipes, as the deposit of lime occurs most in those pipes close to the boiler. The level of the cylinder every plumber should be competent to arrange best to suit his surroundings. By placing it well above his boiler quicker circulation of water follows. If the cylinder is on a level with the boiler the circulation of the water will be slow, and the risk of lime deposit will be increased.

The cold supply pipe should be led into the bottom of the cylinder, and so arranged that the cold water entering shall not be shot up into the hot water which is being drawn off at the tap of the cylinder, but that it shall spread itself, as its greater density inclines it to do, over the lower part of the cylinder and through the return-pipe into the boiler. The cold supply pipe should be one of the largest pipes in the system. It is sometimes the smallest, and then causes much mischief. It should also be arranged so as to prevent a tendency to back heating from the hot cylinder. The cold supply may safely be of lead. The expansion and hot supply pipe may best be taken from the top of the cylinder,and well supported on the walls, with a steady rise, and avoiding all dips—present or future—for dips cause air to collect, and are fatal to success. They are the cause of the noises which are so till a fracture occurs. Copper pipes and they also cause frequent bursts in the pipes and discredit to the plumber. A secondary return pipe of very small bore will be found very useful if taken off the distant end of the hot-supply pipe, and led back, well supported, with a steady fall into the bottom of the cylinder. A 1-2 inch pipe is generally sufficient to induce secondary circulation, and it should be fitted with a stop-cock close to the cylinder, and no supply branches should be taken off the secondary return pipe. Brass union couplings are essential in connecting lead pipes to the cylinder. The cylinder for hard water may well be of heavy galvanized iron, and must have ample means of access for cleaning.

Copper boilers, pipes, and cylinders are now being largely used for hot-water supply to houses. If the copper be well tinned inside no better material can be used. The joints must be most carefully screwed and sweated, and couplings must be freely used. Plumbers prefer to do all their work in lead, but unless they master the fitting of copper pipes, this branch of their trade will pass away from them to the coppersmith and brassfitter. Lead pipes must not be used for hot water supplies, unless the pipes are rigidly supported every foot of their length, and, what is still more important, unless the temperature of the water is kept up evenly by constant circulation through every foot of the lead pipe. In the great majority of hot water systems where cost has interfered with quality, lead branch supply pipes for hot water running to distant points, such as pantry troughs, scullery troughs, lavatories, or baths, will be found with no circulation of hot water through them. Consequently, when not in use, the water in them turns dead cold, the water has to be drawn off before the hot comes, and then the sudden change from cold to hot acts on the lead, destroys its cohesive strength,and crystallizes the structure of the metal till a fracture occurs. Copper ippes and boilers will not prevent the deposit of lime, nor will any of the advertised antidotes have any effect on circulating boilers and pipes where water is constantly drawn for use and replaced by fresh hard water charged with lime or magnesia.

The true remedy is to use soft water, and, where this cannot be accomplished, to arrange your apparatus not to raise the water within 20 degrees of boiling point. There are such numerous complaints about the defects arising in plumbing work connected with hot water domestic supplies that the subject forms one of the plumber's difficulties. Let us not lose sight of the fact that such work can be done so well as to require no repairs for a long series of years, and that it is sound, well-devised work which pays everybody concerned best in the long run.

The dangerous practice of fixing stop-cocks on the circulating pipes between the boiler and the cylinder should be prohibited by law, unless when a safety-valve is placed upon the boiler easily accessible and always in good condition. The danger arises every time that these stop-cocks are shut off—whether for cleaning out the boiler or for any other purpose. Then the safety of the household depends upon the care and on the memory of the person employed; and if the stop-cocks are forgotten and left shut when the fire is started an explosion is certain to occur, and the results may prove fatal. when a plumber finds stop-cocks placed on the circulating pipes, as they often are, it becomes his immediate duty to report the fact to his employer, and then if the householder, after being informed of the danger incurred, refuses to allow the stop-cocks to be removed, a letter should be written protesting against the risk thus permitted, and asking to be relieved from all responsibility in event of accident. —Ironmonger, London.

Thos. Firth & Sons, Ld.,

Best Crucible Cast Steel

Steel, Peech & Tozer, Ld.,

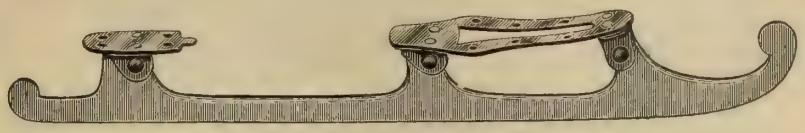
Bessemer Steel,
Open Hearth Steel.

James Hutton & Co.,

Agents.

MONTREAL AND TORONTO.

Boyd's Skeleton Skates



Expert Racer, Crystal Racer, Junior Crystal, Hockey Club, Eclipse, Victoria Club and Dominion.

Best line of Skeleton Skates made. Send for Catalogue of Skates, Hockey Sticks, Snowshoes, and Winter Sporting Goods. Ask for discount sheet.

T. W. BOYD & SON, 1683 Notre Dame St., **MONTREAL**

A. RAMSAY & SON

Established 1842.



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Sole Manufacturers of the Celebrated Brands

UNICORN COACH COLORS,
UNICORN OIL COLORS,
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Etc., Etc.

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Manufacturers of

CHARCOAL PIG IRON

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BRAND "C.I.F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
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Managing Director and Treasurer

STOP!

Do not turn another page before we have told you what we can do for you.

OUR HERCULES METAL

Is the best in the world. Does not heat and suits all kinds of Machinery.

Our Solder is used by all the leading Plumbers, Roofers and Tinsmiths.

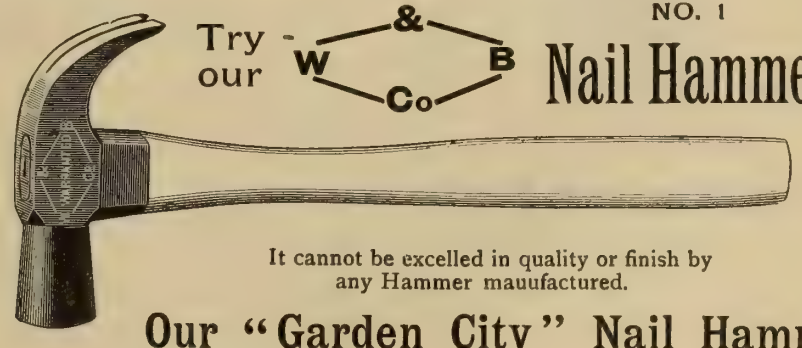
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92 and 94 Queen St. E., TORONTO.

THE WHITMAN & BARNES MFG. CO.

Canadian Branch: St. Catharines, Ont.



Try our W & B Co NO. 1 Nail Hammer

It cannot be excelled in quality or finish by any Hammer mauufactured.

Our "Garden City" Nail Hammer

GET OUR PRICES AND TRY OUR GOODS

Is the best and cheapest "Solid Cast Steel" Hammer on the market. . . .

We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .

New Wholesale Gun and Sporting Goods House

NEW GOODS
.. AND ..
NEW PRICES.
NO OLD STOCK

King's Quick Shot Black Powder,
Quimby's Canvass Covers, Coats, Vests, etc.,
All Grades of Leather Coats,
British Bull Dog and Imitation S. & W. Revolvers.

Large Shipments of Above Just Arrived

Send for our Illustrated Catalogue and discount sheet to the trade—FREE.

The Bowman Hardware and Sporting Goods Co., Hamilton, Ont.



A GREAT LOSS?

If you have any Pipes or Boilers uncovered you are loosing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional Covering you will save 85 per cent. of this loss The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay St., Toronto.

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

George Beard, general store, Longueuil, Que., has assigned.

Hughett & McIntyre, saw mill, Genoa, B. C., have assigned.

A. B. Barron, planing mill, Mitchell, has assigned to J. W. Cull.

R. Wilson, harness maker, Norwood, has assigned to W. A. F. Campbell.

Wilfred Tremblay, painter, Montreal, has compromised at 50c. on the dollar.

The stock of T. Ayotte, plumber, etc., Montreal, is advertised by bailiff for sale.

J. H. Partry, hardware, etc., Que., is offering to compromise at 50c. on the dollar.

Gilbert McEachren, of Balsover, general storekeeper, has assigned to William Cameron of Woodville.

The creditors of John Burns, carriage builder, Toronto, have decided to accept $2,000 from Mrs. Burns for the assets.

Grant & Shipley, general merchants, Ailsa Craig, have assigned in trust to W. A. Campbell, Toronto. They owe $10,000 and assets are nominally the same.

F. H. Thompson, coal and wood dealer, Toronto, has assigned to G. H. Williams, of the Ontario Coal Company. The assignment was the result of a $32,000 writ issued by the Ontario Coal Company a few days previously.

At a meeting of the creditors of C. B. Wright & Son, the well-known cement, lime and brick manufacturers, of Hull, W. J. Campbell, Hector McRae and T. G. Brigham, were appointed the inspectors, and Mr. John Hyde, chartered accountant of Montreal was appointed curator.

The nominal assets of J. M. Burke & Company's Bank at Kaslo are $33,000 and about equal to the liabilities, but much of them consists of real estate, valued high and difficult to realize. "It looks," remarks the News, Vancouver, "as if not more, at best, than 50 cents on the dollar will be realized after considerable delay."

PARTNERSHIPS FORMED AND DISSOLVED.

Marquis & Robitaille, lumber, Quebec, have dissolved.

Laliberte & Arpin, foundry, St. John's, Que., have dissolved; D. Laliberte continues.

Geo. Langwell & Son, manufacturers of metal and gauge glasses, Montreal, have dissolved. George Langwell continues, style unchanged.

P. Garneau & Co., sadlers, Quebec, have dissolved, and a new firm, consisting of P. Garneau and Marie Garneau, has been formed, style unchanged.

A partnership has been registered in Montreal by A. M. Thom as general partner and A. W. Ogilvie as special partner, for $5,000, to Sept. 9, 1898, under the style of Angus M. Thom & Co., railway, electrical and contractors' supplies.

SALES MADE AND PENDING.

The stock of Henri Pepin, contractor, Montreal, has been sold at 20 cents on the dollar.

The stock of L. P. Belair, restaurant, Montreal, has been sold at 30c. on the dollar cash.

The stock of W. M. Dunham, general merchant, Carleton Place, is advertised to be sold by auction 17th inst.

CHANGES.

J. E. Wise, coal, New Westminster, B.C., has sold out to Gilley Bros.

T. B. Carleton, blacksmith, Lakelet, has been succeeded by A. W. Rivers.

Chas. B. Miller, blacksmith, Ayton, has been succeeded by Edward Kister.

W. Neelin, blacksmith, Deloraine, Man., has sold out to McQueen & Foster.

W. Thompson, general merchant, Highland Creek, has been succeeded by R. Collins.

J. L. Galbraith & Bro., general merchants, Fort Steel, B.C., have sold out to Carlin & Lake.

Guy & Co. (Mrs. F. A. Guy), produce and coal, Oshawa, have been succeeded by W. H. Holland.

Dame Rosanna Chevigny has been registered proprietress of the firm of J. Forget & Co., tinsmiths, Montreal.

The Bowman Hardware and Sporting Goods Co., Ltd., Hamilton, is applying for charter of incorporation.

W. T. Bunt, general merchant, Centralia, has removed to Parkhill, and has been succeeded by G. H. Windsor.

The Vancouver Electric Railway, Light and Power Co., Vancouver, has been succeeded by Vancouver and Westminster Electric Tramway and Light Co.

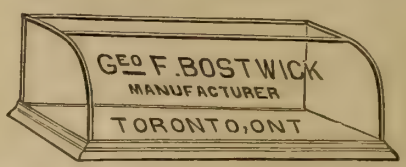
FIRES.

L. & P. Ament, lumber and staves, Brussels, have been burned out.

Blenkhorn & Sons, ax manufacturers, Canning, N.S., has been burned out.

DEATHS.

Robert Fortune of R & J. Fortune, saw mill, Vesta, is dead.



Mantels, Grates and Tiles, Office and Store Fittings and Furnishings.



C. C. HARRIS

Manufacturer of Solders and Antimonial Alloys.

Cor. Wickson Ave. and Yonge St., Toronto.

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Apted Bros.

54 YONGE ST.

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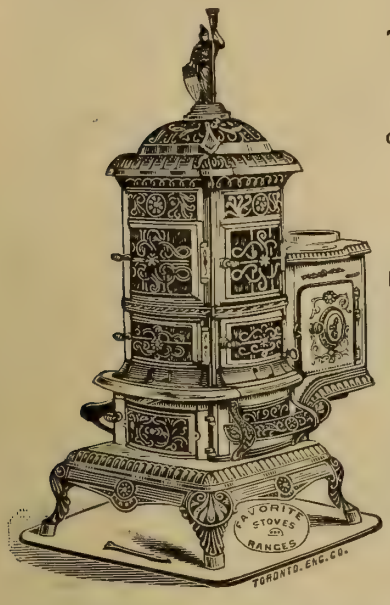
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"THE RIVAL FAVORITE"

SELF-FEEDER FOR HARD COAL.

One Size With Oven. Two Sizes Without Oven.



The most popular of the . . .

"FAVORITE" LINE

Has no equal at the Price.

Orders should now be sent to the undersigned, and will have prompt attention.

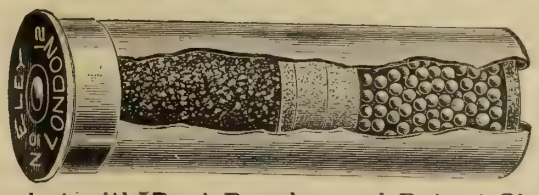
We now have full stocks of these popular Heaters and can ship all orders same day as received. Please let us hear from you either by wire or by letter.

THE JAMES SMART MFG. CO., LTD.

BROCKVILLE, ONT.

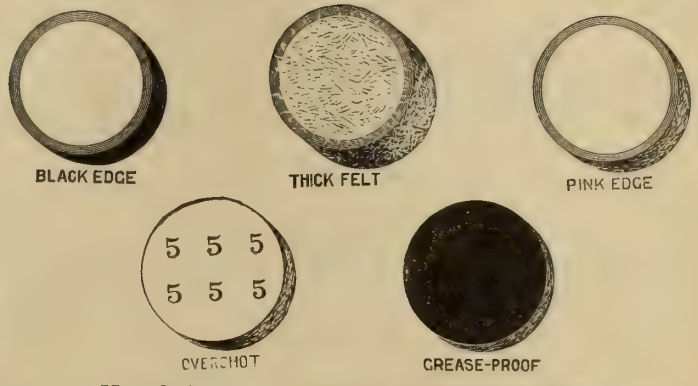
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. . ELEY'S . .
CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. Wholesale Only

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

To the Stove Trade

We carry stock and can . . . . . ship promptly.

We have the following patterns for Repairs, PLATES. UNIVERSAL STOVES AND RANGES, lately made by J. M. Williams & Co., Hamilton; SPLENDID BASE BURNER, lately made by the Toronto Stove Co., Toronto; BRILLIANT RANGE and COOK, FORRESTER, CANDY FURNACE, QUEEN RANGE, lately made by Harte & McKillop, Belleville. . . . . .

The Wm. Clendinneng Son Co., Limited,

145 to 171 William Street, MONTREAL, QUE.

RAZORS, SCISSORS

POCKET KNIVES

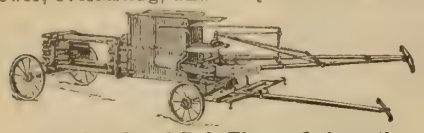


TABLE KNIVES

BUTCHER'S KNIVES

DEDERICK'S PATENT STEEL SHELL HAY PRESSES.

Made of Steel—lighter, stronger, cheaper, more power, everlasting, and competition distanced.



Also all styles of Bale Ties made from the Best Steel Wire.

Manufactured by BOYD & CO., Huntingdon, Q.

MUNN'S LIQUID GLUE

IS THE BEST.

THE ART METROPOLE, Agents.

131 Yonge Street, TORONTO.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—		
56 and 28 lb ingots, per lb	22,	22½
trip "	23.	23½

Tin Plates—*Charcoal Plates, Bright.*

M.L.S. equal to Bradley	Per box	
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 00	4 25
I.X., "	5 00	5 25
I.X.X., "	6 00	6 25
I.XXX., "	7 00	7 25
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.	....	13 00
" " I.X.	....	16 00

Charcoal Tin Boiler Plates.

Coakley Grade—	Per lb.
.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6¼	6¼
26 "	6¾	7
28 "	7¼	7¼

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

¾-inch	10½c
4-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
1/8 "	2 35
¼ " nd thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2¼, 2¾
26 "	2¼, 2¾
28 "	2¾, 3

Canada Plates.

Blaina	½ bright	2 75 ....
Abercarne		2 75 ....
Lion		....

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6	6	3-5
" ¼ " "	4½	5	
" 5-16 " "	4½	4¾	
" ⅜ " "	4¼	4½	
" 7-16 " "	4	4¼	
" ½ " "	3¾	4	
" ⅝ " "	3½	3⅝	
" ¾ " "	3	1-5	
Trace, per doz. pairs	$3 60	5	90
German coil, per 100 ft	1 65	2	70
Jack chain, iron, single, per doz yards	0 13	0	50
Jack chain, double, per doz yards	0 15	....	
Jack chain, brass, single, per doz yards	0 20	1	10

Copper—*Ingot.*

English B.S "	0 12½	0 13
Lake Superior	0 13	0 13¼

Bolt or Bar.

Cut lengths, round, ¼ to ¾ in.	$0 22	$0 25
" round & square 1 to 2 in	0 20	0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16	0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17	0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26	0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 19½	0 21
" 35 to 45 " "	0 17½	0 18
" 50 lb and above per lb	0 16½	0 17

Boiler & T. K. Pitts.

Plain Tinned per lb	0	21
Spun " "	0	25

Wire.

Pure, in coils—		
From 1 to 20 gauge	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20	0 21
" " 27 to 30 "	0 23	0 25
" " 30 and up	0 26	0 28
Sheets, hard-rolled 2x4 ft	0 21	0 23

Zinc Spelte .

Foreign, per lb	0 04½	0 05
Domestic "	0 04⅝	0 04¾

Zinc Sheet.

5 cwt casks	0 05½	0 05¾
Part casks	0 05¾	0 06

Lead.

Imported Pig, per lb	0 03½	0 03¾
Domestic "	0 03¼	
Bar, 1 pound	0 04½	
Sheets, 2½ lbs, sq. ft, by roll	0 04½	0 04¾
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04½	0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)	0 15½	0 16½
Standard	0 14½	0 15½
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12	0 13
Other makes "	0 11	0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5	00
No. 1 Do. "	4	75
No. 2 Do. "	4	50
No. 3 Do. "	4	25

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1	20
2nd qualities "	1	00
Barn (in bbls)	0	65

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0	05
Chrome Yellow "	0	11
Golden Ochre	0	06
French "	0	05
Marine Black	0	09
" Green	0	09
Chrome "	0	08
French Imperial Green	0	19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.c wt	1 35	1 40
" " (J.F.L.S.) " "		2 75
" " Royal " "	1 10	1 15
Venetian Red, (best) " "	1 80	1 90
English Oxides per cwt	3 00	3 25
American " " "	1 25	1 90
Canadian "		

Paris Green, per lb	0	15
Burnt Sienna, per lb	0	08½
Burnt Umber "	0	05
do pure	0	08
Drop Black "	0	09
Chrome Yellows "	0	12
" " Lemon pure,		
8 lb. tins, per lb	0	19
Chrome Greens "	0	12
Golden Ochre	0	03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0	69
Extra "	0	90
Brown Japan "	0	65
Brown Japan (Turpentine) p. gal.	0	71
No. 1 Carriage "	1	30
Gold Size Japan "	1	00
Pure Orange Shellac "	1 95	2 05
Hard Oil Finish	1	30
Oil Shellac	1	40
White Shellac	2	25

Linseed Oil (in bbls)

Raw, per gal	0 60	0 61
Boiled "	0 62	0 64

Turpentine (in bbls)

Selected Packages, per gal	0 44	0 46

Castor Oil.

Best, per lb	0 07½	0 08

Cod Oil.

Cod Oil, per gal	0 50	0 51

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet	0 13	0 15
White, extra	0 16	0 18
Gelatine	0 20	0 30
Strip	0 16	0 17
Coopers	0 17	0 19

Liquid Glue.

F. LePage's, dis. 20 to 25 per ct. off list
Munn's, dis. 25 to 30 per cent. off list

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 3 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmcur's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50 pc. } to 50 and 5
Plate dis. 50 pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per lb 100 p. ~~6 00 11 0 01½~~
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c:

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Per 100 ft.	Double Diamond Per 50 ft.	Per 100 ft
United inches				
16 to 25	1.25 ~~30~~	....	1.85	
26 to 40	1.40 ~~30~~	2.~~30~~ 6	2.10	
41 to 50		3.~~10~~ ~~00~~		4 70
57 to 60		3.40 ~~3~~		5.20
61 to 70		3.~~70~~ 6		5.70
71 to 80		4.~~10~~ ~~00~~		6.30
81 to 85		4.~~50~~ ~~40~~		6.90
86 to 90		4.90 ~~80~~		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

NEW ARRIVALS

30 Cases CUTLERY AND GUNS

ALL NEW GOODS.

Finest Finish. Best Value.



NEW ARRIVALS

20 Casks Cattle and Trace CHAINS

10 Tons Coil Chain.

Five Cars Window Glass.

Bowman, Kennedy & Co., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

Per keg 3 80

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each .. 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   Basis—50 to 60 dy..... 2 30
   40dy..... 2 35
   30 dy..... 2 40
   20, 16 & 12 dy..... 2 45
   10 dy..... 2 50
   8 & 9 dy..... 2 55
   6 & 7 dy..... 2 70
2. American Pattern Only
   from 4 to 5 dy 2 90
   3 dy. (lath)..... 3 30
3. Canada Pattern Only
   from 4 to 5 dy 2 80
   3 dy. (lath)..... 3 20
   3 dy. A.P. Fine 3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 60 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 35 per ct.

Pails.

alvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Star R & L Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, 1 lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9 9½	10¼ 10½
¼, 5-16, ⅜ in.....	9½ 9¾	10½ 11
Cotton, per lb.....	18	20
New Zealand	8½	8¾
Russia Deep Sea, per lb..	12¾	13
Jute ..... " ...	07½	07½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1¼ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D, dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 to 40 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P,, 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 special brands net price.

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Sapolio

In ¼ or ½ gross boxes, per grs. 11 30

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross		7 50	12 00
Dessert "	"	21 00	.....
Table "	"	30 00	30 00
Dessert Forks....	"	24 00	.....
Medium "	"	27 00	.....
Table " ...	"	36 00	.....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4¾
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75 p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P. S. & W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ p.c. to 35 p.c.
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
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Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9 00

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Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
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Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
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Broom Wire 6 to 6¾c. per lb.
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Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " " } 4½ 4¾
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
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Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
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Ordinary, discount 25 p.c.
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" S., per doz..... 5 80 7 00
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TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

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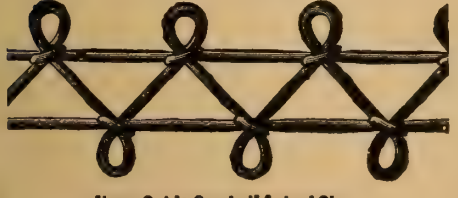
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Pat. Nov. 19, 1889.



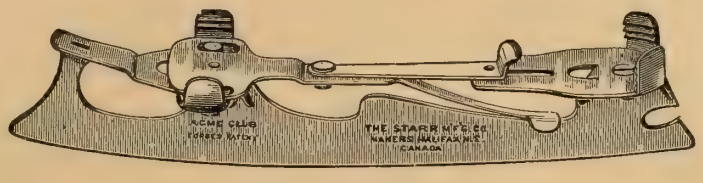
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THE LEADING HIGH CLASS SKATE

All genuine "**Acmes**" have our registered trade mark "ACME," and the Company's name and address in full, stamped on each runner. Beware of imitations.

The Starr Mnfg. Co., Ltd., SOLE MAKERS

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OXFORD "OXFORD" OXFORD

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Our Leaders for 1893--are the

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KITCHEN WITCH RANGES

Put these Stoves on Your Floor and Command the Trade. . . . .

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Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St, Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

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2 x 4 Barb
Plain Twist and
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And Staples for same.

Write for Prices and Discounts.

ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

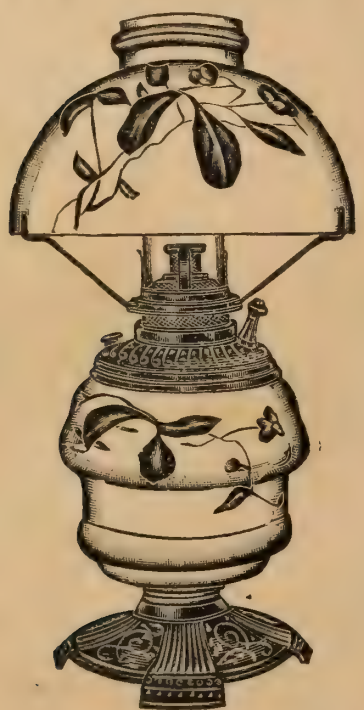
BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

A COSY ROOM



A Glimpse of Comfort

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Bright suggestions which connect . . themselves with .

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The brightest of all bright lights received from

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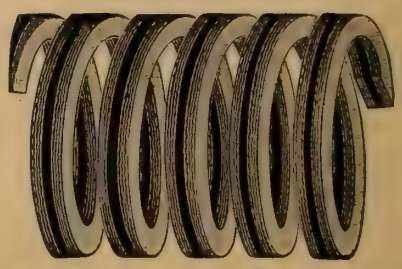
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SPIRAL PACKING
ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., **Toronto.**

"The Seamless Flanged Drip Pan"



Improved Rolled on Edge.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife to cook or lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The improved rolled on edge making it easy to handle.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

SIZES.....	8 x 10	8 x 14	10 x 15	12 x 17
Per Doz.....	**$1.91**	**$2.33**	**$3.20**	**$3.73**

THOS. DAVIDSON & CO., Montreal, Can.

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, OCTOBER 21, 1893. No. 42.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

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Mander Bros. Varnish

Is the First Varnish in the Country To-day

There are a few varnishes that wear well, but they must be mixed or "fixed" before they can be used. Other kinds work all right but are not durable. MANDERS' is the only varnish that is always right at all seasons, and under all conditions.

READ what one of the oldest and most reliable carriage builders in the country says about Manders' Varnish:

"Manders' has proved to be the safest varnish to use right through the year. In my experience of over twenty years it is the best in every respect. I have tested it in comparison with the best American and English makes, and it is superior to all. Its durability is unquestionable.

Send for Price List to the Wholesale Agents for Canada

Walter H. Cottingham & Co.

FINE PAINTS AND VARNISHES. MONTREAL

Sporting Powder

Curtis's & Harvey's

F. FF. FFF.

4 6 DIAMOND GRAIN

Pat. Brown. Basket.
Tower Proof Rifle.



CLYDE MILLS CO.'S . .

SMOKELESS

In ½ lb. 1 lb. 12½ lb. 25 lb.

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What's the News?

World's Fair Grounds.

Chicago, Sept. 13, '93

STEEL-CLAD BATHS

Awarded Medal and Diploma.

Toronto Fair, 1892-93

Silver and Bronze Medals.

Toronto Steel-Clad Bath and Metal Co.

LIMITED

123 Queen St. East, TORONTO, ONT.

STANDARD . .

. . STOVE-PIPE

PATENTED.

Packed 25 joints in a closed crate.
It requires NO RIVETS OR TOOLS to put it together.
The seam does not require pounding down.
It is uniform in size, and, being crimped at small end, secures a close and easy fit.
It has a coating which prevents rust.
It can be bought as cheap as ordinary misfitting stove-pipe. - - - - - - - -
Being nested, secures low freight rate.

Kemp Manufacturing Co.

TORONTO, ONT.

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, OCTOBER 21, 1893 No. 42

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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The production of pig iron in the United States continues to decline. This is evidenced by the figures adduced showing the furnace capacity at work October 1. But this is nothing more than was anticipated. The furnaces of all kinds at work October 1 was 114, a decrease of 11 since September 1, while the gross capacity per week was but 73,895 tons on the former date compar-p ared with 83,434 tons the latter, a decline of 9,539 tons. October 1 a year ago the number of furnaces in blast was 236, and the gross capacity per week 158,027 tons, showing that over 98 per cent. more furnaces were employed then than now, and that the gross capacity was over 113 per cent. larger. Since June 1 the weekly production has fallen off 100,000 tons. What makes the situation all the more unsatisfactory is the fact that in spite of the large decrease in production stocks have increased slightly.

* * *

Germany's position as an iron and steel manufacturing country has been attracting much attention of late. Her exhibits in this line at the World's Fair have excited the susrprise and admiration of thousands. Now the logical German has hit upon a plan for extending his trade in machinery. The plan is the formation of an association of machinery manufacturers. This association will send experts to Brazil, Mexico, Chili and Peru. Some nineteen firms, employing over 7,000 men, are interested in the organization, and each will bear a proportionate share of the cost of working up the trade in the South American republics. The immediate cause which has induced these German manufacturers to take the step they have is the over production on the home market, and the need of seeking outside markets will be greater in the future than ever now, for the inventive genius is abroad in the Fatherland. The trade of these South American countries is undoubtedly worthy of being cultivated. In natural resources they are inestimably rich, and when they get sense enough to cease their periodical internecine struggles foreign capital will step in and develop these resources. Then will come a demand that will be worth catering to. Germany, in the meantime, is trying to secure a share of what is going and paving the way to get a larger slice of that which is to come. It is now in order for Canadian manufacturers to make an extra effort to secure some of this same trade, even if only a few of the crumbs from it fall to their lot. The manufacturers of the United States will make an extra push. That is a foregone conclusion; and Canada canot afford to be less energetic than her neighbor.

* * *

The Spanish ore trade is an important one, and any report regarding it at this time, when the iron trade the world over is so depressed, is of more than usual interest. Such a report has recently been issued by Barrington & Holt, Carthagena, Spain, and was received by the American Manufacturer. It shows the market there to be in a bad way, worse, in fact, than for many a long day. Practically no ore is being shipped. Naturally stocks are getting large and money scarce, resulting in many mines being closed and many laborers being thrown out of work. Owing chiefly to cholera regulations and the results of the coal miners' strikes in England, ore freights have risen to such a degree that it has become impossible for merchants to charter at the high rates ship owners are now quoting; in fact, at the time the report was compiled Mediterranean ore merchants were unable to obtain any steamers except at fancy prices. Now, however, that the coal strike is practically over and the mines are being reopened, the the Spanish ore trade may be expected to in time assume its normal condition. No immediate or radical improvement can, however, be expected at once. In the first place, it will take several weeks to get some of the long idle coal mines into working order again, while the demand, consequent upon the scarcity of supplies and the near approach of the winter season, will naturally tend to keep prices above their normal condition until these wants have been supplied.

* * *

It is to be regretted that Col. Davidson has finally and emphatically refused to accede to the wishes of his fellow business men and numbers of the electorate at large to nominate him for the mayoralty of the city of Toronto. Col. Davidson, as president of the Board of Trade, was a success, and as a business man he has been a success. In fact, as far as we remember, Col. Davidson has proved a success in whatever position of trust he has been placed. And at this stage of the city's history, when a chief magistrate with plenty of business and executive ability is wanted, it is a pity that he cannot see his way clear to accept the highest gift the citizens can bestow, for had he consented to run, there is little doubt about the result.

* * *

Mr. Davidson's plea that business requires all his attention is unfortunate-

ly the plea of almost every desirable business man that for two or three years back has been approached either with a nomination for the mayoralty or for aldermanic honors. There was a time when some of our best business men were found seated at the council board; and if then why not now? No doubt business interests require closer attention now than ten or fifteen years ago. But there is a suspicion in the minds of a good many that it is not altogether business interests that keep desirable merchants from submitting to the wishes of their fellow citizens. The fact of the matter is, the aldermanic standard has depreciated. Each subsequent year has seen it lower than the preceding one, until to-day a good many no longer look upon the position of alderman as an honorable one. "I would not be found in such company," is the expression one frequently hears. This is doubtless one of the reasons why desirable men refuse to be candidates for civic honors. Another, and a probably more prolific reason is the dislike to take a hand in the uninviting task of assisting to unravel the much be-tangled civic affairs. And yet, if there are none who, Cincinnatus like, will sacrifice some of their private affairs for the public good,how are the desired reforms to be accomplished? The Board of Trade, the Ratepayers' Association,and the Trades and Labor Council seem inclined to take united action in the matter, but as yet but little has been done in the premises. And then there is a fear that the mutual jealousy which exists more or less among these organizations will weaken the cause for which they are all striving. We had an instance of this during the municipal elections of 1891. What we want in the mayor's chair, and seated around the aldermanic board is square men and men with good business and executive ability, no matter from what ranks they may come. In some of the cities of the United States the business men have from time to time stepped in and gathered up the reins that hung loose; and what has been done in cities across the line can be done in Toronto if only the right kind of men can be induced to step into the breach.

* * *

The work of the Labor Commission in England has revealed many peculiarities; and of these none are more marked than the divergence of opinions prevailing both among employers and employes. The evidence adduced revealed the existence in the ranks of the unionists of two distinct classes, which have been "dubbed" the Old Unionists and the New Unionists. The former are the more conservative, and are recruited from the ranks of the more prosperous and skilled workmen. They aim first of all to improve the lot of the rank and file of the industrial army. In a word, they demand more efficient inspection, an extension of the employers' liability for accidents, and, to an extent, compulsory arbitration. The New Unionists come from the ranks of the unskilled, the underpaid, and the irregularly employed. They aim at being nothing more nor less than the motive power that shall run the legislative machinery of the country; and one of the first things it would have this machinery evolve is a compulsory eight-hour working day. Some of the workwomen would have the State regulate the wages as well as the hours of labor.

* * *

If the workmen of England are not united, neither are the masters. This too was revealed by the Labor Commission. The Contemporary Review has divided the latter into three grades, the amicable, the passive and the hostile. To a good many it may seem strange that the amiable in regard to unionists and the objects they are fighting for should be the masters whose employes are members of the strongest unions, while the hostile are largely those whose workmen are not so strongly organized. The fact of the matter is that one has learned the practical value of treating with one thoroughly representative body instead of with isolated fragments of the workman, while the other has had to deal with men not only indifferently organized, but actuated by a spirit of arbitrariness and a mind of mistrust. Trades unionism in the one instance is a blessing; in the other a curse. And herein lies the difference between good and bad trades unionism. What we want in both master and man is more moderation; and unless it obtains we cannot expect to exact laws for the betterment of man's social condition wherein the rights of all concerned are recognized and protected. And herein is where the British House of Commons will have its hands full in enacting special measures in the interests of the workman, as it is proposed to do at the next session.

BRITISH vs. AMERICAN IRON.

"Some recent statistics given in relation to the British iron industry make it look as though the British iron industry is gradually decreasing, or else that the efficiency of the workers in the British Isles has vastly increased." These words were used by a well known iron manufacturer in Montreal who has a penchant for figures, in conversation with the correspondent of HARDWARE. In demonstrating his contention he showed by figures in his possession that the total number of hands engaged in the iron and steel industries in Great Britain apart from those engaged in the manufacture of nails, anchors and chain in 1891 was 202,000 as compared with 233,000 in 1881. It was obvious, therefore, that there was a decrease during the ten years in the number of hands employed of over 31,000. It was difficult to learn exactly whether this decline in the number of workmen engaged was due to a falling off in the quantity of iron produced, or whether it was owing to the greater skill of the craftsmen employed and the superior merits of the facilities at their disposal. It was worthy of note, however, that British iron trade returns for 1881 gave the total quantity of pig iron produced at 8,377,000 tons, as compared with 7,228,000 tons in 1891, or a decline in production of over 1,000,000 tons in the ten years. In the case of steel production, however, the output of Bessemer steel in Great Britain in 1891 was 1,640,000 tons against 1,441,000 tons in 1881, while open hearth steel was produced in 1891 to the extent of 1,500,000 tons against 338,000 tons in 1881. Taken as a whole therefore, according to the reasoning of the gentleman, the increase in the production of Bessemer and open hearth steel in Great Britain about compensated for the falling off in the production of manufactured iron during the period under consideration. It was well to remember also when dissecting the above figures that the returns of manufactured iron were returns of puddled bars only, and it might be inferred with some reason, that the decrease of 31,000 workmen above mentioned was largely accounted for in the increase of efficiency and improved methods of manufacture. Taking other statistics into consideration, however, the gentleman expressed the opinion that although the British iron trade had not

actually decreased it had not increased, but was to-day much in the same position as it was ten years ago, which he did not consider satisfactory by any means. In other branches of British iron manufacture there had been notable decreases in the number of employes. For instance, the number of British nail workers in 1881 was placed at 22,396, against 9,943 in 1891, but this enormous falling off in the number of men employed did not of necessity imply a diminution to a corresponding extent in the product, but was due to the substitution of machinery for hand labor, which, owing to the inferior character of the latter in many respects, was as much a matter of satisfaction as regret.

In view of the above facts, he has also been watching the course of prices in the United States with considerable interest inasmuch as it was not at all improbable, despite the prediction of English experts to the contrary, that English iron makers might ere long have to face the force of North American as well as European continental competition in the iron markets of the world. In a small way they already had an illustration of this fact in the manner in which cheap Southern pig iron had ousted Scotch pig from the Western Canadian markets. A reference to some of the figures in this connection was interesting. For instance, No. 1 Southern pig had been quoted this season at $12.75 Cincinnati,, which was about equivalent to the price quoted for the better brands of Scotch pig at Glasgow at the same time, but as the Southern pig had to pay the cost of freight to Cincinnati, Scotch iron at Glasgow was hardly on a parity with it, and he figured on a difference of about $2 per ton in favor of the Southern iron In Bessemer iron also recent quotations in the Pittsburg district had been about equivalent to 50s., despite the fact that the bulk of the ore had to be brought from Lake Superior many hundred miles away as compared with 45s. 6d. in the West Cumberland district for hematite warrants with the ores on the spot or within a distance of 75 miles It was when these figures were considered in connection with the fact that it was not so long ago that the Pittsburg price for Bessemer iron was $20 per ton for an inside that the decline in the cost of American iron was of interest to British iron producers. The facts in relation to finished American iron and steel were much similar to those for pig iron, for if American makers could bring the latter down to a level it was reasonable to anticipate that with their well-known ingenuity in regard to labor-saving appliances, etc., that they would do the same in steel rails, billets, and other lines. In a word, once the English iron maker had really to meet, as he surely had, the competition of his American kinsman, with all the great natural resources at his back, he will find the deluge of iron and steel sent out an altogether different matter from the competition of Germany, Belgium or France, and if present indications were at all reliable that time was not far distant.

ENGLISH BUSINESS WOMEN.

Some interesting facts may be gleaned by the English census returns concerning the struggle of the sexes for professional supremacy. The present showing demonstrates that it is in the lower ranks of professional life that women are numerous. Excluded from the clergy, they are found considerably in excess of the men in the subordinate fields of religious work. In the medical profession there are 100 practitioners, 345 dentists, and two veterinary surgeons. In the legal profession women figure only as clerks, while as teachers their number is more than double that of men; 600 women journalists, with 127 reporters, figure in the lists, with 69 merchants, 3 bankers, 765 brokers and agents, 16 bill discounters, 985 wholesale buyers, 165 commercial travelers, and more than 17,000 clerks. More than 1,000,000 women are registered in domestic and not far from 2,000,000 more in industrial pursuits, but in the higher skilled industries they cut rather a poor showing; nor is their deftness shown to advantage in the making of watches and philosophical instruments, furniture decoration or jewelry, though some 4,000 miners and 45,000 agricultural laborers are in the list.

SOLDERING GLASS AND PORCELAIN

The soldering of glass and porcelain with metals is a novel French process, and its adaptions are likely to be as numerous as they are valuable, says an exchange. It is also simple. The portion of the tube that is to be soldered is, according to an exchange, first covered with a thin layer of platinum, this deposit being obtained by covering the slightly heated glass by means of a brush with very neutral chloride of platinum mixed with essential oil of chamomile, the latter being slowly evaporated, and when the white and odoriferous vapors cease to be given off the temperature is raised to a red heat, the platinum is then reduced and covers the glass tube with a layer of bright metal. On connecting the tube thus metalized, and placed in a bath of sulphate of copper to the negative pole of a battery of suitable energy, there is deposited on the platinum a ring of copper which will be malleable and very adhesive if the operation has been properly performed. In this state the glass tube covered with copper can be treated like a genuine metallic tube and be soldered to iron, copper bronze, platinum, or any metals that can be united with the solder.

A NEW GAS-MAKING PROCESS.

It is stated that a new process has been invented for manufacturing illuminating gas from wood, in regions where wood iss abundant and coal is dear. If this be true, and if, as is further alleged, the process is cheap and applicable to the economical production of gas in small quantities for dwellings and other uses, the invention has a chance for an extended application, with consequent increased demand for gas fixtures, gas fittings and gas fitters work. The possibilities of wood as a material for the manufacture of gas has frequently attracted the attention of chemists, and some processes for utilization of sawdust and shop refuse from wood working establishments for this purpose have been devised. So far no remarkable progress has been made in this direction, but in these days of startling innovations it will not do to judge of the future of any line of invention by the past, unless the great surprises of the past are taken to indicate equally great possibilities in the future.—Metal Worker.

SHOW WINDOW ATTRACTIONS.

Electricity is used to great advantage by enterprising retail storekeepers in the larger cities, not only for illuminating purposes but for window displays, says a contemporary. The dry goods stores especially often produce very beautiful effects with electric lights in their windows, a recent instance being on the occasion of the opening of a new store in Brooklyn. Excellent imitations of revloving pin wheels were shown in one of the windows, the color of the wheels being made to change from time to time, to correspond with the changing hues of the genuine articles at exhibitions of fireworks. Brilliant stars coruscated and twinkled in the same window,while in another a fac simile of a peacock attracted much attention. The eyes and crest of the bird were made brilliant with electric lights, and the spreading tail was studded with tiny electric bulbs, the whole producing a very beautiful and life-like effect. The expense of the display must have been considerable, but as immense crowds were drawn to the store, the proprietors no doubt were well paid for their outlay. It certainly pays to utilize window space to the best advantage for advertising purposes, particularly if the store is situated on a much-traveled thoroughfare.

OLD-TIME METAL TOOLS.

During a residence of two years in a tomb at Gizeh, Wilhelm M. Flinders Petrie collected evidence showing that the tools used in working four thousand years ago were made with the jeweled cutting edges, as is the modern custom. He has given his reasons for coming to these conclusions, and proves in a very satisfactory manner that the pyramid builders used solid and tubular drills, straight and circular saws, and many other supposed modern tools in erecting that greatest of buildings. He also shows that their lathe tools were set with jewels and that they did work with them that would puzzle the modern artisan. In one place he found that the lines of cutting on a granite cord made by a tubular drill form a uniform depth throughout, showing that the cutting point was not worn as the work advanced. The regular taper of the core would also go to prove that the drill was set with jewels on the inside and on the outside alike, thereby facilitating its removal. In some specimens of granite he found that the drill had sunk one-tenth of an inch at each revolution, the pressure necessary to accomplish this having been at least two tons. The capacity of the tools and the skill of the workmen are illustrated by the clean cut they made through soft and hard material alike, there being no difference in the width of the groove when it passes through soft sandstone and granite hard as iron. Nothing is known concerning the material of which their tools were made, or how the jewels were set. The diamond was very scarce at that time, therefore the only logical conclusion is that they used corundum. —Says The Iron Industry Gazette.

THE LIGHTNING ROD.

The efficiency of the lightning rod is among the debateable questions of the present day, remarks Age of Steel. Faith in its protecting virtues was in earlier days of the robust and non-questioning kind. Its installation was duly boomed and cultivated, and in too many instances a credulous public was more or less victimized by perigrinating rogues' and fraudulent rods. Bad material in too many instances resulted in disaster and loss. That protection from lightning is a matter of serious concern is shown by the fact that in the year 1891 not less than 205 lives were lost east of the Rocky Mountains alone, through the action of lightning. From fire tables covering six years, 1885-90, some 2,223 fires were caused by the electric flash, making a total loss of $3,386,826. This record is the more appalling when we remember that 95 per cent. of the casualties occurred between the months of April and December. The question of protection seems to resolve itself from a scientific standpoint—not in the adoption of new methods, but in the improvement in rods and more intelligent work in placing them. It is not likely that in the erratic discharges of electric fluid that absolute protection can ever be guaranteed, but that applied science can do much in protecting property from lightning goes with the saying, and a perfected rod will sooner or later be a fact.

PLANS FOR PLUMBING.

We believe it is not the rule, at least not in the west, to prepare elaborate and detailed plans for plumbers to work from or estimate by, says Sanitary Plumber. The architect is generally satisfied with specifying certain fixtures and perhaps some items which he wants different from the common run of things.

Whether prepared by the architect or plumber, there are many advantages to all concerned, architect, plumber, owner and inspector, in a detailed plan, and a writer in an exchange sets forth a few of these advantages, but only a few. He says a proper set of working drawings for the plumbing of a house, upon which bids are to be made and the responsibility for plan and workmanship is to rest, and which is to be preserved as a guide for future work in changes and repairs, should be almost as minute in detail as the workings for the stairways or carved work. These plans and sections should show every pipe, fixture, joint, stop-cock, and trap, in their relations to walls, timbers, floors, gas and steam pipes, ventilating flues, and give their dimensions. From these plans and specifications a competent plumber should be able, not only to make out a complete list of every length and size of pipe, trap, hanger and fitting that he will need, but to do a considerable part of the work in his shop, and deliver it ready to put in place. It must be admitted that such plans and specifications are rarely prepared, and that when they are furnished they are rarely made in the office of the architect. We do not think, however, that this fact is due so much to the inability of architects to make such drawings and specifications, as to the fact that they are unwilling to take the time and trouble to prepare them unless they are sepcifically demanded by their clients; thinking that any good plumber will be able to settle all the details of the work if the general scheme is only indicated, and that detailed working drawings are only an unnecessary expense. Certainly the course of instruction in our schools for the systematic education of architects includes enough to enable the graduates of such schools to do this kind of work, although it may be doubted whether actual practice in the preparation of such drawings and specifications is sufficiently insisted on as compared with that required in the designing of facades and ornamental carving.

LAKE SUPERIOR IRON SHIPMENTS.

A Duluth despatch says: Shipments from the Lake Superior iron ranges to the Eastern docks and furnaces were very light last week, aggregating from Duluth, Mesaba range, 30,000 tons; Ashland, Gogebic range, 23,000, and Two Harbors, Vermillion range, 19,000.

Escanaba and Marquette shipments from the Menominee and Marquette ranges are very small from the former and fairly large from the latter. On the Mesaba range about the only activity is at the Biwabik mines, which have shipped 70,000 tons this season, two large shipping contracts having been let for winter work. The only mines now shipping, however, are the Biwabik, Oliver, Commodore, and Mountain Iron. The trade is waiting for Congress to settle the tax on ore. Three years ago the owners of very valuable tracts of specular deposits on the almost unknown Atikoka range, about fifty miles north of the Minnesota boundary, and fifty miles south of the Canadian Pacific road, gave options to a wealthy Belgian syndicate, in which King Leopold was said to be interested. This syndicate was to build a railway to the Canadian Pacific railway, build docks and furnaces and ship and smelt ore extensively.

THE MODERN KETTLE.

The dinner kettle in common use 40 years ago, remarks House Furnishing Review, was a tall, straight-sided round tin pail, into which was set a tin dish about half as deep, and slightly flaring, so that it projected a little above the edge. The cover fitted into this dish, and upon the top of the cover was a circle of tin, like a short section of a cylinder, upon which a tin cup was carried. The cup, inverted, telescoped down over the holder. This dinner kettle is still sold, but there are now a dozen varieties in the market.

What is known as the Providence dinner kettle is substantially like the kettle above described, except that it has no cup upon the cover, and is made sometimes with an additional part, a shallow pan or tray for pie or other food. The ladies' dinner kettle is identical with the Providence kettle containing the tray, except that it has a tin handle, most dinner kettles having a wire bail with a wooden hold in the center. These two kettles are sold principally in the East.

One style of round dinner kettle has upon its outside a holder for knife and fork. There is a round kettle about half the height of the ordinary kettle, which is known as a breakfast pail.

There is a kettle called the Western dinner kettle, which is used by railroad men in the West, and is sold also in the East. This kettle is oblong in shape, straight-sided, and with square corners. It has inside a moveable tray, and carried inside is also a flat, square-cornered canteen or flask for coffee. A cup is also carried on a holder upon the cover.

IMPROVED WIRE NAIL MACHINE.

Among the many machine novelties now on exhibition at Chicago is an improved wire nail machine which runs 5 wires at once, and turns out 5 nails at each stroke of the machine. There are two of these machines at work—one weighing only 1,500 pounds, which will turn out 900 fourpenny nails per minute; another larger one, weighing 3,600 pounds, will make 750 eightpenny nails per minute. The decrease of weight of machinery, in proportion to the amount of work done, is about 4 to 1 of the single wire machines. This implies also a great decrease in the power required —about one-half. Twenty-one of these machines, it is claimed, will do the work of 100 single wire machines, and at one-third less cost for labor. The cost of one 5-wire machine is only about one-half that of five single-wire machines. There is also large economy in floor space.

One of the specifications in the patent as allowed is "the feeding of several lines of wire in a machine for making headed articles from wire." This is a sweeping claim, which makes all improvements tributary to the original invention—as did the eye in the point of the sewing machine needle.

If the claims of this machine are not overstated it will greatly reduce the cost of wire nails, and should also, to a certain extent, reduce their price.—American Manufacturer.

ORE SHIPMENT AT NELSON.

Two years ago the Nelson depot was the scene of a striking event. It was when the first crowd of pioneers struck out for the Slocan. Two flat cars were loaded with canoes, boats and supplies; and among the prospectors were men whose names have since been identified with some of the biggest mines in the Slocan. The whole population turned out to wish them God speed.

The scene at the depot on Tuesday afternoon last was not, perhaps, so stirring or so romantic, but it was none the less significant for the future of the country. On Tuesday, for the first time, all the available carrying space on the road was loaded to its full capacity with ores.

The shipment comprised 60,000 pounds of ore from the Bluebird mine, 33,000 pounds from the Dardanelles, and 213,000 pounds from the Noble Five, or 153 tons in all. The approximate value of this ore shipment is $25,000. It will be followed by a shipment of from 40 to 60 tons from the Washington, as well as the before mentioned mines, and later by continuous shipments from Mountain Chief, and before the snow flies many other prospects will be in a position to add their share. Fifteen hundred tons has up till now been actually booked in addition to 500 tons which has been shipped during the last three weeks. But there is little doubt that 15,000 tons is a small estimate of the amount which will be actually produced during the coming winter. The Canadian Pacific will have its resources in West Kootenay taxed to the uttermost to handle this freight. But the attention of the company has at last been aroused to the possibility of the ore traffic, and in consequence will make a supreme effort to keep communication open during at least a part of the winter. The road from Revelstoke will be built to the mouth of the Illecillewaet within the next thirty days, and it is maintained that this will keep communication open till well on in the season.

Old timers might well think when they saw Tuesday's ore-laden cars, and realized what effect the large returns from so many and various mines must have on the outside world, that West Kootenay, having fought a long uphill fight against the forces of ignorance and prejudice and the natural difficulties of her position, had at last, just when everything looked darkest, conquered the situation and stood confessed as the future great silver producing country of the North American continent.—Tribune, Nelson, B.C.

MACHINE SHOP PRACTICE.

In turret machines, if the cutting edge or point of a tool be so placed that a slight difference in the position at which the turret is stopped in cutting position will affect the size of the work greatly, that placing of the tool is wrong. Such a tool should be set so that its edge holds a relation to the turret such that, if the turret be placed on its axis, the cutting point will cross the surface being cut on a tangential plane, and not come closer to the center of the stock than the size of the cut demands.

Few factories run with less loss of power than 30 per cent., and this loss occurs whenever the engine is run, whether there is any work done or not. It is presumed that in the ideal future every tool and machine will be provided with its own electric motor; in the meantime, however, it is thought that a great deal of power may be saved by transmitting it to all shafts at a distance from the source of power on electric wires directly to a system of jackshafts, each of which should be provided with a motor of its own. It is certain that this plan will save one-half of the lost power, if properly carried out. Most shops of considerable size can save the cost of dynamo and motors in one year.

There is no other way so good to emphasize a fact as to reiterate it. Thus there is no other means so good to cool a hot box as to pour on it alkaline or soapy water. The best way to make such a lubricant is to take about five pounds of tallow and perhaps 2 ounces of caustic potash. To this put about one quart of hot water, and then with a jet of hot steam reduce the soapy mass to the consistency required. This lubricant is certainly the most satisfactory one I have ever used where hard duty is required.

Ordinary boiled linseed oil is the best varnish known for cast iron surfaces. Of course, the metal will not absorb the fluid as wood does; so the whole of the gums contained in the oil remain on the surface, where it is hardened by evaporation. It may also be a fact that there is some union between the metal or some of its impurities and the oil, for certainly it dries very soon and very hard.

Casting rusted red will paint better and not scale as much as those in other conditions of surface. On the contrary, the grey surface left after castings are pickled and dried frequently comes off and leaves a bare spot.—Engineering Magazine.

TELLING IRON FROM STEEL.

The simplest way is to pour on the metal to be tested a drop of nitric acid; let it act for a minute, then rinse with water. On iron the acid will cause a greyish white, on steel a black stain. Steel may be distinguished further from either cast or wrought iron by the closeness of the grain, its toughness and its having that peculiar property called temper, which is the power of hardening when suddenly cooled after being red hot. If a bar of steel be made of a bright red heat, and then suddenly plunged into cold water, it will be found to have become harder than any other metal—so hard, indeed, that it will scratch glass, and is as brittle and readily broken as flint. If, says an exchange, a piece of bright, hard steel is held for a moment in the hollow of a clear fire a pale straw color appears on the surface; its hardness is slightly lessened and it is fit for razors, surgical instruments, etc.; if held in the fire a moment or two longer it becomes of a bright golden yellow, and is fit for penknives, and other cutting instruments; held still longer, it becomes bright blue and is fit for watch springs, swords, and other purposes requiring great elasticity; if the heat be carried still farther a brown tinge is seen, and it is now rather soft, but still greatly harder than iron and still elastic; saws, coach springs, and other articles are made from steel at this temper. If the heat be carried to redness the steel will be quite soft when it has slowly cooled, but if suddenly cooled (as by being plunged into water) the original hard temper comes back again. The most curious manufacture in steel is that of lace, which was made several years ago, looking as fine as any brussels lace, and said to be equally soft to the touch.—Mechanical News.

"ON THE ROAD."

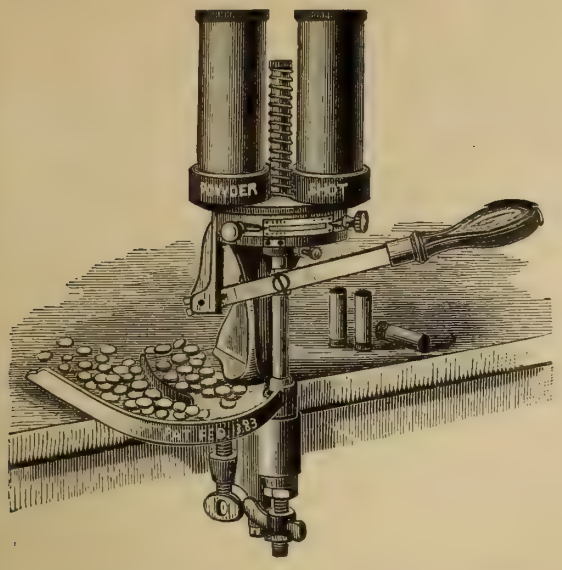
A commercial traveler gives in Ironmongery the following account of his first journey on the road:

When I first commenced my business career, I sat on a high stool with a pen behind my ear and plenty of ink on my fingers, in a dingy city office, where I went through the usual monotonous drudgery and confinement of office life. This to a high-spirited youth lately home from the invigorating life of a high-toned public school, and from the still more recent freedom of the long summer vacation, was, to put it mildly, uncongenial. The code of honor prevailing in a public school is the grandest in the world. The aspirations formed, and high-flown ideas enunciated in my special little coterie of school chums, seemed very far from realization in this so different a life. My staid fellow clerks were very dissimilar to my late bright, sunny companions. The sole aim of everyone in the office "from early morn to dewy eve" seemed to be to add up columns of figures, and copy entries from one book to another. The methodical precision and strict insistance on systems being carried out in detail seemed to me in my ignorance unnecessary and mere waste of time. The meanness and pettiness of one's fellow-men, and the tricks which are supposed to be inseparable from every trade, in fact, the whole business life was so different from the picture I had painted in my boyish imagination, that I think the first few months of my business life were the most unhappy ones I have ever spent. However, I soon settled down, and now I am sure that I should not be happy without a business. The only men attached to the concern who seemed to me to waste time were the commercial travelers, who used to spend a week or two at headquarters three or four times a year. When at home they had comparatively little to do. They would turn up at the office an hour late in the morning without reprimand, and leave almost when they liked. Well dressed and well-groomed gentlemanly men, often brilliant conversationalists, and always amusing or interesting talkers, they would come into the office like rays of light, and enliven us all with their numerous anecdotes and the personal experiences with which they would be brimming over. I always fancied that the governors heaved a sigh of relief when they had started them on their journeys again, and I am more than sure that the person who first gave currency to the expression "Travelers' Tales," had not in his mind Mungo Parke, Spoke, Livingstone, or others of that ilk, but that he must have numbered amongst his acquaintances not a few commercial travelers, and that "Commercial Travelers' Tales" were originally meant.

By them my youthful imagination was fired, and my ambition was turned from becoming a merchant prince to becoming a commercial traveler. I made up my mind that as soon as ever I had mastered my business I would graduate for life on the road. I was perhaps also influenced in my desire for this life by the fact that my father and grandfather had both been commercial knights of the road. Mr. Grandfather used to ride on a horse through the British Isles, from town to town, with his patterns in his saddle-bags, and a pair of pistols in his holsters (antiquated weapons, which are still in the possession of my family), and later, my father had his closed carriage full of patterns, which he used to drive himself through the country; and many were the tales he would tell of how his customers would anxiously look for his coming, and even go out of the town to meet him, to hear all the news of the outside world, which the commercial traveler from many cities could give with so much more spice and detail than the news-letter of the day. Of course I am speaking of many years past, as my father gave up traveling thirty years ago. Now, as our friends across the water would say, "Nous avons change tout cela." Things have indeed altered since, and I am perfectly convinced that traveling had as great difficulties for the past generation as the present, though of a totally different character.

However, all things come to the man who waits, and when I was about 23 years of age, my employer called me into his office one morning, and told me that he wished me to take up a journey, as Mr. Jones had been in bed for a month with rheumatic fever, and he was anxious that the money and usual orders should be got in. The house was only a middling one, the connection on Mr. Jones' journey was poor, and it was in the depth of a severe winter, so that the outlook was not very encouraging, and I found that the actual life was a very different one to that which I had depicted to myself. What seems so easy to the looker-on is often the most difficult to do. Successful traveling is not to be acquired in a day. It requires years of patient, careful study, first to know how to take an order, and next to understand your customers and their requirements, and for you in your turn to be known to them. A connection is half the battle, and for a young man to start traveling to-day without any connection, and for an unknown house, the fight is an uphill one. I have been told by buyers that they have more commercial travelers come into their shop than customers, and ironmongers have frequently remarked to me, "Why, if I listened to every traveler who comes in here, and looked at his samples, it would fill up my whole time all day and every day. I should have no time for anything else."

However, to return to what to me was such an eventful journey. The first town in which I called I was well received. One customer asked me to dinner, and another one insisted upon me having tea with him, and both he and his wife made quite a fuss over me, and I left my first town with three or four nice orders, and feeling considerably "cock-a-whoop." My next town was York, distance a hundred miles across country, and on consulting my time-table, I found that I had choice of two things, either to go forward that night, which would land me in York at half past three a.m., or go to roost where I was and travel on by the first train in the morning, which, however, would not bring me in before the afternoon. Full of energy and enthusiasm, and chafing at the idea of the loss of a day, I instantly made up my mind to go on that night. Full also of youthful ignorance, I had scorned the warm rug (as a useless impediment) which my home folks were anxious I should take with me. It was an icy cold night, with a hard black frost freezing, and not having given a thought for a foot-warmer, I had such a nights' travel as I never wish to have again. I got colder and colder, and was in literal agony. Try as I might I could not get warm; it would have been almost a relief to have sobbed like a child. However, "York," at alst came the welcome cry. I had never been in the ancient city before; so having deposited my pattern cases in the cloak room, and ascertaining that my hotel was up in the town, I sallied out of the station, to find that a blinding snow storm was on, and that the snow was lying about six inches deep. I plodded along for a mile, expecting at every turn to meet someone who would re-direct me, but not a soul was about. To make matters worse, I could not even see an hotel of any sort, it was so dark. At last I spied a light in a window. It was the telegraph office, and one of the operators showed me an hotel, where, after some trouble, I got accommodation at last. I was drenched to the skin, downright miserable, and not much warmer in bed than in the train, so that when I got down in the morning I did not feel at all fit, the snow still coming down. However, there I was, and the place had to be worked, in spite of the still falling snow; so having consulted my call list, I turned out and comemnced my round, but only to meet an unvarying succession of disappointments. Whether it was because I had not acquired the



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persuasive knack of selling, I cannot say. Perhaps it was due to my being personally a stranger; or perhaps the real excuse made was genuine, viz., that as Mr. Jones had not come they imagined that he had postponed his visit till the new year (it wanted only three weeks to Christmas), and in the meantime they had filled up their requirements, and they could not order anything more that year. This was the unvarying tale, and I almost fancy that I cleared out of York without booking a single line.

From York I went to Hull, and it was near the latter town, at a little place called Beverley, noted for its fine old minster, that I had a little adventure. I got in there late in the evening, and found my hotel to be a rambling old relic of the bygone coaching days. After I had finished my supper, the boots showed me up to my bedroom, and I turned in. The room was a large one, which was only half lighted by my solitary candle. Having undressed,and taken stock of the position of the old fashioned four-post bed, I blew out the candle and struck a bee line for it, as thought; after some groping about I found it, and, having clambered up, I got into bed, but although not naturally a nervous man, I was on the floor again like a shot, for on putting my legs in they came in contact with some warm object ensconced between the sheets. I thought I never should have found my candle and matches. Having struck a light, I approached the bed again and noticed that whatever it was which had frightened me was in the bed still. Having put the candle down, I grasped it through the bedclothes, shook it, and was relieved and amused to find it was—what?—a very large old-fashioned stone bottle filled with hot water, which the good motherly old landlady told me the next morning she had put in the bed, thinking, as she remarked, "you looked starved with the cold." I had never used or seen such an article before. From Hull I worked along the northeast coast as far as Newcastle-on-Tyne, and thence back home along the west coast from Carlisle.

If it had been desired that I should get a distaste for traveling, I could not have been sent out under more suitable conditions. However, my master was very kind ,and expressed himself perfectly satisfied with the results under the circumstances, and said that he had not expected that I should have done half so well as I did.

A French screen, lately imported, is three-panelled, six feet high, black satin on one side, and on the other, each panel of a different shade of satin. This screen is entirely embroidered in the most exquisite flower patterns. On the black satin side the flowers are done in their natural colors, chrysanthemums, daisies and nasturtiums, and on the other side are flower done in low tones of olives, pink, brown and yellow.

The dinner kettle forty years ago was a tall round tin pail, and into this was set a tin dish half as deep, with the edges projecting a little over the edge of the outer pail. The cover set into this and had fitted to it a cylinder on which an inverted cup was telescoped. It is still in use with variations and improvements, some being made with trays for pie. The idea is to form the kettle so as to admit of as many compartments as possible, that the different sorts of food and drink can be separated.

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

It is impossible to put a damper on the stove trade now without making a too great draft on truth.—Hardware Reporter.

Kettles for boiling purposes are now made with tubes running diagonally through them, on the principle of the locomotive boiler. Water will boil very quickly in them.

A machine for making tacks was patented in 1806, but not put into practical use until near the middle of the century. Now the world consumes 50,000,000 tacks a day.

Nanaimo's coal shipments for September were much smaller than usual, though larger than those of the month previous. The total amounted to 23,462 tons, East Wellington adding a further quota of 1,955 tons.

A Swedish firm of glass makers are producing a new kind of glass, presenting remarkable brilliancy and clearness. It is said to be composed of no fewer than 14 different substances, of which the most important are boron and phosphorous.

It would be supposed that in these times the trade in luxuries would be the most affected. A dog collar is not altogether a necessity, but manufacturers say that this season is better than any preceding, full prices being obtained.—N. Y. Hardware.

An Axtelle, Ark., woman bought a new fangled teapot from a peddler. Later her husband reproached her, saying that he had the same thing in his store for less money. Her rejoinder was unanswerable: "Then why don't you advertise? One never knows what you have in your store."

The old rail fence is giving way to that of barb wire. Four cents a pound for the latter is cheaper than to bother with the wooden affair. Just now, however, barb wire is slack in demand; the farmer is poor, he is getting little for his produce; and has little left after supplying his necessities for improvements.

A novel contrivance to restrain runaway and pulling horses has recently been patented. The inventors claim that, when in operation, it will bring to an immediate standstill the most powerful and refractory horse. It is fixed upon the box seat, the buckled end of the reins being passed through an aperture for the purpose, and the driver, while guiding the animal with his left hand, can with his right, if need be, instantly raise "The Ready," as the machine is called, and by putting a revolving process in motion tighten the reins to any extent required.—Hardware Reporter.

The Guelich Silica Barytic Company, of Detroit, have disposed of their entire interest in Canada to a Canadian company. The head offices are to remain in Ingersoll, and Mr. Walter Mills, who was instrumental in the purchase, and Mr. Wm. Ewart, of Ingersoll, will still remain leading officials.

Ordinary bricks, boiled in tar for about twelve hours or until they are saturated with it, are increased about 30 per cent. in weight, and are much harder than common ones, unaffected by frost and acids, and perfectly waterproof. They form an excellent flooring ing for workshops or storerooms, particularly in chemical establishments.

The small metal button which turned over on its counterpart, and which was used to fasten doors from the inside 50 years ago, is still in use in old-fashioned houses in New England. It is not to be presumed that a single one of these really good and cheap articles could be found on sale in a hardware store in the country, the bolt having supplanted it.

In the contest between the electric and the cable car as to which shall survive as the fitter the battle seems to be going decidedly in favor of the former. Denver has now joined the list of cities which have decided to substitute electricity for the cables in use, as fast as they become worn out and need replacing.—Ex.

A summary of the lumber sawn in the Ottawa district during this year places the output at about 587,000,000 feet. This is somewhat in excess of the quantity manufactured last year. While the season has been a fairly profitable one for manufacturers, it has been a dull one for the shippers. Prices ruled high at the opening of the season and the cut sold well, but the stringency which ensued on the other side of the line interfered with shipments, American purchasers preferring to allow the stocks to remain in the yards in Ottawa rather than pay the freight and duty.

The experience of many railways both in the United Kingdom and in this country, says Indian Engineer, has shown that six-wheeled vehicles, constructed with a flexible wheel base, though more expensive in first cost, give greater comfort in traveling and effect a certain saving in wear and tear. Further, by the use of six-wheeled vehicles, the risk, in cases of certain accidents, is reduced to a minimum. In 1889 the Government of India issued an order prohibiting the use of six-wheeled vehicles on all State railways in India, supposing quite erroneously that such vehicles must necessarily have a rigid wheel base. The order of 1889 has just been withdrawn.

"Little people," especially in America, have taken out a number of profitable patents. The youngest inventor on record is Donald Murray Murphy, of St. John, Canada, who at six years of age obtained from the United States the exclusive right in a sounding toy. Mabel Howard, of Washington, at eleven years, invented an ingenious game for her invalid brother, and got a patent for it. Arthur G. Smith, at 12 years, patented a rowing apparatus. When only 17 years old Benjamin F. Hamilton, of Boston, took out patents on a number of devices for electric and elevated railways. Sammer Kerr, a youth of 18, has patented a self-feeding pen. Other boys of about the same age have invented useful devices for electric signalling, telephoning, and cigarette making. One has patented a machine which, it is said, turns out 60 horseshoes a minute.—Ironmonger.

"A pair of nippers and half a dozen eighteen inch gas burner tips" was the order given by a jaunty young woman who visited an uptown hardware store the other day, says the N. Y. Sun. "That lady," said the proprietor after her departure, "is an actress, and is just going on the road. All theatrical people while traveling carry nippers and tips with them. The managers of hotels in small towns try to save gas by putting bits of cotton in the bedroom burners, thus impeding the flow. The minute an actor strikes a light and detects this he pulls out his nippers and tips. Off comes the faked burner, and on goes one that lets the full head of gas come through. Before leaving he arranges things as he found them and goes merrily along to get the better of the next economical landlord on his route."

What to do with the buildings of the Worlds' Fair has been a question of considerable interest, and now that the closing day is near at hand, the question is becoming pressing and important. The problem, however, would seem to be solving itself somewhat in the practicability of using the iron construction for other buildings. It is said that negotiations are in progress for the purchase of the Manufactures and Liberal Arts' building. The material is proposed to be used in the erection of a large manufacturing plant. plant. The transportation of the huge arches in their entirety by means of floats and barges to their destination and their subsequent adjustment is said to involve no special difficulty. It is possible that other buildings may be

utilized in the same fashion. Should demolition be determined on in a general way, it goes with the telling that American ingenuity will gather up the fragments so that nothing is lost.—Age of Steel.

The condition of the unemployed chainmakers in the Black Country during the present unfortunate strike is truly lamentable, says Vulcan in Ironmonger. Hundreds of them are patrolling the district as vagrants, disposing of a sheet of verses entitled "The Chainmakers' Lament." Whatever sympathy the poverty of the pleaders might excite would not, I think, be much accentuated by the poet employed for the occasion. I only venture to quote in support of this opinion a single verse from the Chainmakers' Laureate:

Kind friends, condemn not these our lines,
Caused by the hardness of the times;
Remember the Scripture's wise decree—
With you the poor must always be.

ANTIQUITY OF THE ELEVATOR.

An enterprising investigator of the mechanics of our grandfathers has discovered, according to the Philadelphia Telegraph, that the lift or elevator is not a modern invention. An ingenious contrivance of a similar nature was constructed in the middle of the seventeenth century in Paris by a man named Velayer, who called his invention a flying chair. Velayer's lift was not merely a toy; it became very fashionable with rich people on account of its utility. It was simply a chair attached to a rope which was passed over a pulley—or something which did duty for one—and had a weight at its other end to counterbalance the chair and its occupant. It continued in fashion until a mishap occurred to the King's daughter at Versailles. On one occasion the machinery failed when she was half way up, and she stuck there for three good hours before she could be rescued by her servants, who had to break away the wall to release her.

"Flying-chairs" were not much used at court afterwards. Some years later M. Thronier, who dabbled in mechanics in his leisure time, made a similar chair, which he worked from the balcony outside his window. He thus escaped the danger of being shut up in a shaft, as the King's daughter was. M. Thornier kept his arrangement secret, and had many a laugh at the expense of his friends who came to visit him. When they left him he would make some excuse for not going down stairs with them, but when they reached the courtyard they were amazed to find him standing there awaiting them. To their questions he would return jesting replies, and then seat himself in his chair and go up so quickly that they were unable to discover how he did it. One day, instead of surprising his friends agreeably he did so disagreeably, for the machinery broke and he came to grief. He used the staircase after his recovery.

DESULTORY ADVERTISING.

He who depends upon circulars for business-bringing may not be a fool, but all fools use circulars exclusively.

The generic tree of good advertising has one trunk and three big branches.

The trunk is built of newspapers, grounded in a bed of type, and fed on printers' ink.

The branches are first class printed matter, advertisements in directories, and programs, and novelties and outdoor signs of every class.

The branch methods have their value if they spring from the main trunk, but if their existence depends upon themselves they will not live because they never have lived.

The legitimate advertisement in the legitimate newspaper is worth more than any other kind of advertising.

A two-inch advertisement in a good newspaper has more value than barrels of circulars, although circulars are worth something when used in conjunction with first-class newspaper advertising.

The local dealer must use the local paper. He may use other classes of advertising.

The local newspaper should receive from one-half to two-thirds of the local advertising appropriation, the balance to be distributed among legitimate branches.

I speak words of truth, founded on my own experience, and on my knowledge of the experience of hundreds of successful business men, who admit that their success is due to newspaper advertising. Because there may be in your city an exception, or even two exceptions, does not prove the incorrectness of this practical rule.

The wise business man keeps within the beaten track until he knows the condition of the side-track.

A catalogue, well written and printed, cannot be considered illegitimate in any sense, for a catalogue is a necessity, and in many cases is as important a factor in trade as are the goods themselves; but the catalogue must be supplemented by newsapper advertising, so that it may secure profitable distribution.

The sending through the mails of any printed matter, unasked for, unless it be unique, and of unusual seasonable suggestion, has seldom brought in adequate returns.

The giving our promiscuously of circulars on the street has seldom brought business.

What becomes of circulars and flyers given out by any boy or man to passers-by, or left at houses?

Read the answer in the gutters of the town.

How many of the circulars handed to you do you read?

Judge of the world by yourself.

How many people like you do not read the daily paper?

Everyone of you buy it, and pay for it, and that which is bought will be read, editorials, news, advertisements, and all.

The newspaper advertisement is upon the same sheet of paper that contains the news; therefore you and others must see it, if it be bold, distinct and brief.

The first-class local newspaper forces itself into the homes and hearts of the people, beyond the barred doors of blue-blooded aristocracy, even into the charmed circle of the boudoir.

The directory advertisement, unless the directory be the only one, or the leading one, in its city, is worth almost as little as nothing. Limited space in a first-class directory, if the page concontaining the advertisement is referred to in the business directory part, has some value, because it enables the merchant to give a catalogued list of what he does or sells, which the directory will not present; but the retail advertiser has no business to advertise in a directory, for the people in the town already know well enough the class of business he does, and it is not necessary for any directory advertisement to teach them about it, and women do not read directories.

The majority of directories are merely advertising mediums, with no other purpose than to make money out of advertisements.

Programes of church fairs, and of other entertainments, issued in the interest of charitable, or other worthy purposes, must be considered, not so much for the good the merchant will receive from them, but for the harm which may come to him through a refusal.

They are simply honorable and legitimate blackmailing sheets, which the merchant cannot afford to ignore.

Signs on rocks, and painted upon fences, are worth something, but such will not sell goods. They are simply supplementary, and in that capacity have a right to exist.

Stereopticon advertising, in value, is about as thin as the illuminated picture on the sheet.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton. Ontario.
SP

MEETING OF BRASS MANUFACTURERS.

The annual meeting of the Brass Manufacturers' Association was held in Toronto this week. Nearly all the leading manufacturers were present. The principal business was the consideration of the "fixed" prices and the tariff changes. It was decided to adhere to the selling prices agreed upon some time ago. In the matter of tariff changes the Association will oppose any reduction in the duty on manufactured articles. In fact some members are anxious that there should be an advance on particular lines. On the other hand, they will ask that raw material be admitted free instead of paying the 10 per cent. now charged. Robert Mitchell, Montreal, was elected president; James Morrison, Toronto, vice-president, and A. W. Glassford, Montreal, secretary.

BLAST FURNACES.

At the summer meeting of the Institution of Mechanical Engineers, held at Middlesborough, England, Mr. J. Head contributed a paper in reference to recent developments in the Cleveland iron and steel industries. In the course of his paper, says an exchange, he made the following comparison of English with American blast furnaces:

On the occasion of the visit of the members of the Iron and Steel Institute to America in 1890, most engineers and ironmasters from this district were deeply impressed by the enormous outputs obtained per furnace at some of the American smelting works. This was found to be due in a large measure to the use of exceedingly rich ores; but that did not altogether account for the observed results. Mr. James Gayley, one of Mr. Carnegie's managers, has since published the performance of the Edgar Thomson furnace "I" during January, 1892. This furnace is 90 feet high by 21 feet bosh and 12 feet hearth, and has a capacity of about 23,000 cubic feet. The make during the month was 12,706 tons, the average yield of the ore 61 per cent., the fuel consumption 1,700 pounds, or about 15 cwt. per ton of pig iron, the best week's work 3005 tons, the best day's work 511 tons, the temperature of blast 1200 Fahr., and the pressure 10½ pounds per square inch. The volume of air delivered by the blowing engine was 27,000 cubic feet per minute, which is 1175 cubic feet per 1000 cubic ft. capacity, or from 3 to 4½ times what is usual in Cleveland. As regards the advantage obtained by richer ore, that is clearly unattainable here, if local ores only are used. As regards difference in practice, the most noteworthy thing is the enormously greater quantity of air passed through the American furnace than is customary here, and the higher pressure of blast which has to be maintained for enabling it to penetrate the charge. The circumstance that the maximum American output exceeds the Cleveland maximum in about the same proportion as the air passed through per 1000 cubic feet of capacity seems in some measure to explain these wonderful results.

Although the American practice of forcing furnaces, with the consequent rapid destruction of linings, has not found favor generally in Cleveland, still it has raised much discussion and indicated various lines of progress for the future. In America great stress is laid upon large blowing power, and upon blowing every furnace from a separate engine or engines, independently of any others. The quantity of air entering a furnace is regulated by the number of revolutions per minute which the engines make, without regard to the blast pressure obtained. The engines are indeed used as air meters as well as air pumps. Each one is provided with a governor, which keeps it approximately at a uniform speed, however much the resistance may vary. An ingenious centrifugal speed-recorder by Mr. Edward Brown, of Philadelphia, is employed as a check, and has since been introduced here by Messrs. William Whitwell & Co. Cleveland engineers as a whole are still unconvinced that separate blowing is better for their circumstances than blowing into and drawing out of one common main; but nevertheless arrangements have in some cases been made to give the power of separate blowing as in America. At one works a special furnace has been built to use Spanish hematite on the lines of the most recent American practice; but sufficient experience has not so far been obtained for enabling deductions to be made. The lining of a Cleveland furnace lasts any time from 6 years if on hemitate up to 18 and even 20 if on Cleveland. One of Messrs. Cochrane & Co.'s furnaces, which has just been relined, lasted 18 years and served for 500,000 tons of pig iron The American highly forced furnaces require relining in 2 or 3 years which would scarcely admit of such a production as this per lining, notwithstanding the richer ore used.

A RAILWAY UNIT.

The tendency of railways to consolidation is one of the marked features in its later history. This alliance or absorption is in touch with the economics making it a necessity. It may in some cases be precipitated by intrigue, and its nearest cause be purely related to the cupidity and ambition of the larger fish to fatten on those smaller than themselves. The fact, however, is that as arfithmetic is not spoiled by rogues making figures, neither are the great forces of economic law disturbed by designing men making an effort to secure their assistance. In this matter an arrest of process is simply an attempt at the impossible. The railway interests of this and other nations are among the most vital and far-reaching of any in modern progress. What they have done in the way of commercial and industrial development is practically beyond estimate, and for good or evil, autocratic or beneficiary, they are here to stay. In this, as in all other developments, the good and the evil have been coincident. States have been oppressed with exorbitant exactions, railway wars have disarranged the business of great communities, political associations have fostered corrupt practices, the judiciary has had no sanctity for the intruding foot or the cash that tempted a Judas, while the industrial conflicts involving disastrous losses have in too many instances been the direct result of false or criminal economics. These evils, to which there can be no reasonable contradiction, have come about not so much from personal or corporative viciousness as from the helpless anarchy resulting from conflicting systems in which the individual or corporative body was a straw on the stream and not its direct momentum. Railroad managers are not either worse or better than other men, with this in their favor that in intellectual capacity and large heartedness they are generally of the best type. In many cases they have been honestly solicitous in building up business interests along their respective routes, have conscientiously protected life and property, in case of State or national calamities have been generous, and in many other ways have rendered service to individuals and communities. In these things it can be truthfully said railways have not had their due. The fact, however, remains that under present isolated and competitive conditions there are manifest evils that are only removable by a change of methods. How best to do this constitutes the railway problem. To this end there has been the usual amount of quackery donated, in most cases the strangling of the patient rather than his cure being the object of the pseudo physician. Of critical and destructive theories there has been a surplusage, reorganization or construction being generally forgotten in an iconoclastic craze. The economics of the situation are, however, its real and only masters. These, as before intimated, are not in favor of incoherent, straggling, or competing bodies, but in reasonable and available consolidations. These may eventually take the form of Government ownership, but are more likely in a nearer and more immediate sense in a national organization. The ways and means of doing this may be obscure and indefinite, and involve radical changes that are much easier put on paper than put into practice. There is, however, no doubt as to the final object, and it may be accepted as a foregone conclusion that in the unifying of railway interests lies the solution of its problem.—Age of Steel.

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PINKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friend against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, TORONTO

ENGLISH HOUSE: **SAMUEL, SONS & BENJAMIN**
164 Fenchurch St., London, E. C.

STOVE PIPE POLISH

Nonsuch, Rising Sun, Jacoby, Mirror.

STOVE PASTE

M. L. S. Crown.

STOVE PIPE VARNISH

Butler's, Crystal Black, Ever Ready, Resplendent, Easy Shine.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Oct. 20, 1893.

HARDWARE.

Business in general hardware is much what it was a week ago, the movement being of a steady character and extending over most of the leading lines, and it is just possible that the volume of trade is if anything a shade larger. At any rate the counters in most of the general houses appear to be pretty well filled with orders, all kinds of shelf hardware coming in for attention. There is no change in any of the leading lines, but the bulk of the orders appear to be made up of sleigh bells, skates, cutlery, horse-shoes, horse nails, galvanized boot nails, etc. Wire rules quieter, but there is still a fair demand for smooth wire for hay baling. Nails are steady and in fair request. Tinware is moving out fairly well, while plumbers' supplies show a fair degree of activity, but building supplies are unusually dull. We do not hear of any urgent complaints about payments.

WIRE—There is a moderate movement in smooth wire for hay-baling purposes, and we note also that some lots of barbed wire have been moving during the week, but this line is rather quiet than otherwise.

CUTLERY—Assorted lots of table cutlery continue to make up a fair share of the orders that are going out at present, and it may be noted that the demand runs a good deal this fall to fine quotations despite the talk of hard times, etc.

WINTER GOODS—The demand for sleigh bells and skates is fully maintained, both lines showing considerable activity, in fact they still furnish the bulk of the movement.

NAILS—Makers say that business is fair with them, and jobbers note a steady if moderate call for both cut and wire nails at the standard rates There have been quite a few orders for small lots of galvenized boot nails also during the week, as well as a good volume of trade in horse nails under a steady call.

TACKS—We noted the only change there has been in tacks last week, and business in them is of moderate dimensions.

HORSESHOES—When fifty and one hundred box lots of horseshoes are moving it is a sign of a good volume of business, and the same is to note this week, the recent advance having apparently induced buyers to take hold more freely.

SPORTING GOODS—Toward the middle and close of last week there was a lull in the demand for this class of articles, but the sportsmen evidently want further supplies, for the week has witnessed some good sized orders for ammunition, guns, etc.

TOOLS—There is no special features to note in this line aside from a small business in axes, axe handles, etc.

SUPPLIES—Plumbers' requirements are evidently greater this week, for business in supplies for them has been rather better, but building supplies are duller than is usually the case at this season.

WARE—A fair movement to note in tinware, but in other lines business is nil.

NAVAL STORES—This line is dull and unchanged, with no movement in anything of special importance. In fact ship chandlers complain that the season has been disappointing. We quote : — Turpentine, 46c. ; resins, $2.50 to $5.00, as to brand ; coal tar, $3.75 to $4 ; cotton waste, 5½ for colored, and 7 to 10c. for white ; oakum, 5½ to 7½c. ; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep-sea line ; pure Manilla, 11c. for 7-16 and upwards and 12c. for smaller sizes.

METALS.

Trade in heavy iron and metals continues as quiet as ever, and what movement there is of a very moderate character. In fact the advance in freights which takes place every fall, and which usually makes itself felt in the way of an increased movement of heavy material in anticipation of it has not been felt as a factor yet. Buyers generally maintain their indifferent disposition, and in no line is there anything very special to comment on.

PIG IRON—Supreme quietness sums up the position in pig iron, a few small lots of Scotch pig moving on the basis of $18.25 to $18.50 ex wharf for Summerlee and equal brands. Canadian pig iron has been moved at $16.75 to $17.00, and we quote : Summerlee, $18.50 to $19; Eglinton, $17 to $17.25; Carnbroe, $16.75 to $17; Langloam, $18.50 ; No. 1 Siemen's, $18; Ferrona, $17.

BAR IRON—Bar iron has not furnished much that is new. Most jobbers now claim to be well supplied for the moderate demand that they experience. We understand that lower province makers have been making some offers on this market, but cannot learn whether they have been cutting, though it is possible. However makers here do not look for any serious competition from them in the market here or in the West.

SCRAP IRON—Scrap iron continues dull and featureless with prices nominal at 15 to 16c. for wrought scrap.

TIN PLATE—Tin plates continue a slow sale, but holders say that they can afford to wait as they laid in supplies at unusually low prices. Sales have been made however at $3.15 for cokes, and we quote cokes $3.15 to $3.25 with charcoal $3.75 to $4.

CANADA PLATES—The easy feeling that we have already noted in Canada plates has been accentuated if anything, sales having transpired on the bases of $2.45 for round lots, but we quote $2.40 to $2.50 as a fair range.

TERNE PLATES—Continue nominal at $7.25 to $7.75.

GALVANIZED IRON—There has been a fair jobbing demand for galvanized iron, but otherwise the market is quiet. We quote prices steady 4¾ to 5c. for No. 28 guage.

SHEET IRON—Sheet iron has been moving fairly in a small way at unchanged prices, viz., $2.25 to $2.40. A moderately good demand is to note for Russian sheets at the old prices 10½ to 11c.

HOOPS AND BANDS—There is no change in hoops, and bands which have furnished a fairly good business in a jobbing way at $2.35.

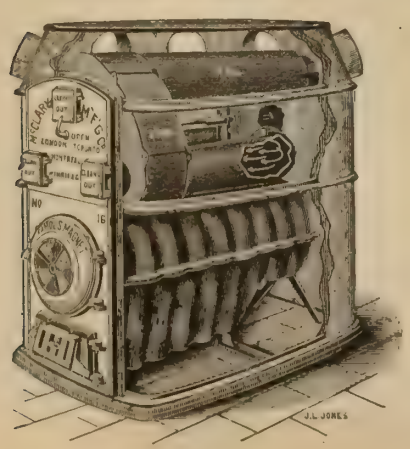
COPPER—Copper does not show any improvement and business is flat with prices nominally the same 11½ to 13c.

TIN—The same remarks apply to tin which is unchanged at 21½ to 22c. for ingot and 25c. for bar tin.

ANTIMONY—There is nothing special to report about this line which is nominally unchanged at 10½ to 12c.

SPELTER—Spelter is easy in tone, and our quotations would be shaded in the case of an order for round lots; $4 60 to $4.75.

LEAD—Is flat and unchanged this week. We quote : Pig lead, $2.80 to $3 ; sheet lead, $4 to $4.25.



WOOD FURNACE

Famous Magnet

NO. 14 AND 16

We confidently ask the attention of the trade to this furnace. Let us send you full particulars regarding it. . . .

IT IS A GOOD ONE

The McClary Mfg. Co.,

London, Toronto, Montreal, Winnipeg

ADAM HOPE & CO., HAMILTON

Offer for Sale

"Pioneer" and "Sloss" PIG IRON

These are fine foundry irons, being strong and large scrap carriers.

Also all the well-known —

Scotch Brands,
Broken Car Wheels,
and Railway Cast Scrap.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.
Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.

FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,

CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

GAS, ELECTRIC, AND COMBINATION Fixtures

Of English, Canadian, and American designs. . .

Globes and Shades

Staple Brackets and Gas Fittings. Select stock of above always on hand.

Jas. Barwell, 88 Bay St., Toronto

SHOWROOMS OF JAS. BARWELL, SONS & CO., Birmingham, Eng.

Drawings and Estimates on application.



"BUILD TO-DAY THEN, STRONG AND SURE, WITH A FIRM AND AMPLE BASE." —Longfellow.

DO YOU?

WISH THUS TO BUILD, an advertisement in the CONTRACT-RECORD, TORONTO will bring you tenders from the best contractors.

THE INVINCIBLE.

EVERY SAW WARRANTED.

THE FASTEST AND BEST CUTTING SAW ON THE MARKET.



Guaranteed four Guages Thinner on Back than Front and Made from the Highest Quality of Double Refined Silver Steel.

Manufactured only by

The James Robertson Co. (LIMITED.)
Toronto.

SAMPLE ORDER SOLICITED.



You will Insure Success IN THE STOVE Business, by selling



"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.



The Gurney-Tilden Co. Ltd.

Successors to The E. & C. Gurney Co.

HAMILTON - - ONTARIO.



NEW. CLEAN. GOOD



Meat - Cutter

WHITE ENAMELLED

Inside, and Brown Japanned outside.

H BOKER, Manufacturer. | For Sale by Leading Wholesale Houses.

TORONTO CUTLERY CO.,

65 and 67 Yonge Street, Toronto

M. MAYER, Propr.

NON-XLL

Cutlery

WARRANTED

And the Most Complete Lines of Cutlery of all descriptions.

MONTREAL Markets Continued.

SHEET ZINC—A moderate jobbing business is doing on the basis of $5 to $5.25, and that is all.

CEMENT—Demand for cement continues good at firm prices, several round lots moving at our quotations during the week. We quote for Belgian brands $1.95 to $2.05, and English $2.10 to $2.25 per cask ex-wharf. Fire bricks are in fair demand at prices ranging from $16.50 to $21 per thousand, as per brand.

PAINTS AND OILS.

The same steady trade is to note in paints and oils at firm prices, but dealers complain that there has not been the expansion in the volume of trade that they anticipated. Linseed oil is firmer at 60c. for raw and 63c. for boiled, and there is likely to be a still further advance. We quote: Choice brands white lead, government standard, $5; No. 1, $4.75; No. 2, $4.50; No. 3, $4.25; No. 4, $4; dry white lead, 5c.; red lead, pure, 4½c.; No. 1, 4¼c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, raw, 60c., boiled 63c.

GLASS.

The glass market has not shown any change, a fair volume of trade being to note. We quote the old basis at $1.35, with putty in bulk $1.85.

PETROLEUM.

A fair demand is noted for refined petroleum at unchanged prices, and while the movement cannot be called large dealers say that it is up to the average of last year. We quote: — Canadian at 11¼c. in shed in Montreal for round lots, and 12c. for small quantities. American petroleum, 16½c. in car lots, 17c. in 10 barrel lots, 17¼c in 5 barrel lots, and 17¾c. for single barrels, nett cash; American benzine, 23 to 25c; Canadian benzine, 10¾c. Petrolea; 12½c Montreal.

MONTREAL TRADE NOTES.

Linseed oil is 1c. per gallon higher than it was at this time last week.

W. H. Cottingham & Co. report continued encouragement in the demand for Mander's varnishes.

Ship chandlers here complain bitterly, and business at this season has never been as disappointing as it is at present.

Sales of turpentine have been made at an advance of 1c. on last week's prices in consequence of firmer advices from the South.

McArthur, Coneille & Co. report that their advices on caustic soda show a much firmer tone and quote 60 per cent. at $2.50 to $2 75 with 70 per cent. $2.75 to $3.

Mr. H. McLaren, of H. McLaren & Co., the Montreal agents of the Safford Radiator, Magnolia metal, etc., is away on a visit to the World's Fair. He expects to be back next Monday.

Maritime Province makers have been offering bar iron on the market presumably at a cut for to compete with the Western makers; they certainly would have to do so. The latter, however, don't look for any serious competition from this source.

Mr. Wm. McNally of Wm. McNally & Co. left town on Monday for Toronto. There he will be joined by his brother Mr. P. J. McNally of the Toronto Lead and Color Co., and the two gentlemen will proceed on a visit to Chicago and the World's Fair.

Francis Hyde & Co. are receiving this week some large consignments of Portland and Belgian cement which they are prepared to offer to the trade at the very lowest market price. They also call attention to their line of fire bricks, glazed pipes, and agricultural tile drain pipes.

TORONTO MARKETS.

TORONTO, Oct. 20, 1893.

HARDWARE.

There is a good trade doing in seasonable goods of all kinds, and fancy hardware, plated ware, cutlery and so on, is beginning to be enquired for more freely for the holiday trade, which promises to be a very satisfactory one this year. Many novelties will be offered, but good substantial articles will have the call over the showy but less serviceable. Lamps and lamp goods are very active. Remittances are hardly up to the average mark.

CUTLERY—Business is quite satisfactory. Buyers are stocking up for their Christmas trade. Carvers in cases are specially wanted, and it looks as if a large quantity of these would be placed in consumers' hands this year. The quality is assorted from $1.50 to $10. Table and pocket cutlery is also active.

NAILS—Only the ordinary demand is reported for cut. Wire nails are going out quite freely, but orders are not very large. In horseshoe nails business is exceptionally brisk. Values on all kinds are unchanged.

TACKS—Not much doing except in carpet tacks, which are fairly active.

WIRE—The principal demand continues for hay-bailing purposes. Ordinary bright iron wire is going out, but only for tin smithing purposes.

ROPE—Values remain at last week's advance.

BAR IRON—Business is very satisfactory, the principal demand being for horse and sleigh shoe iron and sleigh shoe steel. Prices remain at $1.95 basis.

HOOPS, BANDS AND SHEETS—The cost of importation is about 10 to 15c. higher, but as soon as the strike is settled prices will get back to old figures. Stocks are rather light in the first two named lines, but new shipments are, however, arriving. Prices remain at $2.50 to $2 60 for 1 inch and up.

CORRUGATED IRON—Quiet and unchanged.

GALVANIZED IRON—Locol market is unchanged at $4.75 to $5 for 28 guage. Importers are still selling at old figures, but are talking firmer owing to increased cost of importation. Demand is keeping up exceedingly well.

INGOT TIN—Easier. Some fair lots have been sold this week at 21 to 22c. for L and F. Straits are lower at 20½ to 21c. for round lots.

SHEET COPPER—Is without change at 12 to 12½c., and not much doing. Orders for quantities can be shaded ½c. per lb.

SHEET ZINC—A fair business is being done and prices are being reduced a little,



and dealers are now selling at 5¼ to 5⅜c. in cask lots, and ¼c. extra for smaller quantities.

SPELTER—Is slighty lower owing to overproduction in the west. At 4½c. a few good sales have been reported, but in general the trade is quiet.

HORSESHOES — Although the price on these advanced last week they are in very active demand, this being the season. The prices being fixed by manufacturers are being held firmly at $3 80, Toronto.

CHAIN—Very little doing, although some import orders have been booked for direct shipment. Prices are unchanged.

SPORTING GOODS—Seasonable goods are going out fairly, the business being fully up to last year. No changes are reported; the prices are all being maintained at the figures fixed by the combination.

TINWARE AND HOUSEFURNISHINGS — Business is increasing. Orders for fall specialties are mostly completed, but sorting up orders are still reaching the jobbers. The movement in Peerless and blue and white ware is only moderate.

LAMPS AND LAMP GOODS—The usual fall trade is keeping dealers very busy. Jobbers are finding some difficulty in getting deliveries from the factories. There is an increasing demand for the better varieties of lamps with atttractive bowls and shades and the most improved burner. Even with the lower prices of electric and gas lighting there is a very large demand for oil.

PLUMBERS' SUPPLIES—Demand is looking up both in city and country. There is, however, still room for further improvement, as sales fall considerably short of corresponding period last year.

BUILDERS' SUPPLIES—Trade is flat, although a slight improvement is noted in the country, but none in the city.

TOOLS—Not much doing.

CYCLES—Demand is quiet, though in the cities there have been a few sales

HEAVY HARDWARE AND METALS.

The coal strikes in the old country have affected many metals and heavy hardware, and in some cases quotations are not obtainable for immediate import. The miners are returning to work and it is expected that before long manufacturers will resume their customary prompt shipments. Values generally continue low but with a firmer tone. There is the usual heavy volume of trade for this season of the year. The increased freight rates from Montreal will soon go into operation, and buyers are endeavoring to get supplies forward before they come in.

PIG IRON—The strike in the coal districts in England has caused many British smelting works to shut down and importers have not been offering anything to arrive. The trouble now seems to be over and shipments will soon be made. There have been some orders on the market, but they have not been accepted for immediate import, and they have gone to the domestic or American producers. Prices are nominal at $20.50 to

MARKETS—Continued

$21 for Summerlee and $19 75 to $20 for Carnbroe. Nova Scotia pig has been selling freely and better prices have ruled at $19 to $19.50 for Siemens chiefly, at higher figures.

Rogers, Brown & Co, Buffalo, say of the market for American pig in Toronto. A quiet and slow market continues to prevail. Shipments have kept fairly up to the average of the past few weeks. Buyers continue to hold off, but the large decrease in production throughout the States keeps prices firm. We quote on the cash basis f.o.b. Toronto in bond: 1 X Foundry strong Coke Iron, Lake Superior ore, $15.05; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14.55; 2 Foundry Strong Coke Iron, Lake Superior ore, $14.05; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17 55; Southern Soft 1, $13.35; Southern Soft 2, $12.85.

STEEL—A good trade is doing in tool steels from spot stock at steady prices from at 11 to 14c. as to quality.

TIN PLATES—Business is keeping up well especially in coke tin for furnace work, although some of the best brands are being called for, but the quantities of the latter, however, are not large.

TERNE PLATES—Are very quiet, with very few inquiries.

CANADA PLATES — Are getting scarce owing to the coal strikes. Business is chiefly of additional lots in cases where dealers have exhausted their import shipments, or for supplies of parties who had not placed any import orders. Prices remain at $2.65 for all dull.

SOLDER—Prices have been reduced a fraction this week owing to the low figure on ingot tin, they are now 15 to 16c. for half and half and 14 to 15c. for standard, according to quantity.

ANTIMONY—Very quiet and prices remain the same at 11 to 12½c.

LEAD—Continues very cheap. The Silver Purchase Bill if repealed will increase the price as lead is only a bi-product of silver. The price now is much below cost of production. On spot they are quoting 3 to 3¼c. for small lots, but large lots can be shaded.

PAINTS AND OILS.

The only important change on the week has been an advance of a cent in linseed oil, and values now stand at 60c. and 62c. delivered for raw, and 63 to 65c. for boiled; demand is very fair. Turpentine is steady at last week's advance. Other oils are unchanged. White lead remains steady at 5c. Paints are unchanged; demand is dull, there being very few sorting-up orders coming in.

GLASS.

The price on window glas at present is $1.20 for first break, in any quantity, large or small. This is a decline of 5 to 10c., due to keen competition between the large houses. Demand is quite active and stocks plentiful. The Belgian market is firm, and late cable advices say prices are being maintained there. Plate glass is unchanged.

OLD MATERIAL.

Old material is just about the same as it has been with the exception that there is hardly any market for light wrought scrap, and the larger dealers are not quoting at all for it. We quote prices paid by dealers as follows: — Agricultural scrap, 60c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40 to 45c. per cwt.. No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 2½c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; borings and turnings, 10 to 15c.

HIDES, SKINS, TALLOW AND WOOL.

Hides.—Business in hides continues to be dragging, and this is owing to the fact that the tanners throughout Ontario who have had the ready money to buy Western hides have done so. Thus, the local hides are neglected and accumulating in this market. The export trade in the Western market is likewise slacking off and the market is in a stagnant condition. Prices are weak and anyone going to Chicago with money can buy hides at his own price. Dealers affirm that this state of business will continue so long as the financial troubles in the United States remain unsettled. Some of the tanners in the United States, owing to the shrinkage in their large stocks—which they purchased at exceedingly low prices—have been compelled to close, or work from two to three days per week. Under these circumstances higher prices or revival of business cannot be expected. Prices in Toronto continue the same; dealers are paying 4c. for No. 1, 3c. for No. 2, 2c. for No. 3.

Skins.—The situation in the skin trade is such as has never been known for the past 30 years, says a wholesale dealer in Toronto. Skins are practically about 16c. per pound less than last year at this time. Product skins are selling at 17 to 18c. per skin less than last year at this time. Fresh slaughtered skins are fetching from 60 to 65c.

Tallow.—Is in fair demand but scarce. This is owing to pork packers and lard men who buy up the culled tallow at such a price that soap manufacturers cannot touch it. Price of tallow is from 4 3-4 to 5 1-4c. per pound according to quality.

WOOL.—Domestics have been sadly neglected, and are accumulating at almost every trading post in Canada. Dealers say that wool has not been so low for 30 years as it is now, and is likely to remain so until the tariff question is settled. Prices remain unchanged. Dealers are paying from 19 to 20c. for good pulled wool, and from 16 to 17c. for fleece.

MARKET NOTES.

A. C. Leslie & Co. are booking some good orders for Jessop's tool steel for immediate delivery.

J. H. Lyons of Samuel, Benjamin & Co.'s is on a trip in the west. Before returning he will take in the Fair.

Wood, Vallance & Co., Hamilton, will supply the tubes for the boilers at the pumping house there at 16½c. a foot.

M. & L. Samuel, Benjamin & Co. received several lines of cutlery in cases this week. They are medium grades, for retailing at $3 up.

Rice Lewis & Son are showing an automatic umbrella check for hotels, restaurants and public places. Each holder has a small check about the size of a 25c. piece, which is warded like an ordinary key. When the umbrella is put in the check is carried off by the owner. The umbrella cannot be removed until the owner returns and deposits the check in a slot, when the umbrella is released automatically.

Glistening cream, for polishing furniture and metal, a new article on this market, is having a very good sale. Rice Lewis & Son are the wholesale agents.

Samuel, Benjamin & Co. have now their full stock of vase lamps, chimnies and lanterns. Those who have been waiting to have their orders filled will receive the goods in the course of the next few days. The "Baloon" chimnies, which have been out of stock for three weeks, are among the arrivals.

A complaint is made that copies of HARDWARE MERCHANT get into the hands of consumers. This is not as it should be. It is intended for the trade only, and when it is known subscriptions are not accepted from others. Merchants should not allow their copies to get into the hands of consumers. They see the prices and then endeavor to get the retailer to cut knowing what he pays for his goods. In several instances the Patrons of Industry subscribed but as soon as it was found out the amount of their subscription was refunded.

It is claimed by one of the largest manufacturers in the city, that a great many concerns who sell a limited amount of solder are in the habit of supplying the smaller foundries with tin and lead. They feel satisfied that in return they are getting solder consisting of a mixture of tin and lead. It is thought that if they would analyze their product they would find really less of a mixture than they at first supposed. One buying solder who feels doubtful about the quality would do well to enquire of the manufacturers themselves, especially when such firms hold themselves responsible in guaranteeing that their material is exactly what they represent it to be.

AMERICAN MARKETS.

New York, Oct. 20, 1893.

PIG TIN.—In some quarters there seems to be a certain degree of antagonism, and enough uncertainty conected therewith to keep the market somewhat disturbed in the speculative department at least. Still, operators who are interested in raising the level of prices gained some advantage through raising bids without having to take up any considerable amount of tin trade and consumptive demand is still very fair, and the distribution makes steady inroads upon supplies in first hands, thereby strengthening the statistical position. In fact, the appearances were that the bull interests are either disinclined or unable to take full advantage of the conditions in their favor, since

MARKETS.—Continued

prices show nothing like an advance proportionate to the reduction in spot supplies. Early in the day 20.85c. was bid for prompt and current month delivery on exchange contracts, but later deliveries were permitted to drag in a suggestive manner, and the idea that there is some peculiar manoeuvering was thus encouraged. It is an open secret that out of town speculative lots have been marketed of late, and that local outside holdings have been reduced also.

COPPER.—Actual business so far as reported here was on a moderate scale, and the demand was also represented as having been tame. In fact, there seems to have been little movement outside of deliveries on old export and home trade contracts. Offerings, while not particularly heavy, were sufficient to give the market a rather soft appearance. On Lake Superior ingot 9 5-8 to 9 3-4c. was quoted. The range for electrolytic was 9 1-4 to 9 1-2c., and that for common casting stock about 9 1-8 to 9 1-4c., according to brand and delivery.

PIG LEAD.—About 100 tons of ordinary Western were sold at 3.30c. in this market, and St. Louis wire to the Metal Exchange noted a decline to 3.20c. at that point. Generally speaking, the market presented a weak appearance, the result chiefly of indifference on the part of consumers and need of funds in some producing sections.

SPELTER.—There was fairly free offering of ordinary Western brands at 3.60c. delivered here or at common point, and more than a faint possibility that 3.55c. would have been accepted for lots of five-car loads, if, indeed, not for single car lots, for immediate shipment. The seemingly attractive prices failed to stimulate buying, however, and the market remains dull as well as weak. St. Louis quotation by wire to the Metal Exchange was 3.35c.

ANTIMONY.—For other than ordinary jobbing quantities there is little if any demand, but the business passing is chiefly at steady prices, say about 9 5-8 to 9 3-4c. for Hallett's, 10 1-8 to 10 1-4 for Cookson's, 10 to 10 1-8c. for LX and similar brands.

TIN PLATE.—Only moderate business of commonplace type was reported for the day, and the market was devoid of distinctly new feature. Prices for ordinary cokes remain fairly firm, but otherwise the market remains rather soft. Stocks here are only fair, yet sufficient for the outlet. Future deliveries are being taken in a perfunctory manner only, but such as it is the transactions are chiefly at prices within about 2 1-2c. per box of those at which spot goods are being dealt in.

PIG IRON.—American brands are finding merely fair sale, and there is little, if any, improvement in the demand. Selling competition is slow in the face of comparatively small production, and prices are therefore still more or less irregular although showing no radical change.

Scotch pig iron finds slow sale, and there is no demand except for small quantities. On lots to arrive the quotations are $21.50 for Coltness, $20.50 to $21 for Summerlee, and $19 to $19.50 for Eglinton. Spiegeleisen and ferro-manganese remain very quiet and prices are nominal in a great measure. Ferro-manganese 80 per cent. is offered at $56 to $56.50, and 20 per cent. Spiegeleisen at $25.50 to $26, landed here.

STEEL RAILS, ETC.—The periodical rumor of a "cut" in the combination price for heavy section rails has circulation, but the only confirmatory fact is that large orders have been solicited at special rates. The so-called "official" price is kept at $29 f.o.b. mill, but only small quantities of rails are being sold. Rail fastenings find slow movement and prices continue unsettled and rather weak.

OLD MATERIAL.—Demand has continued moderate, and prices are still unsettled and weak. Iron tee rails are quoted at $14 to $15 f.o.b. Jersey City. Steel are about $10 to $11 at the same point. No. 1 wrought scrap is offered at $10.50 to $11 there, and $10 in yard. Machinery cast scrap about $11 to $12 delivered. Car wheels nominally $11.00. Wrought turnings $9.50 to $9.75, and cast borings $6.50 to $6.75 delivered to nearby mills.

GALVANIZED WIRE NETTING Quotations given for Import orders

A. C. LESLIE & CO., Montreal and Toronto. CUTLERY Full assortment in stock; best values in all lines, especially in Carvers. . .



The Celebrated Clauss Bread, Cake, Paring and Carving KNIVES. The only genuine. Made of very finest steel. Fully guaranteed to all purchasers.

Merchants write us for terms. Patented in the United States, England and Canada. Clauss Shear Co., 67 Adelaide East Toronto

PERSONAL MENTION.

A. J. McNally of the Toronto Lead and Color Co. is doing the Fair.

P. Howland, of H. S. Howland & Sons, is on a business trip to the North-West and Manitoba. He will be away a couple of weeks.

Mr. S. Frankel of Frankel Bros., who has been spending the summer in Europe, arrived in New York to-day. He came on the Lloyd steamer Harvell, and reports to have had a good trip.

Alexander Miller, Toronto, manufacturer of hammocks, died this week, the results of an accident last spring. His six sons are well and favorably known to the hardware trade. The eldest is now senior partner of Miller, Morse & Co., wholesale hardware, Winnipeg. The others, with the exception of Coleman, who is a traveller for Samuel, Benjamin & Co., are in the States.

A. B. Lee, T. B. Lee, and R. C. Fisher, of Rice, Lewis & Son, have returned from the World's Fair, where they spent about two weeks, doing some business at the same time. Mr. Lee makes a good point when he says that all exhibits should have an attendant. It was most important that he should have seen the representatives of several of the exhibits, but they were not there.

R. Y. Blythe, Bellwood, has just returned from a trip through the Territories. Speaking of the prospects of that country he said that it was the place for young men to go to but he would not advise any elderly man to settle there.

J. H. Lyons, the traveling representative for M. & L. Samuel, Benjamin & Co., left on his western trip this week. Jake will visit Chicago, taking in the World's Fair before returning home.

The Ontario Malleable Iron Co., Oshawa, Ont., are adding a large new moulding and milling room to their already extensive plant. Another engine and boiler and electric light plant are also been put in. The improvements will cost over $8,000.

A disastrous fire, said to have had its origin in spontaneous combustion, accomplished damage to the extent of something like $5,000 at the Hobbs glass works on Ridout street adjoining the Grand Trunk tracks on Saturday morning. The damage to the building consists mainly of a burned roof in the end where the fire started, while the walls and floor of the upper storey are seriously scorched also. The ground floor and cellar, where the most expensive glass was kept, escaped intact; but a large quantity stored in the burned portion was melted or cracked. The premises are amply covered by insurance.

SITUATION WANTED.

EXPERIENCED Hardware Clerk wants situation in good live town. References furnished from late employer. Address, J. E. WESTCOTT, 298 Wolfe St., London, Ont.



Ontario Nut Works, Paris
BROWN & CO.
Manufacturers of
All sizes of Hot Pressed Nuts, Square and Hexagon

A METALLURGICAL GENIUS.

Few men in the history of modern metallurgy have attained the eminence of the man with whose name is identified an epoch-making change in the manufacture of steel. This same inventive and industrial celebrity, with a prefix to his name and an historic event in his biography, has not only secured fame, but in the octogenarian period of life is enjoying its substantial rewards. In this Sir Henry Bessemer is an exception to many, whose fame has followed death and poverty. In the exception named business sagacity and inventive genius have been coincident, and in the welding of the two the unit is what might have been expected. In this matter no one will grudge the honors and rewards of the man who is perhaps the most notable figure in the modern metallurgical world. It may be said of the now historic Bessemer that in an all-round sense he is a rare example of versatility and resource.

In mechanical abilities and scientific knowledge he is equally distinguished, being in handicraft and mental resources a rare example of associated gifts. In sculpture and molding he has shown the skill of an artist. In the science of astronomy and chemistry he is no novice, while in mechanical devices he has, amongst other inventions, given the industrial world the mechanical stirrer and the hydraulic ingot crane. At 19 years of age he evolved the idea of a die for the bill and legal stamps of the British Government, for which he has never received a penny, but in his later years had the nominal prefix of "Sir" put to the plain domestic name of Henry Bessemer. It is also claimed that he practiced the art of depositing copper some eighteen months before the almost simultaneous patents granted to Jacoby of St. Petersburg and Jordan of London. In a dictionary of electro-metallurgy appearing about 1846, the author says: "By this elegant art (electro-metallurgy) perfectly exact copies of any object can be made in copper, silver, gold and some other metals, through the agency of voltaic electricity. The earliest application of this kind seems to have been practiced about ten years ago (circa 1835) by Mr. Bessemer of Camden Town, London, who deposited a coating of copper on lead castings so as to produce antique heads in relief, about three to four inches in size. He contented himself with forming a few such ornaments for his mantlepiece, and though he made no secret of his purpose he published nothing upon the subject.

Of the discovery with which the name of Bessemer is identified, and which can be marked as epoch-making in the manufacture of steel, all the world may be said to be familiar. The Bessemer rail has gridironed all countries where the locomotive is the iron horse of modern transport. The introduction of the new method of manufacture has stimulated iron industries everywhere, and though riveled in many points by the basic process, has merits of its own that guarantee its permanent reputation. There are, of course, broad margins yet left for science and discovery yet to deploy. Finality is not yet even in sight where the process of progress will be arrested, but it can be safely said that up to date the genius of Bessemer has its own special distinction.

In the autobiography of this now famous metallurgist that is to appear in the early months of next year, there will doubtless be much revealed that will throw light on some disputed points and be of profound interest to the iron-working world.—Age of Steel.

SPORTING GOODS IN THE STORE.

The profits from the sale of sporting goods has led wide-awake hardwaremen to pay greater attention to these lines, and the number who have laid them in during the past few years has greatly increased, writes R. T. Palmer in Iron Age. There are many places, however, where these goods are not kept in sufficient variety and quantity to do these lines justice. One great aid in purchasing goods suitable to the local trade, and in disposing of them, is the sport-loving proclivity of the merchant himself. From his own indulgence in hunting and fishing he will better understand his brother sportsmen's wants, and it will teach him to avoid burdening himself with unsalable and inferior articles, which in time accumulate into worse than useless stock.

He will be alive to the merits of novelties which are constantly coming on to the market and by providing them will convey to his customers the idea that he is headquarters in his line.

Another most important aid is an early and seasonable display, not a heterogeneous mingling of all sorts of hardware with sporting goods—but a window tastefully decorated containing a solid display of tackle in the early spring just before the opening of the season, with perhaps a display of the same a few weeks later, and an exhibit of guns and gun goods in and during the fall. Solid displays always attract and hold attention, and no windows are more interesting to man and boy alike than those containing paraphernalia which bring up to the memory instances of boy life.

In many instances to stimulate fishermen's enthusiasm and rivalry dealers have with much success offered prizes for the largest bass and trout caught during the season, same to be weighed in the dealer's store, while the first bird of the season has become traditional. In smaller cities lawn tennis can be laid in to advantage, more especially so if the dealer associates with those among whom the game is popular. These goods are ordinarily handled with baseball goods by the book stores, and it may often be wiser not to intrude.

Bicyles are essentially a part of the hardwaremen's stock and are deservedly receiving more attention from the trade. While in the tackle and gun lines it is necessary to carry in stock cheap-priced articles for a class of trade who cannot be induced to buy higher grade goods, yet it is always policy to sell a man as good an article as he can be persuaded to buy, even at a less ratio of profit, as a well-suited customer is always a good advertisement, and in nothing, perhaps, as much as in sporting goods. It is good policy in any branch of merchandising to exhibit interest in your customer, but particularly so in the success of your customer with his rod and gun.

ECONOMY OF FUEL.

In these hard times economy is enforced along the entire line of business and household expenses. As very often managed, there are few articles of household consumption used more wastefully than fuel. In an investigation made some time ago to ascertain how much waste there might be under quite average conditions of furnace consumption, the ashes, etc., were saved that were discharged from two large furnaces in a school, to which, from the commencement of heating in the fall till its discontinuance in the spring, were fed 36 tons of good anthracite coal. Two men were employed to sift these ashes and sort out the clinkers and stones. Their wages were $1 each per day, and they did the job thoroughly in somewhat less than three days, receiving $5 for the work. The good coal removed from the ashes was then weighed and found to be 2 1-5 tons. The cost of the coal delivered was $6.50 per ton. Hence, a little over six per cent. of the coal was saved, the value of which was $13.20, obtained at a cost of $5, a saving of $7.20 in the cost of the year's fuel. The weighing occupied some of the time of the men, which would make the actual saving somewhat greater. It was thought that the furnaces were not more than ordinarily wasteful of coal, and that they were managed with average skill. A considerable economy is possible in all kinds of heating apparatus by careful management in the supply of fuel as needed. Coal should be placed on the grates of heating boilers in sufficient quantity at each feeding to last a considerable time without further attention. It is a great mistake to keep fussing and puttering with a fire, and, by too frequent shaking of the grate and poking the fuel, to work through the grate an undue amount of unburned coal. The shaking and clearing out should be done thoroughly after a mass of ashes has accumulated under the burning coal; then, when the supply of new fuel is added, the fire should be allowed ro take its own course, provided the draft is regulated automatically, as ought always to be the case when practicable.

Mr. E. B. Eddy of Hull, was in the city, early in the week.

NEW FORM OF ELECTRIC LAMP.

Some remarkably interesting and important phenomena with a new form of electric lamp, according to an exchange, reported by L. B. Marks, in a paper read before the International Electrical Congress at Chicago. The author conducted a series of experiments with the new incandescent arc lamp, as it is termed, which indicate a high degree of efficiency for the arrangement. The lamp, while possessing the main characteristics of the ordinary lamp, is also akin to the incandescent light, and may be said to constitute a mean between the two. The arc is enclosed in a small envelope, which is made of high refractory glass. The envelope is closed at the bottom and provided on top with a metal plug, having an opening in it just large enough to admit of the feed of the upper electrode. A fire-proof plug of asbestos pulp insulates the metal from the glass. A valve allows the egress of gas, but prevents ingress of the air. Upon the closure of the circuit and the springing of the arc, the air in the inclosing envelope is robbed of its oxygen, the latter uniting with the carbon of the electrodes. The gases are brought to an exceedingly high temperature, at which they maintain the carbon vapor issuing from the arc. This vapor is deposited in the form of a thin coating on the internal surface of the glass chamber. The expansive forces of the gases may become sufficiently great, if no means of egress be provided, to rupture the envelope ; hence, a small safety valve is provided for their outflow. The inclosing glass envelope is made as small as possible, for the conservation of the radiant energy, and hence the efficiency depends largely upon the size of the chamber. The heat, which, in the ordinary arc light, is dissipated in the air, is here conserved and raises the temperature of the inclosed gases and vapor of carbon. The proper conditions being fulfilled, the lamp maintains its maximum efficiency shortly after the current has been passed through it, and glows like the incandescent, with the brilliancy of the arc light. The arc proper is scarcely visible, but the entire contents of the chamber seem to be luminous, giving the appearance of a solid cylinder of light. The life of the carbons was shown by the tests made to exceed one hundred hours. The merit of the new lamp, as brought out in the discussion of the paper, is to be found in its simplicity and its ready application to existing arc lamps. The reduced expense in trimming arc lamps without considering the saving in the cost of carbons, which would be effected by a lamp burning continuously for one hundred hours, is a matter of considerable importance in the operation of lightning plants. There is also a question of the probable increase in interior arc lighting which will follow the introduction of a successful 100 hour lamp. Such a lamp of small candle power, consuming a minimum amount of current, once its practicability is demonstrated in connection with a device which will require no attention to be given to the lamp for a week or two at a time, would soon open a wide field of usefulness in lighting offices, dwellings, and the like.

MODERN IMPROVEMENTS.

Father had always heated the old homestead with stoves, but as it was large and several rooms had to be warmed, this made considerable labor and some dirt. Mother was getting along in years, we were growing up, and the old house was just a little dilapidated compared with some of its more modern neighbors. Susie's beau was an architect, and had said that a beautiful old colonial residence could be made of it on a reasonable expenditure, and all of its highly prized antiquity preserved, with all of the necessary elegance added and the modern conveniences provided. Well, the carpenters and painters certainly made the old house look grand, and our John said the new bathroom beat taking a scrub in a washtub in the kitchen after all the folks had gone to bed by as much as two pair all of one kind beat a full house, whatever that meant. All of the downstairs rooms had new ceilings that were white as snow, and with filigree and fluting around the edges they looked as inviting as a company pie.

To save all that coal and ash carrying, and ash poking and dirt, a brand new sanitary hygiene warm air apparatus was either "instituted," or "instilled," or "installed," I don't know which, in the cellar. Anyhow, it was "sot thar," as Ezekiel said, to heat the whole house, and the "heating engineer" —I think that is what the offshoot from a stove jobber called himself—said it would furnish all through the house a balmy summer atmosphere when the weather was cold enough to freeze a fire if you forgot and left it out all night. Nickel-plated registers in the floor downstairs and white and black enameled and bronzed registers were in what the girls called the pink room, the blue chamber, the guest chamber and other rooms upstairs. Pipes led from the transposer, which transformed a rip-snorting norther into a soft summer zephyr, to all the flues and registers. The "duct"—I've been ducked, but it was always in water—that brought in the raw air to be served warm as atmosphere, was nothing but a big wooden box that Jason Woodcraft made. One end took in the whole of a window, and was big enough for a man to crawl through. Well, that air duct nearly wrecked the "institution" that was "installed," as far as the family's favor was concerned.

There were some open fire places where wood was burned, and the furnace that had been "instilled" was not started until winter jumped down on us one day with both feet and about 3 inches of snow. We lived near two railroads and not far from four manufactories, and as everybody had to fire up according to the weather the soft coal smut that was made was a caution. Why, before noon that snow looked like the mashed potatoes at a country dinner, it was peppered so profusely. Manufacturing had increased that summer and the air was full of soot.

Well, this same wind was awhistling through our new apparatus and out of them registers, but the house was comfortable, that is sure. One day I got notice if I couldn't brush my clothes and keep clean I had got to keep out of the guest chamber, and a boy had no business to sit on a bed with a white coverlet on it, anyhow. Now, I hadn't been in that room or hadn't sat on that bed, but I had to keep still. I concluded to investigate, and watching my chance I slipped into that room, and sure enough right opposite the register was as fine a smudge on that bed as if a chimney sweep had sat in it.

The next time I was hauled up it was for throwing my cap against the ceiling in the sitting room, and though I protested I hadn't done it they showed me the spot on the ceiling as conclusive evidence of my guilt. Things were getting pretty black for the house, and correspondingly blue for me, when one day a white muslin dress that had been all done up for a party was hung on a chair in front of a register in an upstairs room. That day the wind was blowing right from both railroads where they were drilling a lot of cars and all of the factories were running at full pressure. When they took that frock off of the chair they smoothed it down with their hands and left some very plain evidences of soot.

This let the cat out of the bag and me out of disgrace and a tour of inspection followed, which found the ceilings in a terrible condition ; some pictures had to be cleaned and explanation was found for a lot of dirt that had been a mystery and the cause of a lot of extra work in cleaning. Well, there was another kind of atmosphere and the heating engineer was in it and he didn't enjoy it, for he found it pretty hot.

He suggested closing the cold-air window and connecting the box with a big register in the hall, but mother wouldn't have a hole cut in her carpet 2 feet by 3, and father remembered all he had said about "sanitene and hygiary," so he was all at sea.

The upshot of the matter was a dicker for a new steam-heating apparatus, and it would have gone in if they hadn't wanted to run pipes right through the rooms, parlor and all, and to put great big iron radiators right in front of the windows where the girls want to sit. The row this kicked up caused delay, and a fellow came along about this time selling a patent wind sifter that he said would purify, rarify and indemnify the air that passed through it against "mycrobees batchalies or other imported matter." We had to have a big one, and ours is about the size of a big chicken coop and is filled with cheap dry goods, but it does the business.—L. M. W., in Metal Worker.

TRAVELING SALESMEN.

When you go to the old fashioned circus you always hear the ringmaster order. "Now then, Mr. Merryman, see what the young lady wants," as she brings her steed to a half after her first excursion round the ring. "The young lady wants her banners," replies the clown with a great flourish of speech, and the banners are brought forth. So it is with stove conventions, the traveling salesman is a feature in the ring, and he is made to hop over the banners and vault through all the balloons just as if he was the man who invented all the perplexing vexations which settle deep in the brain of the weary employer, and make him long for their total abolition from the face of the earth.

It is quite interesting to read the essays regarding the gentlemen who are professionally known as "traveling salesmen," as to what they should be and do to gain and merit this title; in short, what a bang-up first-class hustler ought to be. It all reads well, and no doubt it is the proper caper to possess such qualifications, and those who have them should be looked up to and copied by the younger gentlemen who are in the profession, or who intend to take it up. They cannot, I am sure, do better than acquire the qualifications so charmingly described. It might be said that a very good sort of a traveling salesman is a chap who could sell the most goods at the biggest profits, and not make a bad debt. This qualification could be set off against those nice niceties which the ideal ought to have. To be sure he might have all the others, but as between the two it is probable that the latter would be a sort of recommendation, even if the cut of his jib or the style of his cady were not of the latest pattern.

Before the terrible era of high art took possession of the stove trade the boss used to have drummers come round the shop, but there wasn't so many then, and they did not come so often; in fact, our shop was a sort of headquarters for the boys. The old man wasn't so dyspeptic them days, and was as full of fun as any of them; but it is different now. The old man don't keep up with the times. He does, however, run a bang-up tin shop, but no new fangled things are tolerated in it. Old Tim, our foreman, runs the shebang, and he has got a lot of old customers who won't buy only of the boss, because they "kin always reckon on his wares." So we are not favored much with visits from the profession. The old man used to have one of them flat-backed, blear-eyed, fat black-and-tan female terriers. She got to be a very knowing creature, and was quite curious at times about strangers. She used to lay in the store where she could see the door open, and the chances were if a traveling man came in she would waddle up to look him over, at least it seemed so, and if she liked him she would wag her tail—that is, she couldn't give it a full wag because of an accident, but it was still a dog's greeting. She couldn't cock her head up full dog-fashion, neither, but she would show her pleasure through her bulgy eyes, and if she liked the fellow it was a pretty sure thing he did business with the boss. If she didn't fancy a man she would trot up to him, look him over for a moment, and walk slowly back in the shop and settle down with a tired look and a big sigh that was truly affecting. The dog was generally right, for the fellow was usually a duffer. It shows that even dogs have an intuitive instinct regarding these gentlemen. The old man does not sour on traveling men exactly, but he doesn't feel so much interest in them as in old times. His son Jack looks after the store, and does most of the talking. But Jack is as fresh as they make them, and when he is in the humor he likes to put his knowledge on parade, and the consequence is the shrewd ones are on to his curves and generally knock him out. Jack's weakness is baseball; he eats, drinks and sleeps baseball, and if any traveling man has the same weakness he can be Jack's friend. There is one fellow who hates baseball with a vengeance, but he has managed to get an order out of Jack several times. He has been letting Jack post him on the game, says "Jack is an oracle, and the most perfectly posted man he ever met on the subject." But if you were to ask him four minutes afterward about the game he wouldn't know what you were talking about. He never pays attention to Jack's talk, but waits his opportunity to get a home run, and he gets there.

Of course all buyers are not like Jack nor all dogs like the boss's, and it is an open question what are the qualifications for traveling men. All men do not do business on the same lines, the most careless and improvident succeed sometimes when the alert expert does not. It could not be tolerated that the careless plan is the correct one, but all these things are quite perplexing, and so it is with the traveling man. It is a pretty difficult thing to find the ideal, especially for the stove trade; not but what it should have the best, but there are too many more like the boss who are set in their notions and "what they used to do" is the only rule and guide they know, and all else is bosh. But the world moves, and the chances are much against those who are going to keep up in the race on "what they used to do," and no doubt a much better grade, or is not a better one, perhaps different methods, will be pursued both by the makers and venders of the greatest stoves on earth as well as the inciters of public interest in them, who are so much of a stumbling block at present to their employers.—Jeems in Iron Age.

A combined latch and catch pivoted near the outer edge of the blind and operated by a pull rod or drawbar. The latch is spring-actuated, and is pivoted in a plate attached to the inner side of the blind, having a terminal catch or shoulder projecting outward from the blind hinge, while the drawbar has a rigid laterally projecting handle and is arranged in a recess, the blind being also pivoted to the latch at a point between its pivotal point and catch.

A new form of bath tub called a steel-clad copper bath. That is to say, it is made of copper, on which is deposited a patent tinning compound, which has the brightness and cleanliness of electro plate. There is claimed for this invention that it will last a lifetime, requiring no repainting, and free from the objection of chipping so usual in enameled baths, hence there is no danger from the metal being eaten away by corrosion, more especially as the outside is also accessible and allows no place for the accumulation of hurtful impurities.

The Queen's hotel, Fredericton, N. B., is one of the best appointed hotels in the Maritime Provinces. It contains 75 rooms, and the main building has large and handsomely furnished suits of rooms, while the table is first-class. The office walls are adorned with moose, cariboo, and deer heads. The lawn is most invitingly situated. The stable in connection with the hotel is one of the best equipped in Canada.

A window shade supporter, being an improvement on the formerly patented invention for an adjustable device consisting of a sectional wire truss frame, the upper and lower wires sliding upon each other, and locking devices holding the sections at their adjustment. Suspension eyes insure the straight hanging of the shade, and the construction is such that all soldering of parts together is aboided. Provision is made to accommodate a spring roller shade or a curtain pole, forming a combined roller shade and curtain supporter.

A reputation for truthfulness is indispensable to permanent and satisfying success.

No young man can possibly have mistaken his calling who finds in it what the world wants done

One thing in particular should be impressed upon clerks—the necessity of careful attention to small customers

"There are geniuses in trade, as well as in war or the state, or letters; and the reason why this or that man is fortunate is not to be told. It lies in the man."—EMERSON.

COPPER SMELTING IN RUSSIA.

At the Bozolovsk Works in Russia purchased from the Crown by the present proprietor, Mr. Polovtzof, about 10 years since, the converters in the Bessemer shops are arranged in two groups of four, each group having two reverberatory smelting furnaces, explains a contemporary. When in use one converter is blowing, a second under repair, a third is cooling, and the fourth warming up. The operation is performed in two stages; in the first the coarse metal, by the elimination of sulphur and iron, is reduced to fine metal in the second the sulphur in the latter is oxidized, bringing it to the state of blister copper. In the first oepration 32 cwt. of coarse metal, with 20 per cent. of copper, melted in a reverberatory furnace, is run into the converter and blown for 20 or 30 minutes. By the burning of the sulphur and iron, the temperature rises rapidly, and a yellow flame, with violet edges, and filled with very bright sparks, issued from the mouth of the converter. As the iron decreases the flame drops, and finally becomes green, when the operation is finished and the charge is poured into the moulds, where the slag and regulus separate in cooling. The latter averages about 64 per cent. of copper.

In the second operation the white metal of the first blowing is re-melted and blown to blister copper; this requires a longer time, and is less easily affected than the first operation, as the only combustible constituent, sulphur, gives such a small amount of heat that there is danger of the charge setting. It is, therefore, necessary at times to raise the temperature by throwing in charcoal, and two men are continually engaged in keeping the tuyeres open with iron pickers. The blow lasts from one to one and a half hours, and is changed regulus is found in the projecconsidered to be finished when no untions, collected on a shovel inserted into the converter. The flame, which is at first green, changes at the end to a reddish-yellow. The slags, containing 5 to 6 per cent. of copper, are poured out first, and afterwards the blister copper, which is refined in the reverberatory furnace in the usual way.

In the same converter three or four consecutive blows for white metal are followed by two for blister copper, and two or three for white metal,the object of the alternation being to remove any masses of copper adhering to the lining. The average assay of the blister copper from the converter is 96 per cent. In 1890, 5,013 tons of 19 per cent. coarse metal were converted in 3,835 blows into 1,549 tons of white metal, and the latter by 887 blows into 746 tons of blister copper.—Ex.

HOW TO INCREASE CASH SALES.

The following received the second prize given by Ironmonger, London, on the subject, "How to Increase Cash Sales":

To increase cash sales is becoming more and more the aim of every go-ahead ironmonger. The pushing draper has had this aim for many years now, and has reaped a rich harvest. The stores owe their success to their system of cash trading by which their customers are supplied at much lower rates than they ever could be under the credit system. Every new starter directs his personal attention to draw the cash trade, and, having drawn it, tries to keep it. In consequence of these forces many old established ironmongers have found their cash sales decreasing, until, perhaps, it only rerpesents about 25 per cent of their business,and in many cases even less than that. This is the class whom we wish to advise towards a better state of things. First of all, buy well. If you have been conservative in buying, turn liberal, and so prove whether your old firms have been supplying you at bottom prices. Next, pay promptly, and get the best cash discount. Also buy in proper quantities, so that in many cases you may have your goods carriage paid. Always have your windows clean and well-dressed with seasonable goods, all marked with a cash price ticket. Don't be frightened to mark an article 1s. 1 1-2d. or 9s. 1d. This is the draper's style, but it is one of their trump cards. Advertise freely in your local paper,and when you have bought a large consignment of anything let the public know about it, and don't forget to intimate that you will allow 5 per cent. discount on all purchases. In selling, always show a customer what difference this makes, and you will be surprised at the number who will take advantage of it Circulate handbills headed "Cash versus Credit," setting forth the great advantages you are giving under the former system. Send good circulars to your better-class customers of lawnmowers and other goods in their seasons, showing your net cash prices the same as the stores, and draw your customers' attention to this.

Always have a leading line of specially good value in your windows, but don't always sell it. Try and sell what will pay you better. Have an occasional clearance sale—say before stocktak—ing, or after it (the draper makes use of both excuses). Go all over your furnishing stock, reduce any old or soiled stock to a clearance price; reduce little else, but put a sale price ticket on—say 9s. 11d. instead of 10s.—also have some special cheap lines bought for the sale. A partial clearing sale should also be run as often as possible--say, for instance, of coal-vases or fenders, towards the end of the season. Advertise that some of these are slightly soiled and must be cleared. Ticket each article with the original price and sale price, and this will draw a lot of the lady bargain hunters who are always prepared with cash for these occasions. Gasfittings, oil-lamps, traveling-trunks, etc., should be treated in a similar manner. Perambulators and mail carts should be pushed well during their season. Good posters, with the words "Low Cash Prices" prominent upon them, are the best means of advertising these. With regard to these last mentioned articles, and also sewing and wringing machines it is as well to make your prices so that you can allow 10 per cent. for cash, because all sewing machine dealers, most of whom deal also in perambulators and wringers, allow that discount for cash, getting the full price, however, on their easy-payment system.

Then the tool trade is another branch which can be worked on cash lines; therefore, push it well. Refuse firmly to give any workman credit for tools, or you will lose more than you will make Get up a neat tool list, with all prices as low as you can make them, and on the foot of every page state that you allow 5 per cent. discount for cash.

With regard to builders' hardware, ranges, stoves, etc., it is not possible to do a cash trade—at least, not to any extent. The best you can do or hope for is to have the terms of credit shortened, and only monthly accounts given. Stop all customers taking one to two years' credit. You will find you are better without these. Have your cash terms plainly printed on your bill heads. Head your bills, if you like it, "The Cash Ironmongery Store." Establish your character as an up-to-date ironmonger; keep good smart assistants, and pay them well.

Always be prepared to sell at store prices, and don't let a customer go away with the idea that you cannot compete. Buy as good articles as you can sell in proper quantities, and put on a reasonable profit. Keep pegging away at your advertisements; let them be short and original, always keeping to the front the advantages of cash trading, and in a short time you will find your cash sales moving upwards, and you will have money to pay your accounts promptly, and at the same time your bad debts will be fewer, and your business in general much easier to manage.

A clerk of this city, who is smarter than his employer, was heard to remark: "Thank fortune, the boss has stopped advertising for the season. Now we will have a rest."

Counterfeit Canadian silver is in circulation in New Westminster and Vancouver. It is only a middling immitation of the genuine coin, and is easily detected either by ring or color.

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Price $15, complete.

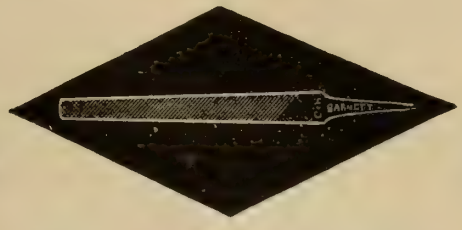
Will gum any cross-cut saw ; anyone can work it. There is paying work for a saw gummer in every town, village or cross-roads in Canada.

A. B. JARDINE & CO.

Manufacturers of Blacksmith's Tools and Tube Expanders,

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BLACK DIAMOND FILE WORKS,



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EVERY OTHER DESCRIPTION OF SAW FILES.

Hard Wear Paper FOR Hardware Men

Manillas, Brown Wrapping,
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THE E. B. EDDY CO., Hull, Canada

SAVED BY A BLOTTER.

A commercial traveler says: "The blotter in a hotel writing room once saved me from very considerable loss. As a general rule the blotter in a writing room is so dirty and covered with ink spots that the whole presents the appearance of an Egyptian hieroglyphics. But on this occasion, as luck would have it, the blotter was entirely new clean, and could be examined very closely. The last man who had been using it was also the first, and as he used a rather liberal supply of ink and wrote rapidly, he reproduced almost the entire letter upon the blotter before folding it up. I knew him to be the representative of a large Eastern house in a similar, though not rival, capacity to our own, and, without intending to do so, I found myself glancing at the reproduction of his letter on the blotter I was struck at once with the names of the house from which I had the previous day taken an exceptionally large order, and, reading on, I found that he had notified his firm that, acting under advice from a very reliable source, he had decided not to carry out his instructions and sell this firm a bill of goods. I went out at once and made a few enquiries which convinced me that not only was the house in question in difficulties, but that it was also contemplating a fraudulent transfer to defeat its creditors. I promptly wired the house I represented to ignore my letter by mail, coutaining this order, giving the reasons briefly, and following up the telegram by an explanatory letter.

"Some rather indignant correspondence followed, but this was abruptly terminated by the suspension of the latter and the absconding of one of the partners. I have always held a clean blotter in a hotel writing room with a feeling of veneration ever since."—Ex.

THE DEACON'S PHILOSOPHY.

"Yo' wanter borrer 5 cents to ride down town? Whad yo' done wiv dat $10 yo' hab Sat'd'y night?"

"I bought a pa'r labender pants a' a bosom pin. I had t' hab 'em," replied the Randolph heir apparent.

"Yo' did, eh?" said the deacon. "Well, jes' go up an' see ef de guard'll let yo' ride frum A Hundred and Twenty-fifth street t' de Battery because yo' got on a pa'r ob labender pants and a bosom pin. When yo' gits hungry go in an' ask fer a meal because yo' got a pa'r of labender pants and a bosom pin. When yo' froo work t'night p'r'aps yo' feel better walking from city hall to Harlem wiv a pa'r ob lebender pants an' a bosom pin den ridin' in de cars wiv ole pants an' nine dollars an' ninety-five cents in yo' pocket. Go long wiv you. While yo' had dat $10 in yo' pocket yo' was jes' as good a man asGeorge Gould; but now yo' ain' no better dan a bunco steerer wiv yo' labender pants an' yo' bosom pin."—Judge.

THE RAILROAD INTEREST

Advance sheets of the fifth statistical report of the Interstate Commerce Commission show that for the year ending June 30th, 1892, which is the date of the report, the increase in new mileage was only 3,161 miles, a smaller amount than has been reported for a number of years. The total miles in operation at the close of the year were 171,563 The increase reversed in one respect the condition of previous years, since it was principally in Eastern and Seaboard States. This mileage of road required for its operation 33,136 locomotives and 1,215,092 cars, while the great army of 821,415 employes were engaged in the service. The capitalization of the railroad property amounted $10,226,748,134, of which about 46 per cent. was represented by stock, 50 per cent. by funded debt, and 4 per cent. by floating debt. The railroads carried during the year 560,958,211 passengers and 706,555,471 tons of freight, the average passenger journey being 24 miles and the average freight hauled 125 miles. The average number of passengers carried per train mile was 42, and the average number of tons per train mile was 182. The earnings from this business amounted to the great sum of $1,171,407,343; the operating expenses were $780,997,996, but from the remaining net earnings of $390,409,347 fixed charges absorbed the greater portion leaving only the balance of $115,965,-191 available for dividends, being about 2.5 per cent. on the total stock. A considerable part of this was, however, used in making improvements and paying floating debts. The proportions of the earnings furnished by the different classes of business has not changed greatly from previous years, the freight supplying about 70 per cent of the total and the passenger business 25 per cent, the remaining 5 per cent. coming from mail and miscellaneous matters.

A dark side to the report is the chapter of railroad accidents, which shows that in the operations of the roads 2,554 employes, say 1 in 322, and 376 passengers were killed, while 28,267 employes, or 1 in 28, and 3,227 passengers were injured. Great as this number is, however, it shows a decrease from the previous year which is, perhaps, partly due to the fact, also noted in the report, that there was an increase of 68,537 in the number of cars fitted with automatic brakes, and of 75,300 in that provided with safety couplers. As the density of traffic and the consequent danger of operation increases, the use of signal and other safety appliances also increases, not quite as fast, unfortunately, as it should, but still in a way which shows a disposition on the part of the roads—or some of them at least—to do better in this respect than they have in the past.—Engineering and Mining Journal.

CORRUGATED IRON IN AUSTRALIA.

Mention was made in a former number of this journal of the adoption of corrugated iron for school buildings in portions of Australia where the shifting character of the country population made the frequent moving of such buildings necessary in order to place them as nearly as possible in the centers of the inhabited districts. The Australasian Ironmonger, in a recent isuse publishes some further information on this subject, which is of interest. Mentioning the difficulty experienced for many years by the South Australian Government in the proper provision of school-house accommodation for the outlying districts of that colony, the Ironmonger says: The farmers here, after working new ground for a few years, move away to unworked ground, generally further north or to the west coast. Under the circumstances it was not policy to erect stone or brick buildings, and the teachers and scholars had to put up with the ordinary wooden buildings, and these were often unpleasantly hot, and, through shrinkage, dust and wind (hot and cold) was admitted. Galvanized iron, played over on the outside with lime wash, was next tried, the inside lining being of wood. The result was more satisfactory, but still left something to be desired. Owen Smyth, the superintendent of public buildings next tried the small fluted 28-gauge galvanized iron for internal sheeting in lieu of wood, with ample inlet and exhaust ventilation, and had both sides of the external and internal iron played over with a special compound of fresh lime, boiling water, sugar and salt. By this means the radiation of heat from the bright galvanized iron was practically stopped, and the result was a neat, clean and healthy building, cool in any but the hottest weather, and even then never ranging above shade heat; while at nights the rooms are beautifully cool (comparatively), besides being fresh and sweet—very different from stone or brick brick buildings after a bout of hot weather. There is now erected in one of our city State school yards a model iron school room, with entivlation, etc., assured, surpassing in this respect many of the stone or brick buildings. Specially large ventilators carry off the vitiated air through the roof; the fresh air finds access through the ventilators fixed at about 7 feet six inches from the ground level; also, if required, from the swing sashes. Owen Smyth has provided a cheap and healthy building, with the temperature never more than that of shade heat, and frequently much cooler. This building has the advantage that it can be shifted to another site at a small cost.

Thos. Firth & Sons, Ld.,

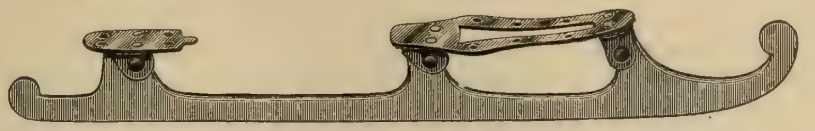
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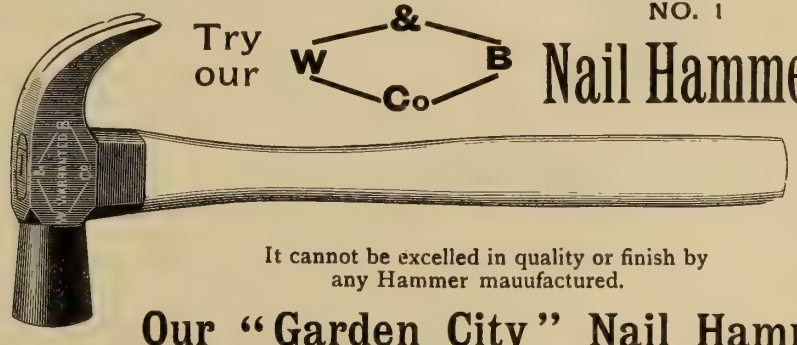
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It cannot be excelled in quality or finish by any Hammer mauufactured.

Our "Garden City" Nail Hammer

GET OUR PRICES AND TRY OUR GOODS

Is the best and cheapest "Solid Cast Steel" Hammer on the market. . . .

We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .

New Wholesale Gun and Sporting Goods House

NEW GOODS
. . AND . .
NEW PRICES.
NO OLD STOCK

King's Quick Shot Black Powder,
Quimby's Canvass Covers, Coats, Vests, etc.,
All Grades of Leather Coats,
British Bull Dog and Imitation S. & W. Revolvers.

Large Shipments of Above Just Arrived

Send for our Illustrated Catalogue and discount sheet to the trade—FREE.

The Bowman Hardware and Sporting Goods Co., Hamilton, Ont.

BUSINESS CHANGES.

SALES MADE OR PENDING.

The plumbing stock of P. P. Raby, Montreal, has been sold at 40 cents.

Hull & Ferguson, general stock, Fort Erie, Ont., to be sold on 19th inst.

The hardware stock of E. Blanchard & Co., Montreal, is to be sold by auction on the 25th inst.

The Hatch & Shipway Manufacturing Co., manufacturers of iron bedsteads, fencing and electrical bell goods, Toronto, have been sold out by the bailiff.

The general stock of T. Bourassa of Chatham was sold on Monday for 78 cents on the dollar. The stock amounted to $1,972 34, and the purchaser was F. Marr of Chatham.

PARTNERSHIPS FORMED AND DISSOLVED.

The Montreal Electrical Supply Company has dissolved.

Reed Bros., plumbers, have succeeded W. H. Reed of Fredericton, N. B.

Geo. Jeffrey is the only partner left of Jeffrey Bros., agricultural implements, Cote Visitation, Que.

Murray & Loughrin, general store, Mattawa, Ont., have dissolved. The new firm is T. & W. Murray.

R. S. Banbury, late with T. S. Bray & Co., general store, Wolseley, N. W. T., has formed a partnership with E. A. Banbury as Banbury Bros.

CHANGES.

L. Baird, general store, Wick, Ont., has removed to Saintfield.

S. Haney, general store, Phelpston, Ont., has sold out to Robert Shields.

J. B. Wylie, general store, Almonte, has been succeeded by John Hamilton.

The wholesale hardware business of Jas. Hutton & Co., Montreal, is being continued by the executors.

The Trothier Axe & Edge Tool Manufacturing Co, Three Rivers, Que., suffered by fire in their establishment last week.

On and after Nov. 1st, the business firm hitherto known in Toronto as The Doty Engine Works Co., will be designated the "Bertram Engine Works Co."

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

Robert Scott, general store, Scottstown, Que., has compromised at 25c. cash.

A meeting of the creditors of L. H. Gauvin, general store, Acton, Que., has been called.

Anderson R. Burpee, tinware and stoves, Port Elgin, N. B., has assigned to W. W. Wells.

George Gurney, the yongest son of the late Charles Gurney, of the Gurney-Tilden Co., died at Hamilton on the 14th inst. after a long illness. The deceased was a bachelor and had been an invalid for over 12 years. Previous to that he was an active and valued member of the Gurney firm, and assisted his father and uncle in building up the business. He was born in Hamilton in January, 1846.

GLASSWARE vs. SILVERWARE.

Artistic glassware has come to be no mean rival of silverware, remarks House Furnishing Review; consequently there are fashions in glass as in other matters. Handsome cut glass, so long in favor, remains so with many, yet fewer and more fragile patterns are being introduced of late, especially for liquor sets. Engraved glass is still favored, and graceful shapes are produced, notably in novelties to be mounted in silver. While table glass is for the most part white, for decorative purposes there are many novelties in colored glass. The green Nuremberg glass is very much admired and is made in many artistic shapes. A new vase for flowers is shaped like a milking stool, and the tall heliotrope colored glasses ornamented with gilding are very effective. There is also a new kind of decorative glass which is likely to become a favorite, though the prices will be rather high. It is an imitation of tapestry work enameled in faint old fashioned colors on a fine threaded glass.

Candalabra and epergnes continue to be produced in cut glass, as do other massive pieces which allow of depth for cutting. A magnificent cut glass epergne, employed as a center piece on the table, enhances the value and brilliancy of the silverware by the glitter of its finely-cut facets. Fruit attractively placed on its graduated dishes, with flowers in the vase surmounting these dishes, imparts the required touch of color, and renders the whole a picture pleasing indeed to an artistic epicure.

Many persons are under the opinion that glassware of the finer grades is expensive, but this is a false impression. Within the last few years the American manufacturer has made marked advances in producing glassware of all grades, and to-day is acknowledged to be without a rival for the production of cut glass and goods of the highest order. A few years ago glassware was only found in the houses of the wealthier portion of the population, but to-day the price has been reduced, so that in the homes of those of moderate means fine glassware can be found.

FACTS FOR RETAILERS.

The successful business man is he who is willing to commence at the bottom and work his way up, by steady, unremitting attention to every detail of his business, and to be able to do that he must, before he thinks of engaging in business for himself have a thorough knowledge of the grocery trade.

In selecting your location, be sure and have it the best you can afford. You will have to pay more rent, but that will cut a very small figure in comparison to the extra trade you will attract. When you have secured your place of business, the next thing to do is to place yourself right before the public, financially and morally. First, go to one of the prominent mercantile agencies and make a fair, square, and honest statement of the business you intend to engage in, the amount of cash capital you have to invest, what your position has been, and what you anticipate doing. Then you make a resolution and stick to it, that you will be strictly temperate, and never "play the races," or any other chance game.

When you get ready to purchase your stock, have a memorandum made out, and allow so much money for each class of goods, and keep as near the limit as you can. Don't overload yourself with first purchases; get the very best cash discounts; you will find there is considerable money saved during the year by discounting your bills.

When business begins to slack up do not sit down and wait for the return of fall or spring trade, but get up some good scheme that will bring you more prominently before the people, and at the same time bring you profit.

The arrangement of fixtures is something that would be considered as much as anything. Make everything as convenient as possible, and you will find your clerks will wait on more customers, make more sales, and cause much less annoyance to those whom they are serving.

Stocks should be so arranged that customers purchasing one thing will have something else suggested to them by its being convenient, and the clerk will then have no trouble in introducing and selling it.—Ex.

The Halifax Shovel Co. secured prizes at the World's Fair for shovels, scoops and spades.

APTED BROS.

PRINTERS

54 YONGE ST., TORONTO

"THE RIVAL FAVORITE"

SELF-FEEDER FOR HARD COAL.

One Size With Oven. Two Sizes Without Oven.



The most popular of the . . .

"FAVORITE" LINE

Has no equal at the Price.

Orders should now be sent to the undersigned, and will have prompt attention.

We now have full stocks of these popular Heaters and can ship all orders same day as received. Please let us hear from you either by wire or by letter.

THE JAMES SMART MFG. CO., LTD.

BROCKVILLE, ONT.

Successors to the business of the Chown & Cunningham Co.

. . ELEY'S . .
CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. Wholesale Only

ELEY BROS., LTD.

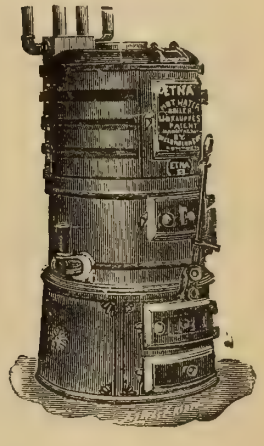
254 Gray's Inn Road, LONDON, ENG.

The "ETNA"

Hot Water Heater . .

— IS —

PERFECT



And we are prepared to

GUARANTEE

Its working satisfaction in every particular. **Write for Price List and Testimonials.**

Wm. CLENDINNENG & Son, Montreal, Que.

RAZORS, SCISSORS

POCKET KNIVES

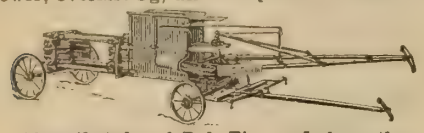


TABLE KNIVES

BUTCHER'S KNIVES

DEDERICK'S PATENT STEEL SHELL HAY PRESSES.

Made of Steel—lighter, stronger, cheaper, more power, everlasting, and competition distanced.



Also all styles of Bale Ties made from the Best Steel Wire.

Manufactured by BOYD & CO., Huntingdon, Q.

MUNN'S LIQUID GLUE

IS THE BEST.

THE ART METROPOLE, Agents.

131 Yonge Street, TORONTO.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucpan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—
56 and 28 lb ingots, per lb .. 21, 22
Straits ..... " 20½, 21

Tin Plates—*Charcoal Plates, Bright.*

	Per box
M.L.S. equal to Bradley	
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 00 4 25
I.X., "	5 00 5 25
I.X.X., "	6 00 6 25
I.XXX., "	7 00 7 25
D.C., 12½ x 17	3 75 4 00
D.X.,	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets ..	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

	Per lb.
C okley Grade—	
.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6½ 6½
26 "	6¾ 7
28 "	7½ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb ..	$1 95	....
Refined " " ..	2 35	2 65
Horse Shoe " " ..	2 60	2 75
Band " " ..	2 50	2 60
Hoop " " ..	....	2 60
Swedish " " ..	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
⅜ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2½, 2¾
26 "	2¾, 2¾
28 "	2¾, 3

Canada Plates.

All dull	2 65
½ polished	2 75
All Bright	2 90

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head

16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5½, 5¾

Gordon Crown—

16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4½ 4¾
" ⅜ " "	4¼ 4½
" 7-16 " "	4 4¼
" ½ " "	3¾ 4
" ⅝ " "	3⅝ 3⅞
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 11½ 0 12½
Lake Superior	0 12½ 0 13

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22 $0 25
" " round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 18 0 19
" 35 to 45 " "	0 16 0 17
" 50 lb and above per lb	0 15 0 15½

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelte .

Foreign, per lb	0 04½ 0 05
Domestic "	0 04⅝ 0 04¾

Zinc Sheet.

5 cwt casks	0 05½ 0 05⅝
Part casks	0 05½ 0 05¾

Lead.

Imported Pig, per lb	0 03 0 03¼
Domestic "	0 03
Bar, 1 pound	0 04½
Sheets, 2½ lbs, sq. ft, by roll	0 04½ 0 04¾
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04½ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 15 0 16
Standard	0 14 0 15
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 12½
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do "	4 75
No. 2 Do "	4 50
No. 3 Do "	4 25

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 00 1 20
2nd qualities "	1 00
Barn (in bbls)	0 90 1 00

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p. cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red, (best) " "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " } " "	1 25 1 90
Canadian " }	
Paris Green, per lb	0 13½ 0 15
Burnt Sienna, pure, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure,	
8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra "	0 90
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 85
No. 1 Carriage "	1 30
Gold Size Japan "	1 00 1 20
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40
White Shellac	2 25

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 46 0 48

Castor Oil.

Best, per lb	0 07⅞ 0 08

Cod Oil.

Cod Oil, per gal.	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue—F. LePage's, dis. 20 t 25 per ct. off list; Munn's, dis. 25 to 30 per cent. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis.40 to 45 p.c. Amer-
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads. in ½ lb. bags	0 70
Best thick white card wads. in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33½ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50 pc. } to 50 and 5
Plate dis. 50 pc } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per cwt 0 60 0 65
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18
Chisels—*Socket, Framing and Firmer*
American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10 p.c
Shepard's Queen City, dis. 15 p.c:

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.20	.....	1.85	
26 to 40	1.30	2.60	2.10	
41 to 50		3.00		4 70
57 to 60		3.30		5.20
61 to 70		3.60		5.70
71 to 80		4.00		6.30
81 to 85		4.40		6.90
86 to 90		4.80		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

NEW ARRIVALS

30 Cases CUTLERY AND GUNS

ALL NEW GOODS.

Finest Finish. Best Value.



NEW ARRIVALS

20 Casks Cattle and Trace CHAINS

10 Tons Coil Chain.

Five Cars Window Glass.

Bowman, Kennedy & Co., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

F.O.B. Toronto & Hamilton $3 80
Snow, " " ... 3 90
F.O.B. Montreal 15c. less, and London 5c. more than above.

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy.....	2 30
40dy.....	2 35
30 dy.....	2 40
20, 16 & 12 dy.....	2 45
10 dy.....	2 50
8 & 9 dy.....	2 55
6 & 7 dy.....	2 70

2. American Pattern Only

from 4 to 5 dy	2 90
3 dy. (lath).....	3 30

3. Canada Pattern Only

from 4 to 5 dy	2 80
3 dy. (lath).....	3 20
3 dy. A.P. Fine	3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 60 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 35 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, 1 lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9	10½
¼, 5-16, ⅜ in.....	9½	10¾ 11
Cotton, per lb.....		18 20
New Zealand.....		8½ 9
Russia Deep Sea, per lb..		12½ 13½
Jute ..... " ...		06¾ 07½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D, dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 to 40 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 special brands net price.

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis. 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Sapolio

In ½ or ⅓ gross boxes, per grs. 11 30

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Snaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4½ 4¾
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S. & W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ p.c. to 35 p.c.
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9 00

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 5a
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6⅜c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " } 4½ 4¾
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p.100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33½, 35 p. c.
Tower's Engineer, each .. 2 00 3 "
" S., per doz..... 5 80 7 0
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS, KNIVES, FORKS, SPOONS

MANUFACTURERS OF THE

Finest Quality Electro-Plated Ware.

AND SOLE MANUFACTURERS OF THE CELEBRATED

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

---

None Genuine without this Brand



Stamped in head of Every Package.



PAINTERS

Will find the cheapest Paint Brushes are those having our . . .

Flexible Bridles—

Why? Because the bridle can be taken off and replaced in a moment. The paint circulates and the stump never hardens. You can wear the brush down shorter, therefore it will last much longer.

Ask your dealer for them. Made in round, oval, and flat. All sizes and qualities.

CHAS. BOECKH & SONS

Brush Manufacturers

TORONTO - - ONTARIO

DOME BOTTOM COPPER TEA KETTLE



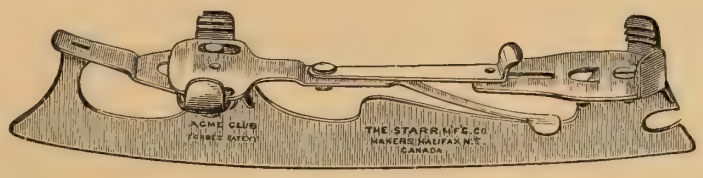
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Manufactured and for Sale by

The Collins Manufacturing Co.,

84 Adelaide Street East, TORONTO.

The Genuine Acme



THE LEADING HIGH CLASS SKATE

All genuine "Acmes" have our registered trade mark "ACME," and the Company's name and address in full, stamped on each runner. Beware of imitations.

The Starr Mnfg. Co., Ltd., SOLE MAKERS

Halifax, Nova Scotia.

: : For Sale by all the Leading Jobbers : :



OXFORD "OXFORD" OXFORD

. . LINES . .

Our Leaders for 1893--are the

Countess of Oxford

. . AND . .

Art Countess

and the BASE BURNERS

DUCHESS OF OXFORD

. and . **KITCHEN WITCH RANGES**

Put these Stoves on Your Floor and Command the Trade. . . . .

The Gurney Foundry Co., Ltd., Toronto

The Gurney-Massey Co., Ltd., Montreal

Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St., Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 x 4 Barb
Plain Twist and
Strip Fencing

And Staples for same.

Write for Prices and Discounts.

ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

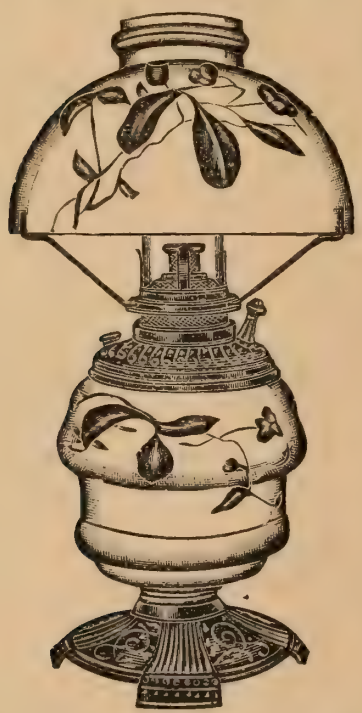
BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

A·COSY·ROOM



A Glimpse of Comfort

A Hint of Rest

—ARE

Bright suggestions which connect . . themselves with .

..THE..

"Pittsburgh"

: :LAMP

The brightest of all bright lights received from

THE "PITTSBURGH."

WRITE FOR PRIMER -:-

Gowans, Kent & Co.,

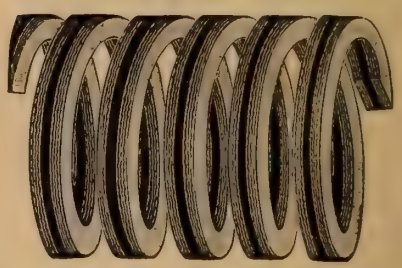
Sole Agents for Canada. TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

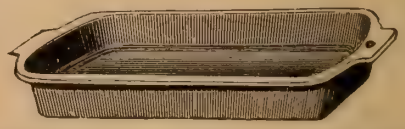
Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., **Toronto.**

"The Seamless Flanged Drip Pan"



Improved Rolled on Edge.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife to cook or lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The improved rolled on edge making it easy to handle.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

SIZES.....	8 x 10	8 x 14	10 x 15	12 x 17
Per Doz.....	$1.91	$2.33	$3.20	$3.73

THOS. DAVIDSON & CO., Montreal, Can.

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, OCTOBER 28, 1893. No. 43.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

MAGNOLIA METAL CO.,

London Office: 75 Queen Victoria St.
Chicago Office: 41 Traders Building.
Montreal Office: H. McLaren & Co., Agents

Owners and Sole Manufacturers,
74 Cortland Street, NEW YORK.

Mander Bros. Varnish

Is the First Varnish in the Country To-day

There are a few varnishes that wear well, but they must be mixed or "fixed" before they can be used. Other kinds work all right but are not durable. MANDERS' is the only varnish that is always right at all seasons, and under all conditions.

READ what one of the oldest and most reliable carriage builders in the country says about Manders' Varnish:

"Manders' has proved to be the safest varnish to use right through the year. In my experience of over twenty years it is the best in every respect. I have tested it in comparison with the best American and English makes, and it is superior to all. Its durability is unquestionable.

Send for Price List to the Wholesale Agents for Canada

Walter H. Cottingham & Co.

FINE PAINTS AND VARNISHES. MONTREAL

Glistening Cream for Furniture

A Polisher, Shiner, Brightener, and Glosser of everything, from a Piano to the buckle on your shoe.

• • •

Is not a varnish, but will clean and renew the gloss on your furniture and the woodwork in your house, making everything glisten exactly like new. The judicious use of a single bottle will make your house appear as though you had expended a hundred dollars in revarnishing. Try it on your woodwork, give it a severe test, and you will be delighted. **Glistening Cream** effectually removes that smoky blue dullness so often seen on Pianos and other highly polished surfaces.

Absolutely no labor necessary, simply apply with a cloth and wipe off. This article is just out, and there is nothing like it.

Everything Glistens with "Glistening Cream"

RICE LEWIS & SON, Ltd.

Wholesale Agents. **TORONTO**

Copper Cider Kettles

(BRAZED AND HAMMERED.)



PLATE 237.

PRICES ON APPLICATION. **CORRESPONDENCE SOLICITED.**

MANUFACTURERS OF

Brewers, Distillers, Confectioners . . . Varnish Makers Plumbers and Marine

Copper Works

The Booth Copper Co.

Formerly Booth & Son. • 122 Adelaide Street West, **TORONTO**

STANDARD . . STOVE-PIPE

PATENTED.

Packed 25 joints in a closed crate.
It requires **NO RIVETS OR TOOLS** to put it together.
The seam does not require pounding down.
It is uniform in size, and, being crimped at small end, secures a close and easy fit.
It has a coating which prevents rust.
It can be bought as cheap as ordinary misfitting stove-pipe. - - - - - - - -
Being nested, secures low freight rate.

Kemp Manufacturing Co.

TORONTO, ONT.

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, OCTOBER 28, 1893 No. 43

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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NEW YORK OFFICE: Room 41, Times Building. Roy V. Somerville, Manager.
EUROPEAN BRANCH: Canadian Government Offices, 17 Victoria St., London, S.W. R. Hargreaves, Manager.

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Some months ago a certain agricultural implement company whose head offices and factory are located in Chicago, gave out that it desired to establish a branch factory in Canada. Naturally a number of cities, towns and villages in the country began "setting their cap" to catch the coveted plum. Statements galore were prepared, showing advantages possessed by this and that place, or what Jonesville and Brownsville respectively would do if the aforesaid company would only locate with them. Not only did much correspondence pass between the places who desired to be the site of the proposed large branch factory and the company, but paragraphs many appeared in the weekly and daily papers from time to time now, announcing that Brownsville would be selected, then that it was Jonesville, and so on until a score or more places were mentioned as being the most favored. Now the firm announces that it has decided not to establish a Canadian branch. Probably the aspirants for the possession of the said branch were not liberal enough in the inducements they held out. At any rate the United States firm has secured an immense amount of free advertising, which may have been after all just what it was seeking.

* * *

The hardware dealers in most of the cities in the United States are troubled with grievances against manufacturers and jobbers. The particular grievance is that they furnish goods to those not regularly engaged in the retail trade. In other words, they sell direct to consumers. This has proved an incentive to the formation of hardware dealers associations. Among the latest community of merchants to take this step is that of Chicago; and the very first clause in the resolution which was adopted at the meeting called to form the organization was one demanding that "manufacturers and jobbers confine the sales of their wares to regular dealers." Fortunately in Canada there is little cause for friction between the manufacturing, jobbing and retailing branches of the trade, but the few that there are would be less were retailers organized into associations.

The window glass business across the line is in a most unsatisfactory condition. The demand is practically nil and prices without a basis. Even the powerful American Window Glass Trust has been unable to withstand the depression, and in order to prevent disintegration has decided to go into a state of suspended animation for an indefinite period. To be exact, the Trust has decided to make the market an open one, thus giving each member of the organization liberty to sell at what price he choses. "The open market," says the president, "does not mean a dissolution of the national association. With a free fight and no favors the members expect to keep same trade going until a general resumption of building trade over the country."

* * *

The situation in the United States Senate regarding the question of the repeal of the silver purchasing clause of the Act of 1891 is as unique as it is annoying. The silver men know that they are hopelessly in the minority, but about a score of them have constituted themselves a filibustering party to baulk the purpose of the majority and to defeat the will of the people of the country. And admirably have they succeeded, having so far by a systematic system of obstruction defeated every attempt to take a straight vote on the question that is at the moment of such vital importance to the people of the United States. Their object is evident: they want to secure a compromise instead of the unconditional repeal of the objectionable silver purchase clause. They know this is the best they can get, and for dear life they are fighting for it. A few days ago, if rumor is correct, there seemed a possibility of their getting what they wanted. An informal conference between a few of the silver and anti-silver men was actually held. At this meeting a sort of agreement was drawn up. The first clause stipulated that the secretary of the Treasury should, until January 1, 1895, purchase one-half less ounces of silver than at present, after which all purchases should be suspended; that the seigniorage in the treasury in silver bulion amounting to nearly $55,000,000 should be coined into silver dollars; that authority given in the resumption Act of 1875 to issue bonds to aid the cause of redemption should be so explained and enlarged by certain phraseology that there would be no doubt of the power of the secretary of the treasury to issue bonds for the purpose of maintaining a parity of the metals or to keep the gold reserve intact. The president, it is said, was disposed to concede that repeal should not take place till the 1st July next, and that a provision for issuing silver certificates against the seigniorage bullion should be incorporated with a bond provision into the repeal bill, instead of left for a separate measure. But while the silver men hesitated he renailed his unconditional repeal declaration to the mast. Although it is possible that the Senate may adopt a conditional repeal measure, it is scarcely probable. In the president is reposed the veto power, and there is little doubt he would use it did the repeal measure not accord with his views on the question. And the chances of the Senate being able to drum up the necessary two-thirds majority in order to over-ride the president's veto are slim indeed. What

seems now more likely to break the deadlock is the application of the cloture. It has been talked of for some time, but only recently seriously so. Already a cloture motion has been introduced, and the mover, Senator Voorhees, was one of those who only the other day avowed that the time for taking such extreme action was not yet.

All self-governing countries look upon the cloture as an instrument to be used as a last resort. In the United States this view is particularly strong, but there seems no doubt that in the present instance cloture would receive the approval of the majority of the Senate and the great mass of the people of the United States, who are sick and tired of the way in which the members of the upper house are dealing with the canker that is destroying the financial health of the country. The obstructionists are naturally loud and deep in their denunication of the proposition to apply the cloture. They characterize it as an interference with the rights of the minority, and one of the leaders of the faction declared the other night that the House had no right to take a vote until the debate is exhausted, and in the next breath intimated that no one was qualified to determine whether he was obstructing or not. Furthermore, he stated that the bill ought not to pass until the majority agreed to a compromise with the minority. A unique contention indeed ; but it is one that carries little weight with it. The fullest debate is what every question is entitled to, but when the debate is prolonged indefinitely in order to defeat the will of the majority both inside and outside the halls of legislation, it has passed the line of reasonableness and the application of extraordinary measures to bring it to a close are only just and reasonable.

* * *

There was a convention of the American Bankers' Association in Chicago last week. It was an annual affair, but more than usual interest was attached to it on account of the financial condition of the country and that Mr. Eckels, Comptroller of the Currency, was to deliver an address thereon. Mr. Eckels is not a banker. He is a lawyer by profession. But he has a level head, and says a good many things that are wise. On the occasion referred to he well-maintained his reputation. The circumstances of the intervening months from May to September naturally came in for much attention, and he was within the province of truth when he characterized them as "the most remarkable in every phase of financial bearing ever experienced by the American people. Heretofore," he added, "in our financial distress the test of solvency has always been applied to store and factory, to great industrial enterprises and railway corporations, but within the period of these months an affrighted people, fearful of the resultant effects of a financial system initiated by ill-advised and ill-considered legislation, became for the first time doubtful of the distinctively financial institutions of the country, the banks." When he incidentally remarked that "competition for business is carried to the danger point by many, and the desire to secure a large business has led to the taking of risks not consistent with prudent methods," he uttered words that every business man, as well as banker, would do well to appropriate and remember.

HARDWARE MEN'S ASSOCIATIONS.

It is strange that the retail hardware merchants of the country, particularly those located in the cities and larger towns, do not form local associations. They have grievances that by united effort might be removed, but probably the greatest benefits to be derived from such an organization are the results which naturally accrue from association. Man, wrapped up within himself, becomes narrow in his views ; and it is the same with the merchant who holds himself aloof from his fellow business men. There is altogether too much jealously between merchants, and it is largely because they have so little intercourse with one another. On the other hand association breaks down the barriers of prejudice, while the interchange of ideas breeds better business methods, something every live merchant covets no matter how successful he may be. This is even more the office of merchants' associations than the ventilation of grievances the retailer may have against the jobber, manufacturer or his municipality. And one of the greatest evils which such associations would tend to eradicate would be that of cutting prices ; not by the creation of any set of cast iron rules, but as the natural result of better acquaintanceship.

It is not necessary that all these local associations should be monopolised by the cities and larger towns. Wherever two or three merchants can gather together an association might be formed, even if the meetings partake more of the nature of informal social chats on business matters. It was only the other day that HARDWARE came across a letter in the columns of a contemporary from the member of a merchants' association whose membership only numbered nine, and yet it was a success. "Our association," he wrote, "has been in existence now for the past six months, and the older it grows the more each member is pleased with it. We all feel benefitted, and instead of looking upon one another as competitors we regard each other as friends. We meet regularly every Monday night for the transaction of any business that may be brought before the association. These regular meetings tend to keep up an interest in the association, and, for my part, it is one of the most pleasant evenings I spend during the week. Prices have been regulated and placed on a profitable basis, cut throat business has ceased and petty jealousies have entirely disappeared. We have confidence in each other instead of distrust, and although business has been very much depressed during the past few months, we are making a living profit on what goods we sell." And what has been done in one place can be done in another. HARDWARE solicits correspondence on the subject.

A WARNING TO MERCHANTS.

If farmers are the victims of the lightning rod and hay fork fakirs, merchants are the happy hunting ground for the advertising fakirs.

Fortunately a good many are awaking to the fact that the best mediums for advertising are the columns of legitimate trade and daily and weekly newspapers, but unfortunately there are still large numbers of merchants who allow themselves to be led into the alluring parlor of the fake advertising spider.

Too often these fakirs are assisted in their nefarious work by some of the daily papers. It may not be always knowingly, but they do it just the same. It seems that the keenness of competition, or the getting into a tight corner will sometimes induce newspapers as well as men to perform questionable acts or lend their aid to their accomplishment. An instance in point has just come under HARDWARE'S observation. A certain few gentlemen, it is said, who make a living by "working up" advertising schemes has purchased a certain amount of space in a Toronto daily paper. This space they propose to use up with "write ups" of business men. The mode of procedure is something like this. The agents of this scheme will swoop down on a certain city, or town, carrol the leading merchants, tell them that the Daily Blank, impressed with the importance of their town, proposes to publish an illustrated historical sketch of it. A part and parcel of this sketch will of course necessarily be a "write-up" and accompanying paragraph of the leading merchants. But the most alluring part of it will be that the "write-up" will be free. Naturally the bait catches a good many. They produce their photos and blushingly allow themselves to be catechised as to

place of birth, business experience, class of goods carried, etc., etc., necessary to a modern "write-up." With this data in their possession the fakirs retire, and when they appear on the scene it is with the autobiographies of the merchants in manuscript. In character they are each of course of the most flattering description, and every subject is an ideal and most successful business man. An enormously large number of papers of the identical issue in which the "write-up" is to appear will be printed, and of course the subject of the elaborate sketch will require a certain number of copies. (The fakir stipulates the number and price.) But if the subject should say that of course he didn't, and intimate that it was not so understood when he furnished the data and photo of himself, the fakir takes his departure in a "huff" and avows that the sketch will never be put into type. He keeps for once the promise he has made, and it isn't.

Merchants, do not be allured by the inducements held out by advertising fakirs. Select the best of the legitimate mediums, advertise in a way that will attract your patrons, keep the promises you make in your advertisements, and you will find the investment profitable. But above all things, shun the advertising fakir.

THE PIG IRON MARKET.

Dullness is still the prevailing feature of the heavy iron market, which is absolutely devoid of feature in Montreal, where it is noteworthy that the supply of Scotch pig iron is much smaller than usual. It is understood, however, that supplies of Nova Scotia pig are considerable, but the demand is not encouraging for it either, in fact the heavy iron market is unusually quiet even for this season of the year.

With regard to the British iron market warrants do not show any particular life, and dullness is the prevailing feature in the trade generally. A leading Montreal broker who represents some of the largest British iron firms supplied the HARDWARE correspondent with some figures which may be interesting as indicating the statistical position of pig iron in Great Britain at the close of the month of September. At that date the stocks of Scotch pig in Connol's Glasgow stores was 331,525 tons against 373,444 tons for the same time in 1892, a noticeable decrease. At Middlesboro', however, the stock was 87,848 tons against 10,809 in 1892, but in the Cumberland stores there was 79,857 tons at the close of September, 1893, against 35,025 in 1892. The total stocks of pig iron in store therefore at the three leading points in Great Britain at the close of September, 1893, was 499,230 tons, against 412,278 tons in 1892, or a decrease of 79,952 tons, which the gentleman in question attributes more to the curtailment of the output due to the colliery troubles than to an increased demand. Still, although holding this opinion he says that the figures of the actual movement from the three points in Great Britain for the nine months in 1893 are greater than in 1892. The shipments from Glasgow this year from the 1st January to the 30th September were 231,969 tons, from Cumberland 202,083 tons and from Middlesboro 730,087 or a total for the nine months of 1,165,139 tons. In 1892, during the same period, the shipments were 255,030 tons from Scotland, 267,740 tons from Cumberland and 460,226 from Middlesboro or a total of 982,996 tons. It will be seen, therefore, that the increase for the present year is entirely due to the movement from Middlesboro, as the shipments from both Scotland and Cumberland in 1892 were greater than in 1893.

DEVELOPMENT OF CHARACTER.

One of the things which give life its interest and its dignity is the fact that no experience stands by itself, but becomes a preparation for that which is to follow, says an exchange. There is a unity and completeness about life on the moral and intellectual sides which gives every act a definite force, and which lends even to trivial things that importance which comes from a close and vital relation to the working out of a large and comprehensive scheme. It is a truism that all life is but a preparation, but it is one of those truisms which very few people appear to believe, to act upon. A great many men and women live as if each day had no bearing upon its successor, and as if each act were unrelated to the acts that were to follow it. They have read neither history nor their own lives. They have failed to learn the first and most obvious lesson of experience. In every successful career there is clearly revealed the close relation between the culmination in striking achievement, and the fidelity, patience and courage which went before it. No man comes suddenly into any kind of supremacy. Every kind of superiority is the result of a thousand apparently unimportant and insignificant acts. The preparation for a great crisis is rarely made unconsciously. It is generally made by the man or woman who is doing the work of the day with the utmost fidelity, without any idea that that fidelity is to find its reward in the possibility of a notable achievement at the end. The experience of life is so adjusted to the development of character that everything which comes in the shape of opportunity or duty presents a test which there is no possibility of evading. He who meets these tests quietly from day to day, often without the consciousness that they are tests, is making sure preparation for the time when some great test will suddenly be applied, and the quality of the intellectual and moral fibre instantly disclosed. However skeptical men may affect to be, there is no getting away from God in this life. Every day, in every occupation, we are dealing with an invisible power, and the character of our dealing, whether we will or no, is determining the kind of success or the degree of failure that shall come to us. The oft-quoted remark credited to Wellington, that Waterloo was won on the cricket field at Eton, is only a dramatic way of putting the truth that the great victories are not won on the field where they are finally secured, but in a hundred unregarded preliminary trials of strength. Every day is such a trial.

CANADIAN PIG IRON.

There arrived in the port of Montreal this week a cargo of 1,900 tons of pig iron by the steamship Tiber, from Pictou, Nova Scotia, consigned to Messrs. Drummond, McCall & Co. The iron is the product of the Ferrona furnaces, an extensive plant having recently been established at that point with a view to the development of the rich iron deposits of Pictou. Already a large output has been made, and the proprietors hope, in the course of time, to supplant foreign pig iron to a great extent in the Canadian markets. Heretofore, iron shipments from Nova Scotia to Montreal have been made principally by rail, and the higher freight rates have somewhat militated against the expansion of the trade in competition with Scotch and other pig iron brought here by water, but if the business attains the proportions which are anticipated, it is probable that arrangements will be made next season for the regular shipment of iron from the Ferrona furnaces by vessel to Montreal. We learn from the North Sydney Herald that while only a year ago the extensive iron works at Ferrona were established, there is to-day one of the finest enterprises in Canada located at that place. Ferrona, which is reached by the Intercolonial Railway, is some five or six miles from New Glasgow. The railway of the New Glasgow Iron, Coal and Railway Co., 15 miles in length, runs to the iron works. The company gives employment to some 500 men in connection with its magnificent plant at Ferrona, where 300 tons of coal for coking purposes, 200 tons of ore and 100 tons of limestone are used each day. The furnace turns out about 90 tons of pig iron daily. There are 50 coke ovens in Ferrona, the coke plant being one of the finest in America. It is of German design and is managed by Mr. Zirker, who formerly held a responsible position in the Kruppgun works in Germany. The New Glasgow steel works obtain their pig iron for manufacturing into steel from Ferrona, the supply of the home product being a new and gratifying departure, as hitherto the iron has been imported from abroad. As a result of the supply from Ferrona the steel works at New Glasgow are expected to double their output in a short time, and instead of one blast at Ferrona there will soon be three or four. The steel works employ about 500 men, and about 1,000 men are employed in the iron and steel industry at that point.—Gazette, Montreal.

OLD IDEAS IN HARDWARE.

In at least one respect, dealers in hardware have an advantage over those in other branches of trade, remarks Hardware Reporter. They handle staple articles that are not subject to sudden changes in style and they are reasonably certain to sell their goods in time if these have been bought with an eye to their customers' wants and necessities. They are of course required to carry a variety of stock and often are obliged to maintain a class of goods that are not quick sellers but which must be kept on hand if the stock is to be at all complete, but when these goods are sold it is generally the case that the sale brings a fair average of profit unless a too long keeping has rendered them unsalable at their first marked price.

But this very advantage is occasionally a detriment to the dealer and his trade. He may argue that as people must buy his goods because they need them, he is not obliged to create a demand for anything more than the mere necessities or to extend his lines beyond such articles as are required for everyday use and of the same grade or character that he has been accustomed to sell for years. He can not see why he should supply his store with a new line of goods and risk the loss of money that for a time follows the introduction of new ideas, when his trade has been used to the good old lines and must be educated up to an understanding, that the hardware world grows, if not so rapidly, yet as effectually as that in other merchandise. He is content with a stock of goods the standard of which has not been raised for years, and he objects to the introduction of novel ideas for the illogical reason that the old kind had been good enough and he does not care to risk the change. He stands still while the world is moving and very frequently has cause to wonder why the trade is not as good as it was ten years ago or why some other dealer with perhaps a smaller capital but larger ideas is building up a trade and drawing away his own.

Happily there are not many such dealers in the trade, taking them altogether, but there are enough of the easy going and non-progressive kind to warrant the suggestion that a little more life, and at least a partial awakening to the fact that hardware buyers are not all behind the times, would redound to the advantage of the trade as a whole. Manufacturers are not necessarily the pioneers in new ideas, and the jobbers give them their first practical introduction, but they cannot reach the user excepting through the dealer, and if the latter fails to appreciate what his trade may want the community in which he lives is just that far behind the times and he himself is just that much out of pocket. When complaint is made that jobbers sell to users over the dealer's head, investigation often shows that the dealer would not handle the very goods that the jobber had thus sold.

SELLING FOR CASH.

For several years I have struggled with the difficult undertaking of endeavoring to get a better percentage of cash takings over those of credit, and being placed in what I suppose is about the most difficult class of business to do this, I thought I might assist my ideas to my own advantage by putting them on paper.

My meaning in saying that mine is a difficult position is this. It is a business in a small town dependent entirely on customers who get their living, directly or indirectly, from agriculture. They have always been used to long credit, and are not easily brought to pay cash ; and as a good proportion of the business is a working trade which is almost solely booking, it is still more difficult. I stimulate myself to increase the cash takings by every month making up an account showing in one column the ready money, and in another the credit money taken. I then refer to the previous year, and so see which way the tide is flowing. If the proportion of ready money is better I am induced to try and still better it ; if worse. I am dissatisfied, and try and make it up next month. I also give my assistants a small percentage each month, so that they may also be induced to assist me in increasing the returns, which I am satisfied they do.

Beyond this, to customers who purchase goods over 10s. I give a discount ordinarily of 5 per cent., but cannot make this a hard-and-fast rule, as there are some large articles —such as cycles, mangles, perambulators, and implements, which are advertised by the makers and cut by the stores—from which a greater discount must be taken to secure the customers. I find it of advantage to ticket all goods as far as possible with plain prices for cash ; for large goods tickets made of tin painted black, with white letters and figures, are very effective, and easily done by anyone who can make a good-shaped figure ; of course small articles would have card tickets. When sending out lists or sheets (which should be often) I use a rubber stamp to indicate the cash discount thus :—

5% for cash.

I send my accounts out quarterly, and repeat in the case of the slow ones with an account rendered every month, as I think letting them go longer is an inducement for customers to take long credit instead of paying cash. With a business such as mine it is impossible to do a strictly ready-money business ; all we can do is to take every opportunity of setting its advantages before the public. For instance, when quoting prices you can offer a special discount if paid on delivery or within a stipulated time, and by marking goods thus—

15/6.
For cash
14/9.

This kind of thing helps to educate people to the advantages to be gained by prompt payment. Even those customers who have an account will, when buying goods so marked, often say, "Oh, I may as well pay for this and save the booking fee."

Any special line (put outside of the shop, if possible), well ticketed, I find, helps—for instance, on a market day a pile of dandy-brushes, marked—

10½d. each.
Half-dozen
for 4/6.

are sure to go. I have sold grosses this way. There are many other articles that can be worked off so—for instance, sponges, currycombs, scrubs, etc. Galvanized tubs or buckets, marked with large black figures and well exposed, sell extremely well. I find customers like to handle goods so as to know what they are buying. Credit customers often put down the cash for goods when so shown and priced. I enclose with the September accounts a circular with the prices of paraffin by the cask, showing a good margin for cash. When I am ordering nails or other heavy goods I try and get a line from builders or others to come with them, giving a special inducement and cash terms. In regard to the working part of the business, the only thing is to keep well-posted up, so as to be able to render accounts promptly ; this department cannot be worked on the same lines as the counter trade. To sum up in the old-fashioned way of firstly, secondly and thirdly : (1) Render accounts promptly ; (2) mark all goods plainly, with special cash prices ; (3) make cash terms a leading part when advertising ; (4) when quoting for goods or work, state special terms for cash.—A. F. Smith in London Ironmonger.

From Jan. 1 to Aug. 31 England imported 119,818 tons of hay compared with 32,177 for the same period last year. Canada's contribution was 23,517 tons against 3,350 tons for 1892.

PROFITS OF MANUFACTURERS.

One important phase of the recent developments in the iron and steel trade of this country has not received that attention which it deserves, and that is the disappearance of profits to all engaged in the industry from the moment the raw materials are taken from the ground until the finished article is placed in the hands of the consumer. Unfortunately, numerical expression cannot be given to this fact, because so very few of our corporations in the iron trade are public companies whose reports are accessible.

Business men are so accustomed to hear manufacturers cry before they are hurt that complaints now, if they were made, would often be skeptically received. Of course the decline in prices does not measure past profits. If it did it would be a waste of sympathy to deplore the present condition of iron ore makers, coke makers, vesselmen and manufacturers. The carriers have contributed to a moderate extent to the decline of values. Labor has been reduced all along the line, and has thus aided in making low prices possible. But undoubtedly the most heroic cuts have fallen upon the capital invested in plant and property.

No one pretends that the iron mining companies of Lake Superior are earning dividends. The lake fleet of vessels has been forced to take rates of freight which may possibly cover cost. The coke producers, with Connellsville selling at $1.20, cannot possibly be earning decent interest on the enormous idle plant through the operation of the few ovens running, even though that figure might enable them to do very well when in full operation. The furnace men, in spite of cheap materials, are selling at prices which do not leave any margin, and steel works who sell soft steel billets at $18.50 are not getting a new dollar for an old one, not to speak of renewal and improvement accounts.

The loss of profits, the lowering of wages, and the decline in freights on raw material are cumulative as the higher forms of product are reached. A drop of $1 per ton on ore means more than $1.50 on pig iron. With the latter, again, lower coke, limestone and labor and the vanished profits take their goodly share from the former selling price. Let us put the whole at, say $3 for the sake of illustration. The billet maker secures all this and must add the amount represented by waste of iron in conversion—say 40 cents—making the lessened cost to him on his principal raw material, say, $3.40. He also takes advantage of the necessities of the squeezed maker of ferromanganese, he uses cheaper coke, gets lower labor and supplies, and yet must abandon profit if he wants to capture any business. The end is that there is an apparently enormous decline in the steel billet from $22.50 to $18.50 in a year. To it, however, everyone along the whole line has contributed. Apparently small accretions have swollen to one great total, which represents the measure of woe of all tributary industries.

We are far from underrating the hardships which labor must bear in such times as these, when the consumer may be supposed to be enjoying the maximum of advantages. The principal source of suffering to the workmen is the lack of employment rather than the lowering of the rate of wages. But after all the blows fall hardest upon the owner of capital who obtains no returns, and in only too many cases sees the fruit of years of work and skill swept away partially or wholly.

A consideration of the factors which have contributed to prevailing low prices at the same time constitutes a warning for the future. When the time does come, as it will, that wages are restored, and everyone along the line finds that conditions warrant the adding of a profit to his cost price, then, too, the additions will be cumulative, and will be represented by jumping prices. It may be premature now to speak of such a contingency, but it is bound to come, and will take those by surprise who fail to watch the signs of the times, and who do not appreciate the fact that it is not alone the last seller in the line, but every one before him, back to the producers of raw material, who is entitled to living profits.—Iron Age.

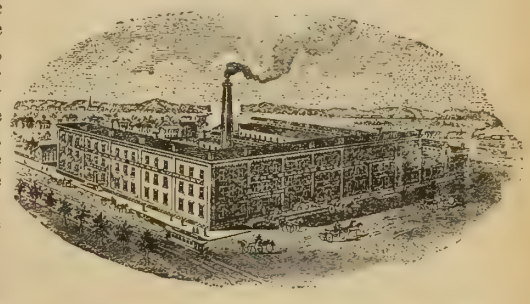
AN INVENTIVE HARDWARE MAN.

An invention for the rapid issuing of tickets on street cars has been a long felt want, and, although many systems and devices have been submitted up to the present time, none have been adopted. A few days ago HARDWARE was shown, by Mr. Wm. Mathieson, a King street hardware merchant, an invention of his own which he intends to submit to the Toronto street railway authorities for adoption. It resembles the fare box that conductors now carry, but in addition to the receptacle on top for the fare, it has a slot on the side near the handle, from which, on pressing a small lever, a ticket about an inch long protrudes ready to be torn from the roll inside. The tickets on coming out are stamped with the month, day, hour, and minute of issue. On the top of the box is a brass dial, by which means the stamp is regulated to mark, within three minutes, the time at which the ticket has been received. The works are exceedingly simple, and on being set the first of one month, will not need resetting until the first of the following. The box is made of tin. There is nothing clumsy in its appearance, and does not seem to weigh more than the ordinary fare-box now in use. Mr. Mathieson deserves success, and it is to be hoped that he may be the means of furnishing the people of Toronto with a practicable transfer system, something so much needed.

A BIG SHEAR FACTORY.

The Clauss Shear Co. of Fremont, O., U S.A., whose shears and scissors are so well known throughout almost the entire world, and especially in the United States, have found it necessary, owing to the increasing demand for their products in Canada, to establish a supply house in Toronto, to enable them to fill orders with more promptness and despatch, and at the same time to deliver goods to their customers direct from Toronto, thus saving them the trouble of passing goods through custom houses. Early in the year 1878 this company was formed and began operations on a very limited scale, their output being perhaps not more than 50 pairs of shears daily, confined to a very few styles and sizes.

Their motto from the beginning has been to excel in their line, in fact to produce just as fine goods as they could, and to improve them wherever and whenever it might be possible from time to time. Therefore, with this end in view, each and every year of their



existence has been marked with rapid progress, until to-day they are recognized as one of the leading shear and scissors manufacturers of the world, their average daily product being over 2,500 pairs of shears and scissors, besides a large number of razors, bread, cake, paring and carving knives. The product of shears and scissors alone is, they claim, more than that of any three other factories combined, and comprise nearly 300 different styles and sizes.

Such confidence have these gentlemen in their goods that they give a warranty with each and every pair, and never hesitate to right any possible dissatisfaction. They were the first to place on the market a full nickeled shear, also japan handles and nickel blades.

They now have offices at Freemont, O.; New York, N.Y.; Kansas City, Mo.; London, Eng., and Toronto, Ont. They employ all told thirty-three commercial travelers, and command in addition a large export trade to the following countries: Germany, France, Australia and South America.

In the contest at the World's Fair they were given a decided preference, being awarded with the highest medals and diplomas.

Owing to the superiority of natural gas as a tempering fuel, in the year 1887 their factory was removed to Fremont, O., which is in the centre of the great gas region of northwest Ohio, where they have a very large and handsome factory.

LAKE SUPERIOR MINES.

Along the Lake Superior mining district has there been not even the semblance of increasing activity that the daily press has given the iron workers' trade. The situation has steadily gone from bad to worse ever since the general shut down in July. Even the phenomenal activity in shipping from the Mesaba is a sign of quiet for the older ranges not only for this fall, but the early part of next year at least, for most of the Mesaba ore now going forward in such quantity is unsold and will lie on Cleveland and Lake Erie docks until such time as there is a better demand. The startlingly large decrease of furnace work does not augur well for activity for the ore trade for a long time to come.

By ranges the situation is about as follows: On the Menominee and Marquette ranges, where 57 mines produced ore last year, only about a dozen are at work, and those not actively or extensively. Less than 1,000 men are at work on the Menominee, where a year ago there were 3,000 or more. In the Crystal Falls section of the Menominee not a single mine or prospect is busy. The Chapin Mine, which had achieved a production up to last fall third in rank in the entire country, has lifted its pumps and abandoned operations for the present at least. Three of the large mines of the Marquette range have lately been added to the same list of flooded properties Ore shipments for the year from both these ranges are about over.

On the Gogebic range only enough ore will now be sent to shipping ports to load vessels now on the way or under charter. A year ago 15 mines were shipping to Ashland and the week's forwarding was 75,380 tons. This week only one mine is shipping and the weekly report is scarcely worth mention. Last week the total shipped was 17,459 tons. A year ago Ashland shipments had been 1,966,000 tons for the season. To date this year they have been 1,015,000 tons. Total Gogebic range shipments to the lower lakes last year were 2,974,000 tons. This year they will not equal half that. Several of the better mines here also are filled with water.

On the Vermillion range, at the Minnesota Iron Company's mines, where 2,500 or more men are employed in prosperous times, there are only half a dozen underground carpenters, and less than 200 on the surface, stock pile men. It is generally believed that even this trifling force will be idle November 1. At the Chandler there are none but stock pile men, and only a score or two of them. The Pioneer is idle and is flooded. The Zenith has shipped its stock pile and stopped all operations. There are no other productive mines on the range.

On the Mesaba the Biwabik, Oliver, Commodore, Franklin and Mountain Iron are working. Were it not for the cheapest mining and the money of a very heavy syndicate furnished to allow ore to be held on Lake Erie docks and the desire to get as much of the new ore as possible to furnaces, several of these would be idle. The Commodore will shut down in a few days. The range will ship about 500,000 tons for the season, not nearly as much as was expected last season, but certainly a good total for a new district.

That there isn't much consolation in this review of the situation goes without saying.

The Mesaba has made some steam shovel mining records the last week that are interesting and exceedingly important as showing what the range can do. At the Biwabik are shoveled, mined and loaded on cars, 85 cars, or 1950 tons, in nine hours. This is at the continuous rate of nearly 4 tons per minute for the entire time. Other records made in the past two weeks have been, at the Oliver, 1500 tons in seven hours; at the Mountain Iron, 1700 in nine hours; at the Biwabik, 3400 in 20 hours. It is expected that the Hale will resume shipping in a short time. Very extensive operations will be carried on by the Biwabik, Commodore, Franklin and by several of the consolidated mines during the winter, among the latter particularly at the Rathbun and Adams, which will each be stripped for steam shovel mining.

The total ore shipments from Lake Superior, including all the mines in the region except those shipping via Escanaba, on Lake Michigan, up to and including October 12, were 4,100,000 tons. Escanaba shipments have probably not been to exceed 1,000,000 tons more. For the entire year there may be sent forward from the mines as high as 5,500,000 tons, against a total of 9,074,000 tons in 1892 and an average of over 8,000,000 tons for the past four years.—Iron Age.

STOVE REPAIRERS.

Too much care can not be exercised in sending out men to do work for you, no matter whether it is rough repair work or selling of your nicest stoves remarks an exchange, for it should be remembered that he is your representative, and that your work will be judged by the impression he creates. If he is slow or does not understand his business, it very likely gives the impression that you must be likewise slow or you would not hire a man of this kind, and if he is not a first-class man in every respect it will surely reflect upon you sooner or later and do much to fix the reputation of your goods in a manner not altogether pleasing to you If a man comes to you to do a job of repairs and goes about his business understandingly and seems to know what to do next, you have confidence in him and also think more of the firm who has sent him out; it is perfectly natural that you should and perfectly proper, only be sure and remember the same rule applies to your case and send out your best men, not only mechanically but morally as well. A drunken representative is a bad advertisement for any firm, and vice versa, the man who behaves himself when out on a job will win your respect.

TASTE IN HARDWARE STORES.

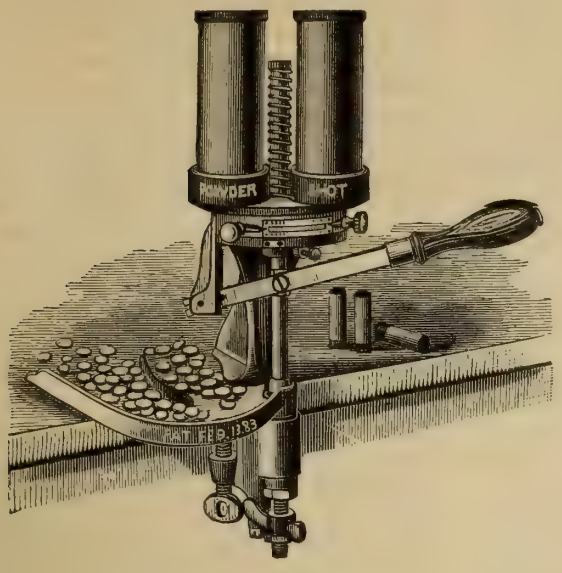
One is pleasantly surprised in going through the Eastern cities, to see the taste displayed in the average hardware store, says N. Y. Hardware. The bundle of straw separated and scattered all over the floor no longer exists; a line of nails which did once mark the path from the bin to the scale, is no longer seen; bits of twine are picked up, hoes and shovels are always now in place, and the tools, cutlery, etc., are under glass which fairly glisten. The drug store is now, in a comparative sense with the hardware store; before, the former was superlative. And the show windows are almost beyond description. Everything is geometrical, tasty, and of course, inviting. Does it pay? You never saw a hardware dealer who once set his wits to work to improve the appearance of his store abandon the plan. If he thought of such a thing, intuition would lead him to study the ins and outs of the almshouse.

In one town the writer happened to go into a hardware store of the hayseed order. The proprietor had just discharged the boy because he could not afford to pay him. Asking him about the business he replied: "Times are bad, and the business seems to fall off, but I peg away. There is only one way to do business in this world," said he in a burst of confidence, "and I that is, if a man comes into your store, to just hang on to him until he buys something. I don't care for new ideas, new articles, or new notions—they don't pay."

Around the corner was another man, who was patiently fixing up a show window with some electrical hardware. Four clerks were busy selling goods; everything was tasty and neat. The proprietor readily entered into a conversation, and soon drifted to the subject that was most interesting. "It may be," said he, "that I spend too much time on this window, but I like to see things looking neat, and then I notice a good many interested faces outside. I presume they come in afterwards, but the only way I can keep run of results is by the cash register. I need more help, but I am a little careful whom I employ."

There is a moral here somewhere.

Here, says an exchange, is a good definition of prosperity: "A condition in which labor is fully and actively engaged in useful occupations at fair wages, while commerce is selling the products of the country freely and at prices which give a reasonable profit to all concerned, but it is necessary that this condition shall be general."



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SILVER AND NICKEL.

"The reason why nickel of the best quality sells for 50c. and fine silver at $10.94 per pound avoirdupois," says the Engineering and Mining Journal, "is because the cost of producing nickel is less than the cost of producing silver, but the fluctuations in the price of the two metals are governed by the same laws. The supply of nickel is large, and its yield could be increased very much if there should be need for it, but the distribution of silver is wider than that of nickel. If there were to-day universal free silver coinage at the existing coinage ratios there can be little doubt the production of the metal would much exceed the present production of nickel. In any event, if the relative abundance of this metal is the only reason that can be given why nickel should not have free coinage and silver should, we have to go back for two years to show that ground to be badly taken ; and if relative values of product be taken, nickel is much the rarer metal to-day ; the value of the world's product last year of nickel being worth, say $6,000,000, while that of silver at coinage rates was nearly $200,000,000.

"The important difference between the metals is that the markets for nickel, being dependent on its uses in the arts which are based on its physical properties, are widening as its cost diminishes, while silver has practically but two markets, that for coinage and that in the arts, based on its value as money and not upon its physical properties alone. The cheaper it becomes the less will be the demand for it in coinage and also in the arts, where it is used almost exclusively because its possession is an evidence of wealth.

"Should silver lose its artificial value in the general money of the world—and nothing short of international co-operation can prevent that—then its value for industrial purposes would reduce its uses to what could be produced as a by-product, for its cost of production would necessarily limit its uses based on its physical properties."

SIX MILES OF MOLTEN IRON.

A Pittsburg, Pa., despatch says that the long projected hot metal route at Braddock is now a certainty. Ladles of molten iron were run this week from the Edgar Thompson blast furnace to the converting mill of the steel works in Braddock. The distance is estimated to be a little less than six miles, which will be made in fourteen minutes. Every precaution is to be used in conveying the iron. From the end of the bridge on both sides of the river a track to be used for no other purpose has been laid. When fully in operation three engines will be employed. The metal when covered with coke dust will remain in a fluid condition for several hours. The company's own men will guard against accidents. General Superintendent Schwab is the originator of the idea.

ELECTRIC LIGHT CARBON.

Upon the introduction of the arc light business in the United States, from the year 1870 to the year 1881, only a small amount of carbons were manufactured, remarks an exchange. The total sales of carbons would not exceed one million per annum, with price ranging from $120 to $150 per thousand. From 1881 to Jan. 1, 1892, the amount of carbons manufactured and sold in in the United States has gradually increrased, until to-day there are upwards of 145,000,000 of carbons being manufactured and sold annually, with price ranging from $9 to $10 per thousand.

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

New English pneumatic tire bicycles are protected by an armor of nails.

The Wellman Iron and Steel Company, of Chester, Pa., is in financial trouble.

The first ore train left the West Kootenay district, via Nelson, recently. It carried 153 tons of ore.

The port of Swansea, Wales, ships about 65 per cent. of the total exports of tin plates from Great Britain.

The forging department of the American Axe and tool Company, East Douglass, Man., was burned Saturday. Loss, $200,000.

Canada's mercantile fleet on the registry books last year numbered 7,007, with a tonnage of 964,129, a decrease in the year of 84,364 tons.

An English journal notes that a Bristol firm has been using a band saw 47 feet long since 1870, the deepest cut being seven feet through oak.

J. T. Huber of Waterloo, has secured the Doon mills from J. Cluthe, and will therein carry on his large glue business, formerly conducted in Berlin.

Fifty thousand tons of iron broke through a heavy frame and nearly caused a serious disaster at the storehouse in the rear of Wright & Co's hardware establishment, London, Monday last.

J. Z. Long & Son have secured for J. H. Smale an American patent for his wagon spring, and for W. E. Stafford, of Shedden, a Canadian patent for riding attachment for plows.—Journal, St. Thomas.

A. Lawrie of Forest has sold his hardware business to D. C. McIntyre. Mr. Lawrie will move to Sarnia, and will go into the same business there, probably with H. A. Couse, his present clerk, as partner.

After the trouble's over, after the worst is known, after the chronic growler has uttered his final groan, all of our trades will be bouncing, we all will have our share, after the trouble's over—after the scare.—Hardware Reporter.

The Ingersoll Board of Trade has elected the following officers: President, Stephen Noxon; first vice-president, Dr. McKay, M.P.P.; second vice-president, H. Richardson; secretary, W. H. Jones; treasurer, W. B. Nelles.

The following details of the amounts of various materials used in the construction of the new tower bridge in London are given by an English journal:—Bricks, 24,000,000; granite, 415,000 tons; cement, 19,000 tons; concrete, 72,000 cubic yards; and iron and steel, 15,800 tons.

It is stated that not since the coal famine which followed the close of the Franco-German war has the demand for coals at East Durham collieries been so great as at present. In one day recently 4,000 tons of coal left one of the collieries.

Application has been made for incorporation of T. W. Dobbie, of Tilsonburg, and others as the Mercer Manufacturing Company (limited), to deal in agricultural machinery. The head office of the company is to be at Alliston, and the capital $120,000.

White, ex-treasurer of the Walkerville Malleableable Iron Company, charged with appropriating the company's funds, has been bound over for trial at the next term of the court of sessions at Windsor. Bail was fixed at $3,000. It is said the defence to be offered will be insanity.

The English syndicate which has been working the Isle Royale copper mines on Lake Superior the past summer has suspended operations for the winter. The syndicate's labors have not been rewarded with the success expected.—Free Press, Winnipeg.

Wm. Hardy has invented about as convenient a device for improving neck yokes as has been seen on the market for many a day. The idea is a roller in the ring, and by using it, breast straps last three times as long as with the old plain ring, besides decreasing the danger. It gives to every motion of the horses, and is much easier on them. It is a cheap contrivance too, and can be used on old yokes just the same as new ones. Mr. Hardy has applied for a patent, and will likely have them for sale soon.—Banner, Dundas.

The Canada Tool Works has just sent out the largest turning lathe ever built in Canada. It was constructed for the Nova Scotia Steel Co. of New Glasgow, and will be used for turning heavy steamboat shafts and forgings. It takes in a shaft 34 feet long, and will swing over the bed 60 inches, and 8 feet in the break. When tested on Saturday it reduced a 14-inch shaft four inches at a cut, and will do a great deal better when put on a proper foundation. The total weight is 68,000 lbs., and when taken apart filled three cars.—Banner, Dundas.

We are to have a sort of international contest on the rails. The New York Tribune, October 2, says:—Everybody knows 999—the famous locomotive which has run a mile in 32 seconds. Everybody who has gone to the Chicago Fair has seen it, and many of the visitors, too, have seen the crack English locomotive, the Empress. What could be more exciting than a race between the two flyers? That is what is going to take place—a race for ten miles for a purse of $1,000. Neither contestant cares for $1,000, but a race that will test the merits of these big engines will excite universal and intense interest.

Among the gold mines now in process of development, not the least important is that on the Bridge River which a Vancouver company is working. A great deal of the precious metal has been taken out of that creek in times past, but the company recently organized is proceeding upon an entirely different plan from that of former days The creek, which is situated a few miles to the northeast of Cayuse creek in Lillooet, will be directed from its present course to a small stream running out of Seeton Lake. About $8,000 has been expended, but from this time forward the yield in the bank to be removed is about sufficient to pay working expenses, and when the ditch is finished bedrock will be reached at once.—News, Vancouver.

The president of the Trade Union Congress of Great Britain said of strikes, reports Bradstreet's, that he believed it to be an act of criminal folly to hint at or recommend a strike until all the resources of civilization had been exhausted in the effort to avoid such a forlorn hope, and that according to his belief, this opinion is very generally entertained among the better organized associations among workingmen. He further expressed the hope that one of the outcomes of the Royal Commission on Labor would be the formulation of such a system of conciliation and arbitration as would make the resort to industrial warfare much less than at present. These are remarks that will bear repetition, not only in the United Kingdom, but wherever questions are at issue between employers and employees.

BUSINESS CHANCE.

Advertisements inserted under this heading two cents per word each insertion.

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SOME IRONMONGERS I HAVE MET.

Tell our friends about ironmongers I have met, Mr. Editor? Why, with pleasure!—but t'would be sweeter far to tell the tale o'er the ruddy hearth of the "Magpie and Toothpick," sunk amidst the protuberant springs of the Commercial room couch, than to expose one's drifting thoughts—and perhaps frettings—to the cold glare of a critical brotherhood each of whom will think that he knows more interesting cases than do I, and can tell them in more tasty fashion.

Well, Mr. Editor, to use a phrase that has made more appearances in various dresses than a popular prima donna—"There are ironmongers and ironmongers." The old original is the gentleman named Fossil, partner to Mr. Softslumber, of Nappingstill. He is the gentleman with the dark shop, where you enter from the morning sunshine and plant your foot down in the blackness with a thud that shakes that pile of tins down. This is the shop, by the way, where you catch your sole in the dark against the sheet iron patches on the floor,or where you fling your arms wildly abroad in the air and practise the first evolutions of the skating season by reason of the shiny polish of the same well trodden patches. You may chaff Fossil about his treacherous parquet, but "Ah! my boy, it wears better than the boards, and we just nail it down ourselves." You may talk to Fossil, too, about his darksome entrance, but his argument is that a window was made to be filled with stock; and his further one that you can see all right when you get indoors a bit, and "get used to the light" is so convinc-"ing, that you get on to business and leave him to the glory of a contented spirit. Fossil's shop, you know, isn't a bad place when you get used to it. Dark, perhaps, and with festoons of buckets only eight feet or so from that armor-plated floor; the shelving black with the hands of Fossil's ancestors (of good Bess's days, may be), but yet the parcels well marshalled, the stock fully sorted, and everything around so carefully arranged with the exactitude that can only come by the hands of "method." Great neatness, but no display—oh no! Bless you, no. Fossil's windows show grosses of tools all beautifully cleaned and polished every week, with a laborious day for the first hand and an apprentice; an acre of copper kettles and jelly moulds, all equally cleaned and polished; a mint of electro-ware, or a whole Lambeth of Oakey's knife powder; but no display, no whirl of interest to bring a crowded foot-path—no! a pile of stuff, just arrayed or hung up in solemn rows to fill the window and incidentally produce that darksome cavern of a toe-stubbing shop. Well, Fossil lacks the artistic soul of a window dresser, and even scorns the display of "them lads" down the street; but, after all, he's a good old fellow—comes down a bit later, perhaps, than he used to, and stays away an hour longer for dinner, but always reeking of the prim old counterman as he serves the major's lady and discusses the derelict kitchen grate that she believes can be "converted into an 'Eagle.'" Always knowing what lines he's short of, always swearing that your stuff's the best because he bought of the firm "this forty years"; always ready with his chuckling joke, and a wink of the wrinkled eye, Fossil is a "decent old sort" to the traveling fraternity, and with all his faults of omission, to him is due a great share of that grave respectability that hardware holds among the trades of the country town. But you ask, "Where is Softslumber"? Well, if yours is one of those nasty newly-grown houses that tries to cut away the business of the firm they've dealt with this forty year, and merely because your prices are lower, you don't need to worry about Sotfslumber, because he only comes into view at settlement. His is the face you see looming vaguely over the faded green curtain of the office glasswork, with the pen sucked crosswise of his mouth, and the old gold spectacles away down on the tip of his nose, where he can conveniently look over them as he watches your haughty retreat from your skirmish with Fossil. Softslumber's time is fully occupied with the year long credit of a country business—booking the fiftenepenny article that the Squire forgot to include with his last stores hamper; or charging up the netting that "th' Passon" finds he can save carriage on by buying here, at home. Cute parson! Poor Fossil and Softslumber, with the lean leavings, and no bright ideas to make them fat! 'Tis a true case of the survival of the fittest; for with all your staid prosperity, your solemnity in the city council, your kindly benignity to the lucky commercial who booked your antique account, your day is past, and if all the local orders are not to follow those that have already gone to Maples it can only be through the despised smartness of "them lads" down the street.

Well now, there's "them lads"—Brisk and Pinktie, to be polite with them. Time was when I daren't call because Fossil "didn't like it." Many a time had I gazed wolfishly into their cleanly windows during an evening stroll, and as many times had I mentally dressed some of my shining lines on their smart baize shelving, but only to turn away with the galling thought of Fossil's fettering decision. But as circumstances alter cases, so a change of billet made me seek a new lamp (seller) in place of the old, and from that point dated my happy acquaintance with the hardware man of the future, Brisk or his partner, for example. Both were born and bred in Nappingstill, Brisk being apprenticed to Fossil & Softslumber, and Pinktie going to Dullard, a smaller man with a jobbing trade attached. As boys, maybe, they rowed together on the Slug, but anyway, when Brisk went to Leicester on coming out of his time,and from thence to Benefink's, Whiteley's and John's, and wound up with a winter in a wholesale house; and when Pinktie followed him to another London counter, it was evident, as all the gossips said, that "th' ood ta'an wa'rnt big ernuff for um!" But the old town was big enough and slow enough to make a fine field for the competition of bright spirits. Of course, they started well. The parental stocking that is often so comfortably hoarded in a country town was brought out. The shop was taken and fitted with a plainer but not less useful replica of the city fixtures. A handsome gilded facia, bearing the pean of freedom "from Benetfink's," crowned the windows, just as the widest and brightest thing in doorways stood between them. Then as to stock, they stood as happily. The pre-Victorian mintage of chandeliers that lay stowed away in Fossil's show rooms, along with the knobless fire-irons and footless coal vase, were conspicuously absent. So were the long, long rows of items that, like a maiden aunt, had reached a "certain age" in Softslumber's careworn ledger. No stale leavings of an ancestral founder about Brisk and Pinktie. Brief visits to the centres, brief confabulations with the pick of the wholesalers met during their London education, and hey! the thing was done. The brand new store of Nappingstill was stocked, and as saleably and workably stocked as Fossil's, but with half the outlay, for Brisk's frequent trips to the city, an intimate touch with the "stores" methods, naturally enabled him to buy better and need less of a sort than his former master, who had no business horizon wider than his somewhat slavish, and altogether too affectionate dependence upon the "sundryman," as druggists very appropriately call the factor. You'll find no darksome pilotage in entering Brisk and Pinktie's shop, and no sheet iron patch to plunge your toe against, but instead, a low cut or even flat cut doorstep with everything in light and cheeriness to induce your advent, even to a strip of comforting linoleum, that seems to guide your hesitating steps forward until it passes you safely inside the handsome door marked "show room," and leaves you only after bringing you to the baized and well-swept dais, where

the latest creations of ornamental brass work or the newest ideas in labor saving inventions are displayed, to the terror of your pocket and equivalent joy of your femininity sitting around you on the bamboo or canvas chairs that are placed for artistic effect, and quite incidentally meant to be sold. A fine light show room, light, even though space has been sacrificed to make it so, and well stocked with just enough of each sort, and no duplication to make it crowded. "Better show a little in a dainty way," says Pinktie, "than show a lot so that no one can see it."

Well, then, their windows—not the tight pack of tools or guns, behind the three-foot "cockley" panes that you saw at Fossil's, with no greater variety than taking copper stuff out, to put skates in, at Christmas, or fireworks in November. Oh, dear, no! Variety every week, but not the inartistic variety of fifty sorts, from husbandry to carpentry, hung in the same window. Brisk and Pinktie's variety is of the kind that awakes the interest of every pedestrial down the corn market. One week, their show of copper kettles and jelly moulds, in brotherly combination with a specialty in gas cookers, and a reliable thing in oil stoves that had for months been knocking unsuccessfully at Fossil's door, brings round their window every envying housewife in the town. Next week their brightly varnished garden seats give background to a picture that has for its ground work a green baize lawn, dotted (rather closely, perhaps) with a roller of the novel water ballast type, a mower of standard make, and a host of sundries that appeal to the home-proud gardener. Thus the thing goes on, always a bright and interesting "picture window," always as much of a crowd around it as the streets of Nappingstill can produce.

With their attractive frontage, Brisk and Pinktie started out with a full propaganda of Stores trading, and dead in the teeth of everyone who said, "Nappingstill is a credit town, and the folks won't pay cash." Well, they didn't for a time, and it needed all the pluck of the new firm to keep those windows continuously smart, and the indoor stock so conspicuously well arranged; but common sense and low prices prevailed, as they always should in the long run, and now-a-days Brisk can give you an order that will, for the moment make you dream that you're booking a two years' contract. There's another good feature about the young fellows—I mean in addition to their smart payments and disposition too say what they mean, and vice versa. They don't sit bashfully in the shop and leave to Fate the task of bringing in the people! Not a bit of it! If their lamp maker, or their knife cleaner man or their carpet-sweeper specialist has a novel circular, they apply for it eagerly, and it goes out to the extent perhaps of 3,000 round the country side, and thus by pertinacity, by having a good cry and continually using it, they make known their presence and their continual stock of bright and useful novelties. But—and this is a great and overpowering "but"—their novelties are of the first grade in each case; their printing is of good quality and tersely worded, and their prices are such that it no longer pays the parson to fag his stuff from London, and so they catch him and his kind on the retentive basis of "self."

To Pinktie's jobbing education be it credited that when he says that Mrs. Thickyed's watering pot shall be "done on Tuesday," well, it is done; and so the back shop earns a character that brings to it all the jobs of the district, and threatens to move the back wall out towards Sand, the grocer's.

Another friend of mine is Pulper, the popular ironmonger of an agricultural district. His shop has all the staid philosophy of Fossil's; but Pulper has a vein of native sense that takes him up to town oftener to see things for himself, and to come home full of patent stink traps and folding beds, and gas regulators economical enough to bring the gas company out in your debt every quarter. Pulper's views of men and things in his neighboring city and his hungry purusal from one of your salmon-colored covers to the other every month, have so whetted his natural vein of sense that he poses as the seat of metallurgical learning for the district, and if any bold squire or bishop buys at the stores, he at least gives Pulper every opportunity to produce the catalogue picturing the article and to quote a price, which, as Pulper says with a chuckle, "doesn't send much trade to London." But Pulper's opportunity comes on with the truly rural customers. The great man will bounce heartily into his doorway with Farmer Weskitfull, whom he has just caught by the Shire Hall, and after towing his prize into the little heaped up office, with merry laugh and jest, will be lost to sight of the vulgar world until such as Weskitfull's broad form looms out again and rolls away across the square, saying, "Well, yo' can send it in then, if yo'll knock the odd guinea off." No fish too small for Pulper's good nature! After telling you to "sit yo' down" and he'll "find you an order," he will trot busily into the mysterious recesses of his storage for a pint of oil for the little tot whom he has just patted on the head and embarrassed by some kindly enquiries. Then Pulper is known to be in great form at the local show—a one-day affair that plunges the town into wild festivity, and is totally unheard of outside the county. Here old Pulper rakes in Mrs. Widewidth and her bevy of country friends, who stand around wreathed in perspiring smiles while he wrestles with the crank of some addition maker to the butter crop. None so busy here as Pulper when pie time comes at noon, and none like he can stop and explain the "innards" of an implement while carrying bread and cheese about for the benefit of all and sundry. What a day he does have to be sure, and with what honest pride does he announce his silver medal, and deliberately forgets the judges' visit to say they'd saved the usual one for him, and "what implement would you like it for"? But then Pulper is secretary, or treasurer, or something, and "charity begins at home," you know.

Next to Pulper, I remember Hump, an unfortunate individual in a cathedral city with the chronic plaint that "everybody goes to Liverpool, there's really no trade done here now. A true story and one you would personally support by example if you had to depend on Hump's resources. He has a fine shop well filled, with goods of a past decade. As a cabinet-makers' man he is perhaps beyond compare, but in furnishing—Heaven forfend! Should you want a standard novelty in teapots, he says, "Oh, no, they're no good, we don't keep them," and tries to work off upon you the weary old sort that grandma used. Should your want be tennis, he "doesn't stock it, but has a fine set of croquet you can have cheap, and he'll paint it up for you too." Then he talks about the weather, but can have no idea of seasons, else why should he show hose reels in November, and copper warming pans in July?

As a pleasing contrast, I have a lady ironmonger, known to most town travelers as a shining instance of the advance of women into the ranks of labor. Her stock is hardly of the comprehensive character that pertains to the country dealer, but it is a remarkable evidence of the trade that can be based on "specialties," well pushed and thoroughly understood by the seller. This lady, after some five-and-twenty years' experience of the trade, has grouped a snug business around her in one of the busiest city thoroughfares, and supports a £250 rental of specialties and small household fittings alone. Her volubility is great, though pleasing, and her knowledge of the business has that character that would put to shame many a man of equally long experience but less "gumption." Her pride is her window, and, indeed, 'twould be hard to find one with greater attractions for the city man just skipping off to his train. I have a host of other characters reeling through my brain, Mr. Editor, but time grows short, and you perhaps want to save a page or two for some other kind of matter, so I close my samples and bid good-day, merely recording my devout feeling of thankfulness that fate threw my steps into touch with those of the British ironmonger. He may be as rough as his own nail bags, or dull as a broom handle, but with all the faults your manufacturer-correspondents ascribe to him, he's a jolly good fellow in the main; and so far as his newer generation is concerned I am glad to believe that he is now showing as good a fight to the cramping traditions of the trade as one could wish him to. May his sign board never grow dimmer!—"Roving Commissioner" in London Ironmonger.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton. Ontario.
SP

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PINKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friend against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, TORONTO

ENGLISH HOUSE: **SAMUEL, SONS & BENJAMIN**
164 Fenchurch St, London, E. C.

STOVE PIPE POLISH

Nonsuch, Rising Sun, Jacoby, Mirror.

STOVE PASTE

M. L. S. Crown.

STOVE PIPE VARNISH

Butler's, Crystal Black, Ever Ready, Resplendent, Easy Shine.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Oct. 27, 1893.

HARDWARE.

The movement in general hardware has continued of fair volume during the week, in fact jobbers generally say they are satisfied that business on the whole is fully up to the average. The demand for winter goods is naturally one of the leading features of the market at the moment, and the turnover of sleigh-bells, skates, etc., has fully maintained its former proportions. Curry combs, and other saddlery supplies, have also met with cnsiderable enquiry during the week. Makers say they are very busy on orders for wire, but jobbers do not report any increased movement. Nails and tacks furnish a fair movement, while positive activity is to note in the case of horseshoes. In ware there is nothing special aside from a moderate demand for tinware. Sporting goods still encounter a fairly active call. Payments are not complained of to any great extent.

WIRE.—Makers report that they are rushed with orders for annealed wire, in fact that they cannot keep up with their orders. They attribute this to the fact that buyers held back to the last moment and have allowed their stocks to run too low. In a jbobing way there is no marked change to note the movement of annealed wire continuing of fair dimensions.

CUTLERY.—There is still a fair lot of orders coming in for assortments of table cutlery and it is noted that the order counters at the different houses are no sooner cleared than they are filled again with lots of shelf goods for shipment.

WINTER GOODS.—The demand for sleigh bells, skates, etc., is fully maintained, and the trade consider that the steady demand they have met means that stocks have run down pretty low.

SADDLERY SUPPLIES.—Demand for curry combs, whips, etc., is also considerable, and a good proportion of the orders going out consist of these goods.

NAILS.—Makers say that the demand for cut and wire nails is not so brisk with them as it was, but jobbers appear to be doing a fair trade in all kinds of both lines. The diminished building operations in some sections to which we have referred before have no doubt restricted the aggregate volume of business in these goods.

TACKS.—There is a moderate business to note in tacks.

HORSESHOES.—The good enquiry that we noted last week for horseshoes and horseshoe nails has been fully maintained, orders coming in in good volume both to makers and jobbers at present.

IRON PIPE.—Makers note quite a fair demand for wrought iron pipe at present.

SPORTING GOODS.—The volume of business in guns, ammunition, and other lines of seasonable sporting goods has been of satisfactory dimensions on the whole.

TOOLS.—There are no new features to note in this connection.

SUPPLIES.—A fair business is doing in plumbers' supplies, but builders do not appear to want anything at all.

WARE.—Tinware is the only line showing any business. Other lines are quiet.

NAVAL STORES.—Ship chandlers are not very busy at the moment, and the only change in the market has been an advance in turpentine in consequence of firmer advices from the South to 48c. We quote: Turpentine, 48c.; resins,$2.50 to $5, as to brand. coal tar, $3.75 to $4; cotton waste, 5 1-2c. for colored, and 7 to 10c. for white; oakum, 5 1-2 to 7 1-2, and cotton oakum, 10 to 12c. Cordage—Sisal, at 9 3-4c. for 7-16 and upwards, and 15c. for deep-sea line; pure manilla,11c. for 7-16 and upwards and 12c. for smaller sizes.

METALS.

The heavy iron and metal market shows very litte change from the position of a week ago, and business is about as quiet as it can possibly be. There is nothing special to note in any particular line, and prices generally remain as previously reported.

PIG IRON.—There have been receipts of some round quantities of Nova Scotia pig during the week, and it is possible that a good deal more will come in before the season of navigation closes. It has sold in round lots as low as $16.40 to $16.50 This cheap domestic pig makes a sale of Scotch iron difficult and only a few car lots of Summerlee and equal brands have been moved during the week at $18.50. We quote: Summerlee, $18.50 to $19; Eglinton, $17 to $17.25; Carnbroe, $16.75 to $17; Langloam, $18.50; No. 1 Siemen's, $18; Ferrona, $16.50 to $17.

BAR IRON.—There is a moderately good movement in bar iron at unchanged prices. A new feature this week is that orders are being received here by makers from agricultural implement manufacturers, the volume of trade in this connection being fully up to that of last year. This undoubtedly means that a good business is anticipated for next season.

SCRAP IRON.—There is nothing doing in scrap of importance, and prices are nominally unchanged.

TIN PLATES.—This line manifests little activity, and an easy tone, sales of cokes being quoted under $3.15, but we still quote $3.15 to $3.25 as to quality. Charcoal remains $3.75 to $4.

CANADA PLATES.—The movement in Canada plates is about over for the season, and we quote them nominally at $2.40 to $2.50.

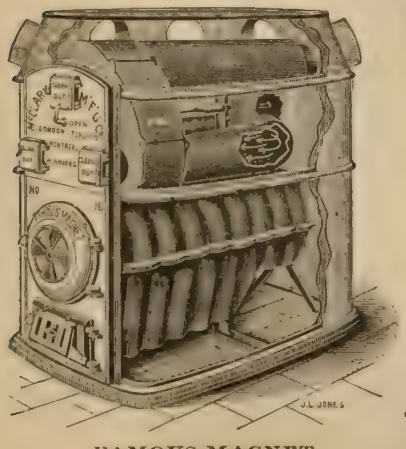
TERNE PLATES.—Terne plates are nominal and unchanged at $7.25 to $7.75.

GALVANIZED IRON.—A fair jobbing trade has been doing in galvanized sheets at the old prices, viz., 4 3-4 to 5c. for No. 28 guage.

SHEET IRON.—The movement is moderate and prices steady at $2.25 to $2.40. A moderate demand is experienced for Russian sheets at 10 1-2 to 11c.

HOOPS AND BANDS.—Business is of moderate volume with the price steady at $2.35.

STEEL.—There is a good demand for sleigh shoeing steel and reports from travelers state that stocks of it in the country are low.



FAMOUS MAGNET.

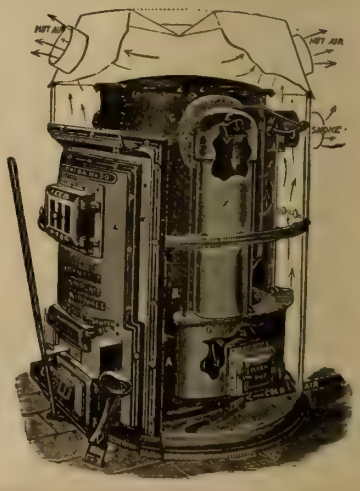
Our New Wood Furnace

The Famous Magnet has taken the trade by storm. It fills every want.

The changes made this Season in our Steel Dome Low Radiator Coal Furnace

make it apparently perfect. **The only three flue furnace in Canada.** If you have any furnace work in view it will pay you to let us send you full particulars of them.

THE McCLARY MFG. CO., London, Toronto, Montreal, Winnipeg, Vancouver.



STEEL DOME LOW RADIATOR.

ADAM HOPE & CO., HAMILTON

Offer for Sale

"Pioneer" and "Sloss" PIG IRON

These are fine foundry irons, being strong and large scrap carriers.

Also all the well-known—

Scotch Brands,
Broken Car Wheels,
and Railway Cast Scrap.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.

Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.

FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,

CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

GAS, ELECTRIC, AND COMBINATION
Fixtures

Of English, Canadian, and American designs. . .

Globes and Shades

Staple Brackets and Gas Fittings. Select stock of above always on hand.

Jas. Barwell, 88 Bay St., Toronto

SHOWROOMS OF JAS. BARWELL, SONS & CO., Birmingham, Eng.

Drawings and Estimates on application.

FRANCIS HYDE & CO.

Builders' Supplies

We make a specialty of **Fire Clay Sewerage Pipes,** and all kinds of Fire Clay goods of best quality.

Best brands of London Portland Cement. Agents for Glenboig Union Fire Clay Co., etc.

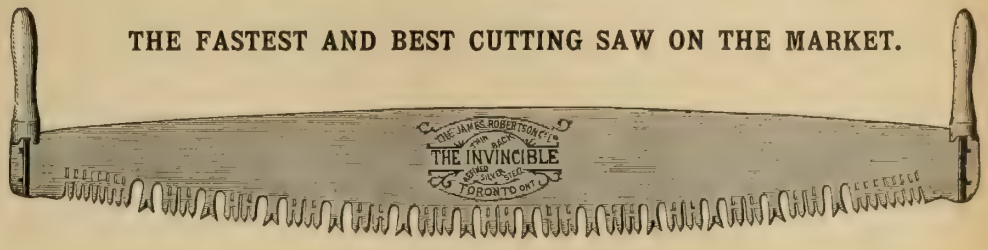
STORES AND YARDS:

King, Queen and Wellington Sts., Montreal

THE INVINCIBLE.

EVERY SAW WARRANTED.

THE FASTEST AND BEST CUTTING SAW ON THE MARKET.



Guaranteed four Guages Thinner on Back than Front and Made from the Highest Quality of Double Refined Silver Steel.

Manufactured only by

The James Robertson Co. (LIMITED.)

SAMPLE ORDER SOLICITED. **Toronto.**

You will Insure Success

IN THE

STOVE

Business, by selling

"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.

The Gurney-Tilden Co. Ltd.

Successors to The E. & C. Gurney Co.

HAMILTON - - ONTARIO.

NEW. CLEAN. GOOD



Meat - Cutter

WHITE ENAMELLED

Inside, and Brown Japanned outside.

H BOKER, Manufacturer. | For Sale by Leading Wholesale Houses.

TORONTO CUTLERY CO.,

65 and 67 Yonge Street, Toronto

M. MAYER, Propr.

NON-XLL

Cutlery

WARRANTED

And the Most Complete Lines of Cutlery of all descriptions.

COPPER.—Dull and unchanged at 11 1-2 to 13c.

TIN.—There is no change in tin on spot, which remains 21 1-2 to 22c. for ingot and 25c. for bar tin.

ANTIMONY.—Very little business doing and prices the same at 10 1-2 to 12c.

SPELTER.—This article is easy in tone, but the price is not quotably changed from $4.60 to $4.75.

LEAD.—Nothing special to note, pig lead $2.80 to $3; sheet lead $4 to $4.25.

ZINC SHEETS.—A few are moving in a jobbing way. We quote as before $5 to $5.25.

CEMENT.—There continues to be a good enquiry for cement at steady to firm prices. Supplies are not large and dealers look for the market being sustained on its present level. We quote for Belgian brands $1.95 to $2.05, and English $2.10 to $2.25 per cask ex wharf. Fire bricks are in fair demand at prices ranging from $16.50 to $21 per thousand, as to brand.

PAINTS AND OILS.

A steady trade has been done in leads and paints during the week, and dealers are predicting another advance in white leads ere long. Linseed oil is firm at the recent advance. We quote: Choice brands white lead, government standard, $5; No. 1, $4.75; No. 2, $4.50; No. 3, $4.25; No. 4, $4; dry white lead, 5c.; red lead, pure, 4 1-2c.; No. 1, 4 1-4c; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, raw, 60c., boiled, 63c.

GLASS.

As we noted some time ago $1.35 would have been cut in the case of a round lot of glass, and we not positively quote $1.25 to $1.30 for first break and so on, with business on the quiet side. Putty in bulk is unchanged at $1.85.

PETROLEUM.

The movement in petroleum is not very large, but dealers state that it is fully up to the average for the season. Jobbers are selling at about cost, and refiners have been forced to meet their prices. We quote: Canadian at 11 1-4c. in shed in Montreal for round lots, and 12c. for small quantities. American petroleum, 16 1-2c. in car lots, 17c. in 10 barrel lots, 17 1-4c. in 5 barrel lots, and 17 3-4c. for single barrels, net cash; American benzine, 23 to 25c.; Canadian benzine, 10 3-4c. Petrolea; 12 1-2c. Montreal.

MONTREAL TRADE NOTES.

Turpentine is very firm, and has been advanced 2c. since our last report.

Wm. McNally & Co. state that stocks of Portland cement are very light for the season on spot.

A round lot of Scotch pig iron is now afloat to this port, and will be about the last to arrive here.

A 50-ton lot of Maritime Province bar iron was offering in Quebec during the week at a low figure it is said.

Thos. Davidson & Co. note a fair enquiry for tinware, their seamless flanged drip pan in all sizes going well.

The Messrs. Pilkington have started in connection with their establishment in Montreal a branch devoted to bevelled glass and mirrors, and are not prepared to execute orders for these kinds of goods. They have brought out expert workmen from England, and say they can turn out work with anyone, having already some good orders on hand for one or two leading furniture and cabinet manufacturers here.

Drummond, McCall & Co., the agents for Ferrona pig, received a round quantity of the iron during the present week.

Scotch iron makers have advanced prices on leading brands of pig 2s. per ton, but this will have no effect on our prices now.

The Montreal Rolling Mills Co. report quite a demand for their new steel toe weight horseshoe, of which they make a specialty.

Francis Hyde & Co. have been sending forward to the West some round ltos of cement and agricultural tile drain pipes.

W. H. Cottingham & Co. note a good demand for paints, etc., and report that Mauder's varnishes contribute materially toward the bulk of their orders.

There is talk of a duty on scrap iron to induce the production of bar iron from Canadian puddled bars in the new tariff modification. With the powerful interests opposed to the innovation, however, it is not likely to pass.

The regular fall contracts for supplies for the Grand Trunk Railway have been awarded. It is not known exactly who the successful parties were, but it is surmised that the Montreal branch of a big English firm were successful.

TORONTO MARKETS.

TORONTO, Oct. 27, 1893.

HARDWARE.

The most unsatisfactory feature of the business situation is the tightness of money. The complaint is general, and in view of the favorable showing of the last bank returns, people are wondering why such should be. As far as volume is concerned, business seems fairly good, although it cannot be called brisk. What is doing is largely of a sorting-up character. Annealed wire is receiving some attention, and the same may be said of rope in small sizes. Cutlery is brisk, and there is a fair movement in nails. Chain is higher in England, but there is no change here. Such articles as elbows, stovepipes, coal hods and cinder sifters are all selling well. The same applies to sporting goods, such as rifles, guns, ammunition and game traps. Lamps and lamp goods continue in seasonable demand. Plumbers' supplies show some improvement, but builders' supplies remain dull and featureless.

WIRE.—There is a great deal of annealed at 14 and 15 gauge for hay bailing, but other kinds do not appear to be receiving much attention.

ROPE.—There is no change. For navigation purposes trade is of course over, but there is quite a demand for rope of small sizes.



CUTLERY.—A good business continues to be done in this line, all kinds—carvers, table and pocket cutlery, scissors and razors—going out briskly.

NAILS.—Business is well maintained. This applies to all kinds of wire, cut and horseshoe nails. For the last named some large orders are reported.

TACKS.—In carpet tacks quite a demand is reported, but in other kinds there is nothing special to note.

CHAIN—There has been an advance in the English market on account of the coal strike there. Here, however, the market is unaffected, stocks being large.

HORSESHOES—A good many are going out but at the old prices, the orders that have come in since the advance of some two weeks ago being small.

WINTER GOODS—Bulk of the trade in sleigh bells is about over. The season seems to have been an unusally brisk one with some houses. Large sales of cinder-sifters are reported.

SPORTING GOODS—Business oontinues active in rifles, guns, ammunition and seasonable sporting goods generally.

WARE—Tinware continues in active demand, and there is a good enquiry for white and peerless ware. Coal hods are in demand, but complaints regarding the cutting of prices are heard in this line.

LAMP GOODS—Full lines are going out freely, but there is no special feature to note.

PLUMBERS' SUPPLIES—A little better demand is reported. Cast iron pipe is going out well, and large sizes of wrought iron pipe from 2½ inches upward are reported.

BUILDERS' SUPPLIES—Not much doing, city trade being particularly dull.

MECHANICS' TOOLS—Business is moderate only in this line and without special feature.

METALS.

The market for metals remains much as before. There is a little imported pig iron moving, and business is fairly well maintained in bar iron. Ingot tin is selling, but at low prices. A good many Canada plates are going out. Antimony is a little stiffer and a little business is reported. The metal market is not marked by any strong features this week.

PIG IRON—Some movement of Carnbroe is reported at $19.75 Toronto, but the market is on the whole still quiet. We hear of sales of 50-ton lots of Nova Scotian pig iron at $18 75. We quote: Summerlee $20.50 to $21, Carnbroe $19.75 to $20, Siemen's $19 to $19 50, Nova Scotian $18.75.

Rogers, Brown & Co., Buffalo, report market for American pig in Toronto as follows: The quietness existing in the States appears in a measure reflected in the pig iron business on this side of the line. Orders are confined mainly to small amounts for immediate use. Southern coke iron from Alabama and vicinity is being offered at lower figures than ever before, but has not resulted in any large purchasing. We quote

MARKETS.—Continued

below on the cash basis f.o.b. cars Toronto in bond: 1 X Foundry strong Coke Iron, Lake Superior ore, $15.05; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14.55; 2 Foundry Strong Coke Iron, Lake Superior ore, $14.05; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17 55; Southern Soft 1, $13.35; Southern Soft 2, $12.85.

BAR IRON.—There is a fair business doing and some large sales are reported. The basis is unchanged at $19 5.

SHEET IRON. — There is probably less doing in this line than in any other. We quote 22 to 24 gauge $2.50 to $2.60 and 26 gauge ¼c. extra.

STEEL.—There are a few orders for sheet steel passing around, but at prices that are not accounted satisfactory.

HOOPS AND BANDS. — Stocks are much broken and it is difficult for manufacturers, both English and American, to fill orders; $2.50 to $2.60 for one inch up is still the idea as to price.

CORRUGATED IRON.—There is practically nothing doing in this line; $4.75 to $5 per square is still the idea for small lots. "Owl" brand is quoted at $3 to $4 per square for patented and $4.25 to $7 for galvanized, according to gauge.

GALVANIZED IRON—Demand is light in line. The majority of import orders are placed and roofers are about through with it for the winter. The furnace men are taking a few odd cases, but outside this there is not much doing. The idea as to price is still $4.75 to $5 for 28 gauge.

INGOT TIN—There is considerable tin moving, but the market is weak and fluctuates a good deal. We quote 21 to 22c. for L. and F. and 20½ to 21c. for Straits.

INGOT COPPER—Demand is fair, but the market does not seem to be gathering any strength. Small lots are quoted at 12 to 12½c., but large lots could be obtained fractionally cheaper.

SHEET COPPER—There is a good deal of this article coming in from the United States on account of the low prices ruling there.

SPELTER—Demand is still limited, and 4¼ to 4⅝c. remains the idea as to price.

SHEET ZINC.—Demand is increasing and while stocks are getting light there will be sufficient for the demand; 5¼ to 5⅜c. is the idea as to price for cask lots and ¼c. more is quoted for smaller quantities.

TIN PLATES. — Trade keeps good, but there is no change to note.

TERNE PLATES. — There is practically nothing doing and prices are without change.

CANADA PLATES. — In this line a good many are re-ordering in small quantities at old prices, viz, all dull $2.65, half polished $2 75 and all bright $2.90.

SOLDER —There is the usual quiet, seasonable demand. We quote half-and-half at 15 to 16c. and standard at 14 to 15c.

ANTIMONY. — Prices have advanced a little outside, and on the Toronto market there are a good many orders passing around. We quote 11 to 12½c.

LEAD—Some sales are reported, but prices are low. We quote small lots as before at 3¼c. These prices would be shaded for large lots.

GLASS.

Trade is active and some good-sized orders are being taken on both city and country account, and stocks, are said to be pretty well broken up. We quote $1.20 for first break. Business is said to be exceptionally brisk in plate glass.

PAINTS AND OILS.

Trade is active and some houses report the volume of business for the month of October larger than for any month this year. Payments are reported to be fair. White lead is in good demand and prices steady at the 5c. basis. In prepared paints there is a little doing, but it does not amount to much. Trade continues quiet in varnishes. Linseed oil is in fair demand at unchanged prices. We quote raw at 60 to 62c. and boiled at 63 to 65c. Turpentine remains quiet at 46 to 48c. A good trade is reported in glue at unhanged prices.

PETROLEUM.

The Petrolia Advertiser, in its weekly report, says: The same old monotony still reigns in oil matters, and a readable report is out of the question. Crude remains unchanged and may be quoted at $1 07 delivered, and refined at 9¾ to 10c. f.o.b. here.

On the local market the conditions are much as before. A good business is being done and prices are unchanged. We quote: 5 to 10 bbl. lots, imperial gallon Toronto; Canadian, 12½ to 13c.; carbon safety, 16½ to 17c.; Canadian water white, 18½ to 19c. Photogene, 22c.

OLD MATERIAL.

Old material is just about the same as it has been, with the exception of ½c. advance on scrap rubber. We quote prices paid by dealers as follows: — Agricultural scrap, 60c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40 to 45c. per cwt.. No. 2, including sheet iron, hoop iron and mixed steel, 10 to 15c.; new light scrap copper 8c.; heavy scrap copper 9c.; old copper bottoms, 8c.; light scrap brass 5½c.; heavy yellow scrap brass 7c.; heavy red scrap brass 8¼ to 8½c.; scrap lead 1½ to 2c.; scrap zinc, 2c.; scrap rubber, 3c.; country mixed rags, 75 to 95c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; boring, and turnings, 10 to 15c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—The situation in hides continuing about the same as last week. The different market points throughout Canada and the United States appear to be in a dull condition. As tanners having laid in a large supply, they are not anxious to invest in more. Prices remain unchanged, dealers are paying 4c. for No. 1, 3c. for No. 2, 2c. for No. 3.

SKINS—Trade continues quiet. Prices are much lower than last year at this time, and the prospects for an increase demand for domestic trade is not at all bright. Prices as quoted by Toronto dealers are the same as last report. Fresh slaughtered skins are running at 60 to 65c.

TALLOW—Continues in good demand, although somewhat scarce. Prices are a little higher at 5 to 5½c. per lb.

WOOL—Domestics remain quiet. Some few cars of Northwest lots are being disposed of, but this is about all. Prices remain unchanged. Dealers are paying from 19 to 20c. for good pull wool, and 16 to 17c. for fleece.

MARKET NOTES.

Craig, MacArthur & Co. report large sales of galvanized hot water boilers manufactured in Montreal.

H. S. Howland, Sons & Co. are in receipt of a line of warehouse and millers' trucks. The warehouse trucks are all fully ironed, and are claimed to be strong and substantial.

Samuel, Benjamin & Co. report a good trade doing in elbows, pipes and stove findings generally.

H. S. Howland, Sons & Co. have a full line of Acme skates in stock, and will fill back orders in a few days.

The McClary Manufacturing Co. of London have received first-prize for their exhibit of tinware at the World's Fair.

A few new brands of their "Maple Leaf" pocket cutlery have just been received by M. & L. Samuel, Benjamin & Co.

A number of repeat orders are reported by H. S. Howland, Sons & Co. for American augur bits in 6, 9 and 13 bits.

It is said that the Canadian manufacturers of shells have been unable to keep up with the demand this season, so heavy has it been.

The Gurney Foundry Co. shipped a carload of their "Quintet Rugby" radiators to Vancouver, B.C., on Tuesday. They are for the court house in that city.

The executors of the estate of James Hutton & Co. will carry on the business until the end of the year, when new arrangements for its continuance will be made.

The creditors of J. D. Fallis, the insolvent Kendell merchant, have decided to wind up the estate. He owes about $3,000, and his assets are nominally the same.

The Bolt Manufacturers' Association held a meeting in Toronto Wednesday afternoon. No changes were made in prices, and nothing of importance was said to have been transacted. It was decided to hold the next meeting in Toronto in January next.

Owing to the growing popularity of furnaces for heating purposes, retailers report stove heaters to be much less in demand than they were last fall, and lower in price, owing to the number of second-hand stoves that are consequently for sale. They find the trade in shelf hardware somewhat dull, but that business in the line of oils, paint, glass, etc., is good.

AMERICAN MARKETS.

New York, Oct. 27.

PIG TIN.—The market remains practically unchanged. Speculative buying continues slow, purchases in other directions are on strictly conservative lines, and the offering continues more or less reserved despite rumors of possible liquidation of November contracts in the immediate future. In other words, the surface appearances were that the market, while strong statistically, suffered somewhat from the uncertain financial conditions on this side of the Atlantic, and consequent hesitancy of buyers generally. Thus far this month only 80 tons have arrived

MARKETS—Continued

here, and about 1,000 tons, it is calculated, have passed into the channels of distribution and consumption. Present prices are a good margin below the cost of importation, but neither that nor the fact that supplies on the spot are steadily diminishing has greater influence at the present time than to steady values. It was noticeable, however, that bids on December delivery were carried about 0.10c. above those made for current month, which fact was somewhat in contrast with the experience previously this week.

COPPER.—The market is without new feature. To all accounts there is still quite enough copper to go around, and some authorities figure it out that, despite the restricted output, more or less accumulation at first hands is taking place. Whatever the facts in this connection, it is clear that Lake Superior ingot may be secured readily at 9 3-4c., and that there is a chance of buying some brands at a fraction less, probably at 9 5-8c. The cheaper varieties are in somewhat similar position, with sellers at 9 1-4 to 9 1-2c. for common casting stock, according to brand and delivery.

PIG LEAD.—A prominent firm that has recently been holding considerable lead, and parted with several hundred tons at prices very near to the lowest figures reached this month was credited with manifesting bullish proclivities and the support from that quarter resulted in bids being raised to 3.30 to 3.32 1-2c. Sellers have advanced their prices somewhat in consequence, and at the close 3.35 was generally asked; but there was no sign of anything like general buying. St. Louis telegram to the Metal Exchange quoted 3.05c. London cable was £9 12s. 6d. for soft Spanish.

SPELTER.—There was a somewhat better tone to the market, with 3.50c. bid by exporters for the ordinary Western brands, and some home trade enquiry at a shade better price. Desirable brands were difficult to obtain at those prices, and dealings were consequently on a moderate scale. St. Louis wire to the Metal Exchange quoted 3.35c. London cable was £16 15s. for good merchant brands.

ANTIMONY.—The market remains quiet, but prices are fairly well maintained at about 9 5-8 to 9 3-4c. for Hallet's, 10 1-8 to 10 1-4c. for Cookson's, 10 to 10 1-2c. for LX and similar brands.

TIN PLATE.—In the demand there was no change. At all events most reports went to show that buyers continue very conservative, and that purchases are barely up to the average for the season, although a certain amount of interest is still shown in coke plates for near future shipments. The movement of prices is still narrow, and the market retains a good tone, although quiet.

BATTLE OF THE ELECTRIC LAMPS.

The coming battle of the electric incandescence electric lamps can already be "scented" not only "from afar," but near at hand. It is likely to be a right royal fight, and will be one in which every ironmonger and the majority of the public will be deeply interested. The Edison-Swan patents will expire on November 10 next, and thereafter what has been a close, even if well managed and enterprising, monopoly will come to an end. The two companies who have had the monopoly have done well, and will now have the opportunity of being better. When the patent expires they will be on a purely commercial basis, and will have to hold their own strictly on their merits. It has to be confessed that they appear to fully appreciate the position, and that they are already exhibiting excellent generalship in bidding for the largest share of the enormously increased demand for incandescence lamps which is morally certain to arise now that free trade in these lamps is to be established. As duly set forth in our autumn special issue of September 23, the Edison & Swan United Electric-light Company (Limited) have "opened the ball" by reducing the prices of their ordinary and special lamps by 2s. each, thus making the tariff price-list of such lamps 1s. 9d. each, subject to their usual terms and conditions. This alteration in prices took effect on September 21, and is certainly a bold and sagacious move on the part of the company, who will for some time to come expect, and have, to play the part of defenders against a not inconsiderable number of home and foreign assailants. The reduction in price thus announced is large, and will have effects favorable to the company, who are evidently ready for any emergencies likely to be evolved, seeing that they hold themselves free to make further alterations without notice. Their initial move, therefore, is distinctly good, strategically, and as their practical experience is infinitely greater than that of any of their actual or possible competitors, the company ought to be able to hold their own so long as the lines of contest remain even and uncomplicated by future patented improvements—particularly as they guarantee the quality of all their lamps. Before long we shall probably know more of the intentions and doings of the competing electric-lamp manufacturers. If current report is to be credited, the continental producers are making great preparations for the fray, and are alleged to have large numbers of lamps in readiness for delivery immediately the patents have expired. Rumor states that these lamps are being prepared in Belgium, Germany, Austria, and Switzerland under the impression that they can be delivered here at prices which will be lower than those of the Edison & Swan Company. It would not be fair to that company to allude more closely to these would-be rivals, but it is quite clear that when the period of monopoly is at an end there may be some lively cutting of prices. Competition of that kind will be wholesome and good for the trade and for the public, provided—and in this case the proviso is of special importance—that the quality of the lamps is as good in one case as in the other. Experience will speedily determine that particular issue, however, and it may be taken for granted that any manufacturer who attempts to attain cheapness at the expense of quality will have no chance whatever of securing any good share of this market. There is nothing more certain than that the electric light has a great future before it, but it can grow only by demonstrating that it is superior to gas and other illuminants. Lamps of good quality are necessary concomitants of this growth, consequently all ironmongers who are pushing their business in that direction will need to be wary on the point of the quality of the lamps they sell and fix. In saying this we do not for a moemnt wish to hint that the coming lamps are specially liable to be deficient in construction. That is by no means a necessary sequence, for it is pretty generally understood, we believe, that the cost of production is not unduly high, and that there is a safe margin of profit even when allowance is made for the effects of strenuous competition. We have yet to wait for the situation to develop, but in any event our readers will lose nothing by carefully noting what is going on in respect of these lamps.—Ironmonger, London.

PERSONAL MENTION.

F. F. Skinner, treasurer of the Gurney Foundry Co., is in Boston.

F. G. Dexter, of H. S. Howland, Sons & Co., returned this week from a trip to the Worlds' Fair.

S. S. Martin, of Rice, Lewis & Son, is in Chicago doing the Worlds' Fair.

Among the country merchants noticed on the street this week were: Mr. Vanzant, of Markham, A. D. Carley of King, J. McLelland of Balacroiz, H. Keys of Weston.

S. Frankel, of Frankel Bros., arrived in Toronto Wednesday morning after a six months' trip to Europe. He is in perfect health and enjoyed his trip immensely.

Any dealer wishing to settle in Calgarry, N.W.T., will find a good stand in Thomson Bros. new block, which will be ready in a month. It is a three-storey stone building with plate-glass front and heated with hot water.

Some of our English contemporaries have called attention to the prevailing low prices of pig iron in this country, and have warned their own iron masters that if such rates continue it is possible that the United States may begin to compete with England as an iron exporting country. A comparison of current quotations gives point to this suggestion. So far, however, there has been no considerable movement in this direction, and our own furnacemen do not seem ready to begin the competition. The low prices of pig iron will promote the export trade in manufactures of iron which is already somewhat important and is increasing. The day is not distant when the United States will be the workshop for a large part of the world and the present great depression in the iron business is hastening the day.—Engineering and Mining Journal.

VIEWS AND INTERVIEWS.

"Yes, that is an ugly looking thing," said a hardware man to me the other day, as he pointed to a large bear trap. "Did I ever tell you about my selling one some years ago to a man who wanted to catch the fellow who was stealing his chickens? Well, some one kept stealing his chickens, and so he came to me and bought a bear trap; and he caught the fellow, too, or rather his foot, for the trap cut it clean off. The thief was a colored man. Of course, negros' legs are tender, particularly if the negro lives on chicken all the time."

* * *

"We find that wrought iron pipe is taking the place of lead pipe to a large extent these days," remarked a broker to me. "The great advantage of wrought over lead pipe is that the rats and mice cannot eat through it. Taking everything into consideration, it is cheaper than lead pipe, too, as it does better work and is more endurable. Architects now largely specify it."

* * *

"There is a strong probability of an advance in clothes wringers," remarked a representative of a wholesale house Wednesday, "and if the trade want to ensure getting their supplies at old figures I would advise them to order at once."

* * *

"Mr. Adams, a partner of the well known English iron and steel firm of that name passed through the city last week," remarked a friend of mine. "I was talking with him, and he told me that business was unusually quiet in the iron and steel manufacturing trades in England. Not only was it worse than he had ever seen, but worse than his father before him had seen."

* * *

"They are making some unusually large sheets of steel in the United States just now," said a broker. "The gauges, which are light, are specially advantageous to boiler makers, requiring less riveting. Considerable quantities are coming in here."

* * *

"What's the matter? Why matter enough," indignantly remarked a jobber to me. "Here are the manufacturers of coal-hods. They go to work and fix prices, what they will supply us at and at what they will sell the retailer, and then they go right to work and undersell us to the very parties whom we have to look for as our customers. I tell you it is not right. It is mean and contemptible of them, nothing more nor nothing less."

* * *

"We always consume a good deal of American sheet copper on this market," remarked a handler, "but we are using much more than usual just now. It is preferable to English as far as quality is concerned, but heretofore it has been dearer. Now, however, prices in the United States have dropped so much that they are approximating to the English. Hence the larger shipments.

BYSTANDER

R. G. Baxter has purchased one of the Bronte grain storehouses and purposes to place it on several scows, bodily, and tow it to Burlington and place it on the foundation prepared for it, where the old one stood that was recently burnt down.—Free Press, Acton.

Attorney-General Longley has just received the following very encouraging note from Mr. J. W. Bigelow, president of the Fruit Growers' Association, who is now attending the World's Fair as the representative of the local government: "I feel like offering to pay your expenses if you will return and see our fruit exhibit since we have got it arranged to the best possible advantage. We are scoring a point for Nova Scotia gravensteins, kings, ribstons, etc., and potatoes, and are now sure of first prize."—Chronicle, Halifax.

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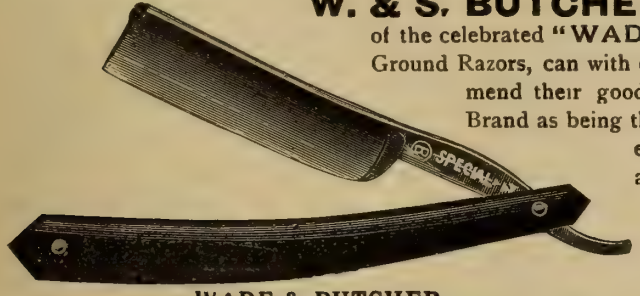
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EXPERIMENTS IN MELTING IRON.

Dr. Edward Kirk, of Philadelphia, sends Iron Trade Review the following interesting appendix to his address on Cupola Fluxes, delivered before the Foundrymen's Association at Philadelphia, and printed in these columns last week:

In 1873, when engaged in the manufacture of malleable iron, I began experimenting with mineral and chemical materials with a view of making a cheap malleable iron, and changing the nature of iron in a cupola furnace so that it might be annealed at a less cost and produce a stronger iron. In this I succeeded to some extent, and then drifted off into improving the quality of iron in a cupola for grey iron castings; this I have followed for nearly twenty years. During this time I have melted iron in foundries all over the greater part of the United States and Canada, and have constructed and worked a number of experimental cupolas of my own, to learn the effect of different mineral and chemical substances upon iron and cupola linings. In these investigations I have used all the mineral and chemical fluxes known to metallurgical science, and observed their effect upon the various grades of iron employed for foundry work

In these experiments I have found that iron can be improved or injured when melted in a cupola furnace, and is often ruined as a foundry iron by improper melting and fluxing. The point at which iron is melted in a cupola has a great deal to do with its quality. Iron melted too high in a cupola is burned and hardened; melted too low, it runs dirty in a mold; melted with too strong a blast it is hardened. Iron melted dull does not make a sound casting. Iron melted with poor coal or coke is injured by the impurities in the fuel. Iron melted with oyster shells, limestone, and other mineral fluxes may take up oxides, sulphides, phosphides silicates and other impurities contained in the flux and be ruined by them for foundry work.

The per cent. of iron lost in melting is increased by improper melting and fluxing, and may be double or treble what it should be. I have made a great manyexperiments to ascertain the effect of silicon on iron, and have found that silicon enters freely into combination with cast iron and has a softening effect upon it. Iron as hard as tempered steel may be made as soft as lead by combining it with silicon. But silicon is an impurity having a delecterious effect upon iron. An excess of silicon destroys cohesive force and crystallization and reduces transverse and tensile strength. So great is the destruction of cohesive force in cast iron by silicon that the strongest iron may be reduced to a powder when combined with an excess of silicon. Silicon in any proportion is a detriment to cast iron, as an iron. The nature and form of crystallization of a pure cast iron is changed by sudden cooling in a mold and a soft iron in the pig may become a hard iron in a casting. This chilling property in cast iron is destroyed by silicon and an iron high in silicon is not hardened when run into a sand mold or upon an iron chill. The destruction of the chilling tendency in cast iron is very desirable in the manufacture of light castings, and for this reason silicon irons are largely used in foundries making this class of work.

The per cent. of silicon an iron may contain and yet retain sufficient cohesive force for the work, depends upon amount of other impurities in the iron and the work the iron is employed to make. For heavy work, requiring great strength, it should contain none at all. For light machinery it may contain from one-half to one per cent., and for stove plate work, light bench work, etc., it may contain from two to three per cent. This amount is sufficient to reduce the chilling tendency of the iron without impairing its strength to any great extent in this class of work. But a larger amount destroys the strength of the iron and also injures its flowing property in a mold.

At the present time there is a large amount of high silicon cheap Southern iron being used in stove foundries for the purpose of making a cheap mixture and a soft casting. At one of these foundries I recently visited, the foreman informed me that they were using a mixture that cost $14 per ton, and said their breakage in the tumbling barrels and mounting shop was very large, and he never made a shipment to their warehouse in New York a distance of 25 miles, but a lot of stoves were broken in transit and sent back to be remounted and repaired.

At another stove foundry in Troy, N. Y., they informed me they were using a mixture of Pennsylvania irons that cost them $20 per ton. They had scarcely any breakage at their works, and shipped their lightest stoves and plate to their warehouse in Chicago without boxing or crating, and never had any breakage in transit or in handling. They had found by experience that a mixture of Pennsylvania irons at a cost of $20 per ton was cheaper in the long run than a mixture of cheap Southern irons at $14 per ton.

In a number of other foundries I visited they complained of heavy breakage when using high silicon irons as softeners. Another matter to be considered in using these high silicon irons for stove plate, is, how long will a stove last made of such weak iron, and can a reputation for good work be maintained by foundries using them? A stove made of this kind of iron will certainly not last as long as one made of good iron.

Carbon has the same effect upon cast iron as silicon in softening and reducing the chilling tendency. The hardest of cast iron can be made the softest by the addition of carbon, without destroying its cohesive force and rendering it brittle or rotten and carbon can be added to iron in a cupola as readily as silicon. Before the high silicon Southern irons were put upon the Northern market, highly carbonized irons were used as softeners for stove plate and other light work, and a far better grade of castings were made then than is now made from the silicon irons.

It is difficult to remove silicon from iron when melted in a cupola, but free carbon is readily removed by the oxidizing flame in a cupola produced by a strong and large volume of blast; and a soft iron may be hardened in melting to such an extent as to make it unfit for the work. This can be prevented to some extent by using a mild blast and melting the iron low in the cupola, and it can also be prevented by the use of chemicals in the cupola to produce a carbonizing flame.

I have spent a great deal of time and money in experimenting on the production of such a flame in a cupola, as would not only prevent the deterioration of iron in melting, but would improve its quality, and at the present time I am engaged in the manufacture of a chemical compound for this purpose.

BURNING GAS COKE.

From the address of President M. P. Mallet before the Societe Technique du Gaz, recently held in Paris, we print, says an exchange, the following extract bearing on the use of gas coke in domestic fires:

As to coke, it is the most remunerative of the by-products; in some cases the money got for it is fully half that received for the gas. Thirty years ago we could not possibly have got rid of the quantities we now regularly dispose of. Very little was used in houses; it was not generally understood how to burn it there; and even industry hesitated about it, save as an inferior fuel. Since then it has come greatly into domestic use. Proper apparatus has come into general use; the Paris Gas Company have done a great deal in this direction; slow combustion stoves have come greatly into use, one firm in Paris having made 175,000 within the last five years. The Marsailles Gas Company, who have metallurgical works of their own, use 10,000 tons a year in these, or about 40 per cent. of the total

coke used. In the department of the Loire some blast furnaces use gas coke to the extent of 30 per cent. of the whole. The four railway companies which come into Paris use about 75,000 to 80,000 tons a year for their locomotives, in the suburbs. Gas coke is also used by large metallurgical works in their gas producers; it is also much used for forge fires and also for raising steam.

Coke dust is ceasing to be a vexation to us; we are now learning how to burn it and how to gasify it. The Godillot system and the Robin system enable us to do this. M. Robin has installed in Paris alone 500 of his coke dust stoves for heating public or private buildings, and 1,400 elsewhere. And even in steam raising, coke dust is regularly being used, up to 70 per cent. of the fuel, by the use of wide hearth bars, very close together. The Societe is to visit the Say refinery, where there are 68 boilers, with a heating surface of 171,560 square feet, in which this is being done. Coke dust has therefore a market before it.

The use of coke has, to some extent, wakened up the use of anthracite. The stove which will burn coke will generally burn anthracite, which is now found used in such stoves. But fortunately for us anthracite is very dear; it costs in Paris $10 a ton.

Although hot water pipe stoves take a good deal of coke dust, still all arrangements which do away with heating of individual rooms are opposed to the sale of coke, since the stoves can burn any cheap fuel. But such methods are only coming in slowly, and in houses of great size, or in large buildings.

The greatest adversaries of the use of coke are ourselves, through the zeal with which we push the use of gas for heating. Already half the coke we sell in Paris goes to manufacturers. It is desirable rather to push its use in domestic heating, else we shall some day fail to get our prices for it. In country towns the use of coke is very little known. There is no reason why this should be so. In Brussels the consumption of gas coke per inhabitant was three times as great in 1891 as in 1886. Where coke is not known it might be sold at as reasonable a rate as possible, at any rate for a time, until the use of it has been understood. It is even better that the inhabitants should have their coke somewhat cheaply than that the same money should be thrown away in benefiting commission agents and railway companies. The coke must, of course, be broken for domestic use. It is bewildering to find some works actually sending it out for house use unbroken. And it must, of course, be kept dry; it must not get wet. We must make people acquainted with the existing apparatus for burning coke. Our Belgian brethren are on the alert, and have instituted a competition for the best apparatus for burning coke. Some good results will, we hope, follow. But even now the apparatus is good, and it is for us to bring it under people's notice by all the means which are necessary to secure publicity. And we ought to lend them coke stoves in the same way as we have successfully lent gas stoves.

MODERN EXPLOSIVES.

The composition of some of the modern high explosives, according to Engineering, is as follows:

Dynamite—Seventy-five parts of nitro-glycerine and 25 of infusorial earth.

Dualine—Eighty parts nitro-glycerine and 20 of nitro-cellulose or gun cotton.

Rendrock—Forty parts nitro-glycerine, 40 of nitrate of potash or soda, 13 of cellulose and 7 of paraffine.

Giant Powder—Thirty-six parts of nitro-glycerine, 48 of nitrate of potash or soda, eight of sulphur and eight of resin or charcoal.

Mica Powder—Fifty-two parts of nitro-glycerine and 48 of pulverized mica.

Tonite—Fifty-two and one-half parts of gun cotton and 47 1-2 parts of nitrate of baryta.

Blasting Gelatin—Ninety-two parts of nitro-glycerine and eight of gun cotton.

Atlas Powder—Seventy-five parts of nitro-glycerine, 21 of wood fiber, two of carbonate of magnesia, and two of nitrate of soda.

Rackarock—77.7 parts of chlorate of potash and 22.3 of nitro-benzol.

It will be noticed that nearly all the above explosives are composed principally of nitro-glycerine; and it is probable that in most cases the other ingredients only act as absorbents for this liquid, and really add nothing to the explosive power. The decomposition of nitro-glycerine is practically instantaneous, and the slower acting nitrates and hydro-carbons must be left far behind when the mass is exploded. The power of all these substances is due to the paradoxical element, which is by itself the most neutral and inactive of all elements, but, when forced into chemical combination, usually confers an element of weakness upon the entire molecule of which it forms a part.



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TACT, TALENT AND TRADE.

Not every man can be a successful trader. For one man that wins, a hundred fail. One cause of non-success, a very common one, too, is the fact that the man who tries to do business relies too much on talent, too little on tact. Buying cheaply, buying seasonably, not understocking, not overstocking, selling at fair prices, collecting quickly, judiciously advertising, all these require business talent, and are essential to business success. Every dealer studies these points to the best of his ability. The successful trader must master them all. This is patent. But there is another element in doing business too often overlooked. The dealer must study his customer as he does the market conditions. He must have tact as well as talent. Business courtesies, an inviting store, little kindnesses, prompt attention to customers, a friendly, but never familiar, interest in his patrons—these are as essential to business success as judicious buying, judicious advertising, judicious collecting. From personal experience we remember a hardware man who had long held a responsible position in a wholesale house and knew more about buying selling, and advertising than the average hardware dealer, and who opened a hardware store on a corner of a suburban section of Chicago. This dealer was annoyed by having people coming into his store and waiting for a car that ran past his store every fifteen minutes, so he hung out a sign—"This Store is Not a Waiting Room for the Dummy." That man failed shortly. Of course he failed.

The public are as quick to appreciate attention as they are to deprecate inattention. Tact costs but little, but it "pays well." It would have cost this dealer little space and trouble to have placed a settee in the front part of his store for the benefit of his neighbors. The mere hanging out of a sign, "Please Step In and Wait for the Dummy," would have gained him friends, and friends are what a business man needs. If the class of people who dropped in were of the order of the typical holder down of country grocery store barrels, then the dealer would be justified in letting them know that their room was more valuable than their company. But patrons of the dummy line in question were certainly a different class from the one above described. This is only one specific instance showing the value of tact in business, and the advantage derived from accommodating the public. Tact is inexpensive, as we have said, and its influence is mighty. A bit of green in the window on St. Patrick's day, the appropriate observance of Labor day, sending to your wholesaler for a small order for an occasional customer, taking trouble to explain some matter of stove construction to a person merely seeking to gratify curiosity, keeping a store open an extra fifteen minutes as a personal favor to a single customer, these are a few of the infinite number of little ways in which tact can be shown. The American Artisan is not underrating the force of talent in trade. A man who has not a business head cannot do business. But you cannot run a store as you can an engine. A customer is an individual with whims and feelings, not merely a buyer. Talent is too apt to recognize only the buyer, tact recognizes the man. Talent without tact may succeed, and may fail. Tact without talent must quickly tumble down. Tact and talent hand in hand must succeed.—American Artisan.

SOME POINTS IN PLUMBING-WORK.

There are so many points, old and new, that one is puzzled in selecting the most useful to elucidate. Water-closet soil-pipes were a few years ago frequently, and are even yet sometimes, formed of common light cast iron rain water pipes, joined with putty or white lead in very unsuitable shallow sockets. We are all aware now that such poor material should not be used, but the difficulty we experience when we meet this "jerry" work is to convince the householder that he should have it removed. You can tell him, first, that these light iron pipes are liable to crack or split in frost, especially if a slight leakage or overflow of water is passing down them, and you will probably be able by sounding with a hammer, or by the smoke test, to prove that this has actually occured. You can explain that the interior is rough and coated with foul deposit and iron rust combined; you can show that the sockets are so small and fragile that proper joints cannot be made with gaskin and molten lead because there is not sufficient space in the sockets, and because you would certainly split the socket in calking home the gaskin and lead joints. You can explain that if you make a careful putty or red lead joint, though it may be secure for a few months, yet that the combined action of sun, heat and frost must expand and contract the light iron pipes and sockets, and dry up the putty joint so that cracks must develop and leakage must eventuate, that the danger from such leakages of foul air is greatest at points where the leaking joints pass by bedroom windows, through which the escaping four air is drawn into the room; and you can point that the important connection between the lead branch soil pipe of the closet apparatus, and the light iron soil pipe cannot under any circumstances be securely effected.

Wherever you find a light iron soil pipe (in wide experience you will find hundreds of them) passing down inside housewalls and through pantries and larders, you must, if you value your reputation, remove them and provide suitable soil pipes outside house walls if possible; but if circumstances compel you to place the soil pipes inside, then give all your attention to make theem absolutely secure.

For internal soil pipes heavy coated or glass lined cast iron, jointed with gaskin and molten lead, well caulked home, is the safest. Heavy drawn lead soil pipes in such position may be approved, jointed with perfectly formed wiped joints and supported with skilful care, but there is always the danger that a careless person may, as time passes by, drive a nail into, or otherwise injure a lead soil pipe; and there is a further danger, not at all uncommon, that a housemaid's slop sink may be branched into this soil pipe, down which very hot water may be thrown, and under such circumstances no lead soil pipe is safe. The sudden expansion and contraction of the lead will eventually injure the pipe, cause it to drag down from its supports, and to leak into the house, and, furthermore, rats have been known to gnaw holes in lead pipes. If a soil pipe must pass down through the house instead of outside, two other joints need attention. Carry the cast iron soil pipe at the foot to the outside of house walls, and do not connect it to an earthenware drain inside the house wall at the foot of the stack. The joint between earthenware and iron is not of such a character, even when well made, as to be implicitly relied upon inside a house. If any defect occurs the foul air will have access to the house freely, and will travel up in the soil pipe, wall chase or casing to the upper bedroom floors.

Let the internal soil pipe also be extended full bore to a point above the roof for ventilation, and, if this cannot be done, then give up the job. Never fix a soil pipe or closet inside a house in a position where proper ventilation is impossible. No skillful plumber will terminate his soil pipe vent shaft near any window or near any chimney, lest the foul air be drawn into the house, yet we see hundreds of such mistakes every day that we come to our business in London when we gaze out from our railway carriage window. No skilled plumber will connect lead soil pipes direct to iron soil pipes. He will use a copper or brass ferrule without reducing the bore of the lead pipe, turn the edge of the lead pipe over the lower end of the ferrule, then wipe a solder joint between the top of the ferrule and the lead pipe, slip the ferrule into the iron pipe sock-

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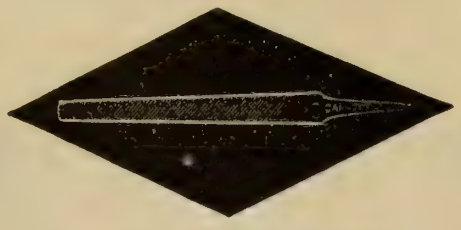
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ket, pack it with tarred gaskin, joint with molten lead, and hammer home. The joints on branch soil pipes ought not to be hidden in the thickness of the wall; every joint should be exposed and accessible for inspection.

The sizes of soil pipes now generally adopted are 3 1-2 inches and 4 inches diameter, seldom larger. All soil pipes, whether iron or lead, require to be rigidly supported; the supports of lead soil pipes must be soldered securely to the pipe itself. The soil pipe should always enter the drain at its foot, vertically or diagonally, never in a horizontal direction, and flanges should be attached securely to the foot of the soil pipe to enable the cement to grip and hold. Branches should never enter the vertical soil pipes at right angles; they should be formed, whether iron or lead, with a curve, splayed so as to allow the soil to pass with even motion into the soil pipe, which should in every part of its interior present a smooth surface without the smallest projection to arrest or obstruct the passage of soil, paper, etc.

Some authorities favor the practice of cutting off every ventilating soil pipe in the house by placing a disconnecting trap at the foot of each soil pipe, having an open grating between the trap and the ventilated pipe to admit fresh air. It is, doubtless, a lessening of risk in one direction to exclude all house drain air from the soil pipe, as we insist on excluding all sewer air from the house drain. But other risks are created. For instance, the traps with open gratings may become stopped by frost; the gratings may become stopped by snow or by dirt accumulations; the trap forms an obstruction to the free passage of soil and paper, perhaps needing a second good flush of water to clear it away; and if the closet is seldom used the soil may remain in the trap long enough to decompose and be dangerous. Again, the trap at the foot of the soil pipe checks the force of the flush and lessens its useful effect in flushing out the house drain and the main interceptor trap; you also lose the soil pipes as ventilating shafts for the drain, and it becomes necessary to fix as many additional independent vent shafts up the walls to the highest points above the roofs as there are branches to the drain, at additional expense. Another serious objection is that the open gratings, intended to admit fresh air at foot of soil pipes, will emit foul air from the soil pipe every time the closet is flushed. Frequently this air is offensive if soil has remained long in the trap, and to anyone standing over the grating it may prove injurious also. Sometimes these gratings and traps must be fixed near a pasasge door or a window, and thus the offensive odors may be drawn directly into the house, and then the householder generally takes the law into his own hands and closes the gratings, destroying thus the ventilation of the soil pipe.

Mica flap-valves are sometimes suggested as a method of preventing this back flow of foul air, but such valves are liable to get out of order, and generally fail to accomplish the good intentions of the plumber, especially if placed in small confined areas or yards. If the house drain is perfectly laid, with smooth interior and good fall, well flushed, disconnected perfectly from the sewer, with access provided for inspection, the soil-pipes also being smooth internally and skillfuly fixed, all the high-level soil pipes may be connected direct to the drain, as main vent shafts for the system, and the soil and flushing water then flows unobstruct to the drain and right away. The rain-water pipes should never be used to ventilate drains, either as inlets or outlets. Every rain-pipe should deliver visibly over a gulley trap and grating provided. The waste pipes from baths and lavatory basins should be also delivered under a grating and over the water trap of a disconnecting receiver, skillfully arranged on the drain, the wastes ventilated full bore at top and bottom, and a drawn lead trap always fixed close up to the waste gratings of the baths and basins. Many of these fixtures are found without a trap underneath them, on the plea that as they deliver in open air a trap is not required; but the result follows that the air flowing through the dirty waste pipe into the room fills it with the disagreeable odor of putrifying soap, grease, etc. Pantry troughs and scullery troughs are best fitted with waste-pipes led (well ventilated) into grease-traps in open air. Grease traps with automatic syphon flush-tanks to wash them cleam four times a day are the best where flushing water is available, otherwise Dean's grease traps, with lifters to remove grease daily, may be safely adopted.

All wastes should have drawn lead traps, with brass cleaning screws, fixed close up to the fittings; where hot water is used, lead traps and pipes should be extra heavy and extra well supported and fastened. Iron pipes, glass lined or galvanized, will be found most secure and durable where hot and cold waters pass alternately. The waste pipes and traps should not be larger than needful, and the brass grating should be of such enlarged open area so as to admit more than sufficient flow of water to fill the waste pipe and cleanse it with every flush. All overflows of baths, basins, troughs, cisterns ,etc., should be large enough to carry away the entire overflow easily when every tap supplying the fitting is running full bore. This is a point constantly overlooked by potters, etc., in making such fittings. The plumber must, if necessary, supplement the overflow in any fitting he fixes if it be found insufficient in practice. Overflows should be safely discharged and trapped. Water cistern overflows should all deliver in the purest open air, and be fitted with copper flap valves, to exclude cold air, in preference to traps, which generally run dry or choke up and so become useless.

Lead safe traps under closets, sinks, baths, etc., should never be connected to waste or soil pipes, but should invariably be carried out direct to open air flowing in under closet seats. Hundreds of these waste pipes in England are dangerously connected direct to soil pipes. In some cases into the closet traps, and in other cases provided with traps of their own, which are quickly emptied of their water seal, and are accountable for many lost lives, though not suspected as dangerous. Attempts to keep these traps charged by small jets of water from weeping pipes are generally futile, the jets speedily becoming choked and ceasing to act. The outgo bends of all traps should also be fully guarded from syphonage by independent sufficient ventilating pipes. While considering this portion of plumbing work, if one asks why ventilation is so prominently urged in connection with drains, soil and waste pipes, you may give shortly a few good reasons. The air in such pipes if sealed during use, is not good or pure, an if allowed to remain becomes a dangerous concentrated gas which will expand and force its way through the trap seals into the house, and also attack and corrode the pipes themselves; therefore it is necessary to relieve the pipes from the pressure of the expanding gases, to remove these gases speedily, and to substitute pure air by simple automatic means. It is also found that sealed soil and waste pipes act as powerful syphons when flushed, emptying any trap upon them of their water seals by syphonic action, and exposing the residents of the house to danger. Why then, would not a small pipe, say, 1-4 inch diameter, answer the purpose ,instead of carrying a 4-inch soil pipe full bore? If you can make the calculation of the areas of 1-4-inch and 4-inch pipes, and the relative friction retarding currents of air through each, you will find that one 4-inch pipe, 40 feet long, will pass more air than one hundred 1-4-inch pipes. Pure air in abundance alone is needed to ensure purity in the interior of well formed drains and soil and waste pipes, and where you can succeed by such simple means in securing abundance of pure air through your pipes, and in removing all that is foul and dangerous, it becomes a crime for plumbers or householders to neglect or lessen these benefits.—Ironmonger.

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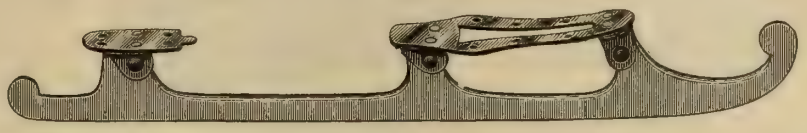
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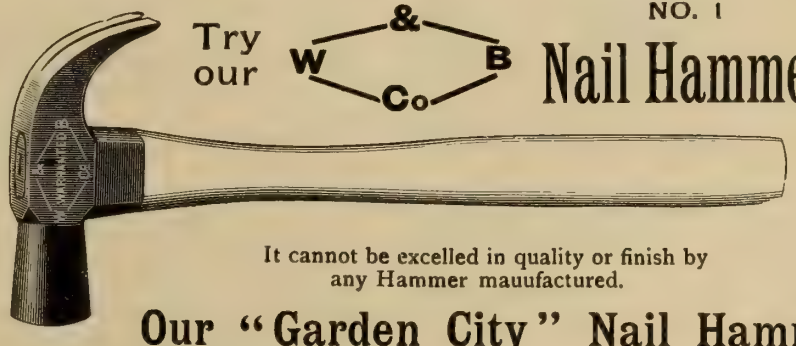
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BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

James Cheyne, builder, Hamilton, has assigned.

T. R. Dearle, painter, Simcoe, has assigned to Thos. L. Gillies.

J. D. Gore, general storekeeper, Glencoe, has assigned to the sheriff.

C. Turpain, general merchant, Bryson, Que., has obtained an extension.

A. J. Wright, furniture dealer, Hamilton, has assigned to George R. Walker.

W. J. Moore, general storekeeper, Sudbury, has assigned to David Blackley.

The general stock of H. Levins & Co., Sherbrooke, Que., has been seized for rent.

W. H. McAlpine, lumber, Montreal, is offering to compromise at 20c. on the dollar cash.

John C. Goddard, contractor and stone dealer, Toronto, has assigned to E. R. C. Clarkson.

A demand of assignment has been made on Laferriere & Tellier, general merchants, Berthier, Que.

Poirier & Michaud, general merchants, Lachine, are offering to compromise at 85c. on the dollar cash.

Dupins & Go., general merchants, Village des Aulnais, Que., have compromised at 30c. on the dollar cash.

James B. Cormack, millers' and engineers' supplies, Toronto, has assigned to W. A. Campbell. Lack of capital is attributed the cause of the failure.

C. A. Smith & Co., general storekeepers, Chester, N. S., have assigned to David Evans. This firm endeavored to effect a compromise at 50 per cent. last spring, but did not succeed. Joseph Smith, of St. Margaret's Bay, has assigned to F. G. Forbes.

CHANGES.

H. E. Hewlett, plumber, has been succeeded by Hewlett & Torpy.

Wm. Bretham, general merchant, Vallentyre, has been succeeded by C. Batt.

Newsome & Co., general merchants, Oshawa; style now A. C. Newsome.

J. B. Weldon, general merchant, Little Britain, has assigned to W. A. Campbell.

Siemens Bros. & Co., bankers, Gretna, Man., have been succeeded by Ritz & Widmeyer.

W. McFadden, general merchant and blacksmith, Williscroft, has sold out his blacksmithing business to Walter Barker.

PARTNERSHIPS FORMED AND DISSOLVED.

James Hodgins & Son, general merchants, Shawville, Que., have dissolved. James Hodgins retires, and George F. Hodgins continues.

Davidson & Garroch, coal, Sarnia, have dissolved. John Garroch continues.

Frank Larmouth has been registered proprietor of the Montreal Electrical Supply Co.

G. E. Robinson and C. E. Tenny have registered a partnership to carry on business as general merchants at Waterloo, Que., under the firm name of Robinson & Tenny.

SALES MADE OR PENDING.

The stock of W. R. Cavana, Victoria Road, has been sold.

The general stock of W. M. Dunham, Carleton Place, has been sold by auction.

M. F. Nogan, general merchant, Chatham, N. B., has been sold out under execution of judgment.

The general stock of Grant & Shipley, general merchants, Alsai Craig, is to be sold at auction.

The stock of James Martin & Co., general merchants, Thurso, Que., has been sold at 30c. on the dollar, cash.

Mr. McClung for several years merchant in Blackstock, has purchased the stock, store and dwelling of J. E. Varcoe in Sonya and will move there at an early date.

The stock, plant, etc., of A. R. McKinlay & Co., manufacturers of window shades, Toronto, has been sold by auction to L. J. McKinlay. The estate was valued at $14,159.

DEATHS.

J. P. Murdock, general merchant, Ridgetown, N. S., is dead.

W. Rendell of the firm of W. & G. Rendell, dealers in builders' supplies, St. John's, Nfd., is dead.

Christopher Columbas Crabb, merchant, of Goderich, Ont., died on Saturday, aged 81.

DEPRESSION IN THE IRON TRADE.

The iron industry, says N. Y. Journal of Commerce, has had a particularly hard time this year, but it is not clear that it has suffered more than others as the result of the currency difficulties of the summer and fall. The statement of the furnaces in blast October 1 in each year from 1889 does very little more than to show the concentration of the pig iron business that has been in operation for some time. As many charcoal furnaces were in blast October 1, 1890, as October 1, 1889, and more anthracite, coke and bituminous furnaces were in blast at the later than at the earlier date. But since October 1, 1890, there has been a steady diminution in the number of each class of furnaces. The total fell from 337 in 1890 to 305 in 1891, 242 in 1892 and 116 in 1893. Of course the reduction between 1892 and 1893 is due in part to the depression in the trade; but 1892 was a better year than 1891, and at corresponding dates it showed 63 fewer furnaces in blast. The rate of production October 1 last was not quite half what it was a year previous, and in great measure of course this is due to the depression in business. But the last report of the Iron and Steel Association indicated an excess of production, or at least of furnace capacity, from which the trade was suffering and to which a part of its present depression may properly be attributed. "It cannot be truly said," observes Mr. Swank, "that our iron and steel industries were prosperous in 1892," and this in spite of the fact, or on account of the fact, that the pig iron output was run up to over nine million tons in 1892; the prevailing low price indicated that this was over-production. This appears more clearly from a comparison of the furnace capacity at different dates. From November, 1889, to January, 1892, the annual capacity of all blast furnaces in the United States increased 2,793,357 gross tons; yet the production was greater in 1890 than in 1892, and the consumption was almost as much. It is highly probable, therefore, that the low prices and the restricted demand of the past six months or a year have much more to do with the enormous output of the last two or three years than with the currency disturbance, or even the apprehension of tariff changes.



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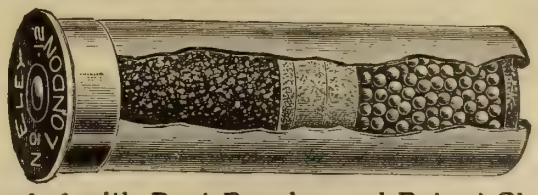
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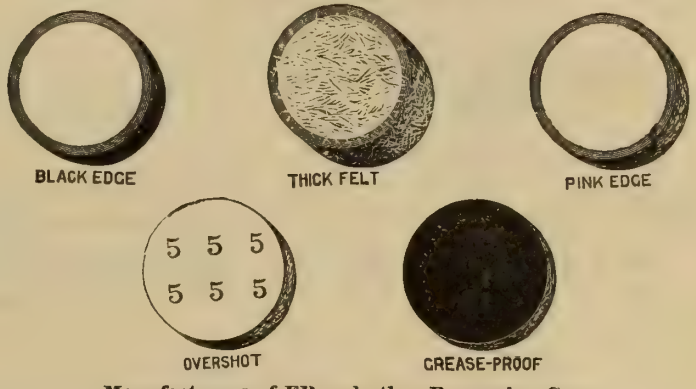
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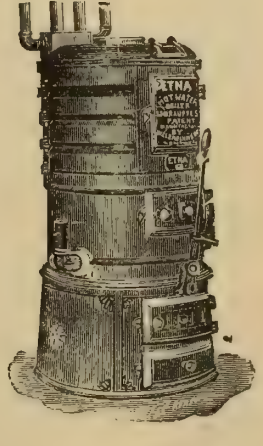
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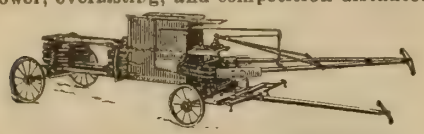


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56 and 28 lb ingots, per lb	21, 22
Straits "	20½, 21

Tin Plates—*Charcoal Plates, Bright.*

	Per box
M.L.S. equal to Bradley	
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 00 4 25
I.X., "	5 00 5 25
I.X.X., "	6 00 6 25
I.XXX., "	7 00 7 25
D.C., 12½ x 17	3 75 4 00
D.X.,	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be purchased at 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

	Per lb.
Sokley Grade—	
.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65.	

Tinned Plates

72x30 up to 24 gauge	6½ 6¾
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¾ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2½, 2¾
26 "	2¼, 2½
28 "	2⅛, 3

Canada Plates.

All dull	2 65
½ polished	2 75
All Bright	2 90

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5⅝, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5⅝, 5¾

Note—Cheaper grades about ½ cent per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4½ 4¾
" ⅜ " "	4¼ 4½
" 7-16 " "	4 4¼
" ½ " "	3¾ 4
" ⅝ " "	3⅜ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 11½ 0 12½
Lake Superior	0 12¾ 0 13

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths about fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 18 0 19
" 35 to 45 " "	0 16 0 17
" 50 lb and above per lb	0 15 0 15½

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelte .

Foreign, per lb	0 04½ 0 05
Domestic "	0 04⅝ 0 04¾

Zinc Sheet.

5 cwt casks	0 05½ 0 05¾
Part casks	0 05½ 0 05¾

Lead.

Imported Pig, per lb	0 03 0 03½
Domestic "	0 03
Bar, 1 pound	0 04½
Sheets, 2½ lbs, sq. ft, by roll	0 04½ 0 04¾
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04½ 0 04½

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 15 0 16
Standard	0 14 0 15
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 12½
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do "	4 75
No. 2 Do "	4 50
No. 3 Do "	4 25

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 00 1 20
2nd qualities "	1 00
Barn (in bbls)	0 90 1 00

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p. cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red, (best) " "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " } " "	1 25 1 90
Canadian " }	
Paris Green, per lb	0 13½ 0 15
Burnt Sienna, pure, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure, 8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra "	0 90
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 85
No. 1 Carriage "	1 30
Gold Size Japan "	1 00 1 20
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40
White Shellac	2 25

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 46 0 48

Castor Oil.

Best, per lb	0 07⅞ 0 08

Cod Oil.

Cod Oil, per gal.	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue—F. LePage's, dis. 20 to 25 per ct. off list; Munn's, dis. 25 to 30 per cent. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 80
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 80

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardine Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per cwt 0 60 0 65
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c:

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.20	.....	1.85	
26 to 40	1.30	2.60	2.10	
41 to 50		3.00		4 70
57 to 60		3.30		5.20
61 to 70		3.60		5.70
71 to 80		4 00		6.30
81 to 85		4.40		6.90
86 to 90		4.80		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb . 0 25 0 30

Handles.

Axe per doz 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½
Per doz. sets
Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.
Per doz. pairs
Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

NEW ARRIVALS

30 Cases CUTLERY AND GUNS

ALL NEW GOODS.

Finest Finish. Best Value.



NEW ARRIVALS

20 Casks Cattle and Trace CHAINS

10 Tons Coil Chain.

Five Cars Window Glass.

Bowman, Kennedy & Co., London, Ont.

Wrought Hooks and Staples, Amer- dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes.

F.O.B. Toronto & Hamilton $3 80
Snow, " " ... 3 90
F.O.B. Montreal 15c. less, and London 5c. more than above.

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

orcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy.....	2 30
40dy.....	2 35
30 dy.....	2 40
20, 16 & 12 dy.....	2 45
10 dy.....	2 50
8 & 9 dy.....	2 55
6 & 7 dy.....	2 70

2. American Pattern Only

from 4 to 5 dy	2 90
3 dy. (lath).....	3 30

3. Canada Pattern Only

from 4 to 5 dy	2 80
3 dy. (lath).....	3 20
3 dy. A.P. Fine	3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 60 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 35 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Star R & L Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9	10 10½
¼, 5-16, ⅜ in.....	9½	10¾ 11
Cotton, per lb.....	18	20
New Zealand.....	8½	9
Russia Deep Sea, per lb..	12½	13½
Jute ..... " ...	06¾	07½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p.c.
S. & D, dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 to 40 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 special brands net price.

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Sapolio

In ½ or ¼ gross boxes, per grs. 11 30

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ p.c. to 35 p.c
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9 00

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6½c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " } 4¼ 4¾
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS

Manufacturers of the

Finest Quality Electro-Plated Ware.

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WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager.

NONE GENUINE WITHOUT THIS BRAND

JOHN LUCAS & CO. PHILADELPHIA IMPERIAL FRENCH GREEN

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Will find the cheapest Paint Brushes are those having our . . .

Flexible Bridles—

Why? Because the bridle can be taken off and replaced in a moment. The paint circulates and the stump never hardens. You can wear the brush down shorter, therefore it will last much longer.

Ask your dealer for them. Made in round, oval, and flat. All sizes and qualities.

CHAS. BOECKH & SONS

Brush Manufacturers

TORONTO - - ONTARIO

BLACKSMITHS' TOOLS.



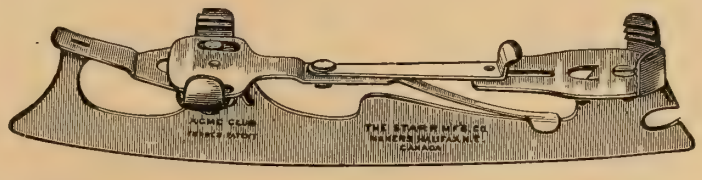
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Price, No. 1, - $4 00
" No. 2, - 7.50

Will save their cost in a week's sharpening. . . . .

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Our Leaders for 1893--are the

Countess of Oxford

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DUCHESS OF OXFORD

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KITCHEN WITCH RANGES

Put these Stoves on Your Floor and Command the Trade. . . . .

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Dominion Wire Mnfg. Co., (Limited)

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WORKS AT LACHINE, QUE., Near Montreal.

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2 x 4 Barb
Plain Twist and
Strip Fencing

And Staples for same.

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ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

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The Pittsburgh LAMP

At a reasonable price is the

Most Profitable

LAMP



both for the the dealer and consumer on the market.

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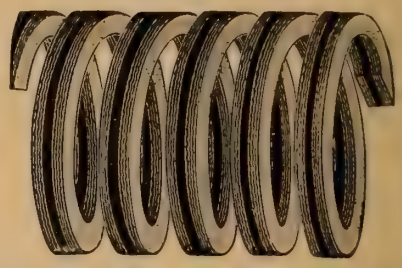
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SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

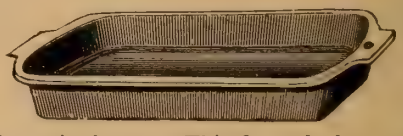
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THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., **Toronto.**

"The Seamless Flanged Drip Pan"



Improved Rolled on Edge.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife to cook or lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The improved rolled on edge making it easy to handle.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

Write for Discount.

SIZES.....	8 x 10	8 x 14	10 x 15	12 x 17
Per Doz.....	**$1.91**	**$2.33**	**$3.20**	**$3.73**

THOS. DAVIDSON & CO., Montreal, Can.

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, NOVEMBER 4, 1893. No. 44.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

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There are a few varnishes that wear well, but they must be mixed or "fixed" before they can be used. Other kinds work all right but are not durable. MANDERS' is the only varnish that is always right at all seasons, and under all conditions.

READ what one of the oldest and most reliable carriage builders in the country says about Manders' Varnish:

"Manders' has proved to be the safest varnish to use right through the year. In my experience of over twenty years it is the best in every respect. I have tested it in comparison with the best American and English makes, and it is superior to all. Its durability is unquestionable.

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FINE PAINTS AND VARNISHES. MONTREAL

Glistening Cream for Furniture

A Polisher, Shiner, Brightener, and Glosser of everything, from a Piano to the buckle on your shoe.

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Is not a varnish, but will clean and renew the gloss on your furniture and the woodwork in your house, making everything glisten exactly like new. The judicious use of a single bottle will make your house appear as though you had expended a hundred dollars in revarnishing. Try it on your woodwork, give it a severe test, and you will be delighted. **Glistening Cream** effectually removes that smoky blue dullness so often seen on Pianos and other highly polished surfaces.

Absolutely no labor necessary, simply apply with a cloth and wipe off. This article is just out, and there is nothing like it.

Everything Glistens with "Glistening Cream"

RICE LEWIS & SON, Ltd.

Wholesale Agents. **TORONTO**

"We hold these truths to be self-evident"



THAT . . .

Steel Clad Baths



Are Cheapest and Best.

MANUFACTURED BY

Toronto Steel-Clad Bath and Metal Co.

LIMITED

123 Queen St. East, **TORONTO**

STANDARD . . STOVE-PIPE

PATENTED.

Packed 25 joints in a closed crate.
It requires **NO RIVETS OR TOOLS** to put it together.
The seam does not require pounding down.
It is uniform in size, and, being crimped at small end, secures a close and easy fit.
It has a coating which prevents rust.
It can be bought as cheap as ordinary misfitting stove-pipe. - - - - - - - -
Being nested, secures low freight rate.

Kemp Manufacturing Co.

TORONTO, ONT.

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, NOVEMBER 4, 1893 No. 44

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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John Cameron, General Subscription Agent.

Dead at last is the silver purchasing clause of the Act of 1891. It took Congress nearly three months to pass the measure which was to give it its quietus, but the last few strokes which decided its fate were quickly delivered. The Senate, after dilly-dallying with it for several weeks, passed the repeal measure Tuesday by a majority of eleven, enough to be sure, but at the same time small enough to cause the people of the country to realize how near they came to have an obnoxious law still longer imposed upon them. Wednesday afternoon the House of Representatives concurred by a majority of ninety-seven, and within an hour afterwards President Cleveland had affixed his signature of approval, and what is commonly called the silver law was repealed.

* * *

A more unwise piece of legislation than that which Congress has just removed from the statute books of the United States could scarcely be conceived of. It was a compromise measure given as a sop to the clamoring free silver men. In its principles it was contrary to all economical rules, and in its results was most disastrous to the trade and finance of the country. Like a canker in the bosom it paralyzed the manufacturing industries of the country; directly or indirectly it was responsible for the closing of the doors of 700 banks, and it sent into insolvency an unprecedentedly large number of merchants. People at home lost faith in the stability of the financial institutions, and were afraid either to trust the banks with the keeping of their money or even to put it into circulation; and so hoarded it up until there was not currency enough for the transaction of business. And all this in spite of the well-known vast natural wealth and resources of the country. Gold like afrighted sheep fled from the shores to the consternation of financial men, while European capitalists looked upon the country in a light similar to that in which a creditor views a doubtful debtor. But in spite of all the evil that the silver law has wrought it is questionable whether it would have been repealed at present were it not for the firm stand taken by President Cleveland. The people clamored for its removal; but the silver men were rich in money and persevering in the guerrilla warfare which they carried on in the Senate, and only surrendered when no other alternative was left them. The people of the United States have been taught a bitter lesson, and they may be expected to start out on a newer and better era; but although the cancer has been removed it will be some time before the health of the body politic will be as vigorous as of yore.

* * *

The sensational failure of the Cordage Trust in the United States is fresh within the memory of everyone, but it was only last week that the real conditions of affairs was known. The source of the information was the report of the receivers submitted to Chancellor McGill. The conditions revealed were not as bad as expected, but they were bad enough. The liabilities of all kinds aggregated $12,690,443, and the assets $12,601,560. The entire amount of stock has nothing for an offset but the good-will of the concern. The total amount of stock outstanding is $5,000,000 preferred and $20,000 common. As an organization the Trust was thought to be all powerful and controlled twenty-three cordage and binder twine factories. When it collapsed it was only natural that its effects should be wide-spread; and judging from what can be gleaned from the columns of contemporaries the cordage trade of the country is a long way from recovery yet, for in addition to what it had to suffer owing to the failure of the Trust, there was the general depression in which it necessarily was compelled to share. As a result of the two causes a large amount of binder twine has been carried over. But "while there is life there is hope;" and the cordage and rope men are trusting that next season will prove more satisfactory and will undo much of the evil that was wrought last season. It is estimated that the United States consumes 60,000 tons each of rope and binder twine per annum, but some expect that this amount will be much augmented next season because of the invention of the new corn harvester, a machine which promises to do wonderful things. It is said to take $12,000,000 worth of binder twine to harvest the United States wheat crop, and arguing from this basis a manufacturer claims that it will take at least double that amount to buy the binder twine for corn harvesting, for not only is the crop more bulky and larger than that of wheat, but a heavier twine is required. It remains to be seen whether it is another case of "counting your chickens before they are hatched."

* * *

The report of the London pig iron warrant market for the week ending Oct. 21 does not show very encouraging features. Prices ruled steady during the week and in Scotch pig they closed fractionally higher. Compared with same time last year prices closed, 8½d. higher for cash and 9d. higher for month; hematite 3s. 7½d. lower for cash, and Cleveland 3s. 5d. lower for cash. Stocks in public stores were: Scotch pigs in Connal's Glasgow stores 329,916 tons compared with 364,714 tons in 1892; Cleveland pigs in Connal's Middlesboro stores, 87,677 tons compared with 10,823 in 1892;

hematite in Cumberland, etc., 79,847 against 37,126 tons in 1892. Shipments for the week ending Oct. 14 were: From Scotland 3,455 tons, against 5,332 a year ago; from Cumberland, 8,220 tons against 8,634 tons in 1892. For the week ending Oct. 20, there were shipped from Middlesboro 25,331 tons against 15,866 the same time a year ago.

* * *

The regular half-yearly meeting of the Grand Trunk shareholders held last week developed into a bear gard n, some of those present, the cable tells us, leaving the room in a towering rage. This is nothing unusual at Grand Trunk meetings of late. People look for it, and if the spirit of discord did not stalk in they would be as much disappointed as would they if they went to see a play in which the leading character was left out. Discord is present at Grand Trunk shareholders' meetings because of alleged mismanagement; and until the cause is removed harmony cannot be expected. The Grand Trunk since its inception has been anything but a gold mine for its shareholders, and about the only thing the most of them have ever got out of it for their investments has been promises; and the report submitted at last week's meeting was gilded over with the same stuff. But this is not the kind of gilt that will long satisfy hungry shareholders. What they want is a paying road and dividends. The peace of mind of the shareholders was not improved by the advent of the Canadian Pacific railway and the dividends which it has been able to pay its shareholders, and that too when the latter road runs through a sparsely settled part of the country which some people declared would not furnish enough revenue to buy grease for the axles.

* * *

Aside altogether from the question as to the ability of President Tyler or the charges of disgruntled shareholders, it is evident to all thinking men that the Grand Trunk railway is seriously handicapped by being controlled from the other side of the Atlantic instead of from this. The very keenness of the competition which we hear so much about demands that the head centre should be in Canada. It does not pay for the merchant to remain always at his private residence, even though the same may be connected with his warehouse by telephone. Neither does it pay for the executive of the Grand Trunk to be in London even though connected with the offices in Canada by cable This people are recognizing more every day. And this "conspiracy," as Sir Henry calls it, of Montreal and New York capitalists "to get hold of the controlling interest in the Grand Trunk stock" in order that they may "oust the present board of directors" is probably none other than a move in that direction. But the fact of the matter is, the whole system needs reorganizing. Owing largely to the discourteous manner of some of the local authorities of the company and their unbusiness-like methods there are large numbers of manufacturers, merchants and other kinds of shippers who will not send their goods by the Grand Trunk if they can help it. Railways as well as merchants are dependent upon the public for existence, and the one any more than the other cannot afford to treat its patrons unbecomingly. The Grand Trunk Railway is an example of this.

* * *

The trade situation in the country is not at the moment as satisfactory as desired. There is no use shutting one's eyes to the fact; and one of the sorest spots is the slowness of payments. Until within the last week or so there seemed to be a gradual, although slow, improvement in this respect; and the turn in the opposite direction is general in all branches of trade. As to causes, a multiciplicity may be advanced. Nearly everybody who express an opinion will tell you that the journeying to the World's Fair of so many country merchants is one of the causes. Some merchants, we are told, whose circumstances were such that they had not the ready cash to spare in order to make the trip, borrowed the money to go. The World's Fair is undoubtedly a great educator, but whether in seeking the knowledge that is there imparted a merchant is justified in borrowing money or allowing his accounts to become past due is questionable. The community at large, as well as the creditor immediately concerned, is interested in the matter, for the prompter accounts are paid the freer is the circulation of the currency. Another cause attributed for the scarcity of money is the low price of wheat and the consequent disposition of the farmer to hold his grain for an advancing market. This has probably more to do with the slowness of payments than any other single cause. With prices of grain as they are now the farmer naturally sells no more of it than he can possibly help. And the little he does sell does not benefit the storekeeper to any extent: It is some more exacting creditor who gets the benefit. The farmer can get what he wants from the storekeeper on credit. But the claims of the implement man and all who may happen to be holding notes of his must be satisfied. Then there is the coal dealer. He demands cash. Fortunately country merchants are not as much disposed as they were to grant long terms of credit to the farmer; but there is yet plenty of room for improvement. Were it not so, the present stringency would not be so pronounced, for there is plenty of money in circulation. The bank returns show this, the total amount in circulation in September being $36,112,480. This is $1,361,763 in excess of August and larger than in the last two years at the same date.

No one, however, looks at the present dull spell with alarm, or believes that it is any other than of a temporary character. The man would be short-sighted, indeed, who thought otherwise. Canada's financial position is and has been for some months more satisfactory than that of any other country. Our banks are in a good, sound, healthy condition, and stocks in the country are not as a rule heavy, while as a result of the general cautiousness which has characterized merchants for some time sails are well trimmed and reefed. When the present temporary disabilities have passed we shall find the merchants scudding along under freer canvas. A noticeable feature of the situation is that people are asking for shorter terms of renewal than is usual. Confidence, caution and strict attention to business is what is wanted at the moment, and the more satisfactory conditions will develop before long.

* * *

A case of interest to business men was decided in Toronto last week. When Taylor, Scott & Co., the wooden ware manufacturers, assigned, they placed their affairs in the hands of Assignee Campbell, and it was through him that the firm secured a settlement with its creditors. Mr. Campbell's bill of costs and disbursements aggregated $1,010. To this amount Mr. Taylor took exception, and the dispute was relegated to Judge Morgan for arbitrament. Last week he rendered his decision, cutting down Mr. Campbell's bill by over $400. The result will be a closer scrutiny of assignees' bills of cost in future, while assignees themselves will be a little more careful in making up said bills. An occasional case like that referred to tends to awaken all concerned. Under the revised statutes of Ontario it is provided that the assignee's remuneration shall be voted him by the creditors at a meeting called for the purpose after the first dividend sheet has been prepared. In event of the latter omitting to do so the duty devolves upon the inspectors, subject to review by the county judge in case of complaint by either of the parties concerned.

THE DUTY ON SCRAP IRON.

As we noted last week, there is a revival of the discussion regarding the duties on scrap iron, and a readjustment of them so as to encourage and induce the production of bar iron from Canadian puddled bars. A gentleman interested in the infant Canadian iron industry, talking of the matter to HARDWARE'S correspondent, said that the duty should be adjusted, but that he was doubtful if it would be. To make bar iron the manufacturers must have either scrap bars or puddled bars, and as matters were at present in Canada the rolling mill owners certainly preferred scrap bars. He did not agree with them, and thought that a change might be beneficial. "At present," said he, "the duties upon their main articles in the iron schedule are on pig iron $4 per ton, on puddled bars $9, and bar iron $13 per ton. The intention was that the ratio between the duties levied on the three kinds of iron respectively represented the cost of labor to transform one article into the other. This would represent, therefore, that, given a ton of iron ore, it required $4 worth of labor to convert it into pig iron, $4 to convert the pig iron into puddled bars and $4 more to convert a ton of puddled bars into bar iron. This schedule, I claim, has entirely failed to perform that which it was intended to do, viz., encourage the consumption of iron produced in Canada. This is largely owing to the admission of wrought iron scraps at a customs duty of $2 per ton which, as every iron manufacturer knows, is a competitor with puddled bars, which ore is required to pay $9 per ton, Now, as matters stand, the producers of puddled bars in Nova Scotia are at a disadvantage represented by the difference between the duty of $2 per ton on scrap iron and the duty of $9 per ton on puddled bars. Either one is too high or the other is too low, and it does not take a moment for any one conversant with the iron market and the production of Canadian bar iron to know which is which, viz., that the duty on scrap is too low. Further, cast iron scrap is admitted only at a duty of $4 per ton, or $2 more than wrought. Why? To be brief, if the consumption of puddled bars made in Canada from native ores is to be developed the tariff on wrought scrap must be advanced to a figure approximating more closely to that of puddled bars."

HARDWARE MEN AND BICYCLES.

The time is coming when bicycles must become essentially part of the retail hardware man's stock. The days have passed when they were used merely to afford amusement. They are now in general use by all classes. The consequence is a great increase in the demand, which will be even greater in the coming season, owing to the inevitable lowering of prices. Mr. Priest of the Quadrant Cycle Co., Birmingham, remarked, during a trip in the United States, that the cut prices in bicycles will drive the cycling store out of business, and that it will have to be taken up by people handling other lines. The season for the 'cycling man is too short for him to make a living when agents' commissions are cut, and the change is coming about rapidly.

These remarks should lead the Canadian hardware man to pay more attention to this line. A large majority of the hardware stores in the cities and smaller towns in the United States are now handling the wheels to great advantage.

On taking up the bicycle trade the dealer must decide as to what class of wheels the majority of his customers or townsmen will have the greatest call for, and also if the roads in his town or vicinity are suitable for their use. The cheap wheel is but a poor article to keep in stock, but again, the most expensive wheels, which are usually light and for racing purposes, will continue to be sold by manufacturers or agents who are riders themselves or employ fast men to advertise and sell them. These wheels are not likely to find sale in the hardware store. The class of machine that the merchant will find most sale for will be the roadster, of medium weight and serviceable for everyday use on city streets or country roads. Get some good moderate priced make, one that has a name which is known, whether it be of Canadian or English manufacture. Be sure that it has a neat frame, for there is nothing harder to sell than an ungainly looking bicycle, whatever may be its other merits. Make yourself or your salesman thoroughly acquainted with the wheel that you sell. A good bicycle salesman knows the catalogue by heart. Bicycle repair shops are rapidly springing up through the country. A good mechanic who can learn simple repairing of bicycles and pneumatic tires is a great acquisition in your repair or tin shop, for many who would have to send to the nearest city for small repairs, thereby incurring expense and loss of time, will give you their patronage.

THE ADVERTISING FAKIR.

The advertising fakir is a queer individual. He sallies forth in the morning with many schemes in his head and he returneth at night with the names of many victims on his list. He promiseth much and fulfilleth little; and then the advertiser ariseth with much wailing and says that advertising payeth not.

Fortunately the happy hunting grounds of the advertising fakir are becoming as scarce as free arable land in the United States. The cause is partly because these sharpers have by the openness with which they plied their profession closed up many avenues thereto, and partly because of the expose by the press.

Toronto was once the paradise of these gentlemen, and the manner in which they plied their trade was notorious. The schemes they propounded were many. Now it would be a hanger of some kind. Then a map with advertisements fringing it, and now it was a guide book, a business man's directory, blotting pad, or some similar contrivance.

In such schemes themselves there is nothing wrong. If merchants or manufacturers please to patronize them so be it. At the same time it is within our province to question the advisability of doing so. Five dollars spent on an attractive advertisement in a reliable trade or ordinary newspaper will give better results than ten dollars spent on the schemes of the advertising fakir. But where the average propounder of advertising schemes does wrong is in promising to do something that he never intends fulfilling.

Not long ago a representative of this paper had a conversation with a well-known city printer who in times past had done the printing for a number of these fakirs. "I could have sent some of those fellows to gaol time and again had I so chosen to expose them," he said. "More barefaced acts of robbery and misrepresentation one could scarcely have imagined than some of them were guilty of. Fact is some of them did occasionally have to leave the country to escape prosecution. Here, for instance, is a sample of what they would do : They would go to you and show you some attractive scheme, say an illustrated work. Perhaps it would be a write-up or an ordinary display 'ad' that they wanted from you. The number of copies of the work they promised to issue would be enormous. Under such conditions as these you would probably think you were getting a good thing and sign the contract. I have an instance in mind at the moment where Bland & Blank—(He mention the names of two well-known advertising fakirs)—got up a work of the kind, and on the promise of issuing 20,000 copies got a lot of advertisements. But would you believe me, they only got out 500 copies. In fact I don't think it was scarcely that many; and I ought to know for I did the printing. The way they managed it was this : They would see that every advertiser got a copy ; also that one or two of his neighbors on either side did. If they knew of any personal friends that the advertisers had they too would be furnished with copies. It was scandalous the bare-faced way these fellows carried on. But they were no worse than a good many others. They haven't the chances now that they used to have, I can tell you. Their methods are too well known," he concluded.

As pointed out in last week's issue, some of these advertising fakirs are purchasing space in respectable daily papers and using that for their questionable practices. Merchants and manufacturers are again warned to be on their guard. Advertise by all means, but advertise in reliable journals. Take for granted that the scheme is carried out according to agreement, ten chances to

one no benefit will accrue to the advertiser therein. In advertising a merchant first of all wants to seek the best medium, and in that medium to place his advertisement in the most attractive manner possible. Fake and transient schemes are not the best mediums. Ask the average old and experienced advertiser and he will tell you the same thing.

PIG IRON COSTS ON THE NEW BASIS.

There has been a revision of cost sheets in the iron trade within the past six months—a revision, at least, by such manufacturers as have bought their raw material on the panic basis. Where old contracts for ore, for example, or for coke, are still in force, the total of cost items, for the blast furnace manager, has not sensibly lessened with the exception of labor. Manufacturers who begin with pig iron, with billets, or with rods, have bought, of late, at reductions secured largely at the expense of furnace companies. Ore contracts made last spring and winter by furnaces supplied with Lake Superior ores are still in force, and are well known to be on a higher basis than that of present purchases. In coke the difference is not so great, but that market, too, has been steadily in favor of the later buyer.

A little figuring will show that the cost line, on Bessemer iron, at least, has been closely approached in some recent transactions, even were the ore prices now current to be made the basis of reckoning.

A 65 per cent. Bessemer ore at $3 25, Lake Erie port, would cost $3.80 at Valley furnace. Allowing for moisture, and reckoning 1⅔ tons for a ton of pig iron, the cost would be $6.34.

Coke at Valley furnace would cost $2.35 for sufficient to smelt the ore for a ton of pig iron—$1.10 for 2,000 pounds of coke and $1.25 freight.

Limestone may be fairly reckoned at 30c. to a ton of iron.

Labor items, including superintendence and clerical work may be counted at 90c.

Reckoning $30,000 for a year's repairs and renewals on a furnace of, say, 60,000 tons annual capacity, we have 50c. a ton for that item.

Recapitulating, the account stands :

Ore	$6 34
Coke	2 35
Limestone	30
Labor	90
Renewals	50
Total	$10 39

The above reckoning is about 85 cents too low on ore cost to furnaces that contracted early in the season for Bessemer ores at $3.75. But such furnaces are able now to reduce the cost of their mixture materially by the purchase of ores close to the Bessemer limit, selling to-day at $2.85. And where all the ores used are bought at present prices, it can be seen that the figures above given may be reduced by the employment of such non-Bessemers in the mixture.

With the exception of the allowance for renewals, in our computation, every item is on the minimum basis, and the labor cost is such as would be attained in a furnace of modern construction and of maximum output. It can be seen that the margin must have been on the wrong side, when furnaces of only average economy in operation and whose ore purchases were made last winter, parted with their product on a $11 50 basis, Pittsburg, or $10.85 in the Valley.

Calling our total above $10.50, and reckoning $6.50 for conversion—not the absolute minimum, we know, and yet better than the average cost, and we have $17 as the cost total for steel billets, where billet maker and furnace operator are one. The recent purchase for Cleveland delivery, at $17.75 Pittsburg mill, makes a very thin partition between cost and selling price, it must be admitted ; with many mills it would mean a loss of from $1 to $2 on every ton.

It must be apparent that the possibilities of further economies, that would permit lower prices on Bessemer iron or soft steel, are exceedingly meager.—The Iron Trade Review.

HARDWAREMEN AND GAS STOVES.

In almost every town in the country, of two thousand or more inhabitants, there are public gas works, and in all places so favored there will certainly be a proportion who will some time in the year make use of gas stoves. Of course, the majority will still use wood, coal, oil, oilgas, gasoline, etc., and it is perhaps to the interest of the local hardwareman to give his special attention to the lines in which he has been engaged, and in which there is the greater demand ; but even in view of all this, we still insist that it will be to his advantage to be in shape to meet such demand as may arise for gas stoves.

The demand is certainly growing, and those who get in on the ground floor, will get in to the best advantage. The gas companies will, in the long run, be compelled to turn this entire business over to the hardwareman, to whom it belongs, and be themselves content with the by no means meagre profits to be made in the manufacture of gas.

This question came up with some emphasis in a recent meeting of the Pacific Coast Gas Association, where there occurred a somewhat animated debate upon the theme : "Why should gas companies handle gas stoves? One authority answered that the chief reason was to be found in the fact that no one would handle them if the gas companies did not. Of course, it was admitted that the gas companies were interested in pushing sales for the increased consumption of gas that would ensue ; but there it seems to us the argument for the companies stops short. There is no more reason why the sale of the stoves, because of this desire, should be lodged with the gas companies. than that the woodchoppers of Michigan and the coal miners of Pennsylvania, should insist upon selling all the cook stoves and ranges set up in the land.

If any stove belongs to the hardwareman, the gas stove is also his. And we much mistake his character, as shown in the matter of bicycles, lamps, etc., if he does not insist upon his rights, and handle the greater portion of goods sold in this line. Our advice to each retailer would be to cast about him for a good line, and to get a hold upon this growing trade as soon as he conveniently can.—N. Y. Hardware.

ALUMINUM IN MILITARY SERVICE.

The United States Government has decided to try aluminum for the accoutrements carried by its soldiers. A short time ago correspondence was opened between the Ordnance Bureau and Captain A. L. Hunt, of Pittsburg. The captain explained what was being done in Europe and what he thought could be done by making a soldier's accoutrements of aluminum instead of brass. The result is that Lieutenant W. C. Brown, now stationed at the World's Fair, but who until recently was in command of the soldiers in lower Colorado, has been ordered to make a test of the accountrements made of the new metal and report what satisfaction comes of it to the War Department. The Pittsburg Reduction Co. will send the lieutenant in a few days an equipment of canteens, etc., made of aluminum. The result is awaited with interest. Captain Hunt expresses the opinion that the aluminum will prove acceptable to the war authorities. A complete change in the service will not be very costly, and he believes that it will be made within a few years. A soldier thus lightened of the weight he carries can take with him two hundred rounds of ammunition, as against eighty rounds which was the highest number carried during the civil war.—American Manufacturer.

WONDERFUL CLOCKS.

Herr Noll, a mechanician of Berlangen, Germany, has constructed a clock warranted to run 9,000 years without winding. D. L. Goff, Brooklyn, N. Y., has, according to the American Contractor, in his hall an old-fashioned clock, which, so long as the house is occupied, never runs down. Whenever the front door is opened or closed the winding arrangements of the clock, which are connected with the door by a rod with gearing attachments, are given a turn, so that persons entering and leaving the house keep the clock constantly wound up. T. G. Farrer, of Fresno, California, invented a clock, the only motive power of which, he alleges, is the gravitation of the earth, which keeps the clock running forever without winding. The clock consists of a plate glass dial suspended from the ceiling, and all the parts of it that are visible are the two hands, the pivot on which they swing and the dial.—Ex.

OLD IDEAS IN HARDWARE.

In at least one respect, dealers in hardware have an advantage over those in other branches of trade. They handle staple articles that are not subject to sudden change in style, and they are reasonably certain to sell their goods in time if they have been bought with an eye to their customers' wants and necessities. They are of course required to carry a variety of stock and often are obliged to maintain a class of goods that are not quick sellers but which must be kept on hand if the stock is to be at all complete, but when these goods are sold it is generally the case that the sale brings a fair average of profit unless a too long keeping has rendered them unsaleable at their first marked price.

But this very advantage is occasionally a detriment to the dealer and his trade. He may argue that as people must buy his goods because they need them, he is not obliged to create a demand for anything more than the mere necessities or to extend his lines beyond such articles as are required for every day use and of the same grade or character that he has been accustomed to sell for years. He cannot see why he should supply his store with a new line of goods and risk the loss of money that for a time follows the introduction of new ideas, when his trade has been used to the good old lines and must be educated up to an understanding that the hardware world grows, if not so rapidly, yet as effectually as that in other merchandise. He is content with a stock of goods the standard of which has not been raised for years, and he objects to the introduction of novel ideas for the illogical reason that the old kind has been good enough and he does not care to risk the change. He stands still while the world is moving, and very frequently has cause to wonder why the trade is not as good as it was ten years ago or why some other dealer with perhaps a smaller capital but larger ideas is building up a trade and drawing away his own.

Happily, there are not many such dealers in the trade, taking them altogether, but there are enough of the easy-going and non-progressive kind to warrant the suggestion that a little more life, and at least a partial awakening to the fact that hardware buyers are not all behind the times, would redound to the advantage of the trade as a whole. Manufacturers are necessarily the pioneers in new ideas and the jobbers give them their first practical introduction, but they cannot reach the user excepting through the dealer, and if the latter fails to appreciate what his trade may want the community in which he lives is just that far behind the times and he himself is just that much out of pocket. When complaint is made that jobbers sell to users over the dealer's head, investigation often shows that the dealer would not handle the very goods that the jobber had thus sold.—Hardware Reporter.

A PUMICE STONE MINE.

A mine of pumice stone exists on the Teneriffe Peak, of which the working was only started in 1888, says an exchange. The stone is found in that part of the peak called the "Canadas," at about 2,000 feet above sea-level, which has an area of some 6,000 hectares, out of the middle of which rises the highest part of the peak. The Russian Consul at St. Croix bought this property from the Spanish Government in consideration of an annual payment for the pumice stone working. The Russian Consul has associated with him a Belgian, and they, under the firm styled Aguilar & Valcke, commenced operations in 1888, but it was only last year that exportation was really started. At the Paris Exhibition, the Consul-General states, this stone obtained a silver medal, and, in view of the requirements of England, France and America, he believes it will develop a trade of great importance before many years So far the Lipari islands have practically furnished the world's supply of this product, exporting about 100,000 tons per annum. The Teneriffe stone, being recognized as of excellent quality, and its extraction being of a much more simple matter than in the Lipari Islands, it follows that the price is much less.

THE HARDWAREMAN AS A BOOMER.

While the army of eager men and women were pouring down into the Cherokee strip, in search of homes and fortune. The hardwaremen were by no means laggards in the race, and seem to have raised as much dust along the trail as any of them. Perry seems to have been the chosen site among them, and at least four brand-new hardware stores have sprung up in that city of tents and shanties. Coulter & Brown, late of Guthrie, have opened their stock near the post office. The Spencer Hardware Co. announce that they will "erect a fine building as soon as they have secured a proper location." (Let us hope they will not be compelled to shoot a few Sooners to secure a lot). William Plagg has also moved over from Chandler with a load of hardware; while H. C. Wallerstedt & Co., from Omaha, Neb., have started with a $2,000 stock toward Perry, and have secured a location at C and Sixth streets.—N. Y. Hardware.

NEW INVENTIONS AND DEVICES.

An apparatus for heating and lighting vehicles. In a casing supported in the bottom of the vehicle is held a lamp in such a position that its light is thrown around the vehicle upon the road, while its heat passes through the casing to the interior of the vehicle. A special cover in the bottom of the vehicle excludes the heat when desired.

A moulded cake of proper dimensions for efficient and economical use as a fire kindler. Among its ingredients are sawdust, resin, and a combustible cement of coal tar, asphaltum, etc. When pressed into shape, the substance remains consolidated without becoming sticky, does not disintegrate with age, and is sufficiently inflammable to readily ignite a mass of coal in a stove without the use of other kindling material.

A heat regulator for ovens. This is a device to allow the hot air to escape when an oven is becoming too highly heated. A plate with a wire gauze-colored opening is arranged to establish communication between the interior of the oven and the external air, the plate having standards for supporting and guiding an expansion bar, and actuating levers, one of these levers carrying a cover for closing the opening. The expansion bar, as it is lengthened by excessive temperature, actuates the lever to uncover the opening.

A metallic clothes pin. A single piece of wire is bent into W shape, with the two portions in the middle forming loops, and the outer and upper portions of the loops are bent outwardly to form spring coils, then extended continuously across the ends at right angles to prevent the rising of the clothes line. The device has an easy and full spring action, adapting it to pass over and securely hold heavy articles of clothing as well as light ones, without danger of tearing or injuring the clothes.

A simple and effective mechanism for creating an air blast for a chimneyless lamp. An air space surrounding the oil reservoir, and in the hollow standard below it is a small electric motor, the revolving armature of which operates a fan to cause an upward current of air. Removably secured in the lamp base is a dry battery, and a conveniently arranged switch in the connections enables the motor to be stopped and started as desired, its operation affording an air blast designed to insure a clear, steady flame, without the aid of a chimney.

A new form of horse hoe. In this implement the side bars are pivoted to be capable of adjustment latterly to suit the width of the rows between which the tines are to act. The implement is light and strong, may be readily expanded and contracted and compactly folded up, and the stocks of the tines are adjustable along the side bars and also about their own vertical axes, to keep the tines forwardly directed, whatever the degree of expansion of the frame. Special means are provided for securing the hoe point or share to the tine, and by the use of points or shares of various forms the machine is adapted for heavy or light work.—Hardware Reporter.

THE TRAVELING SALESMAN.

The best commercial friend that the retailer has to-day is the traveling re-resentative of the manufacturer or jobber. The time when the buyer went to the seller has long since passed, and the present system of traveling salesmen is a decided benefit to the dealer. It is much easier to obtain low quotations when one stands behind one's own counter and is asked to purchase by the commercial traveler than is the case if he visits the wholesale establishment and makes known by his presence his need of goods. Then the terms are more satisfactory, for the dealer can exert a personal influence upon the salesman which would have little effect if he were not standing in the midst of his own business and extending his patronage rather than asking for credit. There is a recognized personal appreciation of the value of the trade, which exerts a marked influence on the decision of the salesman as to both prices and terms. The salesman not only desires to sell the goods in the interests of his employers, but he also is ambitious to increase his sales in order to satisfy his own ambition and reputation as a successful salesman. No matter how humble the dealer he will invariably receive at the hands of the traveling salesman an amount of consideration which he could never expect were he to visit the factory or warehouse. The salesman knows that to succeed he must be courteous, well informed, and fair in his dealings, and the dealer, therefore, is treated with respect and his interests protected, because the salesman recognizes that an honest policy will hold his customer.

Another way in which the traveling salesman exercises his friendly offices to the retailer is in the matter of keeping the dealer posted as to changes of styles, variations in value and improvements in goods. The salesman is well aware that to hold the interest of the dealer he must be the first to show him a sample of the latest fad or device. He must be the first to notify him of the decline or rise in prices, and the first to warn him of the public change in favor of some new fashion or method to which the dealer may cater. The salesman, at stated and regular periods visits the store of the dealer with his valise or trunk, and, after some general conversation as regards business news, asks permission to display the samples of his line of goods. The relative values of each article are clearly described and their uses explained if necessary, and a comparison given in an intelligent manner of the competing goods on the market. The dealer by this means has an opportunity to learn many valuable points about the goods, and is afterwards able to better describe their values and uses to his own customers. The man who "knows it all," or the man who knows enough about the details of his business is yet to be born, and it is, therefore, a matter of no small importance to the dealer to educate himself in all directions.

After the samples have been exhausted and the dealer has selected his purchases and given the order, the salesman feels it his duty to see that proper instructions are given as to shipping, packing, etc., and is solicitous that the order shall reach his customer on the dates and conditions specified. On the other hand, should the dealer see fit not to order, the salesman will accept the verdict in a proper spirit and leave with a hope of future business relations. These remarks are of course in regard to the conduct of the successful salesman. There is no doubt still some cross-grained and tricky men who act as representatives of wholesale houses, but their number is decreasing. The successful salesman of to-day must be a gentleman, not only in appearance and manners, but at heart as well. He must feel the responsibility of his position and merit the confidence of the trade. It is not a matter of sentiment; it is a cold fact of business dollars that fair treatment and honest statements win the race.—Metal Worker.

HINTS FOR HARDWAREMEN.

The amount of money to be used for family or personal expenses should be decided upon at the beginning of each year, the amount based upon the net profits yielded by the business the year previous. The merchant should then treat himself as a clerk, paying himself a monthly or weekly salary, in accordance with the amount decided upon. It is poor policy and unbusinesslike—in fact, it is not treating the business fairly—for the merchant to give himself the run of the money drawer, and to take from it without charging himself with the amount taken. Nor is it wise to put into one's pocket cash received without accounting for it. Goods taken from the store by the proprietor should be paid for at cost from his salary if the salary plan is followed; if not, they should be charged to the account. The keeping of open accounts on the ledger, no credits being shown, with the doctor, grocer, blacksmith, etc., with whom the merchant has dealings, is to be condemned. The apparent money owed by these parties, as shown by the account, only deceives the merchant. If it is desirable for any reason to keep running accounts with such parties, the merchant should insist upon receiving their bills each month and credit them with the amounts.

In marking goods to yield an average per cent profit, some goods will have to bear a greater and some a less profit than the average; while those marked at less than the average will be the ones most largely sold. It is not always safe to mark goods at the same price as a competitor is selling them for, without being satisfied what percentage of profit such prices would yield. He may be selling them at a higher price than a legitimate profit warrants, or his price may be lower than their cost to you would justify. In the latter case he may have better facilities for buying them, or he may be selling them at a loss. The matter should be carefully examined into, to ascertain whether the goods can be bought to sell at his price, or whether he is really losing money on them. If a legitimate profit cannot be made on any class of goods, after exhausting all resources in purchasing, it is better to drop them until a profit can be made.

The advantage of doing an all-cash business over that of doing part cash and part credit is great. A merchant often thinks he is obliged to do business on the latter basis, when in the course of a year, he could by easy stages, convert his customers to an all cash system. Some who have studied the matter carefully consider that when goods are sold at the same prices to cash and credit customers, the credit part of the business yields no profit, taking into account the loss of interest on the amount credited and the amount lost by bad debts.

The experience of a firm who have recently started a strictly cash hardware business is that they could sell a much larger quantity of goods on a credit basis, but that they sell a great many goods to people simply because they do not owe the new firm.

If, however, a credit business is done, a specified date should be agreed upon when the goods are to be paid for—a bill rendered promptly, with the expectation of its being promptly paid. Some merchants make it a rule that all goods sold on credit, on which no specified time is given, must be paid for by the end of the current month.

The amount of credit to be given in proportion to the cash business done should be decided upon at the beginning of the year, and the proportion strictly adhered to. Prudence would suggest one-quarter credit to three-quarters cash sales By keeping a daily account of cash and credit sales the average can be maintained.

The advantages of having the office near the front entrance of the store cannot be overestimated. Here customers can be welcomed as they enter; clerks called to wait upon them, or waited upon by the proprietor if all the clerks are busy. Books and correspondence can here be attended to in comfort when not otherwise engaged, knowing prompt attention can be given to other matters when required. If books, correspondence and the store cannot all be properly attended to, an assistant in the office is a good money investment, and may save the merchant from utter failure in business.—A.F.G. in Iron Age.

H. S. HOWLAND, SONS & CO.,

WHOLESALE HARDWARE.

37 Front Street West, TORONTO.

HAY BALING WIRE.

ORDERS SOLICITED.

Linseed Oil, Turpentine, Castor Oil

PREPARED PAINTS

White Lead, Coach Colors Putty, etc.

14, 16, 18 and 20 Pearl Street, TORONTO, ONT.

The Toronto Lead and Color Co., LIMITED

INVENTIVE CANADIANS.

The following list of United States patents granted to Canadian inventors, October 10, 1893, is reported expressly for HARDWARE by James Sangster, solicitor of patents, Buffalo, N.Y.: Thomas H. Allen, Toronto, railway brake; Christian H. Dorenwend, Toronto, telephone attachment; Francis J. Freese, Lowell, Mass., assignor to the Goodyear Shoe Machinery Company of Canada, Montreal, sole-channeling machine (two patents); Hamilton A. Jukes, Winnipeg, dry closet or commode (reissue); George S. Karr, Toronto, saddle for velocipedes; Malcolm E. Knobb, Knowlton, vehicle spring.

Total issue, including designs, trade marks, and reissues, 488.

Granted October 17, 1893: Alfred E. Ahrens, Stratford, securing dental suction-valves to plates; Jay S. Corbin, Prescott, hardening harrow disks; Walter Greaves, Ottawa, fishing basket; Robert W. King, Montreal, transferring mechanism for knitted work; Saul Laporte, assignor of one-half to J. Coursolle, Ottawa, dial fastening for watches; John D. McEachren, Galt, steam boiler cleaner; Samuel Murray and Charles Epps, St. George, lard or butter cutter; Asa Mutchenbacker, Rosseau Falls, boom chain; Alfred J. Saunders, Port Arthur, bed for mortising machines; John H. Smale, St. Thomas, wagon bolster spring.

Total issue, including designs, trademarks and reissues, 464.

PATENT POINTS.

Perhaps the meanest of all swindlers, says N.Y. Hardware, are those who prey on poor inventors. They look over the Gazette issued by the Patent Office every week and get the names of those to whom patents have been newly granted. Then they write to each one, saying: "We see that you have got a good thing. We know certain parties who will put it on the market, supplying the necessary capital. Send $20 to cover the cost of negotiations." The inventor, perhaps, borrows the money and forwards it by mail. Subsequently he is informed that $15 more will be required, and in this way he is worked until nothing more can be got out of him. A man will often write to the Patent Office in good faith, saying that he has something great, and asking the government to put up the cash required for placing it on the market. But Uncle Sam does not do business that way.

Formerly inventions were nearly all made hap-hazard. People hit upon them accidentally. Now the discovery of new ideas in mechanics is a profession. The inventor is a skilled man, employed by a firm of manufacturers with the understanding that all his inventions shall belong to them. The Westinghouse Co., for example, picks up trained electricians all over the world, sets them to work, and gives them every convenience for producing new industrial appliances of electricity. These salaried inventors are excellently paid. Electricity is the great field for invention now. Twenty thousand electrical patents have been granted since 1880.

In accordance with the Bank Act the following banks publish the rate of interest payable on their stock for the half year just closed: Bank of Toronto, 5 per cent.; Bank of Ottawa, Standard Bank of Canada, Bank of Hamilton, Imperial Bank of Canada, 4 per cent. each; Banque Jacques Cartier, Quebec Bank, Merchants, Commerce, Ontario, 3½ per cent. each; Traders', Hochelaga and Ville Marie, 3 per cent. each.

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

A very valuable shipment of silver ore was made a few days ago from Port Arthur for New Jersey from the Rabbit mountain mine.

The Kincardine Town Council has repealed the by-law granting a bonus of $10,000 to the Kincardine and Teesewater Railway.

An English mining expert affirms that amethysts have been found in paying quantities in Sebastopool township, Renfrew county, Ont.

T. McAvity & Son's, St. John, exhibits of cocks, muzzles, steam valves, safety whistles, bilge pumps, etc., has been awarded prizes at the Chicago fair.

Joseph Lessard has been appointed inspector of factories for Montreal, and chief inspector and president of the board of inspectors of this province.

James Worthington, of Toronto, president of the Ontario bolt works, is negotiating the purchase of the Ontario rolling mills, Swansea, for something less than $100,000.

Samples of mica have been taken into Edmonton from near Jasper House. It is said to be found there in large quantities and to be clear and perfect in quality.—Winnipeg Commercial.

The valuator of the Canadian Fire Underwriters' Association has estimated the injury at the recent Hobs' glass works fire in London at $16,220—$9,920 on general stock and $6,300 on plate glass.

D. Hoyt, who was for some time in the employ of Chas. McKenzie, hardware merchant, Sarnia, has resigned his position and removed to Point Edward to fill an engagement with the G. T. R.

M. C. Ebbecke & Co., hardware merchants of Allentown, Pa., have opened a bicycle "livery." Parties who have no bicycle of their own can go there and hire one, the same as going to a livery stable.

S. J Dawson of Algoma, who was in Montreal recently, said the silver industry of Ontario showed signs of revival. All that was needed, said he, was a settlement of the silver question and the removal of the depression in the American steel and iron trade.

About two hundred million feet of lumber will represent the output of the Ottawa saw mills this season. The mills will run for about four weeks yet. An approximate estimate of the cut is as follows: Mr. J. R. Booth's large mill, 65,000,000; the old Perley & Pattee mill, 15,000,000; Bronson & Weston, 50,000,000; Buell, Hurdman & Orr, 30,000,000; Gilmour & Hughson, 15,000,000; W. C. Edwards, N. E. Mill, 25,000,000; total, 200,000,000.

C. J. Mills, manager of the Imperial Oil Company, London, was in the city yesterday. They will erect works here, as well as having a wareroom at the Grand Trunk. In the meantime they are offering all oils for sale through the Shedden Company.—Windsor Record.

Shipbuilder John B. Roach of New York, recently turned out one of the largest and finest barges ever built for the Standard Oil Company. The boat is built of steel throughout, and has a moulded length of 248 feet; beam 37 feet, and a depth of 19 feet. She has a carrying capacity of 760,000 gallons in bulk, and a gross tonnage of 1,599 tons. She is schooner rigged and has four masts.

Makers of rat traps think they have done a good thing when they kill a rat. Generally, they do not know what there is beyond. In Paris the rat trap does not kill the rat; they catch him not to drown him, as here, but to utilize him. The rat is set to work to eat the flesh from the bones of carcasses. When he has done that thoroughly, then his slaughter comes. His fur is used for trimming, his skin for gloves, his thigh-bones for toothpicks, and his bones and tendons for gelatine wrappers.—Hardware.

The Babcock & Wilcox Company, whose Canadian headquarters are at Deseronto, have secured the contract of supplying the Montreal Water Works with water tube steam boilers of 600 horse power. In addition to this large contract the company has filled orders for the Canadian General Electric Company, of Toronto, for 600 horse power, and for the Richelieu Woolen Mills, Chambly, P. Q., for 200 horse power, as well as several lesser orders for other manufacturers.

Keenan and Ratceford, dealers in stoves and tinware, have removed to their new and spacious premises on Waterloo street almost opposite their old stand. The new store and warehouse were built purposely for this firm and are well adapted for their extensive business. They have as well as the large front sales store an apartment in the rear for a show room, also a well lighted workshop upstairs, with an entrance from Peters street. The large apartment over their store they intend to let as a hall.—Gazette, St. John, N. B.

New York and New England has another mystery on, and the stock rapidly advanced. A meeting of the directors of the company will be held in Boston to-morrow, at which a number of plans will be divulged by President McLeod. Among the rumors are that a track alliance is to be made with a road in Vermont, so that a connection can be made either with the Grand Trunk or Canadian Pacific, and, in exchange, an outlet to New York is to be furnished these lines. Before this is done it is thought that the Vanderbilts and Mr. McLeod will reach some agreement, so that the Canadian roads will not enter the territory so long claimed by the Vanderbilts.—Press, New York.

Aluminum cooking utensils are to be seen in use at the Rhode Island State Fair in the Domestic Science Department. These utensils cannot rust, have a wonderful heat conductivity and heat retaining properties, are of light specific gravity, and food cooked in them will not scorch or burn—a fact of great importance in cooking milk, cereals or fruit. Aluminum is three times lighter than the lightest metals now used in cooking. These utensils will be used on gas and oil stoves particularly, and one especial feature about them is that they have no surface finish but are equally bright throughout.—Stoves and Hardware Reporter, St. Louis.

The department stores are the bane of the hardwareman, and as a rule, so far, they have bought cheap goods, something which would attract a customer because the figures asked were so reasonable. Latterly, they are beginning with a great deal of shrewdness to expose the best class of goods to be found, alongside of what might be called cheap goods, and are giving an object lessen to the customer as to relative values. The big stores up town say that the customer is becoming very shrewd, and generally carries home the best article.—Hardware, N. Y.

The broad wagon tire which in some European countries as a matter of legal regulation is gaining favor in this country as a matter of necessity. The condition of our roads, even in the proximity to some of our oldest and largest cities, is a satire on our management and progress. To remedy this really national evil considerable agitation has of late been developed, and in connection therewith the wagon tire comes in as an important factor. In a special report by the Ontario Department of Agriculture it is stated that as a result of repeated experiments it is definitely proven that wheels with tires 2½ inches wide cause double the wear of wheels which have 4½-inch tires. Wide tires for draft vehicles are recommended as having a tendency to roll the roadbed and keep it smooth, while on the other hand

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the narrow tire not only cuts it up, but requires more hauling for the same weight of load. It is evident that the broader tire is gaining favor for the reasons given and with our highways is in need of reform.—The Age of Steel, St. Louis.

"The Coal Saving and Smoke Consuming Company," limited, has been incorporated by letters patent.

Hardwaremen are the cause of much good in this world, even after they leave it, says N. Y. Hardware. It is not well known that Catherine Wolfe, who died four years ago and left $200,000 to the Art Museum in Central Park, was the daughter of a hardware merchant. She spent his fortune in laudable ways, the illustration given being one of many.

The contract for building the much talked of Syrian railroad from Haifa to Damascus has been awarded to a Chicago firm, Huss & Townsend. Work is to be begun immediately. The enterprise has been initiated by English capitalists, who purpose ultimately extending the road to India if Persian concessions can be obtained.—Metal Worker.

Mr. W. W. Ogilvie, President of the Montreal Board of Trade, has returned from his annual autumn trip of inspection in Manitoba and the Northwest. He says that "this year's crop in Manitoba and the Territories was of a very superior quality. The weather for harvesting and threshing and for hauling the grain to the elevators has been exceedingly fine. The only drawback to the farmers is the low price prevailing, not only there but throughout the world. This season's crop will grade at least 75 per cent. No. 1 hard. The yield, both in point of quality and otherwise, surpasses that of last year, and especially as frost rendered no damage"

A further batch of notices of application to Parliament has been received. Among them are the following: To incorporate a company to construct a railway between Ste. Flavie and Little Metis station to tidewater in the parish of Matane. To incorporate the "Alberta Southern Railway Company," with power to construct a railway from Calgary to Lethbridge, and thence to the international boundary. To incorporate a company to construct a railway from some point on the gulf of Georgia, Delta municipality, by the most feasible route to New Westminster, B.C. To extend the time limited by the Acts relating to the Canada and Michigan Tunnel Company for the completion of the company's works.

There is a prompt hardwareman in Delta, Col., says an exchange. A raid was made by a band of robbers on the local bank. The cry was raised, after the killing of the cashier. Men rushed for revolvers and guns. Among them was W. R. Simpson, a young hardware merchant, whose shop was across the street. He picked up a rifle and started up the street. As the robbers came out of the alley and crossed the street Simpson fired and one of the robbers fell, the top of his head being fairly taken off by the ball. Simpson then ran to the alley and fired after the other two fleeing men. He shot twice, killing first another man and then his horse. The second man was also struck in the head. The remaining survivor escaped.

The shipments of pig iron from Scottish ports during a recent week were 4,224 tons, compared with 7,626 tons in the correspond ing week of 1892. Of the total, Italy took 695 tons, Canada 675, Germany 455, Holland 425, United States 50, South America 140, India 232, Australia 335, France 71, Belgium 90, Spain and Portugal 87, other countries 290, the coastwise shipments being 680, compared with 2,550 tons.

In the rooms of the Connecticut Historical Society is exhibited a piece of a bell showing the date of casting, 1729. This fragment, which is in two parts, is a portion of the bell which formerly hung for more than a century in the old Center Church. The old bell having broken in 1725, the society, on Dec. 19, 1726, voted that "John Edwards, at the charge of the society, purchase some suitable red bunting for a flag to be set on the State House to direct for meeting upon the public worship of God." The old bell was sent to England at the expense of both the first and second societies, where it was recast in 1729, and continued in use here from that time until 1841, when it broke, and a new bell was ordered.

Henceforth the Canadian - Australian steamers will call at the Fiji Islands. This change in the route, the proprietors of the steamers confidently hope, will influence the Imperial Government to grant a subsidy to the line. The Arawa, which has been chartered for eighteen months to replace the disabled steamship Miowera, which stranded on the evening of October 2 while entering Honolulu harbor, is a much larger vessel, and has a cold storage capacity of 30,000 carcases, while she has also a capacity for carrying large quantities of fruit, butter and cheese. "Thus," the London Times remarks, "the disaster may prove a blessing in disguise, developing trade in a much greater degree between the colonies." The Arawa leaves Sydney for Vancouver on November 18, the Miowera's schedule date.

A patent on a bicycle intended to remove some of the ojections to the use of the wheel has been taken out. The vibratory strain and the shock incidental to the severe use of a safety are designed by this improvement to be greatly reduced and taken up, correspondingly increasing the comfort of the rider. The main frame has its seat bar or backbone connected at its front end to the steering head by a spring connection, its rear end being similarly connected with the rear wheel fork frame. These connections are so arranged that the weight of the rider will assist in carrying the wheels over an obstruction instead of retarding such movement, as is the case with rigid frames. The brake mechanism is operated through the steering head, and suitably arranged movable bearings receive the propelling axle.—Stoves and Hardware Reporter, St. Louis.

VIEWS AND INTERVIEWS.

"No, there is not much doing in hoops," said a broker Thursday. "Fact is the Americans are sending in hoops of nearly all sizes with the holes already punched. They send them in direct to the coopers."

* * *

"O, pshaw, the market for tin is away down low," remarked a handler with some irritation. "And what is making it worse for us is that a Hamilton firm is actually selling 1c. below New York."

"Cutting in the price of glass?" ejaculated a hardware man in reply to an observation of mine, "why I should say there was. Some of them I know are selling at cost; yes, and even below cost. I know what I am speaking about for I have taken pains to find out. We figure the cost down pretty fine and all we ask is a profit of 10 per cent., and if we can't get that why we don't want to sell. We are not in business for fun. The other people can have the fun and the business too for all they are getting out of it."

* * *

"The demand for hay-baling wire has been unusually large this season," said a jobber. "In fact it is largely in excess of the output of the factories, which are doing their best, and filling the orders by rotation. I have an order on my desk from Oct. 3, and it has not been shipped yet. Merchants would do well to place their orders early, so that they may secure the wire when wanted."

* * *

"Well," remarked a gentleman to me Saturday who takes periodical trips to the leading business centres of the country, "business seems more satisfactory in Ottawa than in any other Canadian city. There is no boom there of course, but the business men there seem more satisfied. I did not hear nearly as much grumbling there as in some places"

BYSTANDER.

ANSWERS TO CORRESPONDENTS.

Q. Supposing a merchant is insured in the North British and Merchantile Insurance Co. for $2,500. Stock worth $3,500. A fire occurs, and $600 is saved, does the merchant receive the full amount insured for, or is the $600 taken out of amount insured. Ans. He is entitled to the full amount of insurance.

BUSINESS CHANCE.

Advertisements inserted under this heading two cents per word each insertion.

STORES and Offices to rent in The Thomson Bros. Block, Calgary, a three story stone building, plate glass front, heated with hot water, lavatory, closets, etc., most central location in the city, ready for occupation in about a month. Address, THOMSON BROS., Calgary.

SITUATION WANTED.

EXPERIENCED Hardware Clerk wants situation in good live town. References furnished from late employer. Address, J. E. WESTCOTT, 298 Wolfe St., London, Ont.

FROM CREDIT TO CASH.

That a business upon strictly a cash basis is preferable to one part cash and part credit, or to one all credit, is conceded by all progressive merchants. But while the theory and desirability are granted, the practicability is doubted—in fact, even derided. To a merchant starting a new business, to open and continue an all cash trade, is comparatively a simple matter; the rub comes upon changing a credit into a cash business.

Can it be done without injury to my business? Most emphatically yes, if one has push, patience and perseverance, but if one be weak and vacillating, then a negative answer must be given. While the beginning may be marked by a decrease in the amount of sales, yet the net profits will usually be found to be as great, if not greater, than before; for in a part cash and part credit business three-fourths of the profits will result from the cash part. A large share of the items of expense, if examined carefully, will be found to consist of matters relating largely to the credit side of the ledger, such as bad debts, bookkeeper, cost of collection, extra help required, interest on capital invested, and other charges traceable to the same cause. In a cash business these are eliminated, while as added sources of profit we have cash discounts, increased custom because of lower prices, quick returns upon compound interest of money invested and the freedom from that peace destroyer, worry. Besides one has his business well in hand, is ever pushing it, and with a gilt-edged credit—the best of capital.

Without doubt the first year or two will see lessened sales, but remember it is but the shrinkage from inflation to real value and that the growth afterward will be more healthy and satisfactory than it ever otherwise could be.

The end is desirable, but how is it to be obtained?

In the first place, decide to change to a cash business and do it. Do as Cortez did when entering Mexico with but a handful of men against a rich and powerful nation—burn your boats behind you and press on with a firm determination to succeed, and you will. Set a day for the change, and prepare your customers for it by explaining to them as far as possible, either personally or by letter when well acquainted, by circular, as we did, or through the press, the advantages to be derived therefrom by yourself, but especially by them.

When we decided to make the change to a cash basis we issued a circular, which was distributed among our customers as follows:

We take pleasure in announcing to our friends and the public generally that after this date we propose to conduct our business, both buying and selling, on the cash plan.

A long experience in the hardware business has convinced us that the system of selling goods on credit, to be paid for when convenient, is a most vicious one. The increased expenses of doing a credit business, on account of salaries of bookkeeper and collector, the amount of inevitable losses every year because of bad debts, which will occur notwithstanding the most careful discrimination, and the loss of interest from having a large amount of capital "tied up" in book accounts, all render necessary a larger margin of profit, which has to be considered as business expenses and paid for by the cash buyers.

Besides this, the bad feeling constantly occuring because credit is given to one customer and refused another, and the disagreeable necessity of being obliged to "dun" customers for past due accounts, confirm us in our determination in the future to sell for cash.

In these times of close competition cash buyers expect, and are entitled to, the very lowest prices, and should not be required to pay the losses incident to a credit business.

In the future it shall be our aim, by giving the most careful personal attention to every detail of our business, to satisfy the demands of close cash buyers, and to carry a still better assortment of carefully selected lines of the following goods. Endeavoring in all things to further the interest of our patrons by giving them all the advantages of a cash system, we shall hope to merit a continuance of the patronage which we have received in the past.

On the other side of the circular we called attention to the fact that we carry in stock a large and complete assortment of the following goods, purchased direct from the manufacturers for cash. The various lines of goods were mentioned under the following headings:

BUILDERS' HARDWARE.
CUTLERY.
MECHANICS' TOOLS.
BUTCHER'S SUPPLIES.
BLACKSMITHS' GOODS.
FARMING IMPLEMENTS.
HOUSE-FURNISHING GOODS.
MANUFACTURERS' SUPPLIES.

Show by your prices how much cheaper you can sell now than before, as you surely can. It is unnecessary to make a pro rata reduction through your stock, but make leaders many and often, display tastefully, advertise extensively and trade will be attracted. This now can be done with no fear of loss. Upon those articles where competition is severe figure very low, for here comparisons will be made, but from those unattacked a good profit can be reaped. In the first case, however, good returns will be obtained because the stock is quickly turned into money and reinvested, the interest or profit being now compound instead of simple.

One, except in special cases, can always sell for cash closer than for credit, and in this way is able to make greater inducements to the public to trade with him than can his credit competitor. Without doubt a few customers will become offended when refused trust, but for everyone thus lost two will be gained, and as the firms see that their money will go further for cash than when time is given they will soon return. A man if he thinks he has saved money upon an article of good quality will be pleased. Such a customer is the best advertisement one can have. Sell closely at a fixed price, back it up by strict honesty and courtesy, and there will be no doubt of your success.

In changing to a cash basis, to get the best results most quickly, circumstances will alter cases. With a wide fund to draw from the change can be made at once, but when restricted it is often better to allow, for convenience, a little time to those you know will pay your bill as soon as presented. They will, however, soon become educated to paying cash. But let the time given be brief as possible.

Our experience of a year in a cash business has confirmed our theory. While the amount of sales has of necessity diminished, we are constantly, by reason of reduced expenses, lower prices, etc., extending our business to fields into which we could not otherwise have gone. Moreover, while selling on much closer margins than before the change was possible, the ratio of profits to sales is greater. But best of all, when we leave at night "we go not like the galley slave scourged to his dungeon," by worry over approaching bills, but "sustained and soothed by an unfaltering trust—we lie down to pleasant dreams."—E. D. Warner in Iron Age.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton. Ontario.
SP

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PINKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friend against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, TORONTO

ENGLISH HOUSE: **SAMUEL, SONS & BENJAMIN**
164 Fenchurch St, London, E. C.

STOVE PIPE POLISH

Nonsuch, Rising Sun, Jacoby, Mirror.

STOVE PASTE

M. L. S. Crown.

STOVE PIPE VARNISH

Butler's, Crystal Black, Ever Ready, Resplendent, Easy Shine.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Nov. 3, 1893.

HARDWARE.

Business in hardware continues of fair volume, and although orders are not large, the demand is of a steady character which in the aggregate contributes to a fairly satisfactory movement of business. Orders for winter goods of all sorts, such a sleigh bells, skates, etc., are still to the fore, while the demand for saddlery supplies, such as curry combs, etc., already referred to, is maintained. Makers report a continuation of the orders for smooth wire and the inference is that jobbers must also be experiencing a demand for the article. There is a moderate enquiry for nails and tacks, but horseshoes and horseshoe nails rule on the active side. Sporting goods also present a fair degree of activity for the season although the movement in them is not quite as large as it was. Values generally are firm, and there is no serious complaint with regard to payments.

WIRE.—Makers still experience a considerable enquiry for supplies of baling wire from jobbers, and the latter also report a fair movement.

CUTLERY.—The demand for cutlery has been fairly satisfactory, although it is not quite so active as it was.

WINTER GOODS.—Supplies of sleigh bells, skates, etc., are evidently still wanted, for the demand for them continues without any material diminution.

SADDLERY SUPPLIES.—Orders for curry combs, whips, and other saddlery supplies are still to note, and the volume of business in them is of fair proportions.

NAILS.—Cut and wire nails are only in moderate demand. There is no change in values, the standard list, so far as can be learned, being faithfully observed.

TACKS.—Tacks rule quiet and unchanged.

HORSESHOES.—The demand for horseshoes is fully maintained, while as for horseshoe nails makers state that they are rushed with orders.

IRON PIPE.—A good demand is still to note for iron pipe.

SPORTING GOODS.—Enquiries for guns, ammunition, etc., although still fair, are not quite so urgent as they were a short time ago.

TOOLS.—No feature to note.

SUPPLIES.—There is a fair enquiry for plumbing supplies, but building supplies continue as dull as ever.

WARE.—There is still a good demand for tinware, but other lines are dull and featureless.

NAVAL STORES.—In consequence of firmer advices from the South the advance in turpentine to which we referred last week has been increased, and we now quote 50c. Resins are in fair demand, also coal tar. We quote: Turpentine, 50c.; resins, $2.50 to $5, as to brand. coal tar, $3.75 to $4; cotton waste, 5 1-2c. for colored, and 7 to 10c. for white; oakum, 5 1-2 to 7 1-2, and cotton oakum, 10 to 12c. Cordage—Sisal, at 9 3-4c. for 7-16 and upwards, and 15c. for deep-sea line; pure manilla,11c. for 7-16 and upwards and 12c. for smaller sizes.

METALS.

There is no improvement in the heavy iron or metal market since our last. There is possibly more goods going forward in consequence of the advance in freight which takes place on the 13th of the month, but these do not represent new business but orders placed some time ago. Pig iron is quiet with very little doing, and prices easy, while Nova Scotia pig is offered at very easy rates. Bar iron is quiet in a jobbing way, although makers report fair orders for future delivery. There is nothing special in tin and Canada plates which rule very easy, and copper and other metals are absolutely featureless.

PIG IRON.—This article rules exceedingly quiet, a few small lots of Scotch pig moving on the basis of $18.50 to $18.75 for Summerlee, while Nova Scotia stock ranges from $16.50 to $16.75. We quote: Summerlee, $18.50 to $19; Eglinton, $17 to $17.25; Carnbroe, $16.75 to $17; Langloam, $18.50; No. 1 Siemen's, $18; Ferrona, $16.50 to $17.

BAR IRON.—The actual movement from jobbers' hands is small and unimportant, but makers report a continuation of the orders from agricultural implement makers. Prices are unchanged.

SCRAP IRON.—There is no change in scrap, but some large lots of English have been put through recently on the basis of $15 to $16 for wrought.

TIN PLATES.—Tin plates are dull and easy in tone, and are offered at $3 in round lots laid down in Montreal for cokes, with few buyers, as supplies are considered ample. We quote cokes $3.10 to $3.20, and charcoal $3.75 to $4.25.

CANADA PLATES.—There is nothing to say about Canada plates, and prices are more or less nominal in the absence of business. We quote as before, $2.40 to $2.50.

TERNE PLATES.—Ternes are nominal at $7.25 to $7.75.

GALVANIZED IRON.—There is still a fair demand for the article in a jobbing way, but otherwise the market is quiet. We quote prices unchanged at 4 3-4 to 5c.

SHEET IRON.—Sheet iron is dull and unchanged at $2.25 to $2.40. Some demand is still experienced for Russian sheets at 10 1-2 to 11c.

HOOPS AND BANDS.—There is no change in these, which rule dull at $2.35.

STEEL.—A good many jobbing orders for steel for sleigh shoes are still being received.

COPPER.—Copper is dull and heavy at 11 1-2 to 12c., with business very light.

TIN.—Advices on tin are very easy, but spot prices remain 21 1-2 to 22c.

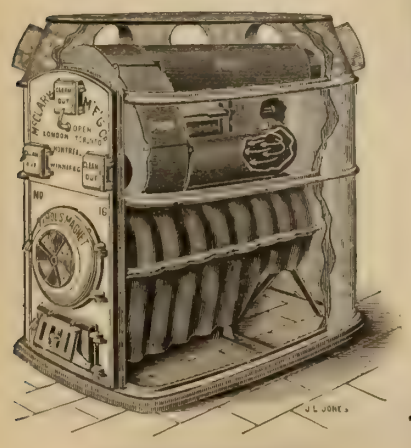
ANTIMONY.—There is no change in antimony, which is quiet at 10 1-2 to 12c.

SPELTER.—Spelter is quiet and unchanged at $4.60 to $4.75.

LEAD.—There is only a small business doing in lead, which remains at $2.80 to $3.

ZINC SHEETS.—A few small lots are moving at former prices, viz., $5 to $5.25.

CEMENT.—The cement market continues steady under moderate supplies and a good demand. We quote for Belgian brands $1.95 to $2.05, and Eng-



FAMOUS MAGNET.

Our New Wood Furnace

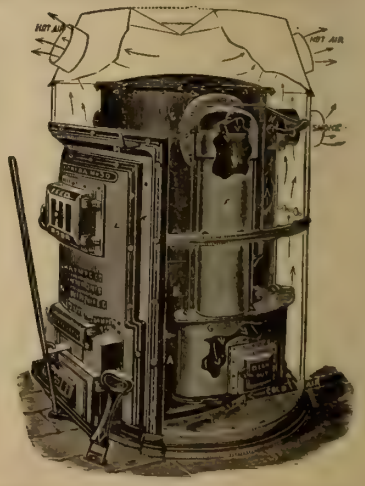
The Famous Magnet has taken the trade by storm. It fills every want.

The changes made this Season in our

Steel Dome Low Radiator Coal Furnace

make it apparently perfect. **The only three flue furnace in Canada.** If you have any furnace work in view it will pay you to let us send you full particulars of them.

THE McCLARY MFG. CO., London, Toronto, Montreal, Winnipeg, Vancouver.



STEEL DOME LOW RADIATOR.



Ontario Nut Works, Paris

BROWN & CO.

Manufacturers of

All sizes of Hot Pressed Nuts, Square and Hexagon

ADAM HOPE & CO., HAMILTON

Offer for Sale

"Pioneer" and "Sloss" PIG IRON

These are fine foundry irons, being strong and large scrap carriers.

Also all the well-known—

Scotch Brands,
Broken Car Wheels,
and Railway Cast Scrap.

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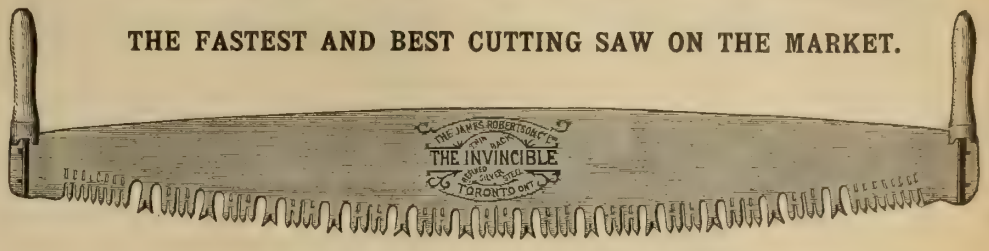
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Guaranteed four Guages Thinner on Back than Front and Made from the Highest Quality of Double Refined Silver Steel.

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65 and 67 Yonge Street, Toronto

M. MAYER, Propr.

NON-XLL

Cutlery

WARRANTED

And the Most Complete Lines of Cutlery of all descriptions.

MONTREAL Markets Continued.

lish $2.10 to $2.25 per cask, ex wharf. Fire bricks are in fair demand at prices ranging from $16.50 to $21 per thousand, as to brand.

PAINTS AND OILS.

The week's business in paints has been rather quiet, but prices remain firm. We quote: Choice brands of white lead, Government standard, $5; No. 1, $4.75; No. 2, $4.50; No. 3, $4.25; No. 4, $4; dry white lead, 5c.; red lead, pure, 4 1-2c.; No. 1, 4 1-4c; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, raw, 60c., boiled, 63c.

GLASS.

Glass is quiet at the easier prices already noted, viz., $1.25 for first break and so on. Putty in bulk unchanged at $1.85.

PETROLEUM.

There has been a seasonable trade in refined petroleum with prices unchanged. We quote: Canadian at 11 1-4c. in shed in Montreal for round lots, and 12c. for small quantities. American petroleum, 16 1-2c. in car lots, 17c. in 10 barrel lots, 17 1-4c. in 5 barrel lots, and 17 3-4c. for single barrels, net cash; American benzine, 23 to 25c.; Canadian benzine, 10 3-4c. Petrolea; 12 1-2c. Montreal.

MONTREAL TRADE NOTES.

The railway companies put in force their fall tariff of rates on the 13th of the present month.

Receipts of cement during the past week have aggregated 18,000 casks of English and Belgian.

Wm. McNally & Co. say that orders for prompt shipment of cement are still being filled with considerable difficulty.

H. McLaren, of H. McLaren & Co., got back from a trip to the World's Fair and a trip through Ontario the end of last week.

There is a temporary scarcity of cement here owing to the withdrawal of some of the London steamers rather earlier than usual.

Painchaud, Squire & Co., report that the fall business in firearms has been larger than usual, and that they could have done more if the goods had been at hand.

Several of the iron makers here have been requested to go up to Ottawa and confer with the Ministry presumably about the tariff, so that some change is very likely.

Jas. Darling & Co. report that the S. S. smokeless powder is having a fine sale and catching on well with sportsmen for the reason that there is no smoke, recoil or fouling.

Mr. Painchaud, of the firm of Painchaud, Squire & Co., Temple building, Montreal, is expected home from a business trip to the European markets by the steamer Majestic, due to arrive at New York this week.

Wm. Clendinneng & Son Co. are sending out quite a number of Etna hot water boilers at present. Their branch salesroom on Craig street, which was interfered with by the fire in the Canada Bank Note Co.'s premises, is again all right for business.

TORONTO MARKETS.

TORONTO, Nov. 3, 1893.

HARDWARE.

Trade has fallen off considerably during the week, and all hands characterize it as unsatisfactory and not up to the average at this time. Payments, too, are not as good as they might be. Wire is going out well, and rope up to a certain size is in request. Business in cutlery keeps up well. Nails are in fair demand, but there is not much doing in tacks. In the way of chain, cow ties are about the only thing for which there is much demand. Trade continues good in sporting goods, horseshoes and tinware, and exhibits some falling off in lamp goods. Further improvement is reported in plumbers' supplies, but in builders' supplies and mechanics' tools dulness continues to be the predominating feature.

WIRE—About the only thing that is moving in this line is hay-bailing wire, orders for which are quite numerous. The demand is principally for 14 and 15 gauge with an occasional request only for 13 gauge.

ROPE—Trade quiet, and the little that is going out is in sizes up to one inch.

CUTLERY—A brisk sorting-up trade is still reported in this line, but no special features have developed.

NAILS—Cut nails are in steady demand, but orders are not large, and only a few carloads have gone forward this week. Wire nails are in rather better demand than cut. In horseshoe nails business has dropped off somewhat, the quantity shipped during the past three weeks having filled up most of the dealers throughout the country.

TACKS—Trade is dull and uninteresting in this line.

CHAIN—Business still rules dull in coil chain. Cow ties are still going out, but quantities all round are small.

HORSESHOES—These are still selling freely and stocks are not heavy.

WINTER GOODS—Not many orders have as a rule been taken for such articles as sleigh bells and shaft bells, merchants evidently holding off till the evidences of winter are more marked.

SPORTING GOODS—Trade in this line continues brisk and without new features.

WARE—Tinware continues in demand, but in peerless, agate and white ware there is not much doing.

LAMP GOODS—Trade has fallen off in this line, the bulk of the demand having been satisfied. Nice orders however are still being received, but the quantities are not nearly so large as they were a few weeks ago.

PLUMBERS' SUPPLIES—Business in this line continues to show improvement, both on city and country account. A better feeling seems to prevail.

BUILDERS' SUPPLIES—In this line the dulness which has characterized it for sometime continues.

MECHANICS' TOOLS—There is little or nothing doing in this line.

METALS.

The most unsatisfactory feature about the market for metals is the easy feeling in the price of some of the staples, while at the same time there is no great demand for any one line.

CORRUGATED IRON
ILLUSTRATED CATALOGUE FREE
METALLIC ROOFING Co.
MANUFACTURERS TORONTO

PIG IRON—Business is practically at a standstill and prices are nominal. We quote: Summerlee $20.50 to $21, Carnbroe $19.75 to $20, Siemen's $19 to $19 50, Nova Scotian $18.75.

Rogers, Brown & Co. report the Toronto market for American pig iron as follows: A general survery of the whole market indicates that the average consumption of pig iron now is small. Some lines are melting quite heavily, while others are doing little or nothing and report no encouragement in the outlook for the immediate future. Orders continue to be for small amounts. We quote for cash f. o. b. cars Toronto in bond: 1 X Foundry strong Coke Iron, Lake Superior ore, $15.05; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14.55; 2 Foundry Strong Coke Iron, Lake Superior ore, $14.05; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17.55; Southern Soft 1, $13.35; Southern Soft 2, $12.85.

BAR IRON—Is still going out freely at the $1.95 basis. Horseshoe iron and sleigh shoe steel is reported to be in active request.

SHEET IRON—All sizes and gauges are going out freely, and prices remain firm at the recent advance. The English market is reported weak on sheet iron. We quote 22 to 24 gauge $2.50 to $2.60 and 26 gauge ¼c. extra.

HOOPS AND BANDS—Prices remain firm at $2.50 to $2 60. A few good orders for import have been booked, but there is not much doing in this way on the whole. Stocks are reported low.

CORRUGATED IRON—The season is about over and there is not much doing in consequence; $4.75 to $5 per square is still the idea for small lots. "Owl" brand is quoted at $3 to $4 per square for painted and $4.25 to $7 for galvanized, according to gauge.

GALVANIZED IRON—Is going out freely. Stocks are pretty well reduced, but some good shipments are arriving. A special demand is reported for Gordon brand, and several import orders have been placed during the week. We still quote $4 75 to $5 for 28 gauge.

INGOT TIN—There has been quite a business doing in this line, although no sales of round lots have been reported except in Straits. We quote 21 to 22c. for L. and F. and 20½ to 21c. for Straits. Prices are low outside and the market has fluctuated a good deal during the week, and how long present prices will prevail here is a query.

INGOT COPPER—A few good sales have been booked during the week, and an increasing trade is reported. Prices are easy. We quote 12 to 12½c. for small lots, with large lots obtainable at lower prices.

SHEET COPPER—Trade in this line has been rather quiet except in roofing and braziers, in which a fair business is being done.

SPELTER—Has been moving quite freely, principally imported, business in the do-

MARKETS—Continued.

mestic article being reported flat. Prices are unchanged at 4½ to 4⅝c. for small lots.

SHEET ZINC—A good trade is reported, this being the season when the article is mostly used ; 5¼ to 5⅜c. is the idea as to price for cask lots and ¼c. more is quoted for smaller quantities.

TIN PLATES—Are going out freely, especially in cokes for furnace work, although a fair quantity of charcoal, in I.C. and I.X., is going out. Prices remain unchanged at $3.85 to $4 for I.C. with the usual extras for I.X.

TERNE PLATES– Quite a few sales are reported at $7.25 for good quality. Sales are confined largely to small lots.

CANADA PLATES—Stocks are exceedingly low, and dealers are unable to supply consumers with enough of the bright plate. It is expected, however, that next week's arrivals will fill up stocks pretty well. We quote : All dull $2 65, half polished $2.75, and all bright $2.90.

SOLDER—Prices have been reduced a little and demand is larger than it has been for some time. Prices range from 14 to 16c. according to grade and composition.

ANTIMONY—Demand has again fallen off and business is flat. We quote 11 to 12½c.

LEAD—Trade is only fair and prices remain as before at 3¼c. for small lots, with large lots obtainable at lower figures.

GLASS.

Trade is brisk in all sizes, although more particularly in store sash sizes. Stocks are low and it has been a difficult matter for some jobbers to supply all the sizes demanded. New consignments are however arriving this week, which will place the trade in a better position.

PAINTS AND OILS.

Trade in paints and oils is not, generally speaking, brisk, although some houses report being well employed. Turpentine has advanced about 1½c. per gallon in the South and an advance of 2c. per gallon is expected to be made here to-day. In the meantime trade is quiet at 46 to 48c. There is a fair demand for white lead in small lots at the 5c. basis. Shellac is in good demand, but varnishes generally are dull. A fair business is reported in linseed oil, and there have been some good sized orders placed Prices are unchanged at 60 to 62c. for raw and 63 to 65c. for boiled. A fairly satisfactory trade is going in glue at unchanged prices. Trade remains dull in prepared paints. Payments are not so satisfactory as desired.

PETROLEUM.

Business continues good on the Toronto market at unchanged prices. We quote :— 5 to 10 barrel lots, imperial gallon Toronto; Canadian 12½ to 13c. ; carbon safety, 16½ to 17c.; Canadian water white, 18½ to 19c.; photogene, 22c.

The Petrolia Advertiser in its weekly report says : The oil market for several months past has been characterized by an unparalleled indifference on the part of buyers and sellers that it is truly remarkable, nor is there any change since our last report. The strangest part of the coincidence is that prices remain firm. The producers must take some action shortly to protect themselves or a serious downward tendency must inevitably result. They have allowed the Exchange to drift into obscurity, and it will be interesting to know what course they will adopt to guard their interests. Refiners are still paying $1.07 for the raw material delivered, and refined is still being shipped out at 9¾ to 10c. f.o.b. here.

OLD MATERIAL.

Large firms report business dull, and are carrying big stocks, sold to them by smaller dealers, but sales are limited, hence the change in prices. We quote prices paid by dealers as follows : — Agricultural scrap, 55c. per cwt. ; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40 to 45c. per cwt.. No. 2, including sheet iron, hoop iron and mixed steel, 10c.; new light scrap copper 7½c.; heavy scrap copper 8c.; old copper bottoms, 7½c.; light scrap brass 5c.; heavy yellow scrap brass 7c.; heavy red scrap brass 7½ to 8c.; scrap lead 1½ to 2c.; scrap zinc, 1½c. ; scrap rubber, 3c. ; country mixed rags, 75 to 80c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs. ; boring, and turnings, 10 to 15c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—Trade remains quiet ; nothing of any account is offering and dealers are cautious in buying more than they can easily dispose of. Tanners are well stocked, and are not at all anxious about receiving any more at present. Prices are the same as last week—4c. for No. 1, 3c. for No. 2, and 2c. for No. 3.

SKINS—Sheepskins are somewhat higher than in the early part of the month. They are now running at 65c. Nothing is reported doing in calfskins.

TALLOW—The situation in this article remains quiet. It is reported that some dealers are paying as high as 5½c. and asking 5¾ and 6c., but this is a little high to run freely.

WOOL—Nothing doing in this article at all. No offers for domestic wools, and very little doing in North-western stocks. Prices are unchanged. Dealers are offering from 19 to 20c. for good pulled wool, and 16 to 17c. for fleece.

MARKET NOTES.

M. & L. Samuel, Benjamin & Co. are in receipt of their first consignment of "Columbus" skates.

Turpentine is 1½c. per gallon higher in the South, and the Ontario Association will likely announce an advance this week.

Toronto Smelting and Refining Works are manufacturing their "Hercules metal." They are doing a large and increasing trade in this metal.

The Metallic Roofing Co., Toronto, is busy manufacturing five carloads of "Owl" brand corrugated galvanized iron for the new Union Station in this city.

H. S. Howland, Sons & Co. are in receipt of full lines of Rodgers', Wostenholm's and Elliott's pocket knives and razors. The firm claims to have in stock the finest line of carvers in cases it ever had.

M. & L. Samuel, Benjamin & Co. are in receipt of a shipment of Pigou, Wilks & Laurence's sporting powder in 25 lb. kegs, loose, and in pound tins, Nos. 4 to 8 ; also a shipment of "E and C" smokeless powder.

The London correspondent of the N. Y. Metal Market Report says regarding tin warrants for the week ending Oct. 21 :— There has been a dragging market throughout the week, until near the close yesterday, when some good buying orders for forward delivery were placed, and a hope is felt that we are on the eve of an improvement, though the condition of trade at the present time is far from being as favorable as could be wished.

Nearly all the agate and granite ware sold in Canada has been, up to very lately, imported from the United States. Now, however, the American manufacturers of these goods are being rapidly supplanted by similar goods that are imported from Germany, which are cheaper and seem to be equally as good in quality as those of American manufacture. Their patterns are similar to the ones of the American, and in finish they are superior. Besides the German agate and granite ware there is now imported from Germany a line of white enamel goods and coffee pots, which much resemble the pearl agate ware imported from the United States.

AMERICAN MARKETS.

New York, Nov. 3.

PIG TIN.—Prices moved slightly downward in the New York market and in London. According to both public and private advices by wire there was continued free selling of futures in the English market, partly by outside holders who were disappointed regarding the expected American demand. Forced sales were looked for here in view of the fact that deliveries to a considerable extent on November contracts are due this week, and that the absorption of stock by jobbers and consumers latterly has hardly been up to calculations. There was hardly as much selling pressure as some operators looked for, yet enough to carry prices a shade below 20.50 for both prompt and November deliveries.

COPPER.—Heavy exports to Europe have weight enough to unfavorably influence prices there, and fail to relieve the American markets to any perceptible extent. In short, the appearances are that there is more than enough copper to go around, despite the restriction put upon output, and that the market suffers accordingly, there being hardly any speculative interest and only very commonplace buying on the part of consumers. There was no further change in values, the popular quotation being 9 3-4c. for Lake Superior ingot, 9 1-2c. for electrolytic and 9 1-4 to 9 3-8c. for common casting stock, while actual business went through at a shade less.

PIG LEAD.—The market was somewhat uneven in tone, and slow as far as actual business is concerned. A certain speculative interest figured as apparent buyers at 4.40c. or a fraction more, for future deliveries, but their display seemed to have been without more substantial backing than sentiment and manipulation. Consumers were very indifferent at all events, and jobbers manifested no disposition to buy liberally. Prices were somewhat uncertain, with

MARKETS—Continued

4.40c. apparently full value for actual lead in car load or larger lots for delivery during the next thirty days.

SPELTER.—Apart from single carload lots no sales were reported, and the business for the day was of moderate proportions. Regarding the demand nothing was learned that indicated any improvement over the general run previously this week. Sellers still offer with some showing of reserve, however, and hold prices quite firmly at 3.60 to 3.65c. for ordinary Western brands, in carload or larger lots, prompt or near future shipments from the West.

ANTIMONY.—There is a fair business with prices fairly firm at 9 5-8 to 9 3-4c for Hallett's, and 10 1-8 to 10 1-4c. for Cookson's, in wholesale quantities, and 1-8 to 1-4c. above those figures in ordinary jobbing parcels.

TIN PLATE.—Coke plates were in slightly better demand for near future delivery, and ordinary spot purchases were rather more numerous, with dealings fairly well distributed over the general line of plates. Prices seemed steadier, but few and only unimportant changes were quoted for the day.

PIG IRON.—Foundry grades of American pig have been moving a little more freely the past few days in delivery on former orders, and some sales agents note improvement in new business also. The entire turnover of stock is merely fair, however, and not sufficient to bring about any change in the tone or appearance of the market. At all events, purchases are readily made at the prices which have ruled for some little time past.

Scotch pig iron is without change in any particular, purchases being almost of moderate quantities for shipment from abroad, moderate all told, and at about former prices. On lots to arrive the quotations are $21.50 for Coltness, $20.50 to $21 for Summerlee, and $19 to $19.50 for Eglinton. Spiegeleisen and ferro-manganese remain positively dull. Ferro-manganese, 80 per cent. is quoted nominal at $56 to $56.50, and 20 per cent. spiegeleisen at $25.50 to $26, landed here.



A SAD MISTAKE.

ANGELINA—"Why, Edwin, whad's de mattah wif yo'?"

EDWIN—"Why, I jumped offen de roof wif a hammock an' thought it would open like a parachute; but it didn't."

PERSONAL MENTION.

S. S. Martin of Rice Lewis & Son is back from Chicago, where he has been attending the World's Fair.

M. Frankel of Frankel Bros. is visiting in New York city. Mr. Frankel has a particular lady friend there whom it is rumored he will take into life partnership some time next month.

J. Barton, manager of the tinware and plumbers' supplies department of M. & L. Samuel, Benjamin & Co. has just returned to business after a four weeks' illness.

N. Courtemanche of Penetang was in Toronto this week. He said that they had about six inches of snow in his neighborhood and that trade was good.

Among the country merchants on the street this week were: Mr. Clement of Clement & Co., Bolton; J. A. Allan of Newmarket, Mr. Paget of Paget & Hay, Unionville, J. McGaw of Markham, H. Keys of Weston, W. Ough of Aurora.

SUGGESTIONS FOR THE SHOP.

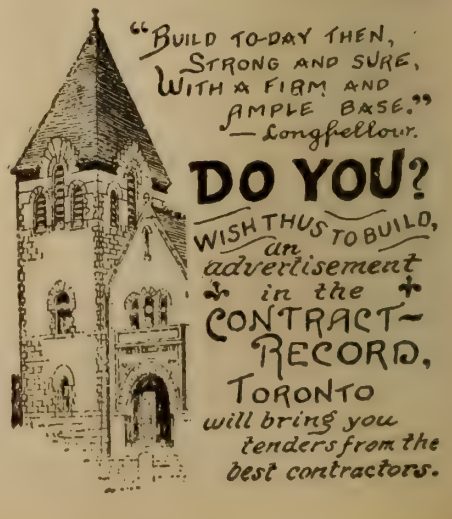
It is strange what a difference there still exists in the way of turning out work to the best advantage in a machine shop, even when the same article of manufacture is under consideration, remarks N. Y. Hardware. This is no doubt due more to the extent with which the business is carried on than to anything else on the part of shop management, for no concern, however well equipped, would fit up for a small order as when the whole shop is to be devoted to one special thing. Take the item of pattern making. We know of one concern in starting in on a new device that paid no attention to cores or core boxes, but turned out a form to cast from, more for the object of getting material to work from than for any assistance from the foundrymen, and had the castings thrown into the machine shop in great numbers. Every mechanic was his own designer of jigs and special tools, and soon the upright drill and heavy lathes were loaded down with home-made attachments for cutting out steam ports and channeling passages for reaching the inside of the work, and no wonder that in the item of brass strips alone an income almost sufficient to meet the expense of running one lathe was obtained.

MOISTURE OF SHOP WINDOWS.

We are approaching another winter, and with it will come that enemy of all good window dressing—the moisture and frost fiend. The man who cares nothing for his window display will be quite indifferent, even if it should be hidden all the winter long, and he ought to be; but those who believe in the efficacy of a good show will go to almost any trouble to keep it always visible, at least in business hours. We have done what we could in the way of suggesting methods of curing the evil, which were either the outcome of others' experience or seemed to promise good results, but the more we all have of really useful hints, the better, since one man's food is often another's poison. Any of our readers, therefore, who have successfully battled with this nuisance will be doing a most practical service to a great many others if they will take the slight trouble necessary to give us the outline of how they baffled the great enemy. If the employers have not the time for it, perhaps they have an assistant who would take the time out of business hours in return for a copy of Ironmongery for one year.

Meanwhile, here are one or two suggestions which may be suitable for adoption by some ironmongers. We have before referred to the use of glycerine rubbed over the inside of the pane. The Engineer gives a formula for a solution of glycerine for this purpose, stating that the glycerine should be mixed with 63 per cent. of spirits of wine. The efficiency of this method arises from the fact that glycerine, like chloride of lime, has the property of absorbing water. Another plan chiefly applicable to small show windows is a well-known Russian expedient, and requires double windows having two plates of glass with a space of 1-4 inch to 1-2 inch between them. The cracks between the two window frames and around the edge are kept tightly sealed, several small vessels of proper form, half filled with concentrated sulphuric acid, are left in the space between the plates of glass; any small amount of moisture that may penetrate to this space is absorbed by the strong acid, and the air thus kept perfectly dry, rendering the undesirable condensation and freezing of moisture on the cold outside glass entirely impossible. From the outside the double thickness of glass is scarcely perceptible, while the vessels containing the acid may be concealed by skillful decoration. The expense incident to the doubling of the windows must usually limit the application of this method to small windows, however.—Ironmongery, London.

The creditors of W. E. Milner & Co., general storekeepers and grain dealers, of Brampton, held a meeting at Assignee Tew's office. It was decided to accept a compromise of 40c. on the dollar, without interest, secured. The assets amount to $5,381.30 and the liabilities to $7,928.50 Mr. Milner's business was one of the oldest in Peel county, being established seven or eight years ago. He owned grain elevators in Georgetown and Brampton. He has been in deep water lately, and the issuing of writs by a couple of his creditors a short time ago caused the assignment.



Corporate Mark.

JOSEPH RODGERS & SONS, LTD.,

MANUFACTURERS ..OF..

POCKET AND TABLE CUTLERY, SCISSORS, RAZORS, ERASERS, &C., &C.

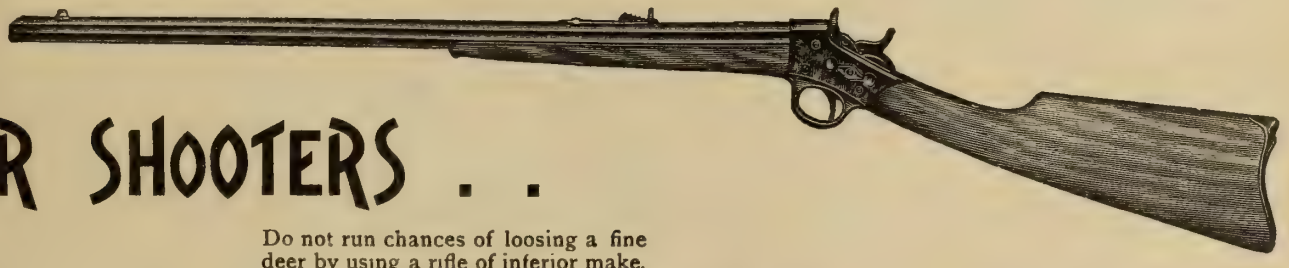
These goods have fully maintained their reputation as the best cutlery in the world for over

. . ONE HUNDRED AND FIFTY YEARS . .

Any infringements of our Name and Corporate Mark will be promptly prosecuted.

SOLE AGENTS FOR CANADA:

JAMES HUTTON & CO., - - - MONTREAL.



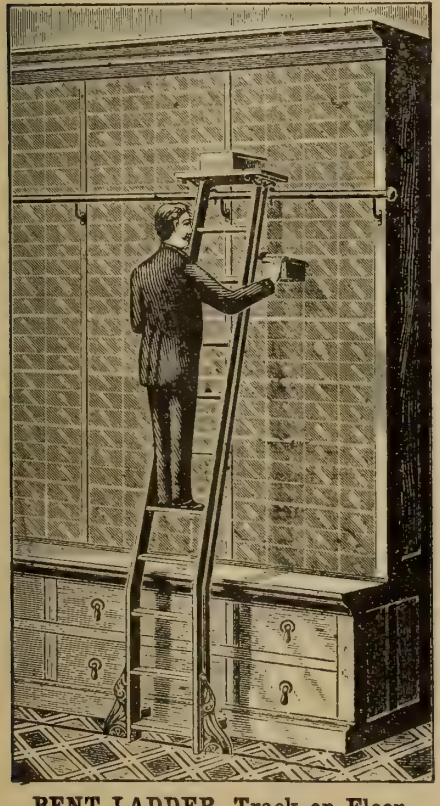
DEER SHOOTERS . .

Do not run chances of loosing a fine deer by using a rifle of inferior make.

Just Received a shipment of 1893 MODEL MARLIN RIFLES 32/40 and 38/55. Send for our catalogue and discount sheet free to the trade.

THE BOWMAN HARDWARE AND SPORTING GOODS CO., - - HAMILTON, ONT.

HAMILTON BRASS MFG. CO., HAMILTON, ONTARIO



BENT LADDER, Track on Floor.

. . MADE IN . .

Oak or Hard Pine

Natural Finished Woods.

Japanned or Nickel Plated Mountings

SEND FOR CATALOGUE



BENT LADDER, Track on Base Shelf.

ANTI-FRICTION BALL BEARINGS.

The following is from a paper read before the Franklin institute and published in Iron Age:

The fundamental principle on which balls are now used in bicycles is not correct. In the present style of bearing:

1. The balls are loose and must be handled singly.
2. Each ball is required to sustain both the weight and end thrust.
3. But two rows of balls can be used, one row at each end of the bearing.
4. On account of the principle on which it is constructed, the balls and bearing surfaces wear away.
5. There must be a means of adjustment on account of this wear.

In the double cage bearings these conditions are reversed. The balls are confined in cages, and readily and safely handled; one set of balls carries the weight, while another set takes the end thrust; any required number of balls can be utilized; properly made, there is practically no wear, and as there is no wear of the parts no adjustment is necessary.

The statement that there is practically no wear to a ball bearing when designed and constructed on the correct principle will undoubtedly be questioned, but as long use shows no change in the measurement of the size of the balls and bearing surfaces, and as the oil with which they are lubricated is not materially discolored, the claim would seem to be justified.

The bevel cage bearing was originated to take the place of the present style of bearing for light work only, for utility and for economy in construction. It is superior to the present style of bearing in that the balls are carried in cages, and that they run on plane bevel surfaces in place of grooved bevel surfaces. The bevel cage bearing will come into use where the work is very light and where the greatest economy in construction is necessary. The double cage bearing will be generally adopted in those classes of vehicles and machinery where the best is wanted, and economy in use and permanency are in demand.

In subsequent remarks on the bearings themselves reference is made to the double cage bearings only; in the manufacture of the bearings, to double and single cage bearings.

The shafting and parts of the machinery in a small manufactory were started on these bearings in August, 1891, and have been in constant use since. Several carriages have been mounted on them, and a brougham so constructed has been on the streets of this city for the past 30 days. A street car constructed with bearings with 3-8 inch balls, after constant use for five months, 16 hours per day, showed no wear whatever. Balls that were applied between plane surfaces under heavy pressure measured the same at the end of four years as when first put at work. Several bicycles, ridden constantly for two seasons developed marked superiority over the old construction. Many instances can be cited showing the practicability and value of the bearings.

When the proper principles for the bearings had been discovered, and the designs perfected, but a beginning had been made looking to their general introduction. A ball bearing, to be of lasting commercial value, must be absolutely accurate and reliable. Perfect spheres are indispensable, and they had never been commercially produced, and the balls and bearing surfaces were required to be of a temper always uniform and reliable, and by no known processes could these results be attained. A small shop was erected in which a force of skilled men have been employed for the past 20 months, and steel balls are now made of absolute sphericity, alike one with another, and with great economy, and a system has been developed for making tempered articles uniform in quality, with a great saving in cost over existing methods for doing similar work. The accuracy and efficiency of the new system of making spheres will be appreciated when it is stated that balls 1-6, 1-32 and 1-64 inch in diameter have been ground from pieces of steel, cylindrical in form, so that they do not vary 1-10000 inch from perfect spheres or from each other in size.

As the patents covering these various processes and devices are not yet all issued, detailed descriptions must in some cases be withheld, but enough can be made known to convey a general idea.

The new system for making tempered articles is covered by a series of patents, under the following titles:

The metallurgical furnace.
The tempering oven.
The double bath hardening process.
The process for hardening rings and sleeves.

By this system Bessemer or open-hearth steel is used, carrying about 10 points of carbon, and costing from two to three cents per pound, in place of machinery or tool steel, carrying from 30 to 150 points of carbon, and costing from six to 16 cents per pound.

By the ordinary hardening process, the quick cooling of a tool made of high carbon steel throughout causes warping and breaking, and has been a source of untold troubles to workers of steel for all time. It is customary in hardening, when the tool needs to be very hard, to cool the article in water or brine, which cools quickly; this secures the desired hardness, but the sudden cooling sets up unequal strains throughout the article, causing the warping and breaking. When extreme hardness is not required, or when an article cannot safely be dipped in brine, it is cooled in a slow cooling medium, like oil. This hardens to some extent and makes the article tough and with less liability to fracture.

To largely overcome these difficulties the double bath hardening process was devised, by means of which the article is plunged into brine and instantly transferred into oil without coming in contact with the air. By means of this device, which I now use for hardening all articles all the advantages are gotten of both the quick and slow cooling processes now in use, and with much less liability of fracture, and in many cases it is not necessary to afterwards draw the temper.

There have always been more or less articles made from iron or steel of low carbon and treated to the process known as case hardening. This process, as heretofore practiced, has made the surface, as a rule, hard for only a slight depth; to use the expression as generally applied in this connection, "skin deep." Greater depth than this is at times secured, but with no certainty of results. By means of the furnace to which I now refer, the ancient and well known cementation, case hardening process is brought under complete control.

All have become familiar with the Harvey process, as applied to armor plate. Great depth of high carbon is secured by that process in the surface of low carbon steel, by subjecting the same while buried in carbonaceous material to a high heat, beyond the melting point of cast iron. My furnace was designed and constructed with the view of adopting that process in making the bearing surfaces of these ball bearings, but on testing it I found that the high heat necessary by the process raised the grain of the steel so that it was not adapted for these purposes. The high heat also, as it proved, would destroy the efficiency of my furnace, and I decided to use tool steel for the bearing surfaces and the workmen were instructed to use the furnace for annealing and case hardening purposes. Later developments, using the ordinary process of case-hardening with the article packed in carbonaceous material in a cast iron box, demonstrated that the furnace would accomplish, at a low heat, what had before only been possible to do at a high heat.

By means of this furnace, for the past 18 months, all the bearing surfaces for these ball bearings have been made from 10 carbon Bessemer steel, and also all the reamers, taps, guages, etc, which have been needed in their construction, as well as a large variety of articles for other purposes.

Having secured, through analysis, the exact result of each day's work, it has

been demonstrated that formulae may be established, and by set rules definite and inflexible results may be obtained. The surface of any article can be carburized to any given required depth, to any high degree of carbon, at a low heat, and in a limited time, without impairing the cutting or wearing qualities of the steel. The furnace is operated at a very moderate expense for fuel, and has needed no repairs in 18 months of constant use. During that time no article has been cracked or broken through the processes.

By means of the new process for hardening rings and sleeves any number of tubular pieces can be hardened with absolute precision alike one with another. This is especially valuable in the manufacture of the ball bearings, but will in time come into general use for purposes to which it is adapted.

The tempering oven is quite new, and will give a uniform heat for drawing the temper, which, so far as I am aware, is not at present attainable.

These ball bearings have been subjected to an exhaustive test to determine the saving in power and their wearing qualities. This test demonstrated that the friction is less than one-thirtieth of that developed by the best class of ordinary bearings as now in use. The rotating shaft of the testing machine—a machine designed and made especially for the purpose—was 2 1-8 inches in diameter, and the balls as used in the bearings were 3-8 inch in diameter. The first series of tests demonstrated that the maximum speed attainable with the best ordinary bearings, under 200 pounds pressure, was 1,000 revolutions per minute, owing to excessive heating of the journals and boxes. A ball bearing mounted on the same shaft at 1,000 revolutions under a pressure of 2,800 pounds, did not heat at all.

In the second series of tests ball bearings were introduced in the machine where the ordinary bearings in the first test had been used. The velocity of the shaft was then increased to 2,600 revolutions per minute, and it was demonstrated that increase of pressure on the bearings did not perceptibly increase the resistance (or friction), and with an increase in the velocity the resistance was so slight as to be of no material importance.

A test of the resisting power of steel balls was made. Three 3-8 inch balls stood a direct pressure of 175,000 pounds, or 58,000 pounds per ball, without injury. The same size balls were rotated between parallel plane surfaces, and under these conditions the balls and the bearing surfaces (the latter Bessemer steel, case hardened) successfully withstood a pressure of 2,500 pounds per ball.

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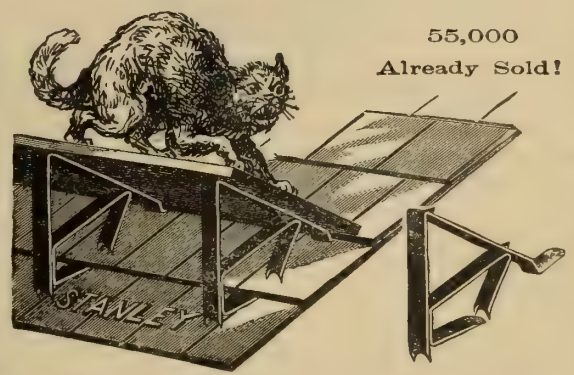
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POWER OF "I WILL."

"I will," when said in down right good faith, says an exchange, is the most emphatic and declarative sentence in all the world of language. You can tie to "I will," feeling absolutely sure that at no time are you likely "to be given away." A modified promise or assent amounts to but little, for in the very nature of its expression, it may mean something or nothing, so you are kept in a state of constant, anxious doubt. A positive "no" is a better way of putting the fact than a half "yes." To know the worst and then provide for it, is always an economy of one's individual resources. "I will" goes forth to conquer. It burns the bridges all along its line of march, for it recognizes no retreat. "Succeed or die" almost invariably brings success. It is your faint heart which never wins the fair lady. To be up and doing with the assurance of the victor is to win the field, however obstinate the foe. "I will" is the scriptural faith in objective form, which removes the mountain and casts it into the depths of the sea. What this world most needs is a positive, aggressive declaration, to be followed by positive, aggressive action. "To fight it out on this line if it takes all summer" has in it nothing of surrender. "I will" is the trump card that takes the trick, so that he who holds it may know that he can play alone, and make a march every time. "I will" not only appropriates in a personal way the present, but it lays its outstretching hand upon the future and secures it with all that it has in store. "I will" is the fulfillment of the promise, for it carries with it the rightful claim to the promise.

A proposal has been made in St. John, N.B, to abolish all taxes on personalty.

From 6,000 to 8,000 bushels of wheat are being marketed daily at Carman, Man.

It is stated the C. P. R. will complete the new line from Vaudreuil into Ottawa through the county of Russell without delay.

NEW IDEA IN PAD LOCKS.

The accompanying cut shows a pad lock H. S. Howland, Sons & Co. are putting on the market. This is an entirely new idea in pad locks. The lock is made of aluminized copper, and the exterior is oxidized and



tastefully decorated, the effect being rich and beautiful. They are self-locking with spring pivoted shackles. Two rolled steel keys, cut and milled, go with each lock.

SPELTER AND ZINC.

Within the past ten days the price for zinc ore has advanced, while that for spelter has fallen, the advance having been scored in the face of an increasing production and despite a slackened demand at and from the smelters. A St. Louis business man interested in one of the largest smelters, says that his works are now running but six pots a week instead of the eighteen run during last June, when the demand was so great that the metal was often delivered before it had a chance to cool, and he instances this in proof of an assertion that the metal markets are held back by the fear of anti-tariff legislation, adding that the heavy demand in June was created by trade necessities, and that the intervening falling off is due, not to excessive production in the past, as guaged by actual wants, but to an expected general fear of disturbed economic conditions.

Three years ago, when the new tariff went into effect, and the rate on pigs and blocks was advanced 1-4 of a cent a pound, spelter sold in this market at $5.75. To-day it sells at $3.30, and yet the claim is advanced by tariff reformers that protection encourages the manufacturer or producer at the expense of the consumer. Between June and October, 1890, the market advanced about the amount of added duty, or 1-4 cent a pound, but the competition induced by the change has reduced the cost to the user, and he is now paying for his goods only about 60 per cent. of what he did then. The use of spelter in various articles of manufacture has been given a wide field in recent years, particularly since 1890, and it is an essential element in many lines where formerly it was only an incident, but it is worthy of note that manufacturers employing it in their work and buying it from the American smelters are in favor of a retention of the tariff and express the belief that any lowering of the duty would injure their own business as employers of labor.—Hardware Reporter.

FOR HONEST TURPENTINE.

Mr. Chas. Richardson, of Boston, says an exchange, has spent a great deal of time in forwarding two very important reforms in the sale of spirits of turpentine The first of. these is a demand for pure goods, and the second, sale by weight. It was he who first directed attention to the pernicious patent introduced among the Southern distillers, enabling them to run petroleum and turpentine together from their stills; and ever since he has watched carefully the shipments from Southern ports and the receipts in his own city and elsewhere. Recently he called attention to the fact that a large consignment of "doubtful" goods had been shipped to a Philadelphia house; and, in answer to a request from this office, placed the facts at our disposal.

The matter is now in the hands of the Philadelphia Paint Club, and it is to be expected that it will be thoroughly investigated, and the results published broadcast. There is no doubt that this city has been the centre of distribution for a great deal of impure turpentine; but the distributors and and the adulterators are now well known, and the trade will in due time be fully warned against them. One house has even gone so far as to issue cards offering goods at about 15 per cent below the market price. The guilty concern endeavored to conceal its identity by the use of a post office box, but the mail has been traced, and now, in Philadelphia, at least, the trade is aware of its identity. Dealers should remember that pure turpentine cannot be bought below the Savannah quotations.

It is to be hoped that the present agitation—to which this paper is proud to have contributed—will result in some official action by the Paint Club to provide for analysis of all turpentine received at this port. Adulteration will then be traceable directly to the local jobber, when discovered, and a sharp watch, coupled with immediate posting of offenders upon detection, will soon result in making the abominable practice unprofitable.

LOCKS IN OLDEN TIMES.

The oldest substitute for lock and key, says an exchange, is the latch and bolt, and the latter have been used since the dawn of the most primitive civilization to the present day. At an early date—perhaps 3,000 years ago—the wooden latch was made more secure by introducing a sort of wooden lever with notches to raise the latch. This lever is regarded as the oldest shape of the key, and is thrust in the lock sideways, writes an exchange. In later times it was made of iron, and still continues to be used in out of the way places all over the world—in Scandinavia, Russia, Germany, in Upper Egypt, in South America, and probably in our own country. The wooden lock held its own through classic and Byzantine times, but the keys were made of iron or bronze. Roman and Byzantine keys were of the simplest shape, but specimens with artistically decorated bows are also found, and the miniature keys Roman ladies used for their jewel caskets were of exquisite workmanship. Locks first made from metal were introduced during the Gothic period, and artistic door mountings in the shape of ornamental door hinges, lock plates, etc., became general. The intricacies of the fan lock were carried to the highest perfection; innumerable notches being put in the bit to guard against the wiles of the medieval burglar. The same style of keys continued through Romanic times.

EFFECT OF CHEAP STEEL BEAMS.

The low price of steel beams is now opening up a wider field for them. They are no longer a luxury, available only to those erecting large buildings and to whom cost is a secondary consideration. Builders of moderate sized structures are using them freely in the place of large wooden girders. Warehouses and stores, with no architectural pretensions whatever, are now absorbing considerable quantities of beams, whereas but a short time since they would not have been seriously considered by the builders. Some progressive architects are even specifying them for use in certain places in dwelling houses. Notwithstanding the general depression in the building trade at present the tendency to substitute steel beams for wood is a notable feature of the beam business, and manufacturers are hopeful that the movement will continue to grow. In this prospect of enlarged consumption in the future they see some compensation for the very low prices now ruling. Cheapness is a very effective missionary.

With the movement begun for the use of steel beams in ordinary structures, a great deal has been accomplished which will be of much value if it is per-

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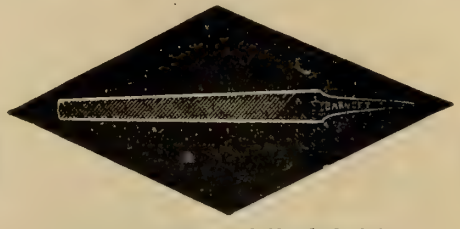
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sistently followed up. There are many architects and builders who know but little practically of the use of steel beams. They need to be informed of the manner in which such material can be used in partial steel construction. This is a line in which it might be well for the manufacturers of beams to do some educational work. In the construction of buildings, particularly in large cities, economy of space is often very desirable, and a steel beam will often be found decidedly preferable for that reason to a bulky wooden girder. Again, the matter of shrinkage is something that proves very annoying to builders, who find their best work frequently marred by the unexpected shrinkage of a large girder, guaranteed perfectly seasoned, but susceptible to atmospheric changes, as all wood is. There is hardly a house of moderate size in which some steel beams could not be used to advantage. In building expensive dwelling houses, however, architects and builders by the use of steel beams could make them either fire proof or of a "slow combustion" type. It would be of much interest in this connection if some competent person were to make a comparison of cost between such a house and one fitted with wooden joists. It is believed that the enhanced cost would be found so moderate that the man who could afford to build such a house would prefer to pay the increase and not only enjoy the sense of security from danger of fire, but find an absolute saving in the lessened cost of insurance.

Beam manufacturers could very profitably to themselves follow up this educational work and instruct builders in the special advantages to be realized from the enlarged use of steel structural material. In entering this field it might be found necessary to make modifications in the shapes and sizes of beams now standard in order to meet new requirements. In the construction of dwelling houses there would, for instance, be no necessity for using the heavy beams now made. Perhaps 3 or 4 inch beams, properly stiffened by cross beams, would be found suited to a great deal of such work. Beams of that size, weighing much less than standard beams, would not be a very costly investment for owners desiring fire-proof or "slow combustion" houses, although manufacturers would probably charge more for them than for the heavy sections, being more expensive to roll. There is certainly a most inviting field opening up in this direction for the beam trade, and as the era of low prices for beams has apparently come to stay it is likely to prove in the future a better business in point of value than has thus far been enjoyed from the construction of large buildings.—Iron Age.

THEY SAVE THE DUST.

One point in which the Germans secure an important advantage, especially as respects their American competitors, in the manufacture of iron, is in economizing the waste and coarser forms of fuel, remarks an exchange. "It is conceded that Americans are masters of economy in labor, but they are extravagant with materials. In our country millions of tons of coal dust—the waste of mines, railways and iron mills—are thrown away as useless. An official commission, after exhaustive study of the subject, has recently published the astounding information that for every ton of anthracite coal mined and marketed in Pennsylvania, 1 1-2 tons are wasted; and the loss in bituminous coal, although somewhat less, is still enormous. In Germany, France and Belgium all this refuse coal dust is carefully saved. Part of it is mixed with pitch derived from tar distillation and molded into 'bricquettes,' which are used as fuel for locomotives, stationary engines and household grates. The remainder of this finely pulverized carbon is blown by jets of live steam into various kinds of furnaces, where it burns with the fierceness of crude petroleum. Coal dust from mines costs in Germany 25 cents per ton on cars, or in large quantities $2.38 per carload of 10 tons, and the care with which it is saved and utilized adds an important percentage to the fuel supply of this country. It is by this application of scientific economy to every stage of manufacture, the saving of secondary products, and the invention of new processes and machinery to work out most advantageously native materials, that the German iron and steel makers have been able to face without disaster the declining metal markets for the past four years."

SELLING AT COST NOT BUSINESS.

"I sold two carloads out of our store Saturday, but didn't make a cent—there was no profit in it." The speaker was a young salesman representing one of the largest houses in the iron trade in the West. And why "no profit in it?" Was it because the young man lacked capacity to transact business profitably, or are his employers brainless? If no profit, then a loss. There is no other ending, except the final one of bankruptcy. And bankruptcy brought about by a policy so deliberately suicidal is positive dishonesty. All merchandise ought to be sold at a profit to the merchant. Not a profit that will enable him to just live and finally die poor, but a profit that pays his reasonable expenses of doing business and leaves him a comfortable income for old age and his family. But the policy of "there was no profit in it" induces the merchant to contend fiercely for still lower prices when buying goods, thereby forcing values downward. No sooner has he obtained a slight concession than he wires his traveling salesman "take the order at any price." And the man who has just bought "at any price" at once proceeds to "knock out" his hated rival business by taking the contract or order when there is "no money in it." And so he swings surely towards the point where he "can't pay," and the one who sold him "two carloads of goods with no profit in it" is struck with possibly fifteen thousand dollars worth of hopeless debt, and then proceeds to tell everybody that these are terrible times. A house strongly entrenched in capital may stand up for many years under such a policy, but the weaker ones die young.

In my experience I recall no instance of a business being governed by a sound policy being forced to the wall and compelled to accept defeat. I recall a marked example of selling goods with no profit. A buyer for a large house, in my presence, made a strong attempt to secure a concession on a bill of goods, claiming that they were resold at cost. The house is noted for selling goods at low prices, and, while they have secured trade in several of the Oriental countries, I have known profitable business almost at their own doors to be neglected. Why send goods to Japan while home trade goes uncared for? Why sell a carload of goods with a value of, say, from one thousand to fifteen hundred dollars for less profit than could be realized on one-tenth of the sum named? When we engage in business we hope to succeed; but we can only have success by getting back our dollar with interest and a profit added. Any other policy than this leads to dishonest bankruptcy.

It is time the press called attention to this subject. It ought to be placed before the eyes of every man in business, and in such a way that when he goes home he will carry the matter in his mind. Thinking about a thing at home generally results in something good.

Closely related to this matter of selling goods at no profit is this: Every traveling man ought to be instructed never to make a price on his goods unless there is a reasonable ground for securing an order. It was not good policy to walk into a wholesale hardware house in St. Paul, and, knowing that the house was already heavily stocked with nails and did not wish to buy, offer thirty thousand kegs at ten cents less than market rates. This is bound to "come back" at the traveling man's house sooner or later with bad results.

Business men! you do not like a loss in dollars and cents, but you like to see good round profits. Some of you are not on the right track to secure the latter. Think of this matter with care and you may adopt a policy that will secure you a good return on your money invested, and at a reduced risk. Better sell less and make more profit, than make little profit and sell more.—James Buckley, in American Artisan.

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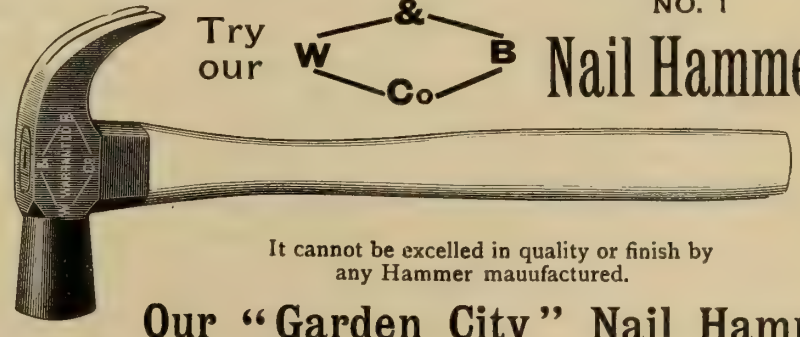
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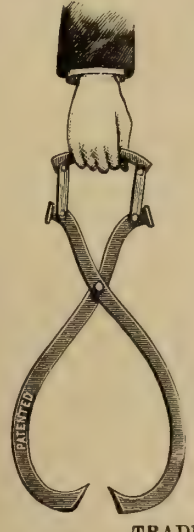
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BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

Mrs. Ozitte Beaulien, general store, Green River, N.B., has assigned.

S. L. Kelly & Co., stoves, Victoria, B.C., has been closed by chattel mortgage.

J. D. Fallis, general merchant, Kendal, has assigned to W. A. Campbell, Toronto.

C. D. Ferguson, general merchant, Aurora, has assigned to W. A. Campbell of Toronto.

Regina B. Groomes, general merchant, La Salette, Ont., has assigned to John B. Graves.

W. T. Mossop, paints, St. Thomas, has assigned. He was formerly in business in Windsor.

Henry & Baurk, hardware, Montreal, have dissolved. Albert Baurk continues; style unchanged.

Isaac B. Chambers, general merchant, Hallville, has compromised with his creditors at 50c. on the dollar cash.

W. G. Hunt, hardware, Wheatly, has assigned to Henry S. Ivison. His failure was somewhat unexpected, he having had a good credit mark opposite his name in the mercantile agency books.

PARTNERSHIPS FORMED AND DISSOLVED.

The Toronto Lock Co. (Ltd.) has obtained charter of incorporation.

Aggett & Cherry, plumbers, Montreal, have dissolved.

Sicotte & Dionne, Alpha Iron Works, Montreal, have dissolved.

J. C. Pettes & Son, general merchants, Knowlton, Que., have dissolved.

The McDonald Manufacturing Co. of Montreal are applying for incorporation.

The F. E. Dixon Belting Co., Toronto, is applying for charter of incorporation.

The Hutt & Phillips Manufacturing Co. of Toronto is applying for charter of incorporation.

Watson & Brown, basket manufacturers, Bothwell, have dissolved. Soloman Brown continues.

SALES MADE OR PENDING.

The stock of T. Cote & Co., hardware, is to be sold by auction Oct. 7.

E. Blanchard & Co.'s, hardware, Montreal, stock sold at 60c. on the dollar.

The stock of W. J. Moore, general merchant, Sudbury, is advertised for sale by auction on the 9th prox.

The stock of L. B. Montgomery & Co., millers' and engineers' supplies, Toronto, is to be sold by auction Oct. 7.

CHANGES.

Wm. Keys is opening a general store at Midway, Man.

John Watson, blacksmith, Deseronto, has sold out to W. Leslie.

Bryden & Co., general merchants, Schonburg, are going out of business.

S. A. King, general merchant, Walkerton, has sold out to A. Nelson & Co.

W. A. Porter, general merchant, Hausport, N. S., has sold out grocery department.

O. S. Carsoe, general merchant, New Denmark, N. B., has removed to the United States.

Newton & Martin, general merchants, Rounthwaite, Man., have been succeeded by James Martin.

FIRES.

J. B. Keirstead, blacksmith, St. Mary's, N.B., has been burned out.

J. L. Cook & Co., general merchants, Newdale, Man., have been burned out.

Brown & Smith, painters, and Lincoln & Williams, tinsmiths, Yarmouth, have both been burned out.

The general store of Collingwood Pugsley at River Hebert has been burned to the ground; loss, $1,200.

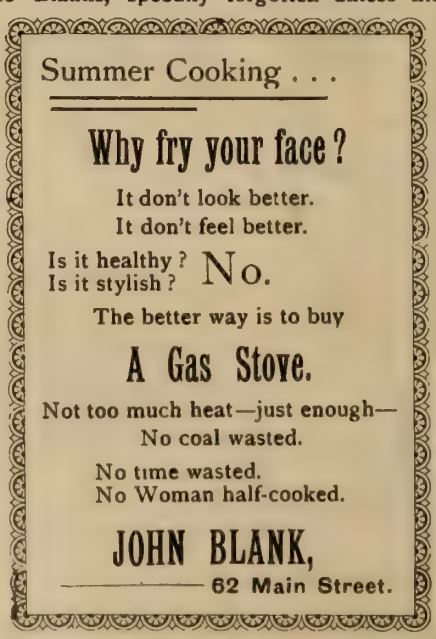
DEATHS.

Charles McLean, agricultural implements. Lindsay, is dead.

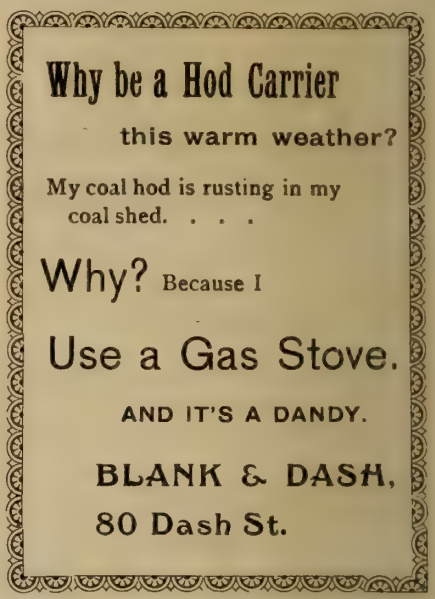
HARDWARE ADVERTISING.

In our preceding article on advertising a hardware store, appearing in the last issue of the Ironmonger, the general form and character of all advertisements were more largely commented on than the advertising of some special article, though that was also incidentally mentioned.

Making "drives" on this or that article in your advertising attracts attention from its newness and change. If you advertise a stove one week a spade the next, then a line of bicycles, followed by a newly patented household utensil, people will get in the habit of looking for your "ad" from curiosity, to see what special article your are promoting. Some advertisers, who are few in number and ultra conservative in methods, look with distrust on this form of advertising, thinking it less efficacious than a general advertisement. In our opinion it is better. Its effect is apt to be sooner felt and the returns are consequently the quicker. The reason for this is not far to seek. A person picks up a paper and reads a general advertisement saying that Charles Blank, the hardware man, has a large assortment of goods on hand, and would be pleased to receive the patronage of the public. Charles Blank profits by having people read this announcement, but not so quickly as if he advertised a sale of lawn mowers just received and going fast, for whereas the reader of the first announcement would very likely content himself with forming a resolution to patronize Blanks, speedily forgotten unless his



memory was refreshed by again seeing Blank's "ad"; the reader of the second announcement would be likely to visit Blank's store to see the line of lawn-mowers exhibited, and when once there, the chances are that he will examine and perhaps purchase other goods besides a lawn-mower. Special advertising, or the advertising of some particular commodity, is on the increase, and general advertising, or an announcement covering an entire stock, is on the decline. As showing what can be done in the particular advertising of one commodity, let us take gas stoves as an example. Most people use stoves for heating purposes and are familiar with the unpleasant features attached to their use. A good way to attract their attention to the events of oil stoves is by proclaiming the fact that these stoves are free from the objections caused by the former. Gas stoves as



cooking stoves are of course more generally used in the summer than the winter, and an announcement calling attention to the greater comfort attending their use, owing to their less severe heat is a practical method of advertising them. A mistake that many hardware dealers make in advertising gas stoves as well as other stoves and kindred commodities is by making their announcement too technical. This mistake is caused in some instances by the fact that the retailers shape their "ads" after those of the manufacturers in the trade papers, forgetting that while the latter are seeking the patronage of persons versed in the technicalities of the stone and hardware business, the former desire to reach the general public whose ignorance of technicalities is such that we will safely wage that a hardware dealer could advertise a stove with draw-centre flues and driving grates without more than a dozen or two persons knowing that a bull had been made.—Ironmonger, Chicago.

Wheat was shown in Winnipeg a few days ago which averaged 69 pounds to the bushel. It was grown near Whitewood, Assa. A sample has been sent to Prof. Saunders at Ottawa.

"Favorite Queen"

Direct Draft Surface Burner for



COAL OR COKE

. . A . .

Powerful Heater

FOR

Stores, Hotels, School-Rooms, Factories, Etc.

A powerful heater giving great results from small consumption of fuel.

Three sizes, 14, 17, and 20 inch fire pots.

The Jas. Smart Mfg. Co., Ltd.

BROCKVILLE, ONT.

. . ELEY'S . .
CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. Wholesale Only.

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

The "ETNA"

Hot Water Heater . .

— IS —

PERFECT

And we are prepared to

GUARANTEE



Its working satisfaction in every particular.

Write for Price List and Testimonials.

Wm. CLENDINNENG & Son, Montreal, Que.

RAZORS, SCISSORS

POCKET KNIVES



TABLE KNIVES

BUTCHER'S KNIVES

DEDERICK'S PATENT STEEL SHELL HAY PRESSES.

Made of Steel—lighter, stronger, cheaper, more power, everlasting, and competition distanced.



Also all styles of Bale Ties made from the Best Steel Wire.

Manufactured by BOYD & CO., Huntingdon, Q.

MUNN'S LIQUID GLUE

IS THE BEST.

THE ART METROPOLE, Agents.

131 Yonge Street, TORONTO.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucpan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—
56 and 28 lb ingots, per lb .. 21, 22
Straits ..... " 20½, 21

Tin Plates—*Charcoal Plates, Bright.*

M.L.S. equal to Bradley	Per box	
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 00	4 25
I.X., "	5 00	5 25
I.X.X., "	6 00	6 25
I.XXX., "	7 00	7 25
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.	....	13 00
" " I.X.	....	16 00

Charcoal Tin Boiler Plates.

	Per lb.
C okley Grade—	
.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6¼	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

½-inch	10½c
-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¾ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2¼, 3
22 to 24 "	2½, 2¾
26 "	2¾, 2¼
28 "	2¾, 3

Canada Plates.

All dull	2 65
½ polished	2 75
All Bright	2 90

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head

16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Gordon Crown—

16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6	6 3-5
" ¼ " "	4⅝	5
" 5-16 " "	4¼	4⅝
" ⅜ " "	4¼	4¼
" 7-16 " "	4	4¼
" ½ " "	3¾	4
" ⅝ " "	3½	3⅝
" ¾ " "	3	1-5
Trace, per doz. pairs	$3 60	5 90
German coil, per 100 ft	1 65	2 70
Jack chain, iron, single, per doz yards	0 13	0 50
Jack chain, double, per doz yards	0 15	....
Jack chain, brass, single, per doz yards	0 20	1 10

Copper—*Ingot.*

English B.S "	0 11½	0 12½
Lake Superior	0 12¾	0 13

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22	$0 25
" round & square 1 to 2 in	0 20	0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16	0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17	0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26	0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 18	0 19
" 35 to 45 " "	0 16	0 17
" 50 lb and above per lb	0 15	0 15½

Boiler & T. K. Pitts.

Plain Tinned per lb	....	0 21
Spun " "	....	0 25

Wire.

Pure, in coils—		
From 1 to 20 gauge	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20	0 21
" " 27 to 30 "	0 23	0 25
" " 30 and up	0 26	0 28
Sheets, hard-rolled 2x4 ft	0 21	0 23

Zinc Spelte .

Foreign, per lb	0 04½	0 05
Domestic "	0 04⅛	0 04½

Zinc Sheet.

5 cwt casks	0 05½	0 05⅝
Part casks	0 05½	0 05½

Lead.

Imported Pig, per lb	0 03	0 03½
Domestic "	....	0 03
Bar, 1 pound	....	0 04½
Sheets, 2½ lbs, sq. ft, by roll	0 04½	0 04¾
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04½	0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)	0 15	0 16
Standard	0 14	0 15
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12	0 12½
Other makes "	0 11	0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt		5 00
No. 1 Do "		4 75
No. 2 Do "		4 50
No. 3 Do "		4 25

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 00	1 20
2nd qualities "	....	1 00
Barn (in bbls)	0 90	1 00

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05	
Chrome Yellow "	0 11	
Golden Ochre	0 06	
French "	0 05	
Marine Black	0 09	
" Green	0 09	
Chrome "	0 08	
French Imperial Green	0 19	

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35	1 40
" " (J.F.L.S.) "	"	2 75
" " Royal "	"	1 10 1 15
Venetian Red, (best) "	"	1 80 1 90
English Oxides per cwt		3 00 3 25
American " } Canadian " }	" "	1 25 1 90
Paris Green, per lb	0 13½	0 15
Burnt Sienna, pure, per lb		0 08½
Burnt Umber "		0 05
do pure		0 08
Drop Black "		0 09
Chrome Yellows "		0 12
" " Lemon pure, 8 lb. tins, per lb		0 19
Chrome Greens "		0 12
Golden Ochre		0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal		0 69
Extra "		0 90
Brown Japan "		0 65
Brown Japan, Turpentine p. gal.		0 85
No. 1 Carriage "		1 30
Gold Size Japan "	1 00	1 20
Pure Orange Shellac "	1 95	2 05
Hard Oil Finish		1 30
Oil Shellac		1 40
White Shellac		2 25

Linseed Oil (in bbls)

Raw, per gal	0 60	0 62
Boiled "	0 63	0 65

Turpentine (in bbls)

Selected Packages, per gal	0 46	0 48

Castor Oil.

Best, per lb	0 07⅞	0 08

Cod Oil.

Cod Oil, per gal	0 50	0 51

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet	0 13	0 15
White, extra	0 16	0 18
Gelatine	0 20	0 30
Strip	0 16	0 17
Coopers	0 17	0 19

Liquid Glue—F. LePage's, dis. 20 t 25 per ct. off list; Munn's, dis. 25 to 30 per cent. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis.40 to 45 p.c. Amer-
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 3 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardin Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per cwt 0 60 0 65
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18
Chisels—*Socket, Framing and Firmer*
American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10 p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.20	.....	1.85	
26 to 40	1.30	2.60	2.10	
41 to 50		3.00		4 70
57 to 60		3.30		5.20
61 to 70		3.60		5.70
71 to 80		4.00		6.30
81 to 85		4.40		6.90
86 to 90		4.80		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb . 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross..... 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent, to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mortar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier per doz 0 50 1

Wrought Iron.

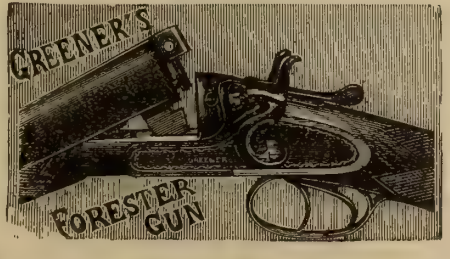
Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

NEW ARRIVALS

30 Cases CUTLERY AND GUNS

ALL NEW GOODS.

Finest Finish. Best Value.



NEW ARRIVALS

20 Casks Cattle and Trace CHAINS

10 Tons Coil Chain.

Five Cars Window Glass.

Bowman, Kennedy & Co., London, Ont.

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 45 to 50 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

F.O.B. Toronto & Hamilton $3 80
Snow, " " .. 3 90
F.O.B. Montreal 15c. less, and London 5c. more than above.

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys.

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   - Basis—50 to 60 dy..... 2 30
   - 40dy..... 2 35
   - 30 dy..... 2 40
   - 20, 16 & 12 dy..... 2 45
   - 10 dy..... 2 50
   - 8 & 9 dy..... 2 55
   - 6 & 7 dy..... 2 70
2. American Pattern Only
   - from 4 to 5 dy 2 90
   - 3 dy. (lath)..... 3 30
3. Canada Pattern Only
   - from 4 to 5 dy 2 80
   - 3 dy. (lath)..... 3 20
   - 3 dy A.P. Fine 3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... .... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 60 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, 1 lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾
Lanes, 33½ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 50 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33½ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9	10 10½
¼, 5-16, ⅜ in.....	9½	10¾ 11
Cotton, per lb.....		18 20
New Zealand		8½ 9
Russia Deep Sea, per lb..		12½ 13½
Jute ..... " ...		06¾ 07½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1¼ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 to 40 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 special brands net price.

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Sapolio

In ½ or ⅛ gross boxes, per grs. 11 30

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4¾
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33½ p c

Ties.

Cow, per doz 1 25 2 50

Tinner's Shears and Snips

P.S.&W., net to 10 p.c. advance on American list.
Canadian 10 per cent dis. 10 to 15 p. c

Tinware.

Stamped, dis. Assn list, 70, and 12½ per cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33½ p.c. to 35 p.c
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9 00

Twines.

Bag, per lb..... 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4½ 4¾
" 4 " 4 & 6 " "
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33½, 35 p. c.
Tower's Engineer, each .. 2 00 3 [illegible]
" S., per doz..... 5 80 7 [illegible]
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR
SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE
HOLLOW WARE.

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR
WM. ROGERS.
KNIVES, FORKS, SPOONS

Manufacturers of the

Finest Quality Electro-Plated Ware.

And Sole Manufacturers of the Celebrated

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.
Keene's Coarse, Parian and Superfine Cements.
SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.
FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,
CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

NONE GENUINE
WITHOUT THIS LABEL





SAW GUMMERS.

Price $15, complete.

Will gum any cross-cut saw; anyone can work it. There is paying work for a saw gummer in every town, village or cross-roads in Canada

A. B. JARDINE & Co.

Manufacturers of Blacksmith's Tools and Tube Expanders,
HESPELER, ONT.

Do we make any other Skates besides our **GENUINE ACMES?**

Well, We Rather Think So!

What About our Hockey? The most elegant and suitable skate for the purpose ever made.

What About our Racers? Made with wood tops and extra light runners—the only way in which lightness, combined with perfect rigidity, can be secured. Special system of strapping. The leading racers use wood-top skates. Why? Because they know from experience they are the best.

What About our Skeletons? For Rink use the most in demand. Welded iron and steel blades. Plain or nickel-plated.

Why have we secured first honors at Philadelphia, 1876—Paris, 1878—London, 1886—and now Medal and Diploma World's Columbian Exposition, 1893? Because of the superiority of goods exhibited, which are the same as those we are shipping our customers daily.

PRICE?—Ask your jobber about that, and you will find they are quite as cheap as the inferior makes.

THE Starr Manufacturing Co., Ltd.

WORKS—Dartmouth. P. O. ADDRESS—Halifax, N. S.



OXFORD "OXFORD" OXFORD

..LINES..

Our Leaders for 1893--are the

Countess of Oxford

..AND..

Art Countess

and the BASE BURNERS

DUCHESS OF OXFORD

and **KITCHEN WITCH RANGES**

Put these Stoves on Your Floor and Command the Trade. . . . .

The Gurney Foundry Co., Ltd., Toronto

The Gurney-Massey Co., Ltd., Montreal



Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St., Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 x 4 Barb Plain Twist and Strip Fencing

And Staples for same.

Write for Prices and Discounts.

ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.



NOT HOW CHEAP

BUT HOW GOOD

The Pittsburgh LAMP

At a reasonable price is the

Most Profitable LAMP

both for the the dealer and consumer on the market.

Write for Primer



Gowans, Kent & Co.,

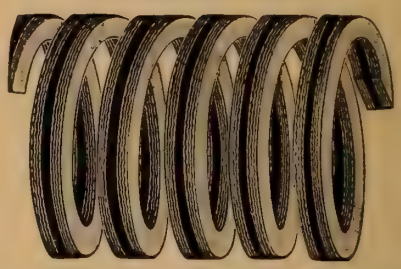
Sole Agents for Canada. TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

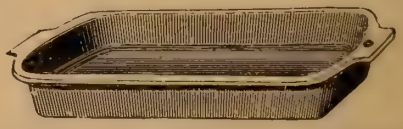
Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., **Toronto.**

"The Seamless Flanged Drip Pan"



Improved Rolled on Edge.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife to cook or lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The improved rolled on edge making it easy to handle.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

Write for Discount.

SIZES.....	8 x 10	8 x 14	10 x 15	12 x 17
Per Doz.....	$1.91	$2.33	$3.20	$3.73

THOS. DAVIDSON & CO., Montreal, Can.

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, NOVEMBER 11, 1893. No. 45.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

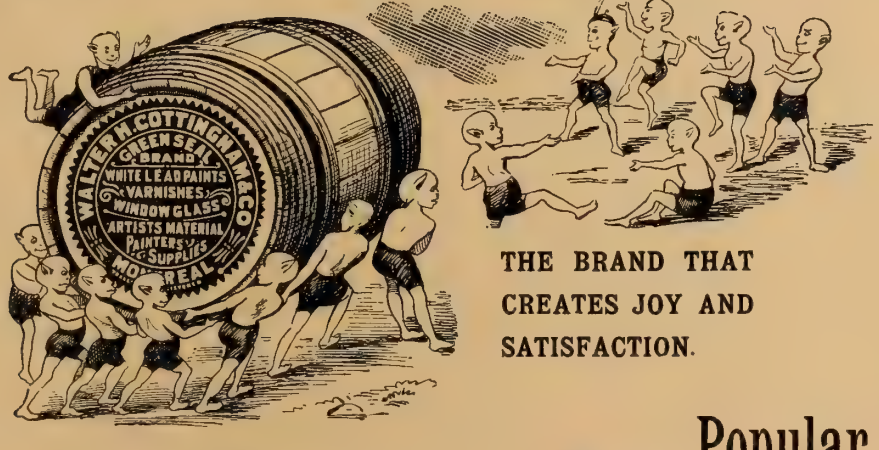
High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

MAGNOLIA METAL CO.,

London Office: 75 Queen Victoria St.
Chicago Office: 41 Traders Building.
Montreal Office: H. McLaren & Co., Agents

Owners and Sole Manufacturers,
74 Cortland Street, NEW YORK.

The Great Green Seal PAINTS



THE BRAND THAT CREATES JOY AND SATISFACTION.

Grow More Popular Every Day.

WALTER H. COTTINGHAM & Co.

Sole Proprietors, MONTREAL.

Large Increase in Sales for 1893.

Glistening Cream for Furniture.

A Polisher, Shiner, Brightener, and Glosser of everything, from a Piano to the buckle on your shoe.

• • •

Is not a varnish, but will clean and renew the gloss on your furniture and the woodwork in your house, making everything glisten exactly like new. The judicious use of a single bottle will make your house appear as though you had expended a hundred dollars in revarnishing. Try it on your woodwork, give it a severe test, and you will be delighted. **Glistening Cream** effectually removes that smoky blue dullness so often seen on Pianos and other highly polished surfaces.

Absolutely no labor necessary, simply apply with a cloth and wipe off. This article is just out, and there is nothing like it.

Everything Glistens with "Glistening Cream"

RICE LEWIS & SON, Ltd.

Wholesale Agents. **TORONTO**

Copper Cider Kettles

(BRAZED AND HAMMERED.)



PLATE 237.

PRICES ON APPLICATION. **CORRESPONDENCE SOLICITED.**

MANUFACTURERS OF

Brewers, Distillers, Confectioners . . . Varnish Makers Plumbers and Marine

Copper Works

The Booth Copper Co.

Formerly BOOTH & SON. • 122 Adelaide Street West, **TORONTO**

STANDARD . . STOVE-PIPE

PATENTED.

Packed 25 joints in a closed crate.
It requires **NO RIVETS OR TOOLS** to put it together.
The seam does not require pounding down.
It is uniform in size, and, being crimped at small end, secures a close and easy fit.
It has a coating which prevents rust.
It can be bought as cheap as ordinary misfitting stove-pipe. - - - - - - - - -
Being nested, secures low freight rate.

Kemp Manufacturing Co.

TORONTO, ONT.

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, NOVEMBER 11, 1893 No. 45

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

HEAD OFFICE: - - 10 Front St. E.
MONTREAL OFFICE: - 146 St. James St. E. Desbarats, Manager.
NEW YORK OFFICE: Room 41, Times Building. Roy V. Somerville, Manager.
EUROPEAN BRANCH: Canadian Government Offices, 17 Victoria St., London, S.W. R. Hargreaves, Manager.
John Cameron, General Subscription Agent.

The past season is said to have been a disappointing one in some respects at least to Canadian manufacturers of reapers, mowers, plows, etc. Stimulated largely by the conditions in the Northwest they anticipated requirements to an unusual extent. The results, however, fell short of the expectations, and to-day probably all the manufacturers find themselves compelled to carry over unusually heavy stocks. It seems that the big manufacturers are the greatest sufferers in this respect. One in particular is credited with having several hundred binders alone left on his hands. The smaller manufacturers were evidently more cautious, but still some of them are credited with having a couple of hundred machines lying in their warehouses. To make matters worse collections in Manitoba and the Northwest are anything bnt satisfactory; and besides carrying over a number of machines the manufacturers will have to carry a good many customers until such time as they are able to liquidate their liabilities. Trade generally in Manitoba and the Northwest has been disappointing this season. With British Columbia not much was expected, and no one was therefore disappointed. With Manitoba and the Northwest, however, it was different. Prospects there were bright, but deliterious influences, such, for instance, as the low price of grain and the depression in the United States, sprang up and nipped the anticipations in the bud. Consequent upon the position in which manufacturers find themselves they are exercising a good deal of caution in regard to purchasing raw material, and iron and steel men report smaller sales to this class of trade than usual at this time of the year as a result.

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Sweden as an iron and steel manufacturing country is gradually creeping into a more prominent position. A Sheffield manufacturer named Senior has recently been visiting that country, and his impressions he has been giving to a reporter. At present it seems England is only taking about two-thirds of the quantity of Swedish iron and steel that it did four and five years ago, although while that country has not been taking so much it does not appear that Sweden has been manufacturing less, for other countries have been taking large quantities. As regards electricity and telephones the people of the Scandinavian peninsula are far ahead of the English. Stockholm, a city of 200,000 or 250,000 inhabitants, has upwards of 10,000 telephones. In passing it may be interesting to note that Toronto, with a population not far short of that of Stockholm, has only about 5,500 telephones, and we generally pride ourselves on being well up to date in this respect. The table instruments in Stockholm are made of aluminum, and every room in the large hotels is fitted with a telephone, enabling, as Mr. Senior says, a guest to telephone to any part of the kingdom almost from his bed. Telephones are evidently a good deal cheaper in Sweden than in Canada. Sweden abounds in waterfalls, and these are utilized to great advantage in the working of machinery. In fact most of their power is water. Their rolling mills are constructed on the American principle, but in ordinary rolling Mr. Senior believes the English can beat the Swedes easily. Nearly the whole of the cutlery used in Sweden is of home manufacture, and the Swedes are exporting more and more of this class of goods every year. In point of finish, however, Mr. Senior holds that this cutlery is much inferior to that made in Sheffield. "In one branch of cutlery, however, the Swedes are able to compete on equal terms with Sheffield makers, their razors being in some instances excellently made. The complaint generally made with respect to Swedish knives is that they are too thick on the cutting edge. They are not ground thin enough, and the makers have a habit of plating the knives, which detracts from their utility." As a skate manufacturer Sweden is well-known. In the manufacture of crucible cast steel, the Swedes are making great strides and their exports in this line are increasing. The metal however does not appear to be up to that of the same class turned out at Sheffield. Their great drawback is the scarcity of coke, which necessitates their turning their attention to gas furnaces, which are not so satisfactory for steel making as the English methods. Mr. Senior says the progress made in some directions is simply marvelous, and as an instance points out where at one place a wire mill, a rod mill and a sheet mill are being erected, all of which are to be driven by electricity, the power for which is obtained from a waterfall five miles distant.

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The Review of Reviews for November contains an interesting article on the Great Northwest. It is from the pen of S. A. Thompson, president of the Duluth Chamber of Commerce. It deals with the United States Northwest in general and that lying within Canadian Territory in particular; and it is this that makes the article of more than ordinary interest to Canadians. Mr. Thompson sees great possibilities in store for the Canadian Northwest; and were he a Canadian bred and born he could scarcely have done the subject more justice. He marshals figures to show that while the ten Northwestern states of the Union aggregate 859,325 square miles, the total area of the organized provinces and districts of Manitoba, Kewatin, Alberta, Athabasca, and British Columbia is 1,245,305 square miles,

and furthermore, that beyond these organized provinces lies an unorganized territory with an area of more than sixteen hundred thousand square miles.

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Mr. Thompson does not, however, stop with the mere matter of area. He also takes up the productiveness of the Canadian Northwest, and with clearness and conciseness tells what must prove a revelation to numbers of his fellow countrymen who look upon Canada chiefly as a land encircled with icebergs and fruitful in ice and snow. He divides the Northwest into three divisions. That lying between Hudson's Bay and the great chain of inland lakes in the valley of the Mackenzie River, extending from Lake Superior to the Arctic Ocean, he points out, is wooded and mostly rocky and swampy, but contains at the same time areas of good land. His second division lies between the great lakes mentioned and the Rocky Mountains, and is a great stretch of fertile plains, part prairie and part wooded. His third division is the Alpine region extending from the Rocky Mountains to the Pacific Ocean. Of rivers navigable to steamboats, he points out that the Canadian Northwest has ten thousand miles, while he quotes Archbishop Clut in regard to the Mackenzie River being "deeper, wider and grander" than the St. Lawrence, and furnishing with its tributaries more than twenty-five hundred miles of navigable waters. In comparing the productiveness per acre of the territories lying north and south respectively of the boundary line, he demonstrates that the balance is in favor of the former, and backs it up by speaking of wheat raised 2,000 miles or more to the north and west of Lake Superior that yielded 34 bushels to the acre "of large, plump, flinty berries," something like 34 bushels to the acre and 65½ pounds to the bushel. Rye, oats and vegetables, he shows, can be grown in the far north, while that the "passible limit for the ripening of barley and of potatoes lies beyond the Arctic circle."

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The secret of the greater productiveness of the Canadian Northwest over that of the United States Northwest, which lies so much further south, is altitude, the navigable channel of the Mackenzie River only being 300 feet above the level of the Arctic Ocean, while the valleys of the Peace and Lizard Rivers are but 1,000 feet above the sea. Where the Canadian Pacific crosses the south branch of the Saskatchewan the elevation is 3,000 feet, and the Athabasca district is one thousand lower, while where the railway crosses the Rocky Mountains the elevation is but 4,000 feet above the sea level. On the other hand, where the Union Pacific crosses the elevation is 8,000 feet, and where the Great Northern gets through it is 5,300 feet. But the average height of the Colorado basin is even greater than the last figures quoted. But there are other conditions besides altitude which favor the Canadian Northwest. There are, to be brief, the great Japan current, the Chinook winds and the greater length of days. In June in the Peace River district the sun rises about 3 a.m. and does not set till after 8 p.m. Canada is a great country, and the president of the Duluth Chamber of Commerce is helping to teach the world that it is.

TURPENTINE HANDLERS AT WAR.

It is the unexpected that is always happening. A case in point illustrates this. In the last issue of HARDWARE it was stated that the Ontario Turpentine Association would probably advance prices 2c. per gallon before the week was out. And at that time there seemed to be good ground for saying so. First of all some members of the Association ventured the informatian that such an advance would be made, and then the market in the South had advanced 1½c. per gallon. But instead of there being an advance of 2c. per gallon there was a decline of 2c. per gallon.

This entirely opposite and unexpected step was not the result of any weakening in the outside market. It was due entirely to dissentions in the trade.

Among the handlers of turpentine that are not members of the Association is a Toronto house, that while not a member has been nominally so, in so far that it was supposed to follow the Association in regard to prices.

At the meeting of the Association held last week it was alleged that this particular firm was not keeping faith, being in the habit of selling turpentine at less than the listed price. "We have had several letters from people saying that they could buy turpentine cheaper from So-and-so than from us," remarked one member. The outcome of the meeting was the adoption of a resolution reducing the price from 46 to 48c. to 44 to 46c. a gallon instead of advancing it as it was proposed to do when the meeting was called.

Members of the Association spoken to regarding the matter did not hesitate to say that the object was to get the price down to a fighting basis ; and it is not at all improbable that another drop will be ordered, notwithstanding the continued firmness in the Southern market. The price, it is claimed, is now down to about cost, and a further reduction would mean, therefore, doing business at an actual loss. One handler outside of the Association claimed that the house complained of had not been underselling the market, and that the action of the Association was merely a move to force it to become a full-fledged member.

HARDWARE is informed from a pretty reliable source that the move of the Association will be followed by a counter move on the part of the firm that has incurred its displeasure, and a period of reckless cutting in price is probable, which may extend to linseed oil.

WHERE IS T. D. GRAHAM?

T. D. Graham of the Graham Nail Works, King street west, Toronto, has absconded. About two weeks ago he left ostensibly to visit the World's Fair, and he was gone some days before it was realized that he had gone not to return. Then what was presumed was assured by the discovery that his household furniture had been disposed of—to a second hand dealer, it is said.

The announcement of his departure surprised everybody. He was doing a good business, was turning out a first-class article, was popular, was looked upon as the soul of honesty, and his friends to-day are fathoming their minds for the discovery of a cause for his sudden departure. One of his most intimate friends who had endorsed a note for him for $600 made a trip to Chicago to try and find him, but he was not successful. He, however, has not yet lost faith in Mr. Graham, and believes that he will reimburse him.

H. S. Howland, Sons & Co. are the principal creditors, and W. McNally & Co. of Montreal are owed a little, but outside these Mr. Graham's liabilities to the trade, as far as can be learned, are little or nothing. Mr. Graham's departure was as much of a surprise to the Messrs. Howland as to anyone else, and it is just possible that they may put the machinery of the law in operation and bring him back.

The works are now in possession of H. S. Howland, Sons & Co., who assumed control in accordance with a certain agreement. The works were only shut down a couple of days, and that was in order to take stock. They are now running as fully and as briskly as ever. All the practical men from the manager down have been retained, and the only difference is that H. S. Howland, Sons & Co. are in control instead of Mr. Graham, so that the trade may be assured that it will get as of yore the well known Graham nails.

THE FIRMNESS OF CEMENT.

Owing ta the withdrawl rather early this season of several of the ocean steamers running to London, lines of heavy goods which are secured from that port have felt the influence this fall in so far as values at Montreal are concerned. This is the case more especially in cement than in any other line. Last fall, also at the same season, the same state of affairs was to note, due to a similiar cause, except that it was a little more aggravated owing to the wreck of the S.S. Gerona on the coast of Scotland with a large cargo of cement on board. At present however there is a temporary scarcity of the article in Montreal, and the market there has been subject to irregularity in the value of receipts owing to the big gaps in the arrival of steamers from the port of London. First of all the Ross Line withdrew their London boats and then Harling, Ronald & Co. did the same, which took off four steamers. This happened over a month ago, and since then the London service has been entirely supplied by the Allan Line, and they also have spread out their date of sailing and reduced the number of their steamers, so that instead of two steamers a week arriving at Montreal from London it has frequently happened that only one has arrived in a fortnight. The result has been that the market at intervals was entirely bare of cement, while on the other hand, after the arrival of a steamer, there would be a big jag of stock to work off. This would gradually move forward, and then supplies would thin out again. This irregularity has kept the price of cement firm, and at present the stock of it in Montreal is small, while the demand, owing to the mild weather we have had this fall, is of larger volume than usual at this season. However, despite these influences, the expectation is for the usual stocks of cement to carry the trade through the winter. There are three or four more steamers yet to arrive, each with round lots, which will sensibly replenish the small stock at present held in Montreal. Values, however, in view of the various conditions above outlined, are expected to rule firm, and all the more, especially if the present fine mild weather is of much longer duration. The fact that railway freights advance on the 13th is also leading to the rushing forward of stock.

MARKING GOODS FOR EXPORT.

The Canadian Department of Trade and Commerce has issued a very important circular with reference to the British "Merchandise Marks Act," which manufacturers and shippers to, or through Great Britain, of goods manufactured in Canada would do well to study, as it may save them much delay and trouble, if not the actual loss of their goods. The British authorities are very strict in their interpretation of the act, and any infringement of its provisions renders the goods improperly or insufficiently marked liable to confiscation. Thus, for instance, goods manufactured by John Smith of London, Ont., and so marked, would be held to have been illegally imported under a false trade description, and subject to forfeiture, whereas if marked as manufactured by John Smith of London, Ontario, Canada, they would not come within the prohibition. The initials or abbreviation usually used in Canada to indicate a province, as Ont., P. Q, or Que., or N.B., etc., added to the name of aplace is apparently held by the officials in Great Britain as not a sufficient compliance with the terms of the section which requires "the name of the country in which the place is situate."

TALKS WITH RETAILERS.

"What hardware men want is an association for the protection of their interests," said a Toronto hardware merchant, picking up a daily paper and pointing out an advertisement in which a large department store was offering a best quality wringer, with wash tub stand complete, for $3.25. "Now the lowest cost price for the goods mentioned is $30 per doz. for the wringer and $15 per doz. for the tub stands. How do you expect us to compete with such prices, and how can they afford to sell at such ruinous rates? This is only one case. Cast your eyes over the Toronto papers, then over the discount sheets, and you will see plenty of cause for our complaints."

The hard times in the United States are causing a great many more firms to place travelers on the road in Canada. Retailers have been visited much more frequently lately by the American drummer.

"I am doing a fairly good business all round, and am very busy in the stove trade," said Mr. Ivory, Queen street, Toronto. "There are more men in the business this year than last, but I am having a larger trade and am kept pretty busy, but I always find time to read HARDWARE, which I would not be without."

Stove men are looking forward to the fall of the thermometer. The continued warm weather has a somewhat depressing effect on the stove business, but wait till we have a cold snap and the farmers are all in from their ploughing!

A HARDWARE reporter was shown through Wheeler & Bain's hardware store, Toronto, and was initiated into the various ins-and-outs of their furnace and stove works. This firm has received the contract to place furnaces in the Fort William jail.

THE DEPARTMENT STORE EVIL.

City retailers in hardware have good cause to complain of the harm that is done to the business by large department stores that handle cheap lines of hardware. The average housewife, many of whom, though thoroughly up to the times in the way of dry goods, etc., are, when it comes to hardware, "penny wise and pound foolish," and will not hesitate to buy what she fondly imagines to be a bargain. A spade is a spade to her, and a hammer a hammer; in fact a lady was recently heard to say, when asked if she had a hammer in the house, that she had no use for one. The flat iron was good enough for her. Novelties in hardware are largely taken up by these stores, and low prices in plain figures catch the eye of their customers. They have a big advantage over the small retailer in the chance of bringing these goods before the eye of the housewife. Women go into these stores ostensibly for the purpose of purchasing small sundries. These small wares attract their notice, and they say: "How nice it would be to have one of these, and how cheap they are; you could not get them for that price in a hardware store." The truth is they have never tried, perhaps have never seen them or heard of them before. The mechanic, however, deals very little in these large establishments which sell everything from a needle to an anchor. He is looking for tools, etc., that he can rely upon, and wants something, not how cheap, but how good, and has no use for the hammer that will glance and the axe that was not made to cut, but to sell. If the retail hardware man wishes to regain and retain the business which he has lost in the way of lamps, cheap household hardware, and novelties, he must pay more attention to window display. Don't hide your light under a bushel. If you have anything that is cheap or new in the way of novelties, etc., put it in the window where it will catch the passing eye of the afternoon shoppers. If they are cheap, be sure and mark them in plain figures. The housewife is always on the lookout for a bargain, let her have a chance of seeing yours.

A READY CUTLERY HOLDER.

Mr. Mayer, of the Toronto Cutlery Co., is the inventor of a simple but effective device for the purpose of holding cutlery on the outside of cardboard boxes. It is made with an inch or more of small brass coil spring, at each end of which is fastened a common paper binder. The binders are then pressed through the end of the box and clinched on the inside. The knife, fork, or other article that one wishes to display is then pushed under the spring, which hold them firmly to the end of the box, and which can be removed with ease. Mr. Mayer claims this to be the most effective and simple device for the purpose that has ever been invented.

CASH FOR HARDWARE.

A tendency is noted on the part of retail dealers in hardware to demand cash on all sales. This perhaps does not arise so much from a lack of confidence in their customers or from any intention to offend them unnecessarily, but from the necessity of meeting their own bills promptly on time and partly because of a suggestion made to them by the jobbers. One instance is reported where six dealers in one section met together and resolved among themselves to demand cash in payment for goods. This information was conveyed to the jobbers from whom all their purchases were made, and the result was the granting of a credit that would not otherwise be given.

Credits are scanned more closely than at any time for years, and this, like the action of the dealers referred to, arises from the exigencies of the times. Collections, while really equal to what might be expected, are not up to the standard, and, although this does not appertain especially to the hardware trade, yet it applies with sufficient force to require a very careful examination of accounts before credit can be extended. The comparative scarcity of failures or embarrassments in the trade, arising from the disturbances of last summer, are noteworthy illustrations of the general solidity upon which the trade is based, yet this does not indicate an entire absence of trouble, and it is probable that the hardware dealers as a class have not escaped a contact with the string key that effected merchants in all other lines. For this reason, therefore, the demand for cash settlements is not only a needed but a wise move, and it is to be hoped that the effect in all the various mediums of trade communications will be of a character that shall ensure a safe return to the methods ordinarily in force.—Hardware Reporter.

ALUMINUM STREET-CAR TICKETS.

We are informed, upon Western authority, says an exchange, that yet a new use has been found for aluminum. A street railway in Kalamazoo, Mich., has issued tickets made from that strong and light metal. They are about the size of a quarter of a dollar. One is round, for ordinary fare, the other octagonal, for children. The adult's ticket is sold by the railroad company to the public at the rate of six for a quarter, and the child's ticket at the rate of ten for a quarter. The company does not allow the employees, either conductors or motormen, to sell the tickets to the public, and dispose of them in ten-dollar lots to the several storekeepers who handle them exclusively. This method of distributing the tickets overcomes to a certain extent the difficulties which have always attended the sale of tickets by employees in connection with the receipt of cash fares. The aluminum ticket has also the great advantage of requiring no cancellation. As soon as the tickets are turned in by the public to the railroad company they are done up in packages and sold again. It is said that the tickets are much in favor, and that they are handled by a great many storekeepers and even by some of the banks as cash. The use of the tickets does not clash in any way with that of the ordinary quarter, from which it is easily distinguished, both by the difference in shade of the metal and by its lightness.

HOW TO KEEP THE STORE CLEAN.

That depends on the store—will be an answer which naturally forces itself upon one, when he considers the diversity of store buildings. Where the store means simply a salesroom, with samples only of large goods, and small quantities of shelf goods the matter of neatness is not nearly as difficult as it is in a store where a single room represents salesroom, office and warehouse combined.

It is absolutely impossible to even imagine a perfect clean hardware store. There must be a corner, or a room, and often a number of corners or rooms, where unsightly and dirty things can be stored. Dirt is simply a question of distribution.

Neatness and cleanness mean not so much the absence of dust and dirt as the distribution of these unavoidable evils. When a portion of a store building is devoted only to the display of goods it is not a very difficult matter to keep this portion of the store perfectly neat and clean. Of course goods will be left on ledges and in improper places during a rush of custom, but a clerk or clerks with an eye for neatness will soon find an otherwise unoccupied moment in which to remedy these irregularities.

"To have a place for everything, and everything in its place," is the great desideratum. This will only be reached when each individual is held responsible for a certain portion of the store, and when clerks who are by nature inclined to slovenliness (and there are such) are forced to be neat in their persons as well as in their surroundings, because a person slovenly dressed, standing behind the counter, will completely counteract the beneficial influences of a neat-looking store on a customer. Of course, it goes without saying that cleanliness and neatness are a great attractive feature in a store. Unhappily, many hardware stores are so unclean and disorderly that ladies are afraid to enter them. In such stores goods are usually covered with dust; bright goods are to a greater or less extent corroded, often through careless sprinkling, all of which detracts from the selling qualities of the goods. It is a well known fact that whoever buys goods wants them to be new, and wants them to look new. Even such people as will leave a new axe in the open yard during a rainy night will not be satisfied to get an axe with a rust spot on it.

It is necessary to have a "general cleaning up" of the store once a day. This should commence on opening the store in the morning. It should be made an inflexible rule that all goods should be in their proper places before closing in the evening. By this the accidental sprinkling of water on goods left on the floor during the day will have been avoided. Much importance attaches to the use and abuse of a sprinkling pot. It is a very easy matter to spray a few drops of water into a nail bin now and then, or on the base of counters and the legs of stoves; but each drop will count, and will detract from the general appearance of the store. Even in so insignificant a matter as sprinkling it is necessary to use care and judgment. Of sweeping and dusting, the same may be said. It is impossible that these daily cleanings should be anything more than superficial. To make the cleanness of the store as nearly perfect as possible, it is nessary that on each day, after the general cleaning, and during leisure moments, a small portion of the stock be cleaned thoroughly. To do this goods must be moved from their places and replaced after thorough cleaning. It is very disgusting for a would-be purchaser to have a cloud of dust blown into his face from the top of a bird cage which is being taken from its hook, and where it had hung unmoved since its arrival in the store.

Show windows (and showcases also, to a more limited extent) should contain samples only, so that it is not ordinarily necessary to remove part of a display to supply a customer. When it is unavoidable to thus "rob" a show window, the missing article should be immediately replaced, since nothing is less attractive than a show window with empty spaces in it. Better have no show window than to have one that is not absolutely neat and clean at all times.

New goods should in all cases be unpacked and marked as far away from the interference of customers as possible, preferrably in the warehouse, and should be stored as quickly as circumstances will permit. It is very undesirable to have customers see too much of the inside workings of your business. It is therefore a necessity to have a place set apart for the storage of goods pending delivery, or the arrival of invoices, for unpacking and marking. Odd goods, such as samples of articles not in stock, should not be allowed to accumulate in any one place, but should rather be distributed among other similar articles. This will greatly increase the chance of selling, and thus removing them. Never should imperfect goods be allowed to lay about, least of all such as

have been returned for imperfections. Broken articles should be either repaired at once, or, when that cannot be done, they should be removed, since all imperfect goods discredit perfect ones of the same kind Next in importance to the buying and selecting of goods is the keeping of them neat and clean.—Walter Eikel, in Iron Age.

WHERE SCRAP IRON GOES.

Nothing goes to waste on a big railroad, remarks a U. S. contemporary,, and every scrap of iron and much second-hand material is valued at a fixed price and carried on the books as so much stock on hand. The system followed by the storekeeper's department of one railroad is a sample of many. The second-hand metals are gathered and placed in piles, regularly assorted. Then they are classified by the foreman and taken into stock by the storekeeper or assistants. There are regular schedules—one of material, which can be used again, which is denominated "second-hand," and another of material which has to be melted before it can be used, which is known as "scrap." The classes are arranged something after the following order: Steel scrap, Nos. 1, 2, 3, 4, 5 and 6, at prices ranging from $28 a ton down; wrought iron, Nos. 1, 2, 3 and 4; cast iron, Nos. 1, 2, 3 and 4. Even borings are taken into account, brass borings being credited at eight cents per pound and brass scrap and copper at twelve. This material is shipped to division headquarters where a car load has accumulated. Here it is disposed of by the storekeeper on order of his chief, being shipped in car loads to big dealers in old metals in large cities. Much of it goes to Pittsburg, Cincinnati and such points. Orders for as high as 500,000 pounds of one kind of material are occasionally received from single firms. Most of the second-hand material is used over again in the shops, but it is previously taken on the books at a fixed price by the storekeeper and is charged up to the account of the articles for which it is used. All usable No. 1 wrought iron is received and charged up at 1 1-4c. a pound, and cast iron at 1 cent.

MAKING BRONZE POWDER.

It is reported that nearly one hundred establishments are engaged in the manufacture of bronze powder in and near the cities of Furth and Nuremberg, Germany, says N. Y. Hardware. The article is composed of copper, tin, zinc and antimony, melted in proper proportions, and cast first into rods of half an inch in diameter and about three feet long, these rods being rolled until about two inches wide, and then cut into suitable lengths for handling. The pieces to the hammers, where they are beaten into a very small fraction of their former thickness, and are then taken to a sulphuric acid bath, where each sheet is washed to remove all impurities,rust and dirt. After being thoroughly dried, the sheets are again hammered by steam hammers until no further reducreduction is possible, there being a limit to which machinery can be used. Up to this stage the treatment which the metal receives, whether intended for powder or metal leaf, is identical; but now the process changes. If designed for metal leaf, the further beating is done by hand, but if for bronze powder, the sheets go to the shears, where they are cut up into small particles and become known as clippings. These are now ready for the stamp mills, which are run in batteries, enabling one man to run or attend fifty or more. When sufficiently pulverized, the powder is sifted in a special manner, the heavier and better qualities going to one receptacle and the inferior grades to another.

REGARDING STEEL PLATES.

In last week's issue, says American Manufacturer, reference was made to certain improvements suggested by William Muirhead, of Lanarkshire, Scotland, in the manufacture of steel plates. At the recent meeting of the British Iron and Steel Institute, Mr. Muirhead gave the full details of his suggested improvement. He now has charge of an entirely new works in the Motherwell district of Lanarkshire, for the production of angles and bars. The rolling plant consists of a 27 inch bar mill and a 12 inch guide mill. The success which has attended the angle and bulb rolling in the 27 inch mill, he states, is due entirely to the high speed adapted for the blooming of the ingot as well as for the rolling of the finished bars, both operations being done in 2 sets of rolls driven direct off the engine shaft, without the intervention of gearing. This was a new feature in that section at least, and it was thought that a blunder had been made; after 2 1-2 years rolling with this plant Mr. Muirhead believes that the most economical way to roll sectional steel for shipbuilding and other constructive purposes, as well as the one that is easiest on the rolling plant and engine plant, and on the material being rolled and that is accompanied with the least risk of breakages, is very high speed combined with quick passes and shallow draughts. He believes further that the same principle applied in a modified form to plate rolling where surface has to be dealt with rather than length would be equally successful. The combined bar mill and blooming mill mentioned by him is driven by a pair of 40 inch coupled reversing engines with 5 feet stroke, and with 100 pounds steam pressure per square inch at boilers. In describing the operation Mr. Muirhead says: "The ingots we are ordinarily in the habit of using are about 15 inches square at bottom, and weigh from 22 cwt. to 24 cwt. each. The operation of blooming down these ingots, running the bloom on the live rollers to the guillotine, and cutting the requisite weight off the same for rolling any required number of lengths of angle bars—all in one piece, of course—varying from 150 feet to 200 feet, at present limited by our bar bank, now under extension, and occasionally, by the class of section being rolled, takes on an average about 6 minutes. Our high speed mill enables us to deal with these bars very quickly, and to finish them with the characteristic blue skin. The blooming and cutting part of the operation takes nearly four of the six minutes. I note this as it has a bearing on a subsequent remark. The upper part of the ingot is billeted down to about four inches square—the extreme spongy end being removed as scrap—to feed our 12 inch mill, and we thus avail ourselves of the full heat of the ingot by finishing right out in the 27 inch mill, and at the same time we feed our small or auxiliary mill with billets, all, as explained, in the one operation. This is done as before mentioned, with one pair reversing engines in one continuous train; but when another pair of engines and housings are added to the opposite end of the train—where a space has been left for the purpose, which is the intention, as manager, I have in view, so that the cogging rolls can be uncoupled from the finishing rolls—then 50 to 75 per cent. would be, I feel quite convinced, added to our output. The procedure just described is not carried out absolutely with the initial heat of the ingot, but very nearly so, as our vertical gas heating furnaces are close to the casting pit, so that the ingots can be swung round and quickly lowered into these furnaces. From the experience gained in angle rolling on the foregoing principle, I have arrived at the conclusion that plates may be successfully rolled in the same manner, that is, in one operation, from the ingot, almost with its own initial heat, out of vertical gas heating furnaces, and by doing so abolishing slabbing as a separate and intermediate operation as at present carried on, and likewise doing away with the necessity for the present system, and also the heavy costs involved in the handling of slabs and the fuel consumed in the reheating of the same. I am quite prepared to be told at this juncture that there is nothing new in the idea or suggestion to roll steel plates direct from the ingot in one operation. I at once grant the accuracy of this statement, assuming it to be made, but there is something novel in the way in which I now propose to do so."

COST OF STEEL RAILS.

The Engineering and Mining Journal says: "The estimate of the cost of converting pig iron into steel rails, which we last week said 'can scarcely exceed $5.50 per ton,' has been criticized by some of our largest steel manufacturers. The figures mentioned, which did not include interest, depreciation, alterations, etc., was based upon those given in Carroll D. Wright's report to the Bureau of Labor, 1890, being reduced from his figures proportionately to the reduction which has taken place in wages and material since that time. It would, of course, increase this figure to add to it interest on capital invested in plant and stock; depreciation of plant with necessary changes to keep up with the latest practice—in other words, to make the cost of conversion include a fair minimum manufacturers' profit. One of our critics writes us: 'The average cost of converting pig iron into a ton of steel rails in American works is not less than $10 correctly figured. I mean that the concern that runs year after year, keeps up its works, meets bad debts, pays interest on capital and interest on stock materials, will find that $10 per ton above the cost of pig iron will not more than cover.' The present is not, however, a time of average costs; in fact in most departments of manufacturing it is probable that they are now fully 20 per cent. below the 'average,' and most manufacturers are quite satisfied at the present time if they can get the minimum manufacturers' profit, of actual present cost and interest on capital. The extremely low price at which steel billets have recently been sold ($17.35 per ton) shows to what perfection of manufacturing and to what economy some of our works have attained."

The price of aluminum, which a year or so ago declined to 50 cents a pound, but subsequently rose to 75 cents a pound, at which it now stands, is about to decline again to lower figures than ever before reached. The day is not distant when this interesting and, for many purposes, valuable metal will be produced in what would now appear enormous quantities, and at prices which will give it many new uses. The Aluminum Industrie Actien Gesellschaft of Neuhausen, in Switzerland, informs us that the increase of its dynamo capacity to 4,000 horsepower, and some improvements in the processes employed, have enabled it to increase largely the production of aluminum, and that the price from January next will be five francs per kilogram, or 45 cents per pound. It must be remembered that owing to the low specific gravity of aluminum, if equal bulks, not weights, of the different metals are taken, this price is really lower than that of copper as recently as 1890, and is actually less than that of tin at the present time. Such a reduction in price is likely to be followed by a very considerable increase in the use of the metal for various purposes.—Engineering and Mining Journal.

SHOP TRANSPORTATION.

Recent developments in methods and appliances have brought to the front the importance of adequate means of transportation of materials within the limits of the shop and modern manufactory, says Iron Age. The means to be adopted and the relative expenditure advisable must, above all, depend upon whether the goods to be transorted are manufactured or built, as those two words are usually understood.

Where manufacturing has become a fine art, the tran portation facilities may be so specialized as to be capable of handling only specific classes of materials or individual parts of standard machines either separately or in bulk But when it becomes a matter of building only one article or machine of a kind, the arrangements must be of such general character as to meet all possible conditions.

Between these two extremes lies the golden mean to be attained in most manufacturing establishments. Special arrangements are almost universally provided for individual machines, but usually as a means of ready handling and for movement through only a short distance, rather than for actual transportation about the plant.

But the mechanism and arrangement which serve to convey a piece from one machine to another, as the process of completion is carried forward, enters most decidedly as a factor in the transportation facilities. Such is the convenient scheme of overhead traveling trolley with switches for individual machines, and even the ancient jib crane swinging the piece from each machine to its neighbor. The introduction of the pneumatic hoist has aided much in the operations of such arrangements.

For moving small pieces in bulk or larger pieces of symmetrical shape the belt or chain conveyor has proved an economical means, while the pneumatic tube still presents ample opportunity for its utilization. The massive traveling crane, developed from the hand trolley, has almost leaped into prominence, and its latest development in connection with the electric motor as a means of propulsion has placed at the command of all a method of transportation from one part of a building to another that cannot be excelled.

The place of the hand truck has been usurped by the modern narrow guage shop railway, with its switches and turntables, its easy-running cars and its ready adaptability to all conditions and arrangements. Whether the motive power shall be human or animal, or whether the work shall be done by steam or electric locomotive, by cable or by electric trolley system must depend upon the weight, character and number of the pieces, and the distance they are to be carried.

When the interest and depreciation account upon such appliances is compared with the running expense for manual labor, which would otherwise be necessary, it is surprising to see what expenditures the manufacturer would be justified in making, and what economies would result from the introduction of improved facilities for transporting his manufactures about the establishment.

IRON TRADE PROSPECTS.

The Iron Age takes a very conservative view of the outlook for the iron trade. It says: "The recovery must be along the line traversed in the downward path. One of the troubles which has been at the root of the evil has been cleared away. Money is as plentiful as it ever has been. But it will take a long time before it galvanizes commerce and industry with renewed life. It takes time before a capitalist grows tired of having his money unproductive, before the eagerness for better interest overcomes the fear for the safety of the principal. The wage earner who has been forced to draw on his hoard of savings, or has run into debt, does not become a liberal buyer as soon as his income is restored to its usual amount. In other words, consumption rallies only slowly from the check which it has been subjected to.

"A good deal of stress is laid by merchants upon the fact that stocks of all classes of manufactured goods in the hands of the traders and jobbers who are nearest to the consumer are lighter than ever before. It must be concluded that that is an important element in the situation. But it is not likely to have much influence on prices, so long as the buyers know that there is a very large reserve manufacturing capacity. At the present rate of consumption there must be considerable swelling of trade before manufacturers are sufficiently confident of future orders to hold back for better figures. Another point which aids in retarding recovery is that a period of sinking prices causes buyers to adhere to a policy of purchasing in small amounts and withholding orders as long as possible. It is true that this ultimately creates a very rapid upward movement which in the past has culminated in historic booms. There are those who see in the present situation all the elements of such a phenomenal rise, but with the tariff question looming up as a very disturbing factor, there is no prospect of any marked advance in any quarter in the near future."

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BEGIN RIGHT.

Whatever work you slight in life, do not let it be the ground-plan work. Nothing can make up for a bad foundation to a building. Let your spelling, ciphering, grammar and hand-writing be as near perfection as your hardest work can make them. If you are unskilled in any of these lines you will always appear at a poor advantage as a business man. Your employer will estimate you very much in accordance with your acquirements here. If you feel your deficiencies, the only wise course is to set out with a determination like a flint to master the point. Write after copies in leisure minutes. Read with sharp attention the directions that go with the copies. Study some plain treatise on grammar, if you are deficient here, and go through an arithmetic page by page if necessary. If you are really strong and determined, you can conquer by yourself with such chance help as you can get from some more-advanced friend.

Suppose you also give twenty minutes a day to close study of something connected with your business. What a gain you might make every week. What advantages young men have now compared with those of the past generation. How many blunders may be saved young tradesmen commencing their career by one such book as "How to Keep a Store." But it is useless to have a price put into the hand to get wisdom, if one has no heart for it. A mother may make her son the Christmas present of the book, but if he lays it away carefully, without reading, where will be the profit?

There was once a young civil engineer employed as rodman, who carried his treatise on the business, slung over his shoulder by a cord, and carried under his coat to be out of the way, through the day, yet handy to be taken out at night. This book he read by the evening lamp, while the other members of the family played whist. He rose from his humble post to engineer in charge in seven months. His companions were two and some of them three years in reaching the same point, and some of them never attained it.

The very best time to study the theory of your business is when you are practicing it. An object lesson every hour comes up before you that will help to impress it upon your mind. And each will help to throw an interest about the other.

HOW TO MAKE RIVET HOLES.

My ideas have undergone a change on the subject of making rivet holes, writes Robert Grimshaw in the Tradesman. I used to think that punched holes were weaker than those which were drilled. I now find that they are really a trifle stronger—if they have been properly punched. The reason is that there is a sort of flow of metal around the punch. When it starts in through the plate it makes a slight depression in it before any metal appears on the other side; then when the plug falls out it will be found of less density than the plate from which it was punched. Some of the metal has been forced from before the punch into the walls of the hole, making a kind of bushing of compressed iron, which renders that hole less liable to tear when shearing strain is placed upon it than if it had never been reinforced. For steel plates I still stick to the notion of the durability of either drilling the rivet holes or reaming them out after punching, the reason being that the operation of punching effects a sort of tempering of the walls of the hole, and the metal thus tempered is more brittle than it was before having this change effected in it.

THE WESTERN IRON TRADE.

The Iron Trade Review says: "It is expected that the iron trade will share in the better feeling begotten by the news that silver purchase repeal is certain. Two months ago, when the House action was supposed to carry with it the assurance of Senatorial concurrence, there was thought to be some slight betterment in business along with the increased hopefulness. To what extent this would have grown but for the Senatorial delay and obstruction is only a matter of conjecture. Since loans involving large amounts have been waiting upon silver purchase repeal, it is probable that the latest development at Washington will modify the bank policy of accumulating, which has been a continuing handicap to business. If it shall be followed up by legislation tending to reinforce the Treasury gold reserve, and notifying Europe of the intention of this Government to maintain of gold the gain will be still more positive.

"The week has brought forth no new development in the iron trade. Prices have not declined since the last reported and it is probable that still more mill capacity is active to-day than at any time since the June shut down. But there is so little large work coming up in any direction that no early change from the condition of the past two months can be expected.

"It is certainly true that the situation has not grown worse. The competition for 100-ton orders is still as intense as for 1,000 tons under ordinary conditions. From the East there are reports of good demands for small and medium sized lots of finished material, quick delivery, and note is made of continued eagerness of Pittsburg mills for Eastern business. One small order for ship plates was secured by a Pittsburg mill on a basis that would scarcely net $1.40 on cars at Pittsburg. It would seem that billets have reached rock bottom, even from the mills of the cheapest producers, contracts aggregating 25,000 to 30,000 tons for far forward deliveries being reported from Pittsburg at prices said to range from $17.60 to $18, Pittsburg. While there is no change in the steel rail situation, and less than one-fifth of the possible production was achieved at the various association mills last month, it is reported that a considerable reduction in price is contemplated and this may lead to some contracting for needed renewals.

There are some indications that a better demand will materialize in the near future in other kinds of railroad work. Car builders will not begin operations with the amount of work anticipated, but they will be compelled very soon to make contracts which have been long deferred In the East, shipbuilding work is being pushed, but no new contracts for material will come up in the near future The demand from lake shipyards is practically nothing at the present time, and there is no outlook for the winter. Lake tonnage was far more than adequate to the past season's requirements, and possible investors will await the developments of another season.

"The pig iron market is entirely a waiting one. Negotiations that were almost matured some weeks ago, that would have taken a considerable tonnage off the regular market, may be taken up again, with better results, in which event the restriction of output may have a better chance to make itself felt. A few lots have gone upon the market recently which had been held as collateral by the banks or received by railroads in payment for transportation. These have been in part responsible for the extreme weakness reported in some quarters. In Western markets no further concessions on prices have been made the past week, yet demand does not grow and further restrictions of output may be looked for."

ASBESTOS AND ITS USES.

Of the many wonderful products of the mineral, vegetable and animal kingdoms which may be seen at the World's Fair, and studied through all the gradations of development from the crude raw material upward to the finished manufactured products, says N. Y. Hardware, few are more remarkable and interesting than asbestos, and probably none will so puzzle the unscientific visitor to say to which of the three great kingdoms it properly belongs.

In the crude state, as dug out of the earth, it looks like rock; crushed and carded till it lays up light, fleecy, and fibrous, or felted into thick sheets, it much more resembles wool, and spun into threads weighing only an ounce to one hundred yards which, in turn, are twisted into ropes capable of sustaining a strain of 1,500 pounds, or woven into cloth weighing about ten ounces to the square yard, or in heavier weights canvas, one is equally ready to declare that it is a near relative of cotton, hemp, flax, and other vegetable fibres. Meanwhile "the geologist with his little hammer" says that asbestos is a mineral converted to a fibrous formation by a process of crystallization due to volcanic action upon certain kinds of rock; but when you have seen the loom, and the carding and braiding machines at work on this material in the H. W. Johns Mfg. Co.'s section in the mining building, and the great exhibit of asbestos products and fabrics shown by Louis Wertheim, of Frankfort-on-the-Maine, in the machinery hall, you will more than half suspect that the geologist is mistaken, until the processes have been traced back to the crude mineral specimens lying near at hand. Anyone but an expert would deem the long, lustrous, mohair-like fibre of the Italian product to be the most available for manufacture, but both it and the Siberian—the latter found in localities almost beyond the bounds of civilization and as yet inaccessible to transportation—are inferior in felting and other essential qualities to the asbestos mined in the province of Quebec, Can., from which the remarkable fabrics shown by this German exhibitor are made.

Of this curious material, comparatively little is known by the general public, although by reason of its peculiar qualities of indestructibility by fire and water, or by powerful acids, its uses in the mechanical arts (only a few of which are suggested above) have become so varied and extensive that it is now, in its crude and manufactured states, a quite important article of commerce. In this country, it is used mainly as covering for boilers and steam pipes, and in packing joints and flanges, for which purpose its scope and value have been greatly extended by the recent perfection of the waterproofing process in a material shown by Mr. Wertheim under the name of Asbestit. As a packing material, asbestos is shown in a great variety of styles, in tapes, braids and bands, threads, cords and ropes, in weight and dimensions suited to different purposes; among which an asbestos rolled cloth packing with a rubber core and rubber coating has a large established trade on this side of the ocean. As a non-conductor, also, this material will occupy a field of growing importance in this age of electrical development, and its value to the builder of fireproof structures, is further illustrated in rolls of asbestos wall paper in handsome colored patterns, fire-proof sheeting and roofing, and cloth-like heavy canvas, suitable for linings or theatrical scenery. In Germany, many serious accidents are now avoided by requiring those employed in the manufacture of explosives and in chemical laboratories to wear suits of asbestos cloth, which, as shown by Mr. Wertheim, should also be of great value for firemen's uniforms.

The capacity for absorption is shown in wide rolls of asbestos blotting paper which, when it becomes seriously defaced by use, can be put on the fire, the ink burned out, and the paper recovered actually better than it was before. The above, though by no means exhausting the subject, will serve to indicate the capabilities and wide range of utility of this remarkable material, which are most comprehensively exemplified in an exhibit which by its completeness and the superior quality and finish of the fabrics shown, attracts the interested admiration of even our home manufacturers.

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TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

Wm .Byers, blacksmith, has opened at Mission City.

to Mitchell owing to the serious illness of his father.

An order is being asked for the winding up of the Reid & Currie Iron Works Co., Westminster, B.C.

The Moffat stove foundry, Weston, will begin operations shortly.

F. Davis, of McGregor's hardware store, Tilsonburg, has been called home

The walls of the Winnipeg linseed oil works gave way the other day, and the building was completely wrecked.

A delicately worded obituary states that the cook who put kerosene on the kitchen fire has gone to a new place.

W. J. Caven, general merchant, Springfield, has purchased the stock of the Lorne Park Supply Co. and removed it to Springfield.

The Victoria railway bridge over the St. Lawrence at Montreal, Canada, contains 3,000,000 cubic feet of masonry work and 10,500 tons of iron.

One of the most wonderful discoveries in science that has been made within the last year or two is the fact that a beam of light produces sound.

Four new members were elected at the last meeting of the Chamber du Commerce, Montreal. They were: J. B. A. Mongenais, N. Mathieu, J. R. Roy and Joseph Riendeau.

At a meeting of the business men of Welland the other night it was deemed advisable to establish a market, and the town council was memorialized to proceed with the project.

A builder recently sent me an order, which read: "I want a cottage range, with boiler on the right, as it faces you but on the left as you look at it," a difficult order to execute "on the face of it."—Ex.

Application is being made for incorporation by letters patent of the McRae Trading Company, Limited, of which the McRae brothers, of Ottawa, are the principal promoters. The capital stock will be $100,000.

At Chatham dockyard preparations are being made for laying down the keels of the two new vessels of war which are to be at once begun. The larger of the two vessels, the "Magnificent," will be more powerful, as well for offensive as defensive purposes, than any battleship hitherto constructed for the Royal Navy. She will be sister ship to the "Majestic" which is to be built at Portsmouth, both vessels being constructed from the same designs. It is anticipated that these two ships will be completed well within two years. The other vessel to be immediately begun in Chatham dockyard is the swift cruiser "Minerva," which will occupy about a year in her construction.

Business men of Belleville, Ill., have decided to raise $15,000 to liquidate part of the indebtedness of the Belleville Steel Company, the creditors having agreed to permit a resumption of the steel works when that amount is made up.

Japan claims to have the swiftest cruiser afloat, in the "Yoshino," lately built for the Japanese navy by Armstrongs. The vessel, which is 350 feet long and of 4,000 tons displacement, is said to have attained an average speed, with and against tide, of 23 knots an hour.

The chimney in connection with the General Electric Company's new station at London, Ont., will be the highest in the city. Its height is 125 feet, and in its erection there were used 107,000 bricks. The flue is four feet in diameter.

Although steel pens are made in some hundreds of varieties, only a small number of pens attain great popularity. Pens of fanciful form have been patented again and again, only to fail of public reception, and it is exceedingly difficult to make a place for any pen that gradually differs from the few forms now widely used.

The muzzle of an old cannon protruding over a foot from the ground at the foot of Sackville street, at the entrance to the Canada-Atlantic & Plant S. S. Co.'s wharf, is attracting the attention of curio hunters. It is said to have come off the old prize frigate Chesapeake that was towed into Halifax many years ago by the Shannon.—Critic, Halifax.

Mr. W. H. Severn, of Great George street, Westminster, is introducing into this country a nut lock which has been widely in use in Canada for some time. Its features are simplicity and thorough efficiency. It has been on trial on several large railways in this country with successful results.—Iron and Steel, London.

Inventors are busy endeavoring to produce a suitable fender for cable cars, so as to make it impossible for the pedestrian to be caught under the wheels. One invented by Henry H. Howe, of Albion, N.Y., consists of a sheet wire netting attached to each end of the car, extending about twenty-eight inches in front, clearing the ground by one and a half inches. The outer rim is cushioned with rubber so as to deaden the blow in striking a person, and the frame or netting is hung to the body of the car by yielding rubber cushions. Its application is simple, for the motorman, by simply pressing with his knee a lever, drops the netting, and thus catches the person in the latter and carries him along until the car can be stopped.

A Toronto manufacturer named Mulholland has taken proceedings for an injunction against R. E. Menzies, E. W. Turner, E. D. Manchee, and others to restrain them from interfering with the A. R. McKinley estate which the defendants purchased a few days ago.

A German has taken out a patent for producing varnish from linseed oil by means of an electric current. The oil, after being purified in a proper manner, is thoroughly mixed and agitated with sulphuric acid and water, and subjected to the action of an electric current for two or three hours, so that the oxygen produced in the nascent state by the passage of the current converts the oil into varnish. The varnish so produced is said to be almost colorless and perfectly free from all mineral or metallic admixtures or impurities.

Supervising Inspector-General Dumont, of the United States, in his annual report as to steam vessels and steam boilers recommends a change in the law which limits the thickness of the shells of externally fired boilers to twenty-six-one-hundredths of an inch, so as to allow such externally fired boilers to be built of material thirty-one-hundredths of an inch thick. That no harm is likely to result from the proposed change, he says, is satisfactorily shown from the fact that, by an amendment to section 4,434, revised statutes, approved February 11, 1885, material not exceeding fifty-one-hundredths of an inch thick was allowed an externally fired boiler "used on steam vessels navigating the Atlantic and Pacific oceans, or salt water bays or sounds, on the great lakes or any of them"; under which conditions large numbers of boilers upon our largest steamers have been built and used for a period of seven years without more deterioration than the ordinary internally fired boiler with unlimited thickness of shell.

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MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton. Ontario.
SP

VIEWS AND INTERVIEWS.

"Well, trade in sheet iron is not so bright as it might be," said a broker to me. "Fact is sheet steel is largely taking its place. Sheet steel is more economical, for, although the first cost is greater than sheet iron, it works easier and there is less danger of its splitting."

* * *

Mr. Bailey of New York, representing W. Jessop & Co. the well-known English iron and steel manufacturers, was in Toronto this week. He reports trade quiet. "But," he added as he knocked some Toronto dust from his clothing, "things are about as good in Canada as anywhere." And that is what everybody else tells me who has been paying his respects to Uncle Sam lately.

* * *

"To give you an idea how the farmers are holding grain and neglecting to pay their debts: said a reliable man, "A Vaughan farmer came into town this week to renew a mortgage. Is it impossible for you to meet it?" he was asked. 'Well, I have enough of stuff in my barn to pay it, but then you see that I am holding for better prices.' It is no wonder money is so scarce when we find so many farmers doing like that. I'll tell you what it is the country merchants want to come down pretty sharply on them and make them pay."

* * *

"It is not surprising that the farmer in the Northwest is not inclined to sell wheat at the price he is getting for it," remarked a wholesaler with whom I was discussing the financial situation. "Just imagine, he can't get as much some places for a bushel of wheat as he has to pay for a gallon of coal oil. You laugh, but I know that some places he has to pay 45c. a gallon for oil. Somebody is getting a big profit on oil at that price, for it can be got at Petrolia at less than one-fourth of that price."

* * *

"Yes the Portland cement market is firm, and you are going to see much higher prices before long," remarked a broker. "The local demand is quieter than it has been for years, owing to the few buildings that have been erected, but in the country there has been a marked increase in the demand this summer. In fact business in this line in the country has been increasing rapidly of late years. Why, do you know that there are some country merchants who now order 50 or 100 barrels of Portland cement who formerly took but five or ten barrels. The people are becoming educated to the use of Portland cement. That's what's the matter."

* * *

T. B. Lee of Rice Lewis & Son has just returned from New York. He has been there on business. "I am thoroughly convinced," he said to me Thursday with emphasis, "that business is much better in Canada at the moment than it is in the United States. The people here have more confidence. That's one great advantage."

BYSTANDER.

A GLIMPSE AT TORONTO JUNCTION.

A HARDWARE reporter visited Toronto Junction and found the hardware men all doing a fairly good business, though there is a great slackness in builders' hardware, but in the way of house furnishing things are moving briskly. One store in particular was noticeable for its extreme neatness. The rubbish heap and the jumble of spoons, dippers, etc., were conspicuous by their absence. This hardware man seemed to be following the old proverb, "A place for everything and everything in its place." The windows are not elaborately decorated, but everything has been placed so as to show everything to advantage. This class of hardware stores are few and far between.

STEPPING STONES.

Young man, do you ever feel that the position you fill is beneath you; that you should occupy a higher place in the business in which you are engaged? Has it ever occurred to you that it is your own fault, and that matters will remain as they are until you prove your title to something better. Let the boy as soon as he finds the position is beneath him, commence there and then to make it better. Nothing succeeds like success: and those above you, seeing that you are doing the best that could possibly be done in the sphere in which you have been placed, will reward you, not less for their own benefit than for yours, by placing you on the next higher round of the ladder that God has placed for every boy to climb.

Don't ignore the stepping stones to success. They lie all along your path. Some are so big that you fail to see them. I know a man who is always growling about the lack of prosperity. Ask him why it is, and he will say that he can't find employment. Suggest some easy, feasible plan, perfectly honorable, but not on the top round, and he will say, "Its distasteful to me; I can't engage in a line beneath me." Why, boys, I would drive an ash cart rather than do nothing. Accept anything that is honorable and that you are able to perform, but don't wait for the plums to fall into your lap; "knock 'em."

I asked a friend the other day to tell me how he became engaged in the business of which he is to-day the head. "Well," said he, "I won't go over my whole history, but will tell you a part of it. "I was a partner in a sheep ranch in San Saba, Texas. I made considerable money, but all I made was suddenly swept away by my partner, who proved to be a rascal. I came to Philadelphia with my wife, and sat down to cogitate how I might better my deplorable situation. Counting over what little I had in money, I found it would carry me to Indianapolis, a place that I felt sure would want young blood. Leaving my wife with her sister in Philadelphia, I started on my journey, and, on arriving, found that I had only ten cents left.

"Carrying my trunk to a cheap lodging house, I unpacked it, and found some books and pictures, which, while I prized them, were not feeding me. I sold them at a second-hand book-store and realized eighty cents. With this small capital and a sore heart, I started up the street in search of something that could be bought and sold again. Not caring what it was, aimlessly I went through the open door of a drug store, perhaps having in mind the purchase of some toothpicks or pencils, that by selling would tend to make life more endurable. Just at that point my eye lit on some quassia cups standing side by side on the show case. I had been informed that there was much malaria thereabouts, and having heard that quassia was a good tonic in such cases, I immediately told the proprietor the object of my visit and asked him what he would charge me for one dozen cups. He said I might have them for $1.50. Taking a half dozen, I started out and visited the office districts first, and succeeded in closing out my half dozen in a remarkably short space of time. It would make a laughable story to tell how I talked up those cups. It was really amusing to me, but I was desperate, and the talk I gave them concerning the merits of quassia would make Mark Twain blush. However, I sold them all, and none under fifty cents apiece. Back to the store for another lot, a dozen this time, I was soon again on the warpath. Then I bought all the man had, and after scouring all over the town, and buying and selling again, I wrote to my wife to go to a large drug house in Philadelphia and buy me a gross to be sent C. O. D., which she did. To make a long story short, I made enough money to start me in the gents' furnishing business, sent for my wife, and made money."

My friend remarked when he had finished, that the boys of to-day lack grit: that if he had given up in despair he would have gone to the poorhouse.

Boys, the above incidents are true, and the successful merchant who is the hero of the story is one of the advertisers in Trade, and I know that you will all join with me in saying that he deserves his prosperity.

Dont fail to use the stepping' stones that lie along your path.—A. S. Wheeler in Trade.

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PINKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes, better packed, average loss from breakage less than ONE PER CENT.

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"St. Helens,"
"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friend against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, TORONTO

ENGLISH HOUSE: **SAMUEL, SONS & BENJAMIN**
164 Fenchurch St, London, E. C.

COW TIES, English and Oneida.

TRACE CHAINS, English and Oneida.

ROPE HALTERS, Hand and Machine Made.

WEB HALTERS.

LEATHER HALTERS.

SLEIGH BELLS and SHAFT GONGS, Large Variety.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Nov. 10, 1893.

HARDWARE.

The movement of general hardware supplies from the hands of jobbers here continues fair, but the percentage of it which represents new business is smaller than a week ago. Most of it, in fact, is on account of orders placed some time ago, the goods for which are being rushed forward to get the benefit of the summer freight rates which will be called in on the 13th of the month. Makers still report fair orders for annealed wire from jobbers, no doubt owing to this reason, and there is a fairly good movement in sleigh bells, skates, curry combs, and goods of a similar nature. Nails are inactive, both for wire and cut stock, the business doing being of a small jobbing kind. Horsenails however, continue in fair enquiry, and so do horseshoes and sleigh shoe steel. A few odd lots of chain are still moving and small orders for sporting goods keep dropping in. Builders' supplies are dull and tools furnish no feature of importance. The same remarks apply to naval stores.

WIRE.—Makers still experience a good demand for annealed wire for immediate delivery. The advance in freights which ensues on the 13th no doubt makes jobbers anxious to get as much of their goods forward before that date as possible.

CUTLERY—A fair sorting up trade is still doing in this line.

WINTER GOODS.—The movement in sleigh bells, shaft bells, skates, etc., is not quite so active as it was, but is still of considerable volume nevertheless.

SADDLERY SUPPLIES.—Fair orders are still to note for curry combs, whips, horse blankets, in fact generally for saddlery supplies.

NAILS.—Trade both in cut and wire nails rules inactive, with nothing of importance to note.

TACKS.—Tacks are dull and featureless. A new line of house carpet tacks is being introduced at present which are being put up in very handy shape for the trade.

HORSESHOES. — Demand continues fairly good both for horseshoes and horsenails, and makers here are still being pushed to get forward supplies to jobbers before the advance in freights occurs.

IRON PIPE.—The same remarks apply to iron pipe, buyers of which wish supplies sent forward as soon as possible for the same reason.

SPORTING GOODS.—Small orders keep dropping in for these goods, which make up a fair volume of trade.

TOOLS.—Continue without special feature.

BUILDERS SUPPLIES, ETC.—Builders' supplies continue as dull as ever, but a fair movement is to note in lines of plumbers' goods, more especially on city account.

WARE.—There is a fair movement still to note in tinware, but other classes of goods are entirely without motion.

LAMP GOODS.—A seasonable trade is doing in this line.

NAVAL STORES.—The movement continues small, and there is no special call for any line. Prices are steady and unchanged, and we quote as follows: Turpentile, 50c.; resins, $2 50 to $5, as to brand. coal tar, $3.75 to $4; cotton waste, 5 1-2c. for colored, and 7 to 10c. for white; oakum, 5 1-2 to 7 1-2, and cotton oakum, 10 to 12c. Cordage—Sisal, at 9 3-4c. for 7-16 and upwards, and 15c. for deep-sea line; pure manilla,11c. for 7-16 and upwards and 12c. for smaller sizes.

METALS.

There is no improvement in the heavy iron or metal market, business ruling as dull as ever, with the general tone of values easy, although no further decline is to note. Only a few lots of pig iron are moving; there is little or nothing doing in tin plates, and metals are without life of any sort.

PIG IRON.—Pig iron, so far as Scotch iron is concerned, is dull, in fact, cheap Nova Scotia pig is doing for Scotch pig in Eastern Canada what cheap Western pig did in the West—driving it out of the market except a small proportion of the higher grade stock which has to be bought for certain purposes. A few small lots of Summerlee have changed hands at $18.50, and Nova Scotia at $16.50 to $17.50, according to grade, the inside figure being for some very low grade pig. We quote: Summerlee, $18.50 to $19; Eglinton, $17 to $17 25; Carnbroe, $16.75 to $17; Langloam, $18.50; Nova Scotia, $17 to $17.50.

BAR IRON.—Makers are sending forward some car lots of stock this week, but the general market is quiet. The standard values are retained.

SCRAP IRON.—Business in scrap is small and prices greatly nominal at $15 to $16 for No. 1 wrought scrap.

TIN PLATE.—The easy feeling noted in tin plate is as conspicuous as ever, and although we repeat former quotations, it is safe to say that an order for a round lot would result in shading. We quote: Coke, $3.10 to $3.20, and charcoal $3.75 to $4.25.

CANADA PLATES.—Business in Canada plates continues very quiet, in fact there has been practically no movement since last week, and we quote prices nominally at $2.40 to $2.50.

TERNE PLATES. — Prices continue nominal at $7.25 to $7.75.

GALVANIZED IRON.—There is no change in galvanized iron, demand for which is fair and prices steady at 4 3-4 to 5c. for No. 28 guage.

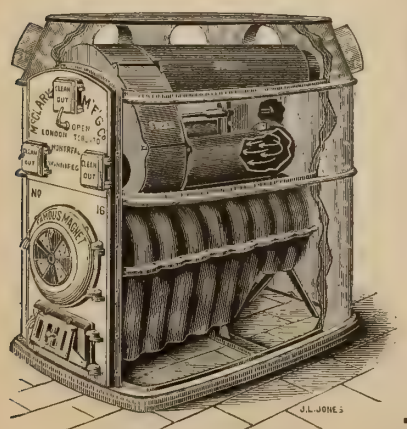
SHEET IRON.—Sheet iron is quiet, but prices are steady on the basis of $2.40 and upwards, according to grade. Russian sheets are moving fairly well at steady prices, 10 1-2 to 11c.

HOOPS AND BANDS.—There is no change in this line, which is quiet at the former rate, $3.35.

STEEL.—There is a good jobbing demand still to note for sleigh shoe steel.

COPPER.—There is only a dragging business to note in this line, and prices are easy at 11 1-2 to 12c., which would be shaded in the case of a round lot.

TIN.—Quotations are still given at 21 1-2 to 22c., but business is so small that the figure is nominal. A round lot could certainly be had at a lower rate.



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Our New Wood Furnace

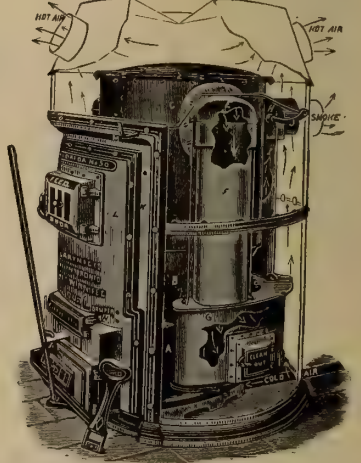
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EXPERIENCED Hardware Clerk wants situation in good live town. Refer nces furnished from late employer. Address, J. E. WESTCOTT, 298 Wolfe St, London, Ont.



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Manufacturers of

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ADAM HOPE & CO., HAMILTON

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Scotch Brands,
Broken Car Wheels,
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Of English, Canadian, and American designs. . .

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Canada's Greatest Business Schools.

FORTY DOLLARS invested in a first-class business education will produce highly satisfactory results.

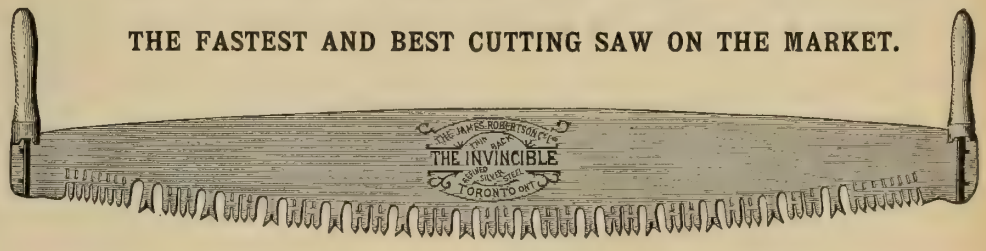
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Guaranteed four Guages Thinner on Back than Front and Made from the Highest Quality of Double Refined Silver Steel.

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SAMPLE ORDER SOLICITED. **Toronto.**



You will Insure Success

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STOVE

Business, by selling



"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.



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Successors to The E. & C. Gurney Co.

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ARE FAMOUS FOR THEIR FINE QUALITY

RAZORS, SCISSORS,

—AND—

POCKET CUTLERY

TRADE MARK.

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For Sale by Leading Wholesale Houses.

TORONTO CUTLERY CO.,

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M. MAYER, Propr.

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Cutlery

WARRANTED

And the Most Complete Lines of Cutlery of all descriptions.

MONTREAL Markets Continued.

ANTIMONY.—Business is flat and prices unchanged at 10 1-2 to 12c.

SPELTER.—There has been a moderate movement in the article at former rate, viz., $4.60 to $4.75.

LEAD.—There is a fair business in lead at steady prices: Pig lead, $2.80 to $3, and sheet lead, $4 to $4.25.

ZINC SHEETS.—There is a fair business doing in a jobbing way at former prices, $5 to $5.25.

CEMENT.—There is a good demand for Portland cement, the fine weather enabling outside work to be carried on much longer than usual. Prices remain firm at $2.10 to $2.25 for English, and $1.95 to $2.05 per cask for Belgian brands, ex ship. The demand for firebricks is slow and stocks on spot are large, quotations ruling from $16 to $20 per 1,000 ex ship for round lots according to brand.

PAINTS AND OILS.

The demand for leads, paints and varnishes has been fair for the season. Advices from England note a further advance in Linseed oil, and appreciation in value is expected here before the week closes. We quote: Choice brands of white lead, Government standard, $5; No. 1, $4.75; No. 2, $4.50; No. 3, $4.25; No. 4, $4; dry white lead, 5c.; red lead, pure, 4 1-2c.; No. 1, 4 1-4c; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, raw, 60c., boiled, 63c.

GLASS.

The demand for glass is quiet and prices are unchanged at the basis last quoted, $1.25 for first break, and $1.35 second break per 50 feet, and $3.25 for first break per 100 feet. Putty in bulk unchanged at $1.85.

PETROLEUM.

A fair trade is noted in petroleum at steady prices, the market being devoid of any feature of particular interest. We quote: Canadian at 11 1-4c. in shed in Montreal for round lots, and 12c. for small quantities. American petroleum, 16 1-2c. in car lots, 17c. in 10 barrel lots, 17 1-4c. in 5 barrel lots, and 17 3-4c. for single barrels, net cash; American benzine, 23 to 25c.; Canadian benzine, 10 3-4c. Petrolea; 12 1-2c. Montreal.

MONTREAL TRADE NOTES.

Last week there were four more steamers to arrive with cement, which will bring up the stock for winter use to the average quantity.

The advance in turpentine to which we have referred in previous reports has been well maintained.

English advices quote an advance in linseed equivalent to about 2c. in Montreal, and prices on the oil here are expected to advance before the close of the week.

The Canada Plating Co., on Craig street, have extended their premises to the next building, and are now occupying two large stores. The sample rooms are elegantly fitted up.

The Montreal Rolling Mills have put on the market a new line of carpet tacks which they call the "Home Carpet Tack." They are put up in 1-4-lb. packages, and can be retailed over the counter at 5c. per package. For the trade they are packed in boxes containing 1-2 gross, and are sold at $2.50 the gross, less the trade discount of 20 per cent.

J. A. Painchaud, of Painchaud, Squire & Co., got back on Monday from an extended visit to Great Britain and the continent. He reports that manufacturers, especially in Belgium, are complaining greatly about the effect of the McKinley measure on their business. He says that boodling is not particular to Canada either. Dumoulin Bros., the fire arms people, of which he is the Canadian agent, lost the contract with the Russian Government for some 500,000 rifles as they allege because they would not allow a commission of two francs per rifle to the Russian Minister of War.

G. J. Crowdy, of Jas. Hutton & Co., has just returned from a visit to Boston and the New England States. He complains that although American money is taken at par on this side the line they refused good Canadian money based on a gold standard in Boston.

TORONTO MARKETS.

TORONTO, Nov. 10, 1893.

HARDWARE.

Trade exhibits some improvement this week, although it is not at the same time of a radical nature. Payments, too, are again reported to be improving. One thing is evident: There is a better feeling, even if the volume of business does not show much increase. Skates are probably showing the most activity, although axes, ax-handles and cross-cut saws are still going out freely. Christmas novelties are attracting a good deal of attention. Coppered steel wire is in better demand, and some nice orders are reported for cutlery. There is a better movement in coil chain and a marked improvement has developed in white and peerless ware. Even some little improvement is announced in builders' supplies.

WIRE—The feature in this line is an improved business in coppered steel wire. Hay-baling wire is still in good demand, principally for 14 and 15 gauge.

ROPE—There is nothing new to report. The little that is selling is principally in sizes up to one inch.

CUTLERY—Some nice orders have been received during the week. They were principally for pocket knives.

NAILS—There have been a few car lots of cut nails forwarded to the Northwest, and business for them continues fair. Wire nails are also in good request. Horseshoe nails quiet.

TACKS—Dulness continues to be the characteristic of this line.

CHAIN—Coil chain is going out a little more freely. Cow ties are still in demand, but principal dealers having received their stock about a month ago quantities are naturally small.

HORSESHOES—Are in good demand, with a few steel selling.



WINTER GOODS.—The continued mild weather still keeps trade quiet in this line.

SPORTING GOODS.—Trade is keeping up fairly well in this line, without any change to note.

WARE.—In peerless and white ware there has been a marked improvement during the week and a few good shipments have been made to the Northwest.

LAMP GOODS.—Last week's remarks practically apply this week. The falling off in the demand then continues, and wants are largely confined to small parcels.

PLUMBERS' SUPPLIES.—Iron pipe is going out freely and the better demand noted for plumbers' supplies generally is maintained.

BUILDERS' SUPPLIES.—A slight improvement is reported, but trade on the whole in this line is still quiet.

MECHANICS' TOOLS.—Trade remains dull in this line.

METALS.

There is not much that is new to note. Business in pig iron remains as before, dull. Bar iron is still moving fairly well, and an improvement is noted in the demand for hoops and bands. Ingot copper on the other hand does not seem to be in as good request as it was. Stocks of Canada plate are still lower.

PIG IRON—Dull. There is some Scotch iron moving, and sales of 50-ton lots of Carnbroe are announced at $19.50 Toronto. A few carloads of Siemen's are coming in for mixing with the American article. We quote: Summerlee $20.50 to $21, Carnbroe $19 50 to $20, Siemen's $19 to $19 50.

Rogers, Brown & Co., Buffalo, report the Toronto market for American pig iron as follows: Nothing has transpired since our last report to indicate greater activity so far as we have been able to notice. There is some inquiry but few actual sales. We quote for cash f. o. b. cars Toronto in bond: 1 X Foundry strong Coke Iron, Lake Superior ore, $15.05; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14.55; 2 Foundry Strong Coke Iron, Lake Superior ore, $14.05; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17.55; Southern Soft 1, $13.35; Southern Soft 2, $12.85.

BAR IRON—Business in this line keeps up well at the $1.95 basis. Horseshoe iron and sleigh-shoe steel is still in good demand.

SHEET IRON—Business has fallen off a little in this line during the week, the quantities now going out being just fair. We quote as before: 22 to 24 gauge, $2.50 to $2 60, and 26 gauge ¼c. extra.

HOOPS AND BANDS—These are being freely called for this week. Stocks have been exceedingly low and some good import orders have been taken. Prices unchanged at $2 50 to $2.60.

CORRUGATED IRON—Several enquiries are reported this week at $4.75, and a good business generally is reported; $4.75 to $5 is the idea for small lots, and we quote

"Owl" brand at $3 to $4 per square for painted and $4.25 to $7 for galvanized, according to gauge.

GALVANIZED IRON—This line is still going out freely. Some good shipments have been received during the week, and a large number of orders have been booked for import for the early part of 1894. Gordon Crown brand is still in chief request. We quote $4.75 to $5 for 28 gauge.

INGOT TIN—Is going out fairly well. No large sales have been reported, although a few good sales of straits have been made at 20½ to 21c., and some movement is reported in lamb and flag at 21 to 21c. Market weak.

INGOT COPPER.—Business quiet. Quantities going out are smaller. Dealers have, however, a number of orders booked for future delivery. We quote 12 to 12½c. for small lots, with large lots obtainable at lower prices.

SHEET COPPER.—There has been quite a demand for braziers, but for the ordinary small-sized sheets there have not been many enquiries, although a few import orders have been taken. Roofing copper is quiet.

SPELTER—Has been going out freely, principally imported, although some sales of domestic have been made. Prices are unchanged at 4½ to 4⅝c for small lots.

SHEET ZINC—Is also in active demand, and prices rule as before; 5¼ to 5⅜c. is the idea as to price for cask lots, and ¼c. more is quoted for smaller quantities.

TIN PLATES—There has been a good trade doing in this, and stocks exceedingly low, especially in the larger sizes of cokes. Prices remain unchanged at $3.85 to $4 for I.C., with the usual extras for I X.

TERNE PLATES—A few good sales have been made in this line, the market for which has been dull for some time; $7.25 is still the idea for good quality.

CANADA PLATES—Stocks are exceedingly low, but this week steamers are expected to bring in a plentiful supply. Jobbers have been finding it difficult to supply the city and country trade, especially the former. Trade in tin plates may be said to be better than expected, there having been a good many repeat orders. We quote: All dull $2.65, half polished $2.75, and all bright, $2 90.

SOLDER—Is still going out freely at prices fixed last week, namely, 14 to 16c. according to composition.

ANTIMONY—Trade quiet, no large orders being reported either from stock or from import. We quote 11 to 12½c. for small lots.

LEAD—An advance is reported in pig lead in the States, but here prices remain as before. A number of carloads have changed hands during the week; 3¼c. is the idea for small lots.

GLASS.

Stocks are now fairly compact, a number of shipments having arrived during the past two weeks. The demand for double diamond is exceeding the supply and jobbers purpose laying in larger supplies of it next season. Trade keeps brisk and is expected to for another month at least, particularly if the present favorable weather continues Plate glass is also in good demand at the 35 per cent. discount off.

PAINTS AND OILS.

The feature of the trade this week has been a decline of 2c. per gallon in the price of turpentine, where an advance of a similar amount was anticipated. The cause of the decline is a tilt between the members of the association and an outside handler who is accused of cutting prices. The quotation is now 44c. Toronto and 46c. at outside points, freight allowed. Dealers in turpentine here are pretty well stocked up and there is not much demand. Advices from the South say that prices there are firm at the recent 1½c. advance, and that indications point to a further advance. In the face of this there is talk of lower prices on the Ontario market. Linseed oil is quiet and unchanged at 60 to 62c. for raw and 63 to 65c. for boiled. The English market is firm on linseed oil, and jobbers claim that oil cannot be laid down at Toronto to-day at the price at which it is now selling here. There is very little doing in prepared paints, and prices remain unchanged at the 5c. basis. Shellac is still in request, and varnishes generally dull. Glue is in fair demand at unchanged prices. Payments are only fair.

PETROLEUM.

Business continues good on the Toronto market at unchanged prices. We quote:—5 to 10 barrel lots, imperial gallon Toronto: Canadian 12½ to 13c.; carbon safety, 16½ to 17c.; Canadian water white, 18½ to 19c.; photogene, 22c.

The Petrolia Advertiser, in its weekly report, says:—"The crude oil market is beginning to have a little better tone on account of the immense quantity of oil which has been shipped away from here during the month of October. It is estimated that the largest business ever done in Canadian oil trade has been accomplished during the last month. The refiners' stock of distillate and refined oil has been materially reduced, and during the next three months a very large quantity of crude oil will be required to supply the demand for the refined article. All the stills at the different refineries are now running full blast, and will most likely continue to do so until next March, which means a consumption of from 80,000 to 90,000 barrels of crude per month for refined oil alone, without taking into account the other uses to which crude oil is put. So that it is safe to estimate that the stocks of crude will be considerably reduced within the next four months, and the drill will have to be started again very lively to keep up the supply.

OLD MATERIAL.

Owing to the extreme dulness in business, dealers report no practical change prices. We quote prices paid by dealers as follows:—Agricultural scrap, 55c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40 to 45c. per cwt.; No. 2, including sheet iron, hoop iron and mixed steel, 10c.; new light scrap copper 7½c.; heavy scrap copper 8c.; old copper bottoms, 7½c.; light scrap brass 5c.; heavy yellow scrap brass 7c.; heavy red scrap brass 7½ to 8c; scrap lead 1½ to 2c.; scrap zinc, 1½ to 2c.; scrap rubber, 3c.; country mixed rags, 75 to 80c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; boring, and turnings, 10 to 15c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—Since our last report green hides have dropped a quarter of a cent; dealers are paying 4 to 4¼c. for selected. No. 1 pure hides remain about the same. Dealers are selling at 4 to 4¼c. Supply continues steady and demand fair.

SKINS—Sheepskins remain unchanged at 65c.; supply moderate.

TALLOW—The situation in this article remains unchanged. Demand good, with supply light. Dealers are paying from 5¼ to 5½c., according to quality.

WOOL—In this article there is little or nothing doing. Mills are buying some additional lots, but in small quantities. Dealers are offering from 16 to 17c. for good pulled wool.

MARKET NOTES.

M. & L. Samuel, Benjamin & Co. are busy filling orders for the "Columbus" skate.

The Booth Copper Co. are busy fitting out a beet root sugar factory in Berthierville, Que., and have now in their works extensive copper fittings which are for the British American Brewing Co.

Samuel, Benjamin & Co. are in receipt of a fresh shipment of white ware, which they claim shows exceedingly good value.

H. S. Howland, Sons & Co. report the receipt of a full line of Potosi silver-plated forks and spoons, and are now in a position to fill all back orders. They are also in receipt of a shipment of Ellins' table cutlery.

Rice Lewis & Son (Ltd.) are making a specialty of tool boxes for the holiday trade, which can be retailed at $5, and netting the dealer a good profit. They are also making a specialty of such Christmas novelties as cutlery in cases.

A. C. Leslie & Co., Montreal and Toronto, are showing a new style of scissor, known as the "Hercules." The special feature in this scissor is that it will cut different thicknesses of cloth with the greatest ease and speedily.

Walter H. Cottingham & Co. report that the "Green Seal" brand is getting a good share of this fall's trade. They are said to be also receiving large orders for Mander Bros. varnishes and Blundell, Spence & Co.'s enamells and other fine colors.

Rice Lewis & Son have secured the Canadian agency for the "Fry Pan" clock, which had such a large run in the United States last year. The face of the clock is the bottom of what appears to be an ordinary fry pan. The figures and hands are gilt. It makes an attractive ornament for the store, and the price is reasonable.

Mr. Mayer of the Toronto Cutlery Co. says that orders are coming in freely from all parts, and that their Montreal trade has been exceptionally good. He also reports large sales in Non-XL goods. He has received numbers of mail orders, which he attributes to the advertisement and guarantee which he published in a recent issue of HARDWARE.

In order to follow out several valuable suggestions, made by expert examiners at the World's Fair, the Watson Perfect Combination Furnace Co. is at present working on new patterns and models, so as to improve, if possible, this heater. Until these improvements are made, and thoroughly tested, it is, of course, impossible to manufacture the complete apparatus for the trade

but within a few months the company hopes to commence filling the orders already on hand and others which are coming in.

F. Van Camp, hardware, stoves and tinware, Hastings, and who recently got burned out there, has decided to move to Lindsay, and is negotiating with Messrs. Maywood & Calhoun of that place with a view of buying them out. It is understood that he will also carry stoves and tinware in connection with the hardware. Frank is a popular fellow, and will no doubt make it go.

The Magnolia Metal Company, having offices at New York, Chicago, London and all over the world, have been allotted the highest award possible at the World's Fair, Chicago, on their magnolia metal. A medal has been granted, and a diploma with following specifications allowed and set forth: It prevents hot boxes; it will not cut or heat journals; its lasting qualities are of the highest order; it is a self-lubricating metal, saving large percentage of oil; it increases the motive power; it is the only metal that protects and does not wear journals. It enamels them; it is adapted to high and low speed machinery; it will stand the heavy work of sugar, rolling, saw and wire mills; it is a success for main journal and crank pin bearings; also, gibs of steamships and steam tugs; it is the best water metal.

AMERICAN MARKETS.

New York, Nov. 10, 1893.

PIG TIN.—The market remains in uncertain shape. London sent lower quotations and intimations also that prompt deliveries were being disposed of by operators having tin to take care of on contracts expiring this month. Speculative interest on this side of the Atlantic was very tame, and not without reason, for the suspicion that the decrease in spot stocks is offset in a measure by the drop in prices in the foreign market. Trade and consumptive buying is of pronounced conservative type, with the aggregate hardly up to the average for this season of the year.

COPPER.—It was learned that some fairly liberal purchases of Lake Superior ingot have been made very recently, involved in which were deliveries running to January inclusive. The quality was not stated, neither were exact terms divulged. What little information as to details could be obtained went to show that nearly or quite 1,000,000 pounds were contracted for, and that the prices, with certain elastic contract clauses, were 9 7-8 to 10c. At the moment there is some demand at 9 3-4c. for prompt or near future shipments, and the offering is decidedly more reserved than it was a short time ago. Other varieties of copper have fared hardly as well in point of sales, but prices are very steady throughout, 9 1-2 to 9 5-8c. quoted for electrolytic, and 9 1-4 generally asked for common casting stock.

PIG LEAD.—As far as reported, the dealings were on a very moderate scale, and negotiations reflected a virtual standoff between purchasers and consumers, with the ideas of values entertained by the respective interests 10c. per 100 lbs. apart. Ordinary Western could have been secured at 3.35c. landed here, in carload or larger lots. The St. Louis wire to the Metal Exchange was 3.15c. London cable quoted £9 15s. for soft Spanish.

SPELTER.—There was no change whatever in the situation of the market for this metal. Orders were few and far between, and the offering, while somewhat free, was almost wholly at former prices, say 3.60 to 3.65c. for ordinary Western brands delivered here or at common point. The St. Louis wire to the Metal Exchange was 3.40c. London cable was £17 for good merchant brands.

ANTIMONY.—Of ordinary jobbing quantities there is about the usual movement, and prices show very little change. Prices are steady at 9 5-8 to 9 1-4c. quoted for Hallett's and 10 1-8 to 10 1-4c. for Cookson's.

TIN PLATE.—For future deliveries of ordinary Bessemer cokes there was quite a good demand. Some interest was displayed also in other varieties, and spot orders seemed to have been above the late average. Prices show no radical change, but the market is, if anything, showing somewhat improved tone.

PERSONAL MENTION.

T. B. Lee, of Rice Lewis & Son, has been in New York on business.

James Peck, of Peck, Benny & Co., Montreal, was in Toronto this week.

Mr. Moore, of Bowman & Moore, Hamilton, was seen among the Toronto warehouses this week.

Geo. Evans has returned to Toronto after a week's shooting in Muskoka. HARDWARE hopes that sport was good and the game plentiful.

Ben Ibbotson, of Queen street, Toronto, has lately returned from a six weeks' tour through England, during which he visited Manchester, Birmingham and other large cities for the purpose of getting pointers on bicycle repairing, which he means to add to his business.

These country merchants were noticed on the street this week: A. Lamont, of Mount Forest; Mr. Clement, of Clement & Co., Bolton; J. Hagerman, of Zephyr; G. Marter, of Gravenhurst; Fred. Hatch, of Hatch Bros., Whitby; L. Prevost, of Williamsford; Mr. Peaker, of Peaker & Son, Brantford.

The statement of imports and exports for the month of September shows the former to have been $12,193,226 and the latter $12,779,137. For the quarter ended the 30th September the total imports were $24,261,725 and the exports $39,035,551, an increase of one million in round numbers in the first and a decrease of three-quarters of a million in the latter as compared with the same period last year. The duty collected for three months of the year was seventy thousand more than last year.

REGARDING ACCOUNTS.

I have often wondered whether the majority of hardware men ever properly, and at their full value, estimate the proportion which will eventually come off the amount of the debts which are owed them, when they are getting out their annual balance-sheets. I refer to the allowances which will have to be made, and deductions which will be struck off from one cause or another, viz., for defective goods, missing articles, lost or broken empty packages, goods in some way or other not to order, discounts and carriage claims, or alleged overcharges, and the thousand and one items which the ingenious brain of the resourceful ironmonger can devise. I believe it would be impossible to find another class of traders who have brought this branch of finance to a higher pitch of perfection than has the hardware trader.

I do not believe that the average man of business makes due allowance for deductions; and I believe that if it were the rule to open a ledger account of gross statements and net payments, the magnitude of the balance between the two would be an "eye-opener" to many a man.

There is a class of traders who never make a payment without wishing deductions and claims of some sort or other of an illegitimate nature. There is a sort of Freemasonry among commercial travelers, and his reputation is very rapidly established, and his modus operandi is anticipated and discounted. The very sharp, or—as I would prefer to call them—sharping men, usually strop too fine an edge, and cut themselves. Wrong allowances are sometimes passed as a matter of expediency, but he is usually made to pay in other ways. While remonstrance is useless, a note of the wrong deduction is registered, and care is taken that it is recovered on the next order, with a substantial profit added.

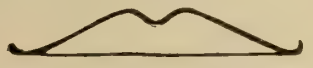
I had a lesson taught me some years ago, which I have never forgotten. In writing a check out, in order to make a level amount two odd pennies were knocked off. My creditor, however, refused to give me a receipt, remarking, "You owe me five pounds and twopence, whereas you only desire to pay me five pounds. If it is worth your while to deduct the two pence, it is worth mine to insist upon having it. Twopence is of as much importance to me as it is to you." I thought it very paltry and exacting at the time; but on thinking it over afterwards, I saw clearly that he was right, and I have never deducted odd coppers since. It is a very common habit amongst ironmongers, however; and we have one customer who always knocks off all pence under a shilling; eight, nine, ten, and even eleven pence have been deducted. The only way we have of being upsides with him is by adjusting prices and quantities that the amount of his invoices shall invariably total level shillings.—Ironmonger, London.

The Toronto Wood and Shingle Co. is to be wound up. It is stated that the liabilities of the company will not fall short of $100,000, with assets nominally the same. The failure is attributed to the financial depression across the line. Henry Barber has been appointed liquidator.



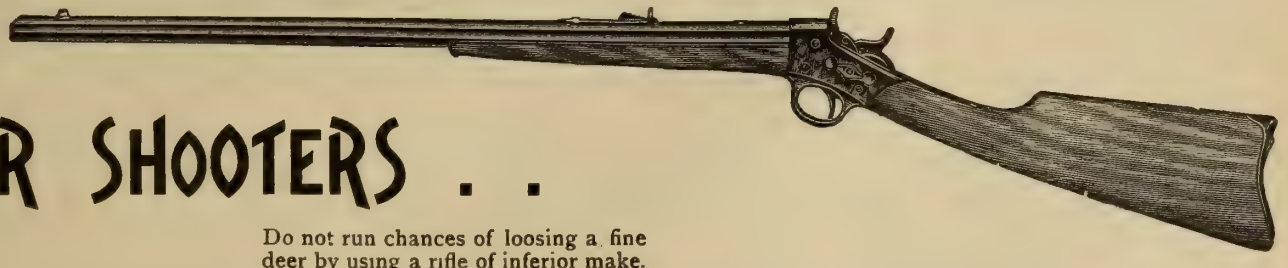
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FOR SALE BY ALL DEALERS IN HARDWARE, CUTLERY and FANCY GOODS

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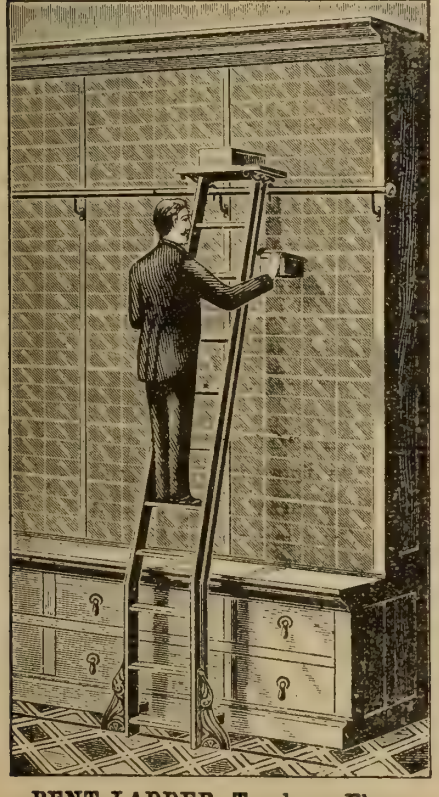
DEER SHOOTERS . .

Do not run chances of loosing a fine deer by using a rifle of inferior make.

Just Received a shipment of 1893 MODEL MARLIN RIFLES 32/40 and 38/55. Send for our catalogue and discount sheet free to the trade.

THE BOWMAN HARDWARE AND SPORTING GOODS CO., - - HAMILTON, ONT.

HAMILTON BRASS MFG. CO., HAMILTON, ONTARIO



BENT LADDER, Track on Floor.

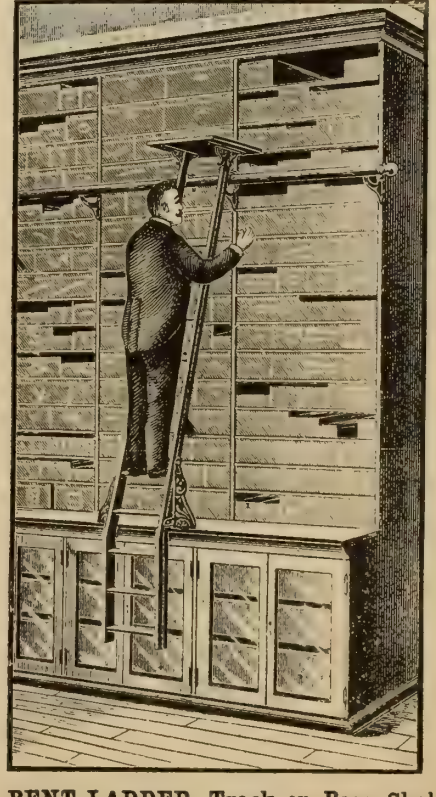
. . MADE IN . .

Oak or Hard Pine

Natural Finished Woods.

Japanned or Nickel Plated Mountings

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BENT LADDER, Track on Base Shelf

THE SAMPLING OF IRON ORES.

The correct and expeditious sampling of ores must be a matter of the greatest interest and importance to all practical men who require trustworthy information respecting the chemical constitution and general properties of their raw materials and finished products. The careful work of chemist and assayer would be unreliable, and therefore wasted, if the sample operated upon were not truly representative of the whole bulk under examination. Although great advance and improvements have been effected in the methods adopted for chemical analyses with the object of eliminating possibilities of error and of securing rapid determination, one great source of error, namely, the proper selection of the sample previous to analysis, does not as yet appear to have received due consideration. It is safe to claim that no better method or principle of sampling than the one described by Dr. Percy has been or is perhaps likely to be devised. Dr. Percy thus describes the operation: "Several pounds' weight of lumps should be selected from the heap or bed of iron ore, so as to obtain a fair average sample. This should be reduced in size, well mixed, spread out on a flat surface, and about one-quarter in bulk taken out and reduced to a coarse powder, and the process repeated until the last portion, representing the sample, will pass through a sieve of from forty to sixty, and in some cases eighty holes, to the linear inch." This gradual reduction in bulk, simultaneously with a gradual reduction in the size of the pieces, may be said to be the fundamental principle of good sampling. In the practical means for carrying out this principle considerable improvement may be effected. The improvements are in the direction of: Firstly, reducing the amount of hand labor; secondly, eliminating the personal equation, that there may be no bias or room for error of judgment in the selection; thirdly, shortening the time of the operation. The operation of sampling is frequently regarded as essentially a manual operation, in which judgment and skill are indispensable for securing a good result. It will be the object of the author to show that there is no reason for the preference of hand work, and that machine work on a proper system is superior on all points. It may be well here to examine and investigate all the causes affecting and governing the selection of a true average sample from a large bulk of material. These principles are, of course, quite independent of the question of the relative merits of hand and machine work. 1. The uniform composition or thorough mixing of the bulk. 2. The fineness of division, or the sizes of the pieces forming the bulk. 3. The mode of occurrence of the metallic constituents. 4. The ratio of weight of sample to the fineness of division. 5. The ratio of weight of first sample to total weight of bulk. 6. The method of cutting out the sample. These principles are mutually related and interdependent. First, the uniformity of composition. It is clear that if the bulk of material is thoroughly uniform, a portion taken from any part at random would be truly representative of the whole, quite irrespective of all other considerations. This is the ideal simple case, which seldom, or probably never, occurs in practice. The proper fineness of division, or the size of the single pieces forming the bulk before a cut for sample can be safely made is controlled by the size of the bulk, and the mode of occurrence of the metallic constituents. Small lots should always be fine before cutting. If the total bulk is very great the single pieces can be large, provided the first sample taken is of fair size, say 5 per cent. of the whole; but the more difficult sampling cases, where the metal is carried by but a few rich pieces in a large mass of barren material, it is absolutely imperative to reduce everything to very small size before making even the first cut. This has more distinct reference to the ores of precious metals. After the first sample has been obtained it is, according to the aforementioned principle of gradual and simultaneous reduction, generally necessary to crush it finer before making a second cut, unless the original material was fine. In that case two or more cuts may be made before regrinding, according to the original degrees of fineness. This brings us to the ratio of the weight of sample to fineness of division. Mr. Bezin, of Denver, Col., who has devoted considerable attention to this matter, recently informed the author that he considers it a safe rule to take one ounce as the minimum weight to which a sample should be reduced from material passing 20 mesh sieve, and for other sizes (coarser or finer) to take the minimum weight of sample proportionate to the cube of the linear dimensions of the average particles. Thus, if the material had passed a 10 mesh, by this rule the sample should be cut down below 8 oz., without the material being first ground finer. This is equivalent to stating that the number of particles in a sample should never be below a certain minimum whatever their size may be. The number of particles of all sizes in 1 oz. of material with a specific gravity of 4, through 20 mesh, is at least 50,000, and on this basis the weights of the smallest sample of three inch mesh material of same specific gravity would be about eight tons. In the opinion of the author these figures are considerably higher than is necessary for iron ores, but for complex ores of the precious metals, the standard does not appear to be unnecessarily high. The smallest percentage to be safely cut out as a sample at one operation, or the ratio of first sample to total weight of bulk, and also upon the method of cutting out the sample. In some cases 1 per cent, or even less, will be safe, whereas in others 20 per cent. would be desirable. It is generally better to obtain a 1 per cent. sample, by cutting 10 per cent. off 10 per cent., than by cutting 1 per cent. direct. The method of cutting out the sample is obviously of the utmost importance, so that a fair average proportion of all the different qualities and sizes may be obtained. The method of mixing, coning and quartering usually adopted in hand sampling is trustworthy, and provided proper care is taken and sufficient time allowed, the result is as good as can be obtained. This may be taken as a standard of excellence, and sampling machines can only effect improvements by (1) Reducing the labor and expense; (2) eliminating the personal equation and dispensing with care in the operator; (3) shortening the time. Coming now to the special considerations affecting the sampling of iron ores, these appear to be; (1) The large bulk; (2) the necessarily large size of the pieces; (3) the constitution, which may be described as moderately uniform. These show that the sampling of iron ores may be made a very easy matter. The conditions are all in accord. The large bulk means a large spout to pass the quantity. This would be so even if the material was fine, but, as it will be remembered, a large bulk allows of large pieces being dealt with, and especially is this the case if the ore is moderately uniform. Respecting the general advantages accruing from improved facilities for rapid and accurate sampling little need be said, as the gain both on technical and commercial grounds will be apparent to all.—Thos. Clarkson, before the British Iron and Steel Institute.

A recent decision by the Post Office Department states that circulars printed or otherwise produced in imitation of type-writing, may be allowed to pass at the one cent for two ounces rate when at least fifty copies in exactly identical terms are handed in to the post office at one time. When such circulars are posted in the receiver they should be tied together. A notice to postmasters states that care should be taken to see that packets containing articles for sale are not allowed to pass at the sample rate. When packets of tea, etc., posted as samples are observed to contain a larger quantity than

would reasonably be required for sample purposes, they should be treated as insufficiently paid fifth-class matter. Postmasters have been notified that undelivered copies of newspapers cannot be returned free to the offices of publication, but should be sent to the dead letter office.

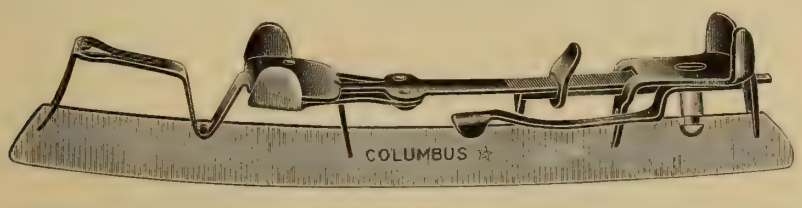
CARNEGIE'S BIG FORGING PRESS.

A mammoth casting for the great hydraulic forging press the Carnegie Steel Co. is to erect at the Homestead plant, arrived at New York some time ago, and is now lying on dock waiting for the construction of a car to transport it. The casting weighs 64 tons and was imported by the Carnegie Co. for the manufacture of armor plates for the United States navy. It is a part of a hydraulic forging plant, and measures 16.6 x 11.6 x 3.6. It was made by Sir Joseph Whitworth & Co., at Openshow, Eng. It is expected that there will be considerable difficulty in getting the big casting across the river. It will probably be taken over to Jersey City on the derrick float of a wrecking company.

The Pennsylvania road has several great gun trucks which can carry half again as much as the 64 tons in this casting, but its dimensions make them of no value. If loaded sideways the casting would extend too far across the tracks. If loaded on end it would be too high. So the men in the Altoona car shops took two gun trucks and built a massive bridge between them. On this bridge the casting can be loaded on edge, the bottom of the bridge being just high enough to clear the rails. The Cufic and Nomadic have been bringing sister portions of the casting over for the last three trips. The whole machine weighs 1,500 tons.—Iron Trade Review.

THE COLUMBUS SKATE.

A skate which is reported by M. & L. Samuel, Benjamin & Co. to be selling well is the "Columbus," and the accompanying cut gives a tolerably good idea of its appearance. What skaters desire is a skate that combines both simplicity and the faculty of being



quickly adjusted, and this is just what is claimed for the Columbus. There are no nuts or wrench, the skate being fitted to the boot in a moment by a simple lever. The skate is a new one on this market, and already has had a large sale. Samuel, Benjamin & Co. is the only Toronto firm handling it.

GALVANIZED WIRE NETTING

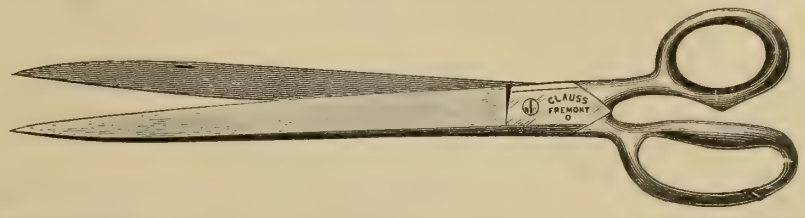
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A. C. LESLIE & CO., Montreal and Toronto.

CUTLERY

Full assortment in stock; best values in all lines, especially in Carvers. . .

"SOLD IN EVERY CIVILIZED COUNTRY IN THE WORLD."



CLAUSS SHEARS AND SCISSORS.

Full Nickeled Shears. Also, Japanned Handles and Nickeled Blades.

Highest Medals and Diplomas awarded by World's Fair judges. Catalogue mailed on application.

Clauss Shear Co.

67 Adelaide St. East . . TORONTO, ONT.

COMBUSTION WITHOUT SMOKE.

Wherever there's smoke there's fire is an adage based on observation of unvarying physical laws, but the reverse does not always hold good, for there may be fire without smoke, or at all events without apparent smoke.

In Berlin an inventor has succeeded in devising a means for insuring complete combustion without the emission of smoke, and his method has, on repeated tests, proved so satisfactory that two of the most important steam shipping companies of Germany have decided on adapting it to their steamers. In this system coal, reduced to powder in centrifugal disintegraters, is introduced into a pear shaped combustion chamber lined with firebrick, and fitted with an induction apparatus like those used in petroleum fired furnaces, the coal dust being drawn along by a jet of steam or compressed air.

The combustion chamber, which takes the place of a furnace, is provided with two apertures, one in the centre line of the boiler, occupying the position of the usual fire-hole door, while the other, on the opposite side of the combustion chamber, serves for introducing the coal dust through a pipe, so placed that the dust is evenly dispersed over the whole surface of the chamber. After the first ignition, which may be effected by any source of heat, the combustion continues regularly and intensely under the action of the air current, which is regulated in accordance with the quantity of dust required to produce the necessary heat. The air or steam and dust are intimately mingled in the zone of combustion, while the speed of the current, which has served as a vehicle for the dust, is much reduced. Each particle of dust held in suspension is by this method brought into close contact with the oxygen necessary for its combustion that this combustion is so complete as to allow of practically no smoke being generated.—Newcastle Chronicle.

This is a very good time for ironmongers to remind their customers and others of the importance of having all range boilers, and both hot and cold-water pipes, put into safe and efficient condition before winter comes on. An inspection is advisable; for if all is well, that need cost him little; if aught is wrong, it is better to know it in time. The sense of security is worth something to everybody. Range boilers degenerate, pipes corrode, exposed supply pipes freeze. If the danger of accidents, of loss by possible damage, and the inconvenience resulting from defects were stated forcibly but plainly and in a business-like way, followed up by a suggestion that a careful survey should be made with a view to commencing the winter with the water system of the house in ship-shape order, most householders would regard the suggestion as at least a happy thought, and look upon the suggester as a wide-awake tradesman whom it would be desirable to bear in mind when any work was needed, even if they did not promptly seek his services.

WOMEN OF IRON.

Mrs. Bridget, Dugan, of Brooklyn, N. Y., carries on a successful horseshoeing business. She said to a reporter: "My father, my grandfather, in fact all my ancestors, were horseshoers so that I come from a horseshoeing race. I have wielded the sledge with the best of them. Many and many a time I have assisted in playing the chimes of Normandy on the anvil—not on the stage—but in reality, in front of the forge in my father's smithy. I can turn a shoe equal to any man in the country. My husband was a boss horseshoer for nearly twenty years. When we were first married I was in the shop at 4 o'clock in the morning and worked on the anvil with my husband until 6 o'clock, striking the heated iron with a heavy sledge with him, blow for blow. He would not let me work any later in the day, as he was ashamed to let people see me at the anvil. Nearly all the shoes that you see turned in the shop are my work. Many a time I have put a set of slippers on a horse; they are light shoes, used when a horse is allowed to run in the fields. I understand the business thoroughly, and give my workmen points about horseshoeing that they never thought of. Since I have been in the business on my own account I have never had a horse returned to me with a sore foot from shoeing. I do not let my men make the horse's hoof fit the shoe, but insist in all instances that the shoe must be made to conform to the hoof."

OCEAN TELEPHONY.

One of the most interesting papers before the Chicago convention of electricians, according to an exchange, was the one by Sylvannus P. Thompson, the noted English electrical professor on the above subject. Perhaps few are aware of the slowness of cable transmission, the rate being only from six to eight words per minute, and it is to hasten transcontinental communication that the ocean telephone is being so seriously talked of lately. The slowness is said to be caused by the gutta percha covering becoming charged at each signal, and this must be swept away before the next signal can be sent. This retardation takes place along the whole line, and the remedy must be applied in a similar manner in order to thoroughly overcome the difficulty.

This the professor proposes to do by means of induction coils, introduced into the cable at sufficiently frequent intervals to overcome this retardation, and to be connected to both wires, as two are to be used in the proposed cable.

These induction coils form in reality a definite path for a predetermined amount of leak between the conductors and thus free them from their retarding influence.

These can, he states, be so manufactured in the cable without serious mechanical difficulty, and will, he is sure, avoid much, if not all, the retarding influence now existing. Different transmitters and receivers will be necessary, but this is a minor problem, and the professor is enthusiastic in declaring that we have the means for ocean telephony within our grasp, and it only remains for the engineer to complete the work so far advanced in laboratory practice.

The cable would not cost much more than the ocean cables now laid, and even if they were not found suitable for telephony at such a long distance they would greatly increase the speed of the telegraph as now carried on in ocean lines. We trust the professor's views are not too sanguine and that they may be tried on short submarine lines enough to demonstrate their worth, and then may be adopted across the oceans if they are found suitable.

A BETTER DAY FOR THE FOUNDRY.

Foundry associations, East and West, are not the only evidence that latter-day foundry practice is having more intelligent and thoughtful attention than was given the art of molding 15 and 20 years ago, remarks Iron Trade Review. The modern foundry structure and its equipment tell the same story. The day was when the management of industrial establishments in which iron was melted and afterwards machined would point with pride to their machine shop, its complete equipment and its advantageous arrangement, while the foundry was kept from the eye of the visitors, because everywhere it was always the same choking, dusty, ill-lighted and ill-ventilated affair—strewn with broken flasks, and dingy and disordered beyond description. Times have changed. New foundries, with appliances for the comfort and convenience of molders, and for the economical performance of work, are multiplying. Heating, ventilating, lighting and labor-saving are all prime considerations. A completely equipped foundry, with its well placed cupola, its convenient core room, pattern rooms, stock room, its carrier of molten iron, its improved blast for heating and ventilation, and its cranes for ready handling of work, is quite as much a matter of pride as the machine stop of latest construction and well furnished with tools. True, the conservative foundryman, who appears to think there can be no successful melting of iron without gloom and broken windows and gen ral rack, is well represented, but there are not so many of him as we once knew.

A NEW HORSESHOE.

The tests that have been made by a street car company, of Paris, of a new form of nailless horseshoes, have been so successful that the company have decided to employ this shoe exclusively in the future, says a Boston exchange. The new shoe is made of Bessemer steel, and in appearance is similar to the ordinary iron shoe, except that it has a bent lever that attaches itself half way up to the rear of the hoof without in any way compressing it. A clamp encloses the hoof, parting the two heels of the shoe, and is supported on the top of the lever, which wholly sustains it, and thereby prevents compression on any part of the hoof. The shoe is fitted with three small interior clamps which penetrate the horn of the hoof and prevent displacement of the shoe without the preliminary raising of the clamp. A number of private firms in Paris have also tested the shoe with success.

A COPPER GUN.

The recent successful test, as announced, of a small copper model gun, tempered by the process invented by Allard of Quebec, has attracted considerable attention, says an exchange. "Before firing, the gun was carefully gauged at two different points, one and two inches from the breech end of the powder chamber. In the first experiment the gun was charged with three-fourths of an ounce of sporting powder, and wadded home with a mallet. After firing the charge, the gun was examined and gauged at the above mentioned points, and the diameters were unchanged. The next test was a very severe one, one and three-fourths ounces of sporting powder being used, leaving only sufficient room for a plug of paper, which, as before, was driven hard home filling the piece to the muzzle. This charge was fired with Bickford fuse, and subsequent examination of the gun showed no flaw or perceptible expansion."

HOW SCISSORS ARE MADE.

Scissors are forged from good bar steel heated to redness, each blade being cut off with sufficient metal to form the single part of the pair which embraces the cutting part and the bow, the latter being the name given to the holding portion. A small hole is punched to represent the bow, and in turn enlarged to the proper size on a conical anvil. Both shank and bow are then shaped and the hole bored in the middle for the rivet. The blades are next ground and the handles made smooth with oil, and then fitted, hardened and tempered.—Ex.

H. D. SIMMONS & CO.,

Manufacturers' Agents,

85 YORK STREET, TORONTO.

Representing Leading Manufacturers in Canada, England, Germany and United States.

Gutlery and Plated Ware, Brass Goods, Grates and Tiles, Engineers' Tools, Painters' and Artists' Brushes, Contractors' Supplies, Etc., Etc.

WIRE.

Coppered Steel Spring. Tinned Mattress Wire. Hay Baling Wire. Flat Wires. Soft Coppered Wires.

We guarantee the quality of all our Wires.

Manufactured by

The B. Greening Wire Co., Ltd.

Write for Catalogue. HAMILTON, ONT.



PAINTERS

Will find the cheapest Paint Brushes are those having our . . .

Flexible Bridles

Why? Because the bridle can be taken off and replaced in a moment. The paint circulates and the stump never hardens. You can wear the brush down shorter, therefore it will last much longer.

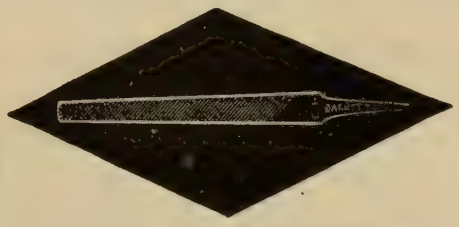
Ask your dealer for them. Made in round, oval, and flat. All sizes and qualities.

CHAS. BOECKH & SONS

Brush Manufacturers

TORONTO - - ONTARIO

BLACK DIAMOND



FILE WORKS,

21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

MANUFACTURERS OF

Mill Sawfiles with two Round Edges for Band Saws.
Double Ended Taper Sawfiles.
Machine Band Sawfiles.
Great American Cross-cut Sawfiles.
Chisel Pointed Sawfiles. **Gulletting Sawfiles.**
Climax Sawfiles. — AND — **Lightning Sawfiles.**

EVERY OTHER DESCRIPTION OF SAW FILES.

Hard Wear Paper FOR Hardware Men

Manillas, Brown Wrapping,
Hardware Manilla . . .
Leather Manilla, Etc., Etc.

PAPER

We can supply Paper of all Grades, in any size or weight, at the best prices and most favorable terms. Write us for samples and quotations.

TORONTO BRANCH : 29 Front St. West.
MONTREAL BRANCH : 318 St. James St.

THE E. B. EDDY CO., Hull, Canada

ADVERTISING.

Know your district well, consequently you will be well acquainted with the people, and in a position to judge as to their requirements. Purchase your goods in the best and cheapest markets, and accordingly sell at the lowest prices possible. Be "up to date" in advertising, and keep your windows attractive and seasonably dressed. Be not backward in reducing prices when necessary; and last, but not least, keep your stock in perfect order and show it to the best advantage. To be a little explicit respecting the above suggestions, I will deal with them successively. It is a most important thing for every business man to have a thorough knowledge of his district; he is then able to know the class of goods to stock, and the class of people with whom he has to deal. If he lacks this information he is bound to accumulate old and unsaleable goods. If your district is a farming and agricultural one, study the farmer, and stock good, general, useful, and not too expensive goods. Be not eager to obtain the latest untried patents, so long as the modern and tested ones are approved of. If on the other hand it is a fashionable summer resort, or an aristocratic watering place, your goods must be "up to date," and your prices must bear comparison. To do this you must buy in the cheapest market, get the very best article at the required price, and mark it accordingly, bearing in mind that possibly some friend in the next street sells the same. Do not reduce prices with the idea to undersell, but see that your prices are within limit. It must be good yet cheap for the visitors, and, I may say, the independent resident folk also.

The present age is a rapidly progressive one. Old machinery is being replaced by new (with all the latest improvements); consequently goods are turned out with better finish, in many cases far superior to the earlier makers. Patents are innumerable, and to be with the times you must, to a certain extent, stock the best and latest. In such a case there is a general tendency to dispose of the new goods first, and unless great care is taken, and a little thought exercised, the former goods remain on the shelves. On the other hand, if you have not the improved articles in stock, you are liable to lose your sale. It should be the object of every assistant to dispose of the old stock first if possible. It is not always necessary to show the new; but if after doing your utmost to sell the old you find all hope is gone of satisfying your customer, then produce the new.

Reduction has a great deal to do with moving old stock. I find it a capital plan, if an article has been in stock for about two years, to reduce it as low as possible, even to cost price—I mean, of course, the ordinary every-day class of goods—and put it well to the front, with a label attached to this effect. If the money originally paid for the article is re-invested, it is decidedly better than that your shelves still remain encumbered with old and unsaleable goods. Take, for instance, electroplate or general furnishing goods. Designs are continually altering, the style sold last year or the year previous will not sell this year, public tastes are fickle; therefore the only means of clearing such goods is to reduce price. This will enable you to stock the latest patterns, to keep a variety, and to improve your trade. In offering old goods, which require pushing, impress upon your customer the fact that you are not offering new and cheap rubbish. Give him to understand that the reduction is not made because the goods are inferior; and if wisely dealt with, he will arrive at the conclusion "that this is the article for me to try," and he gets it. Every ironmonger is aware that goods in stock do not improve, and the longer so, the more difficult it is to dispose of them. It is infinitely better to get your money back minus interest than to continue to bank it in such an unprofitable manner.

The great point is to buy carefully. The commercial gentlemen are very persuasive and tempting with their improved and cheap lines, which they are bound to sell, and no doubt they hope so; but if you have goods in stock which answer the purpose, limit your order with the ever-pressing and not at all times welcome visitor. It is far better to repeat orders than to gratify your canvasser with orders for grosses instead of dozens. I maintain that the great mistake made by ironmongers of to-day is reckless ordering. Instead of the money yielding interest, it is locked up in goods on the overcrowded shelves and the outcome is accumulation of old and unsaleable stock. Different classes of goods are required at different seasons of the year, and you start the particular season with a complete stock and well to the front. Slowly but gradually your stock diminishes, but still at the close of this particular season you are not cleared out. Then, instead of keeping the remaining goods until next year, reduce every one of them, and fill your windows. This should be done before the closing of the season, not at the end. Ticket everything and insert an announcement in your advertising medium as follows—taking, for instance, lamps and coal vases:

BARGAINS NOW OBTAINABLE

5/- in the £ discount off **LAMPS;**

All in perfect condition and made by the LEADING MAKERS.

4/- in the £ discount off **COAL VASES;**

All this year's goods, but must be sold to make room for

SPRING GOODS.

Note the ADDRESS

I know from practical experience that this answers well, and, instead of storing till the winter, you are able to commence the season with new stock and enabled to make a splendid show. If, on the other hand, a little stock still remains, be very careful to see that the goods are properly stored away, plainly marked outside, and wrapped up in a manner to keep them in perfect condition, and then when the time arrives for their reappearance they will not be distinguishable among your new goods. There is not enough care taken in this respect in many cases; the idea is to clear them away, the foremost thought being for the goods now to be shown; consequently at their next appearance they are damaged and soiled, and will probably have to be again stored at the end of the next season, the mismanagement having reduced them into entirely unsaleable stock.

To promote a quick sale, goods should be, as far as possible, displayed in their proper position when in use, and if accompanied by usual accessories, so much the better. Do not stand a kitchen fender or a kerb on its end, or suspend coal vases from the ceiling or exhibit a patent mangle with one roller split. If so, your mangle will remain on show and be a very bad advertisement for you. Everything should be perfect, distinctly marked as to price, and shown to its best possible advantage. Vary your display continually. If you have not sufficient stock alter the positions, and be sure to ticket every article with your lowest cash price. I should have stated before that giving assistants "spiffs" on old stock sold is stated to be worthy of consideration, and this may be so in some cases. I take it that if it encourages assistants to unduly press old stock on a customer, who, possibly, not having courage to say "No," buys what he does not want, and leaves dissatisfied with his purchase, and with the intention of visiting some other establishment on the next occasion, it does more harm than good. If an assistant has (as he certainly should) the interests of his master at heart, he will deal with each customer as he thinks best, and in such a way that he may expect to see him again. Secure able assistants, and carry out the foregoing remarks, and I take the liberty of saying there will be less necessity in the future for our worthy editor to encourage essays on the best method of preventing the accumulation of old or unsaleable stock.—Ironmonger, London.

FRANCIS HYDE & CO.

Builders' Supplies

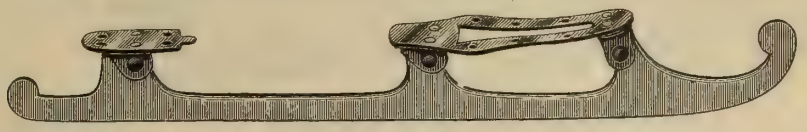
We make a specialty of **Fire Clay Sewerage Pipes,** and all kinds of Fire Clay goods of best quality.

Best brands of London Portland Cement. Agents for Glenboig Union Fire Clay Co., etc.

STORES AND YARDS:

King, Queen and Wellington Sts., Montreal

Boyd's Skeleton Skates



Expert Racer, Crystal Racer, Junior Crystal, Hockey Club, Eclipse, Victoria Club and Dominion.

Best line of Skeleton Skates made. Send for Catalogue of Skates, Hockey Sticks, Snowshoes and Winter Sporting Goods. Ask for discount sheet.

T. W. BOYD & SON, 1683 Notre Dame St., **MONTREAL**

MIXED PAINTS



TRADE MARK

The Unicorn Brand

Has now the leading reputation for purity and durability in Canada.

They are sold all over the Dominion.

Manufactured only by

A. RAMSAY & SON, MONTREAL

ESTABLISHED 1842.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT

Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,

Managing Director and Treasurer

SOLDER.

Half-and-Half Solder.
Plumber's Solder.
Refined Metal Solder.
Triangular Solder.

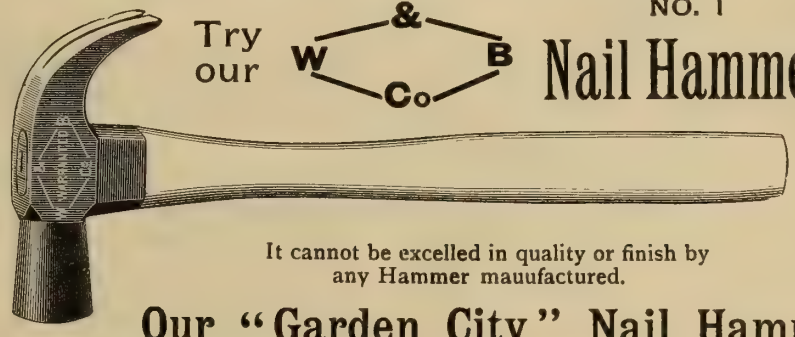
We guarantee all OUR GOODS! If found unsatisfactory can be returned at our expense.

TORONTO SMELTING and REFINING WORKS

92 and 94 Queen St. E., TORONTO.

THE WHITMAN & BARNES MFG. CO.

Canadian Branch: St. Catharines, Ont.



Try our W & B Co NO. 1 Nail Hammer

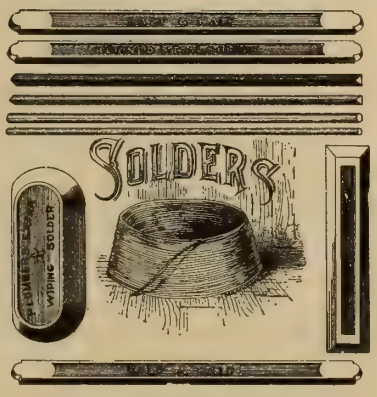
It cannot be excelled in quality or finish by any Hammer mauufactured.

Our "Garden City" Nail Hammer

GET OUR PRICES AND TRY OUR GOODS

Is the best and cheapest "Solid Cast Steel" Hammer on the market. . . .

We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .



C. C. HARRIS

Manufacturer of Solders and Antimonial Alloys.

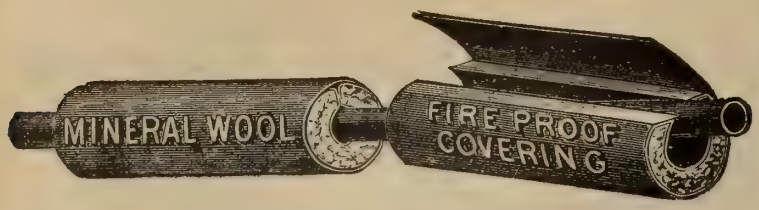
Cor. Wickson Ave. and Yonge St., Toronto.

E.O.W.

APTED BROS.

PRINTERS

54 YONGE ST., TORONTO



Fuel is a Large Item in Your Expense Account

CUT IT DOWN ONE-THIRD

By covering your Steam Pipes and Boilers with SECTIONAL MINERAL WOOL COVERING, preventing condensation and loss of steam.

Others have done it, why not you? Full line ASBESTOS GOODS on hand

Canadian Mineral Wool Co., Ltd.,

111 BAY STREET, TORONTO.

GEO. A COWAN, Montreal Agent, 204 St. James St. GEO. R. THOMPSON & CO., Manitoba Agents, Winnipeg.

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

P. Hetu, plumber, etc, Montreal, has assigned.

H. G. Downer, plumber, Victoria, B.C., mortgage foreclosed.

Stamp & Franks, painters, Hamilton, have assigned to W. Anderson.

S. L. Kelly & Co., tinware, Victoria, B.C., has assigned to R. H. Hall.

Hudon & Ouclet, general merchant, Black Lake, Que., have suspended.

J. A. Elliott & Son, general merchants, Pugwash, N. S., have assigned.

Jules Gauthier, general merchant, Crande Baise, Que., is asking an extension.

The liabilities of the insolvent general merchant, C. D. Ferguson, of Aurora, amount to $6,550, and the assets are $4,688.

Wm. Lauder, trunk dealer, King street west, has assigned to W. A. Campbell. He has liabilities of $4,500, with assets of $4,000.

Geo. A. Keating, general storekeeper of Kemptville, who was reported to be in difficulties some days ago, has assigned to Robt. Spence of Toronto.

Wm. Cowan, proprietor of the Royal Albion hotel, Quebec, has assigned. The privileged claims amount to $38,000. It is understood that 50 cents on the dollar secured will be accepted.

Raymond Walker, who had a large weekly payment store at 107 Queen west, Toronto, has assigned to W. A. Campbell. The liabilities will reach at least $20,000 or $25,000, while the assets nominally amount to about $30,000, including a large number of book debts.

A statement of the affairs of John Goddard, stonecutter and contractor, who assigned to E. R. C. Clarkson a few days ago, show direct, indirect and preferred liabilities amounting to $6,682 09. The assets, consisting of merchandise, plant, building, real estate, book debts, and a surplus from secured claims, total $30,232.68, leaving a nominal surplus of $23,550.59.

SALES MADE OR PENDING.

D. W. Vary, foundry, Strathroy, is advertising business for sale.

The general stock of C. D. Ferguson, Aurora, is to be sold 14th inst.

Chas. Kitchen, blacksmith, etc., Columbia, is advertising his business for sale.

The stock of T. Cote & Co., hardware, St. Jerome, Que., has been sold at 63⅓c. on the dollar.

The stock of L. V. Montgomery, mill supplies, Toronto, is to be sold at Suckling's Tuesday next. It is valued at $7,000.

PARTNERSHIPS FORMED AND DISSOLVED.

Grimshaw & Mallen, coal and wood, Kingston, have dissolved.

Foley & Wettlanfer, agricultural implements, Stratford, have dissolved.

CHANGES.

G. A. Hagarth, general merchant, Melita, Man., is giving up business.

S. R Foster & Son, nail aad tack manufacturers, St. John, N.B., have sold out.

J. W. McKenzie, blacksmith, etc., Comox, B.C., has been succeeded by McKenzie & McDonald.

The H. P. Davis Co. (Ltd.), sporting and athletic goods, Toronto, has sold out to Alfred Ducros, who will continue the business under the old style.

FIRES.

The foundry of Corrier & Audet, Ausleme, Que., has been burned ; partially insured.

Collingwood Pugsley, general merchant, River Herbert, N.S., has been burned out.

The plant of the Dominion Horseshoe Nail Co., Montreal, has been partially damaged by fire.

DEATHS.

Louis Kieffer, of Kieffer Bros., merchants, Montreal, is dead.

Scott Fairley, general merchant, Blackville, N.B., is dead.

ARMOR PLATES RESIST THE DRILL.

A lot of armor for the new United States armored cruiser Maine, in all 400 tons, is now lying at the shops of the Bethelehem Iron Works, Bethlehem, Pa., awaiting shipment, according to Iron Trade Review. The Maine's armor is of the Harveyized type. It has been found that since the first lot of Harveyized steel has been turned out, that there are no tools fit to drill the necessary holes in the plates to permit the latter being fastened on the ship's side. As yet no method has been discovered of placing armor on a vessel's side other than by means of bolts. In all soft steel armor plates no difficulty is experienced in boring holes, but the hard surface of the Harveyized plates appears to defy tools. It is declared by experts that the plates can only be bored after they have been subjected to a softening treatment. This, it is pointed out, can be done by a system of gas jets, but at heavy expense. In softening the armor plates it is made apparent that the plates must necessarily lose some of their resisting powers. It is feared that the plates so treated become little better than plain nickel steel. How to prepare Harvey plates for fitting on the sides of a ship is now under investigation by the ordnance officials of the Navy Department.





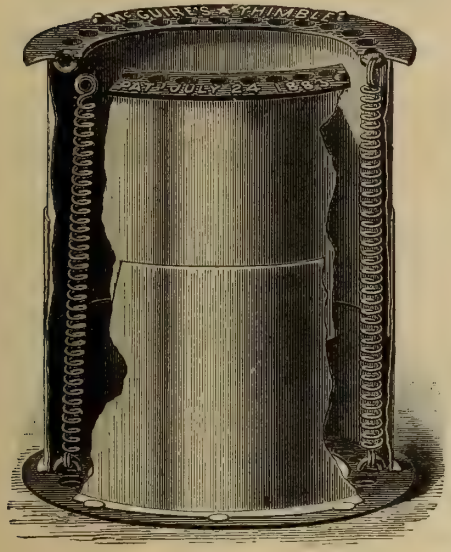
Mantels, Grates and Tiles, Office and Store Fittings and Furnishings.

MINERALS IN NEW BRUNSWICK.

The people of New Brunswick are becoming gradually awakened to the fact that there are still many undeveloped resources in that Province, and as a result the Crown Land Office has of late been besieged with applicants for searching and prospecting licenses. On October 19th no less than 300 applications for areas were filed. The greatest number of applications has been from Westmoreland County, where it is hoped that valuable gold fields may be opened. The plaster areas of Albert County are also in popular demand. Queens County is said to be about covered with applications for coal searching and prospecting leases, and a small excitement has been engendered by the discovery of asbestos at Macadauvic in York County.—Critic, Halifax.

CHENEY'S PATENT - -

DIAMOND EXTENSION STOVE PIPE THIMBLE



Best, Cheapest, and Most Durable

The heads are connected by Spiral Steel Springs, whose tension adjusts them to any thickness required.

Made for Six and Seven inch pipes.

Supplied either complete, or Castings and Springs only, as required.

SEND INQUIRIES AND ORDERS TO

THE JAMES SMART M'F'G CO. LIMITED
BROCKVILLE, ONT.

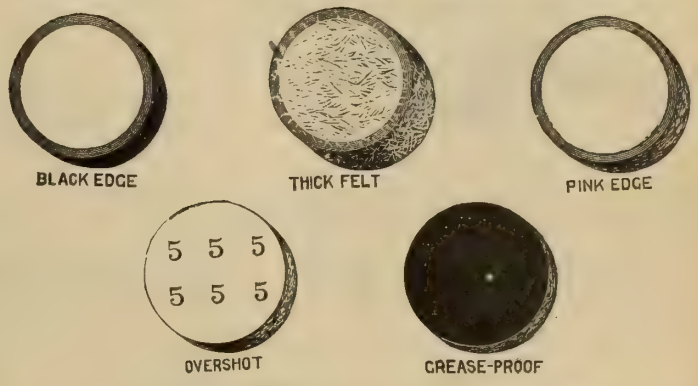
EXCLUSIVE MAKERS FOR CANADA.

. . ELEY'S . .
CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

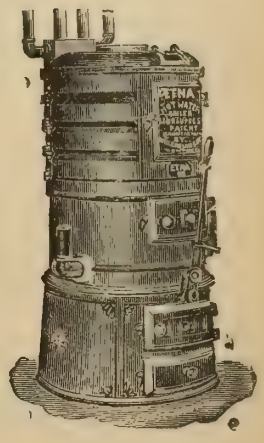
To be had of All Dealers. Wholesale Only.

ELEY BROS., LTD.
254 Gray's Inn Road, LONDON, ENG.

The "ETNA"

Hot Water Heater . . — IS —

PERFECT



And we are prepared to

GUARANTEE

Its working satisfaction in every particular. **Write for Price List and Testimonials.**

Wm. CLENDINNENG & Son, Montreal, Que.

RAZORS, SCISSORS

POCKET KNIVES

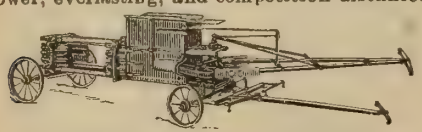


TABLE KNIVES

BUTCHER'S KNIVES

DEDERICK'S PATENT STEEL SHELL HAY PRESSES.

Made of Steel—lighter, stronger, cheaper, more power, everlasting, and competition distanced.



Also all styles of Bale Ties made from the Best Steel Wire.

Manufactured by BOYD & CO., Huntingdon, Q.

MUNN'S LIQUID GLUE

IS THE BEST.

THE ART METROPOLE, Agents.

131 Yonge Street, TORONTO.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	21, 22
Straits "	20½, 21

Tin Plates—*Charcoal Plates, Bright.*

	Per box
M.L.S. equal to Bradley	
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 00 4 25
I.X., "	5 00 5 25
I.X.X., "	6 00 6 25
I.XXX., "	7 00 7 25
D.C., 12½ x 17	3 75 4 00
D.X.,	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	13 00
" " I.X.	16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cokley Grade—	
.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6¼ 6½
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¾ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2½, 2¾
26 "	2¾, 2⅞
28 "	2⅞, 3

Canada Plates.

All dull	2 65
½ polished	2 75
All Bright	2 90

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅝ 5
" 5-16 " "	4½ 4⅝
" ⅜ " "	4¼ 4½
" 7-16 " "	4 4¼
" ½ " "	3¾ 4
" ⅝ " "	3½ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 11½ 0 12½
Lake Superior	0 12½ 0 13

Bolt or Bar.

Cut lengths, round, ½ to ¾ in	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 18 0 19
" 35 to 45 " "	0 16 0 17
" 50 lb and above per lb	0 15 0 15½

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelte .

Foreign, per lb	0 04½ 0 05
Domestic "	0 04¾ 0 04¾

Zinc Sheet.

5 cwt casks	0 05½ 0 05⅝
Part casks	0 05½ 0 05¾

Lead.

Imported Pig, per lb	0 03 0 03½
Domestic "	0 03
Bar, 1 pound	0 04½
Sheets, 2½ lbs, sq. ft, by roll	0 04½ 0 04¾
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04½ 0 04½

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 15 0 16
Standard	0 14 0 15
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 12½
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do "	4 75
No. 2 Do "	4 50
No. 3 Do "	4 25

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 00 1 20
2nd qualities "	0 90 1 00
Barn (in bbls)	0 80 0 90

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.c wt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red, (best) " "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " " "	1 25 1 90
Canadian " "	

Paris Green, per lb	0 13½ 0 15
Burnt Sienna, pure, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" Lemon pure, 8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra "	0 90
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 85
No. 1 Carriage "	1 30
Gold Size Japan "	1 00 1 20
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40
White Shellac	2 25

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 44 0 46

Castor Oil.

Best, per lb	0 07⅞ 0 08

Cod Oil.

Cod Oil, per gal	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue—F. LePage's, dis. 30 t 25 per ct. off list; Munn's, dis. 25 to 30 per cent. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmcur's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardin Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per cwt 0 60 0 65
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.20	.....	1.85	
26 to 40	1.30	2.60	2.10	
41 to 50		3.00		4 70
57 to 60		3.30		5.20
61 to 70		3.60		5.70
71 to 80		4.00		6.30
81 to 85		4.40		6.90
86 to 90		4.80		7.50
91 to 95				8.50
96 to 100				9.50

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb . 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

NEW ARRIVALS

30 Cases CUTLERY AND GUNS

ALL NEW GOODS.

Finest Finish. Best Value.



NEW ARRIVALS

20 Casks Cattle and Trace CHAINS

10 Tons Coil Chain.

Five Cars Window Glass.

Bowman, Kennedy & Co., London, Ont

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 50 to 55 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes.

F.O.B. Toronto & Hamilton $3 80
Snow, " " ... 3 90
F.O.B. Montreal 15c. less, and London 5c. more than above.

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   Basis—50 to 60 dy..... 2 30
   40dy..... 2 35
   30 dy..... 2 40
   20, 16 & 12 dy..... 2 45
   10 dy..... 2 50
   8 & 9 dy..... 2 55
   6 & 7 dy..... 2 70
2. American Pattern Only
   from 4 to 5 dy 2 90
   3 dy. (lath)..... 3 30
3. Canada Pattern Only
   from 4 to 5 dy 2 80
   3 dy. (lath)..... 3 20
   3 dy A.P. Fine 3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 60 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 9 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Star R & L Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾
Lanes, 3½ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 55 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9	10 10½
¼, 5-16, ⅜ in.....	9½	10¾ 11
Cotton, per lb.....		18 20
New Zealand.....		8½ 9
Russia Deep Sea, per lb..		12½ 13½
Jute ..... " ...		06¾ 07½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D, dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 60 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 special brands net price.

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Sapolio

In ¼ or ½ gross boxes, per grs. 11 30

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz 1 75
No 1, Stove Paste, per gross 3 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75 p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz 1 2 50

Tinner's Shears and Snips

P.S.&W., net list.
Canadian 10 to 15 per cent dis.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ p.c. to 35 p.c
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9 00

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4½ 4¾
" 4 " 4 & 6 " }
" Plain twist, 2&3 wires 4½ 5
" Steel thorn and ribbon..... 4½ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS

Manufacturers of the

Finest Quality Electro-Plated Ware.

And Sole Manufacturers of the Celebrated

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.

Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.

FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,

CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co

MONTREAL.

None Genuine without this Brand



Stamped in head of Every Package.

BLACKSMITHS' TOOLS.



Horseshoe Vises.

Price, No. 1, - $4 00
" No. 2, - 7.50

Will save their cost in a week's sharpening. . . . .

A. B. JARDINE & Co.

HESPELER, ONT.

Do we make any other Skates besides our

GENUINE ACMES?

Well, We Rather Think So!

What About our Hockey? The most elegant and suitable skate for the purpose ever made.

What About our Racers? Made with wood tops and extra light runners—the only way in which lightness, combined with perfect rigidity, can be secured. Special system of strapping. The leading racers use wood-top skates. Why? Because they know from experience they are the best.

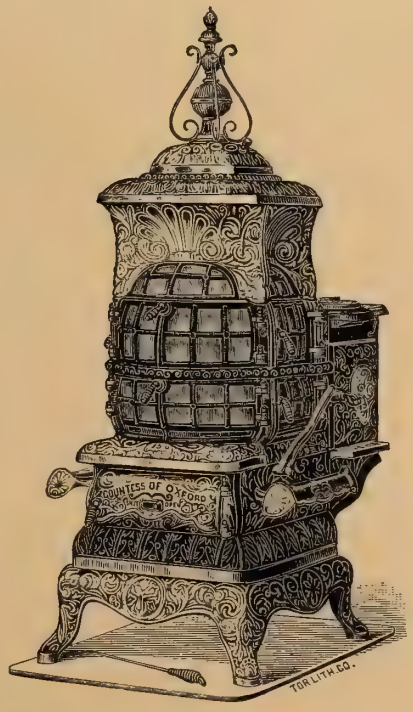
What About our Skeletons? For Rink use the most in demand. Welded iron and steel blades. Plain or nickel-plated.

Why have we secured first honors at Philadelphia, 1876—Paris, 1878—London, 1886—and now Medal and Diploma World's Columbian Exposition, 1893? Because of the superiority of goods exhibited, which are the same as those we are shipping our customers daily.

PRICE?—Ask your jobber about that, and you will find they are quite as cheap as the inferior makes.

THE **Starr Manufacturing Co., Ltd.**

WORKS—Dartmouth. P. O. ADDRESS—Halifax, N. S.



OXFORD "OXFORD" OXFORD

. . LINES . .

Our Leaders for 1893--are the

Countess of Oxford

. . AND . .

Art Countess

and the BASE BURNERS

DUCHESS OF OXFORD

. and .

KITCHEN WITCH RANGES

Put these Stoves on Your Floor and Command the Trade. . . . .

The Gurney Foundry Co., Ltd., Toronto

The Gurney-Massey Co., Ltd., Montreal

Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St., Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 x 4 Barb
Plain Twist and
Strip Fencing

And Staples for same.

Write for Prices and Discounts.

ESTABLISHED 1880 INCORPORATED 1883 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

NOT HOW CHEAP

BUT HOW GOOD

The Pittsburgh LAMP

At a reasonable price is the

Most Profitable LAMP



both for the the dealer and consumer on the market.

Write for Primer

Gowans, Kent & Co.,

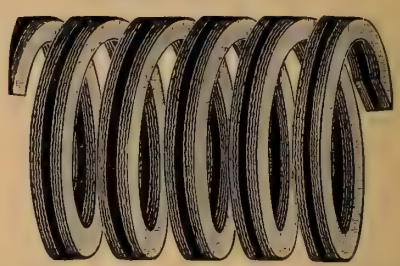
Sole Agents for Canada. TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

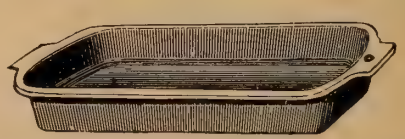
Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., Toronto.

"The Seamless Flanged Drip Pan"



Improved Rolled on Edge.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife to cook or lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The improved rolled on edge making it easy to handle.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

Write for Discount.

SIZES.....	8 x 10	8 x 14	10 x 15	12 x 17
Per Doz.....	$1.91	$2.33	$3.20	$3.73

THOS. DAVIDSON & CO., Montreal, Can.

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, NOVEMBER 18, 1893. No. 46.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

MAGNOLIA METAL CO.,

London Office: 75 Queen Victoria St.
Chicago Office: 41 Traders Building.
Montreal Office: H. McLaren & Co., Agents

Owners and Sole Manufacturers,
74 Cortland Street, NEW YORK.

The Great Green Seal PAINTS



THE BRAND THAT CREATES JOY AND SATISFACTION.

Every Day. Grow More Popular

WALTER H. COTTINGHAM & Co.

Sole Proprietors, MONTREAL.

Large Increase in Sales for 1893.

To the Trade.

WOOD AND FELT

WEATHER STRIP.

Write for Price List and Discount Sheet.

RICE LEWIS & SON, Ltd.

Wholesale **HARDWARE** Merchants

TORONTO.

"We hold these truths to be self-evident"



THAT . . .

Steel Clad Baths

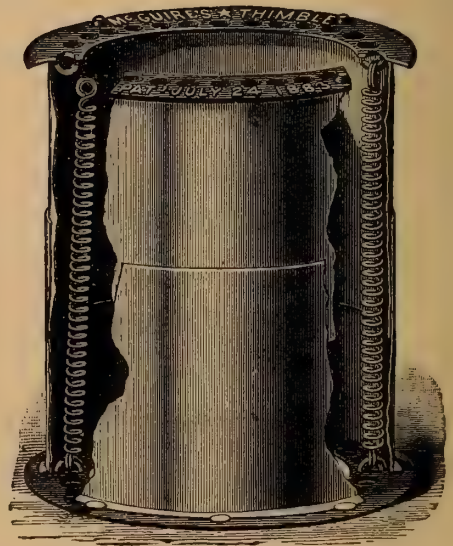


Are Cheapest and Best.

MANUFACTURED BY

Toronto Steel-Clad Bath and Metal Co.
LIMITED

123 Queen St. East, **TORONTO**



THE ABOVE CUT REPRESENTS THE

McGuire Patent Stove-pipe Thimble

It is the same cut we have used in advertising and illustrating this Thimble for the last eight years. We desire to inform our customers, and the trade in general, that we have been and still are the sole manufacturers of this Thimble in Canada, the reputation of which is so well established. No other persons whatever have been licensed, under the patents covering this Thimble, to manufacture it. Anyone infringing will be prosecuted. And to beware of those who represent they sell McGuire's Star Thimbles, who have no right whatever to manufacture the same and cannot possibly supply the genuine article.

Kemp Manufacturing Co.

TORONTO, ONT.

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, NOVEMBER 18, 1893 No. 46

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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E. Desbarats, Manager.
NEW YORK OFFICE: Room 41, Times Building.
Roy V. Somerville, Manager.
EUROPEAN BRANCH:
Canadian Government Offices,
17 Victoria St., London, S.W.
R. Hargreaves, Manager.

John Cameron, General Subscription Agent.

The future of silver production has been a live question ever since the repeal of the now defunct Sherman Silver Purchase law was mooted. That measure, it will be remembered, was a sort of compromise between the free silver and the anti-silver men, and was intended to create a market for the products of the Western silver mines. To what extent this was obtained is a matter of history: Production was stimulated and prices appreciated—for a time. But soon there came the whirlwind; production became abnormal, and prices fell rapidly until they reached the lowest point known. India fatally wounded the silver industry when it discontinued the free coinage of the metal, and the repeal of the Sherman law gave it the final coup. The number of mines that are now being worked in the United States is small indeed compared with a year ago—probably not within 95 per cent as many. If, however, what a writer in the last issue of the Review of Reviews says be true, it was only a matter of time before a great number of the mines would have been compelled to shut down at any rate, and he advances several reasons in the premises. One is the increasing adverse topographical conditions of mining. In other words, many of the mines are at places so remote that it does not pay to develop them, the work of production in the future thus devolving upon the mines or districts now known. Then, as a rule, the more silver mines are worked the greater does the cost become, all but universally silver ores growing poorer as the mines go deeper. Then even when the deeper ores show no important falling off in silver value they are apt to prove more and more refractory, until at last they do not pay for smelting. The smelting even of good ores is becoming more and more costly. "This," says the writer referred to, "is an important point, which not only ordinary people but even practiced metallurgists might easily overlook." For the smelting of silver ores, iron, lime, lead, and mica must be present in definite proportions in order to produce the liquid slag necessary to the separation of the metals from the non-metallic minerals. Some ores have lead enough but no lime, or too much; others have lead and lime enough but no iron or an excess of silica. Of course, the desired constituents may be brought to the smelter, but this means increased cost of production. The smelting element most commonly lacking in silver ore is lead, and everybody knows that the carriage of this to the smelter entails much cost on account of its weight. Then there is the increasing cost of timber to be taken into consideration, the country in the vicinity of the mines having been stripped of this essential. The writer denies that silver is a by-product of lead, as is often alleged. "There is not a mine in the United States," he says, "where silver and lead are taken out together which could be worked for the sake of the silver alone. If their silver will not pay them such mines are of no value whatever. Instead of silver being ancillary in any way to the production of lead, the relation, so far as our country is concerned, is precisely the reverse, lead being almost entirely dependent on the working of silver mines." The total lead product of the United States last year was 222,000 tons, of which 178,000 tons were extracted incidentally to the mining of silver. "And if the silver mines remain closed," opines the writer in the Review of Reviews, "our demand for lead cannot be supplied at home, save at a cost which will render it more profitable to import the metal, heavy as it is, from South America and from Spain.

* * *

One of the most satisfactory features in the hardware trade is the comparative steadiness which has characterized prices for some time. Of course the margin of profits which they yield is small, but that is the case in all branches of trade; and what is more, this condition of affairs is likely to obtain for an indefinite period. Most people realize this, and are endeavoring to cut their garments according to the cloth. This is the only safe course to pursue. Present auguries indicate a quiet winter's trade: the price of grain the world over is lower than at any time in its history, and the farmers, who are always hoping for better prices, are indisposed to sell under such conditions. Then it cannot be expected that Canada can altogether escape the influence of the depression which has hung so heavily over the United States, Great Britain and Australia. True, her condition is healthier than that of most nations; in fact we do not know of any at the moment that is as healthy. And yet this does not mean that everything is altogether satisfactory. Every observing man must recognize that while there is plenty of money in the country it is slow in circulating. As long as this obtains trade cannot be brisk. It may be what is termed fair; and that is the most that can be expected of it this winter. Of a crisis, there is no indication, but, at the same time, it is not wise to court it by careless practices. Like a vessel sailing around in the vicinity of where are known to exist dangerous reefs, merchants need to keep their eyes open and to steer carefully while the present state of affairs exist.

A FRAUD EXPOSED.

Some of the leading hardware merchants of Toronto, particularly those who deal extensively in builders' hardware, are much exercised these days. The particular cause is what they consider unfair competition which they are encountering in certain quarters in the matter of door knobs, escutcheons, locks, etc. It is of recent development. It seems that some manufacturers in the city have been turning out locks, escutcheons, door knobs, ets., made from the patterns of standard and well-known English and American makes. When tenders have been asked by architects for supplying one or more of these articles, some handlers of these imitation goods have attempted—and in some instances have succeeded—by misrepresentation and fraud, to secure the award. It is claimed that some of these men have had the audacity to pretend they were supplying the original standard article when at the same time they were furnishing the imitation. The spurious article would in at least some instances, possess the name or number of the English or American manufacturer, as the case might be. This was particularly so with escutcheons and locks. In other instances, when competing for the work, the tenderer would produce the standard escutcheon or lock and offer to supply like the sample at so much—a price, of course, much below the value of the imported article. One firm only recently was beaten by about 33 1-3 per cent. in a tender for supplying the standard articles. It knew that the genuine could not be honestly produced at the price; and the investigation which it made revealed the fact that the successful tenderer was furnishing a reproduction instead of the genuine article. In some instances the architects have discovered the imposition practiced upon them, and have compelled the tenderers to supply the genuine. Occasionally the architects have been compelled to use the inferior article, even after the fraud was detected, being too late to have it rectified. It will thus be seen that not only have the legitimate merchants been placed at a great disadvantage in competing with such unscrupulous men, but the architects and the purchasers have been put to loss and inconvenience as a result of these dishonest practices.

A representative of HARDWARE was shown one of the counterfeit escutcheons the other day. At a first glance from a distance it looks much like the genuine article, being of course of the same pattern; but on close inspection or on comparison with the genuine the difference is immediately detected. To give it the appearance of the real it is japanned, and instead of being brass is iron, while it is slightly smaller, owing to shrinkage in cooling after casting, and is much lighter than the escutcheon it was made to imitate.

The work of detecting and preventing a continuance of these frauds lies with the architects. And about all they need to do in order to accomplish this is to exercise a little more caution. The same remarks apply to all who have occasion to purchase escutcheons, locks, knobs, and things of that kind.

CAUGHT BY FAKIRS.

The advertising fakir is by no means a thing of the past. He has been compelled to forsake old scenes and old methods, but that is all. As an active propagator of fraud and deception he is as wary as ever. Probably more so, for his prey is not to be caught so easily by the style of angling common a few years ago.

Strange to say, the medium through which the advertising fakir gets at his victim is often the newspaper, the instrument that assisted in exposing his fraudulent practices in the past. An instance of this was seen one day last week in the supplement published by the Toronto Mail. That journal has studied to be in Canada what the London Times is in England—the Thunderer. But even if half that is alleged be true it has lent itself to the perpetration of a deception upon the business public of Toronto that cannot but injure its reputation as the leading journal.

The great trouble with The Mail is that in its desire to get more than its share it is apt to forget its position and standing. The joke this time is on the advertiser. Poor fellow! Caught by the prize baking powder scheme, eh? If anyone of these advertisers had called up Mr. Bunting or Mr. Dyas and asked their opinion they would have been told not to go in. Of course, advertisers have to pay for experience as well as anyone else, but some are always buying experience.

Some time ago a quartet of American advertising fakirs decided to "work" Canada. Recently they arrived in Toronto. Two of them did office work, and two of them did the canvassing. They proposed to write an illustrated sketch of the city, to write up the different lines of trade, and to reimburse themselves for this they asked for advertisements from the leading manufacturers and business men. The price of the advertisement was to be $16—or as near it, of course, as they could get. All this was to appear in the Toronto Mail, and besides each advertisement was to appear in fifteen other papers published in the Province of Ontario. The aggregate circulation of the sixteen papers was given as over 80,000. But The World, which has been exposing the matter, shows that the circulation of the sixteen papers, the Mail included, is only half that amount, even according to the information furnished Rowell's newspaper agency by the publishers themselves. The projectors of the scheme did not hesitate to throw out a sprat to catch a mackerel when occasion demanded it. For instance, in order to induce the merchants in a certain line to "go in" for their scheme they would approach one of them and ask permission to insert his advertisement free. "You know, if we get your 'ad' we can get most of the others." The "sprat" however did not always catch the desired "mackerel," and in such an event the free advertisement did not appear. It was only when the schemers caught something with the bait that they stood by their agreement.

In due time the issue containing the illustrations, write-ups, and advertisements appeared. Then it was that the advertisers began to realize that they had been duped. In every way the issue was disappointing. Typographically it was anything but satisfactory, while the promised business write-ups consisted of words—mere empty words—that no more benefited the respective lines than if the space allotted to each had been filled in with blanks. Here, for instance, is every word it had to say about the grocery trade of Toronto:

It is often said that Toronto, among its other characteristics, is a city of "grocery fortunes." Clear back until the memory of man runneth not to the contrary, at least not in Toronto, this city has been a great central mart for groceries. Fortune after fortune that is now concerned with a hundred interests was reared upon the solid foundation of the wholesale grocery trade. It is indeed characteristic of the city that the "grocery fortunes" are so abounding. They stand for Toronto, bent toward trade and solid business rather than speculation. Toronto can boast of several of the largest and best equipped wholesale groceries in the world.

Exhibits much careful research, doesn't it? Then it is openly charged that but few of the fifteen other papers have published the advertisements. And even those that have done so have merely folded up the Mail's supplement inside their own journals.

But what is more surprising than that the patrons of the scheme should be duped, is that so many shrewd mercantile men, financial men, and bankers should have been led into it. The scheme was a fake upon the face of it. One well-known merchant was heard to remark: "O, I knew it wouldn't do me one cent's worth of good, but I went in because of my personal friendship towards Mr. Bunting." But this could not have been the reason that actuated them all. If they would only confess it they would acknowledge that they were caught by the glib tongue of an advertising fakir. Had they been deal-

ing with a man who was selling something appertaining to their own trade they would have got down to the basis of either taste or sample before placing an order, but in the present instance they allowed themselves to be carried away by the eloquent tongue of a sharp Yankee advertising solicitor. HARDWARE has had occasion within the last few weeks more than once to expose the practices of advertising fakirs, and it is with pleasure, therefore, that we learn that some merchants, with these articles in their memory, rejected the blandishments of the schemers who have recently been at work in Toronto. Barnum, the great show man, once said "the public like to be humbugged." How true. The one desire from boyhood to manhood is to get something for nothing. "Not how good, but how cheap," is the average advertisers motto.

There are some men who profess to never see any results from advertising; and it is no wonder when they throw their money away on such schemes as some of them did last week. There is advertising and advertising. It is safe to say that not one in a score of the merchants whose cards appeared in the Mail's supplement will ever see one single dollar's return for the $16 they invested. In the first place the medium was not a good one. Taking for granted that there was the promised aggregate circulation of 81,000 copies, how many of that number would go into the hands of those whom they were interested they should go? Few, indeed. But aside altogether from the allegation that the contract regarding number of circulation had not been complied with, the possible value of the "ads" were lessened by the inartistic way in which they were "set up" and arranged and the substance of them. An "ad," to be of any value, must, in the first place, be attractive. There is nothing of this qualification about an "ad" which reads: "Jones, Brown & Co., hardware merchants, Toronto." And this was about the sum and substance of the advertisements that appeared in the aforesaid special issue. If Jones, Brown & Co. expect to get returns from advertising they must select a medium that goes direct to the persons whose trade they want to catch, and then "word" their advertisements so that it will attract attention and leave an impression. This is the only way in which results can be obtained. From men who follow this rule one never hears complaints about advertising not paying; and they are the most successful and wide-awake of merchants.

The Yankee advertising fakirs now that they have completed their errand in Toronto, have moved to other fields of labor. Merchants and manufacturers, keep your eye upon them.

A FAMOUS PAINT CASE.

The chief topic of discussion during the past week in the paint and oil trade in Montreal has been the decision rendered last Saturday morning by Judge Tait in the famous case of the Canada Paint Co. (Ltd.) vs. Wm. Johnson & Sons (Ltd.), which has been going on in the courts now for some time. Judge Tait's judgment, in the opinion of the trade, makes honors about even between the two litigants, and previous to referring to the judgment, some reference to the circumstances which led up to it will be necessary for the readers of HARDWARE to understand it.

About 1880 Mr. Wm. Johnson began business in Montreal as agent for L. Berger & Son (Ltd.) of England and J. W. Masury & Sons of Brooklyn, N.Y. This business was sold to one James Goodall in April, 1884, who did business under the name of Wm. Johnson & Co. Goodall wound up and liquidated the business by selling the manufactured goods to John Baillie, and the plant and fixtures in July, 1884, to W. B. McGinnis, who did business under the same name of Wm. Johnson & Co. It appears, however, as if during the time of Goodall & McGinnis the business was practically William Johnsons, anyway he purchased it from McGinnis in October, 1884, and continued it under the same name until the 10th January, 1889, when he sold it to "The Johnson Magnetic Iron Paint Co." by the deed of sale of that date. It is upon this deed that the case of the plaintiff mainly rests and the dispute between the parties has waxed hot as to the interpretation to be given to its provisions.

By this deed Johnson sold to said company the real estate and premises where he had carried on his business, and also amongst other things

"2. The receipts and recipes for articles manufactured by the said William Johnson which he binds himself forthwith to communicate to the said company, together with the full instructions and secrets necessary for the manufacture of the said articles."

"4. The good will of the business heretofore carried on by the said William Johnson, either in his own name or otherwise within the Dominion of Canada, together with the lease of the premises now occupied by the said Wm. Johnson in St. John street, in this city, with warranty that the rental thereof is paid, except as appears in the said list B."

The deed of sale also contained the following clauses:

1. That the said company shall and they do hereby engage the said William Johnson as manager with such powers and duties as may from time to time be delegated by the said directors for the term of five years, and to be accounted from the fifth of November last (1888) at a salary from said date of three thousand dollass per annum for the first three years, and at three thousand five hundred dollars per annum for the remaining two years; it is, however, especially agreed that the said directors shall have the right at any time to terminate this agreement, by giving to the said William Johnson six months' notice in writing, and he shall have no claim for damages on account of such termination."

2. "That the said William Johnson shall not engage in any business for the sale or manufacture of paints, oils and colors, or in any business similar to that carried on by the said company, within the Dominion of Canada, for the term of five years, to be accounted from the first day of November last, unless sooner dismissed from the said company as aforesaid, when the said William Johnson shall be at liberty to engage in such business in his own name."

The name of the Johnson Magnetic Iron Paint Co. was subsequently changed to the "William Johnson Company."

On March 2nd, 1892, the William Johnson Company sold to the plaintiffs, a newly organized company, for $188,384.05, its land, buildings, stock, machinery, etc., and in addition the following:

1. "The good will of the business of the said The William Johnson Company, including the good will acquired from William Johnson under deed of sale of date the 10th of January, 1889, in favor of the said The Johnson Magnetic Iron Paint Company passed before McLenan, N.P., the purchasers acknowledging to be aware that the engagement of the said William Johnson as mentioned in said deed is now cancelled and that the said William Johnson is entitled to resume business in his own name, as provided in said deed."

2. "All formulæ, brands, labels" (of which latter over two millions were transferred) "and trade marks registered or otherwise in possession of or owned by the vendors," etc. (Plaintiffs' Exhibit No. 2.)

The plaintiffs were organized for the purpose of taking over the respective businesses of "The William Johnson Co.," the "A. G. Peuchen Co.," and of Fergusson, Alexander & Co., all engaged in the paint trade, and since their organization plaintiffs have carried on business throughout Canada as paint manufacturers. William Johnson having left the employ of the Wm. Johnson Co., at the time of the sale to the plaintiffs, commenced business at the same time in Montreal in his own name at Mill street, and continued such business until he sold out to the defendants, who were organized in England for the purpose of taking it over, and who have been carrying it on since December last in the Dominion of Canada in their corporate name.

The Canada Paint Co. secured an interim injunction in July restraining the defendants from business, the plaintiffs complaining that the defendants, by the adoption of their corporate name and by using the trade names and marks, cards and labels formerly

used by the old business, whose good will plaintiffs acquired, and by other fraudulent devices set forth at great length in their petition, have misled and are misleading the public into the belief that the defendants are really these old businesses and that they are successors thereof, and have acquired the good will thereof, and that the goods which they, defendants, manufacture and sell are really manufactured by plaintiffs—by all which they, plaintiffs, have been, in a great measure, deprived of the good will they so purchased, and have been greatly damaged.

The defendant moved to have this provisional injunction dissolved, and it was on this motion that Judge Tait delivered judgment. With regard to the first part of the Canada Paint Co.'s demand that the Wm. Johnson & Sons (Ltd.) be restrained from using their corporate name, the Judge reviewed the facts exhaustively, quoting numerous authorities and precedents. He ruled that the Canada Paint Co., in view of the contract of January 10th, 1889, above given, which expressly stipulated that Mr. Johnson could start business again under his own name, could not expect, when they allowed Johnson to become their rival in business, that he was to hide his identity and renounce the high position he had gained in the trade. He accordingly gave his opinion that this point of the plaintiff's demand should be rejected.

Deciding upon that portion of the plaintiffs' demand which asked that the defendants be enjoined from prefixing the word "Johnson" to the terms and designations employed by defendants, as descriptive of the paints and colors manufactured and sold by them, and from using the words "Johnson's" or "Johnson" to describe, distinguish or designate goods manufactured or sold by them, or otherwise in the transaction of their (defendants') business.

The Judge said he could entertain no doubt upon the evidence that the word "Johnson's" as applied to these paints and colors manufactured by William Johnson and William Johnson & Co., who, as was well known to the trade, alone used this name, had acquired a secondary signification or meaning; that it had become what is called in the cases the trade denomination of the paints made by William Johnson & Co., and became the property of that firm; that its use was one of the advantages appertaining to that business which passed at the time of the sale of the good will of it to plaintiffs, who, as the proprietors thereof, can protect their right to its use by injunction. He held that Mr. Johnson, by acquiring the right to return to business, did not take back the good will and advantages of the old business which he had disposed of for a valuable consideration and it could not be pretended in face of the facts proved and authorities cited that any other William Johnson could have used the name "Johnson's" as applied to the paints while the William Johnson in this case, the originator and proprietor of it, was using it—and how could the latter, having disposed of it, give defendants such a right as against plaintiffs, who bought and paid for it. The judge thought it clear that they could not use it, as they are doing, in the same way as it was used by William Johnson & Co., and their successors, and that the plaintiffs must succeed on this point.

The plaintiffs further asked that the defendants be restrained from using any of the floor paint cards headed "Johnson's Floor Paints," and the Judge did not see any room for argument on this point as the cards had been in use for years in the business of which the plaintiffs were the successors, the defendants were enjoined from using the cards.

It was also asked that the defendants be enjoined from using a lithograph of the signature of Wm. Johnson, but the Judge ruled that Wm. Johnson in doing business in his own name had the right to the use of a fac simile of his own signature.

With regard to the demand that the defendants be prohibited from using a card with the words "No one else has the right to use Wm. Johnson's name," the Judge held that the deed of the 10th of March, already mentioned, certainly gave the purchasers the right to use his name, and the defendants were accordingly prohibited from using the words as demanded by the plaintiffs. Deciding about right to the use of the letters O J in connection with the sale of the color known as "vermillion and vermillionette," Judge Tait said, after referring to all the facts of the case, that it was one strongly in favor of the plaintiffs, and that it was his duty to grant the restraining order asked for. The defendants were also "restrained" from using the word "Johnson" in regard to "Johnson's Magnetic Paint." The defendants were also ordered to abandon the use of the word "Johnson" in describing their "decorative pure lead."

Referring to the fact that damages were fixed at $5,000 the Judge, discussing the point fully, said it was an extremely difficult matter to decide what the damages were in a case of this kind. He, however, allowed damages of $200, his judgment in brief being as follows:

(1) From prefixing the word "Johnson's" to the name of paints and colors manufactured or sold by them, or otherwise using it to describe such goods.

(2) From circulating any floor paint cards like petitioners' exhibit No. 4, or colorable imitations of the cards used by petitioners, of which their exhibit No. 3 is a copy.

(3) From circulating travelers' cards containing the words following, to wit: "No one else has a right to use William Johnson's name."

(4) From using the letters "O.J." whether alone or in combination with other letters in connection with the sale of the color known as "Vermilionette" or from otherwise infringing petitioners' trade mark, registered 5th April, 1892, copy of which is filed as Petitioners' Exhibit Number Ten.

(5) From using any of the labels whereof Petitioners' Exhibit Number Sixteen is a specimen, or from otherwise infringing petitioners' trade mark, registered 5th April, 1892, copy of which is filed as Petitioners' Exhibit Number Fifteen.

The whole under pain of all legal penalties; and we do dissolve said injunction and relieve defendants from obedience thereto, as respects all such matters and things as are not by the present judgment enjoined upon them, and I adjudge and condemn defendants to pay plaintiffs the sum of $200 and costs as of an action over two hundred dollars.

Both firms claim that the judgment is a victory for them and one result of it is an action against the Canada Paint Co. for $100,000 damages by the Wm. Johnson & Sons, Ltd., on the ground that the interim injunction was obtained on the affidavits of Mr. Muro, the manager of the Canada Paint Co.

HARDWAREMEN'S ASSOCIATIONS.

A great deal is being said by members of the trade on the subject of local associations. Most of the retailers are in favor of organizing, but differ in opinion as to the result of such a movement. There is something to be said respecting the relation of hardware men to one another. We are afraid there is great rivalry and little friendship between neighboring merchants of the trade, and some of them have grave misgivings as to the success of an association on this account. There is no doubt rivalry, without which the trade would be a standstill, however most of their interests are identical. A Toronto merchant speaking on this subject said: "If we had an association it would be the means, amongst other things, of saving them from being defrauded by bad paying customers, who, after being refused credit in one store, will go to another merchant, who, not knowing how deeply he is in the first one's books, will give it to him. This class of customers could be mutually noted, and thus actual swindlers could be driven to the wall. This is only one instance to show the great benefits that could be gained by an association. The hardware men of this city know a great deal too little of one another's business, and regard each other entirely too much as rivals. The trade is wide, and there is room for us all, and until the Canadian hardware men wake up to the fact and unite, their various grievances will continue."

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MEMBERS OF THE CUT AND WIRE NAIL ASSOCIATIONS

WE MAKE THE

BEST Cut Nails
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COMMERCIAL TRAVELERS.

Last year, as HARDWARE noted at the time, the contest for the presidency of the Dominion Commercial Travelers' Association of Montreal was very keen between Messrs. Lawrence Wilson, of the wholesale wine and spirit firm of L. Wilson & Co., and George Cains, of S. Greenshields, Son & Co. This year it promises to be equally keen, except that the candidates are not exactly the same. This year Mr. Wilson is again in the field, but his opponent is Mr. D. Watson, of the wholesale drug firm of Kerry, Watson & Co. The nominations took place in the Board of Trade rooms in Montreal last Saturday evening, and now the friends of both parties are hard at work making a canvass for their favorite. It is generally admitted that the result will be doubtful until the votes have been actually placed, as both gentlemen are equally popular and no one cares to make a prediction one way or the other. The contest for the other offices does not attract the same attention, that for the presidency putting the others into the shade.

At Saturday night's meeting Mr. Geo. Cains, the president, presided, and his remarks were brief and to the point. He referred to the large increase in the membership during the year, and also stated that there had been a fair increase in the surplus.

After this the work of nominations was proceeded with, that for the directorate being the smallest for years.

After it had been decided that the poll would close on the Friday before the annual meeting at 5.30 o'clock, Messrs. Brewster, Callahan and Dwyer were named to see to the mailing of the ballot papers, and Messrs. Murdock, Beauchamp, Bullock, Morin, J. A. Taylor, and D. Stevenson as scrutineers.

The date of the annual meeting was fixed for the 9th December.

The secretary gave a notice of motion to the effect that in future when a claim for damages was filed the claimant should be able to establish total total disability from work before his claim could be allowed, or if he should be able to carry on any part of his business, the circumstances should be considered by the committee.

Mr. George Forbes introduced a motion instructing the investment committee to take steps to provide that no outside party should be allowed to take judgment against properties on which the association held mortgages, and, further, that the list of securities held by the association should be published in the annual reports. In support of this he read a report of a case where judgment for $398 had been received against property in which a company held a first mortgage for $700. By intervening in the case the company had received $138 out of the $700. It was seconded by Mr. Wm. Galbraith, but was defeated upon a vote.

Then came the question of a dinner, and, as in past years, the meeting was divided into two camps. The first party were opposed to a dinner and the second were against an "at home," which the first were for, and strongly in favor of a dinner. The dinner eventually won, as it always does, and Messrs. Cains, Wilson, Watson, G. Piche, F. Gormley, Beauchamp, Gurd, Dwyer, Galbraith, Cote, Grandpre, and Lesond were appointed a committee to look after the necessary arrangements, and the meeting adjourned.

The various nominations are as follows:

For President: David Watson, of Kerry, Watson & Co., by George L. Cains, Fred Birks, E. L. Gault, Fred. Hughes, S. S. Boxer, Thomas L. Paton, Frank A. Wray, W. McLennan, J. L. Caverhill and C. H. Dougall. Lawrence A. Wilson, by Colin Campbell, J. S. Leo, Wm. H. Callahan, George Auldjo, W. Beauchamp, Frank Gormley.

For Vice-President: Wm. McNally, of Wm. McNally & Co., by John Black, F. Hughes, Sid. Boxer, Fred. Birks, J. D. Rolland, Wm. Waugh. Alf. Elliott, by J. W. Thompson, A. R. Calvin, T. W. Christian, A. G. Snowdon and Miles Grant.

For Treasurer: Fred Birks, by George L. Cains, R. L. Gault, D. L. Lockerby, David Watson, G. D. Aird and Wm. Morris. Charles Gurd, by Fred. Hughes, Holland, Gustave Piche, A. Croil, J. S. Mayo and others.

For Directors: G. H. Bishop, by A. M. Messurier, Wm. Morris, J. T. Dwyer and W. T. Norman; Samuel Ewing, by A. Rogers, J. D. Graham, J. T. Dwyer and others; S. D. Marceau, by Gustave Piche, Hughes, Boxer, Watson and Cains; James L. Gardner, by W. A. Craven, W. Lafrenniere, F. S. Foster, J. Watson, John Black, Waugh and Boxer; T. L. Paton, by Birks, Cains, Piche and others; John Hughes (of Caverhill, Hughes & Co.), by Cains, Wray, Piche, Hughes, and others; Isaac Friedman, by H. G. Frost, Frank Gormley, J. D. Shaw and others; Wm. Gosling, by C. P. O'Connor, Ed. Packam, John Hughes, C. F. White, and others.

PERPETUAL MOTION.

The construction of a machine which shall run by itself without the aid of any outside force, says Popular Science, has always been a favorite project among those unacquainted with the fundamental laws of force and energy. Even at present, when the impossibility of such a machine has been proved time and again, the perpetual motion crank keeps patiently at work, and the columns of the Wayback Gazette, or some other shining light of journalism, contains at more or less regular intervals accounts of a curious machine, "whittled out" by one of its subscribers, which, when once started, will run until it wears itself out. It is needless to say that these machines never materialize in any more tangible form; but a multitude of similar schemes for burning water, utilizing the force of "etheric vibrations," or in some other way making power out of nothing, are being constantly brought forward, and too often succeed in filling the pockets of the shrewd inventors at the expense of their unscientific dupes.

The fundamental fallacy of all theories of perpetual motion is that force or energy can be created. We can no more create a unit of energy than we can a molecule of matter. As far as we know, the total amount of both matter and energy in the universe has always been exactly the same, and all the various phenomena which we observe are due to changes in the form of these two great principles. This fact is independent of any metaphysical theories as to the nature and relations of matter and energy; whatever they may be, it is certain that we can neither create nor destroy the smallest amount of either. The universe consists to-day of exactly as many atoms of matter and units of energy as at the moment when it came into existence, and by no possible method can the absolute or relative quantity of either be altered. We cannot transform matter into energy, or energy into matter, but we can transform one form of energy into another with the greatest ease, and of the 60 or more simple forms of matter now known, we can make an infinite number of compound forms, but this is all that can be done, and all the force which we can make use of to run our machinery of every kind must be obtained by transforming the energy which has been stored up in the universe since the beginning.

Since a machine can create no energy, self-moving or a theoretical perpetual motion is an absolute impossibility. Practically all our force is drawn from the sun, as from a great central reservoir, and the supply from this source is so abundant that it may be considered as inexhaustible. A small machine that would derive its motion from the heat of the sun could be easily constructed, and, with proper provision for storing up power for use at night and in cloudy weather, would continue to move indefinitely, like a water wheel placed under a never failing stream. This would practically be a perpetual motion, but not absolutely, for the sun is constantly dissipating its stored-up energy, and in the course of ages will become cold and dark, like the earth or moon. Whether this dissipated energy will ever be gathered up again into centers of radiation, and the cycle of astronomical changes now in progress be repeated, is beyond the limits

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Linseed Oil,
Turpentine,
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PREPARED PAINTS

White Lead,
Coach Colors
Putty, etc.

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of our knowledge. We can only say that, while it is not impossible, the phenomena of Nature, as at present revealed to us, give little or no indication of any such revivification of the universe. Perhaps this may be made clear to us in some future state of existence, but hardly in the present one.

The direct transformation of the heat of the sun into power and motion is one of the most important scientific problems of the day. At present nine-tenths of all the power used is derived from the solar energy stored up in past ages in the coal beds. In time—and not a very long time either—these will be exhausted, and the question of a supply of power will become one of the most extreme importance. A supply of energy far in excess of all possible requirements is daily given off by the sun, but it is all wasted, as we are unable to utilize it. It is by no means impossible that before the coal beds of the world are exhausted we may be able to run our engines by this waste heat, and become entirely independent of any other source of power; and in this way only, will the problem of perpetual motion be solved—for to construct a machine which would itself produce the energy which moves it would imply the possession of creative power on the part of the constructor.

EARLY WIRE DRAWING.

In a paper read at the British Iron and Steel Institute meeting, Mr. J. P. Bedson stated that the wire-drawing trade was started in England by four families who went there from Germany, and they first hammered (called "tilting") the charcoal iron into ¼-inch square rods, which afterwards they drew through draw-plates, and not on to blocks. This was effected by means of a long pole, which had a reciprocating motion, actuated by a water-wheel, and in this way worked backwards and forwards. In the forward stroke it drew the rod and wire through the plate and on its return stroke, both of which were very slow, the workman sat and coiled up the length drawn by hand into a ring, and thus continued until the whole piece was drawn. The annealing was done in a kiln or brick oven where the wire was heated to redness and allowed to cool naturally. This formed a lot of scale, which had to be removed by hammering, and then scoured in a barrel filled with wire and gravel and caused to rotate by water-power, half immersed in water, for about 12 hours, when the wire was taken out, coated with flour lees, and ready for drawing on.—Ex.

A BUMPER BRAKE.

Abram Reese, a well known mill man of Pittsburg, has, according to American Manufacturer, invented a brake for railroad cars which he claims is simple and safe. It is constructed upon the bumper plan and works automatically, locking the wheels when there is a pressure. The brake receives its power from the motion of the draw head. When the engine is checked the draw-head presses against a lever at the rear of the draw-head to which a brake chain or rod is attached to the ordinary brake bearers. The draw-head, thus pressing against the rear lever, applies the brake simultaneously to all the wheels of the car. Then, on the other hand, when the locomotive starts in motion the brake automatically releases all the pressure. The Pittsburg division of the Baltimore and Ohio road has given the brake a trial, and superintendent Patton believes with a full train equipped with the brakes and the engine handled with driver brakes to obtain the necessary back pressure, the train would be much more fully under control of the engineer, so far as stoppages are concerned, than if handled by double the number of men constituting the ordinary train crew.

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

The increase in the Grand Trunk's earnings for the week ending on the 4th Nov. was £13,915.

Baskets are being made in Windsor, Ont., for shipment to Australia via the new Canadian route.

The pig iron market is weak, but the Western hog crop seems to be good, remarks a funny exchange.

W. H. Bradden has bought Jas. Jordan's handle factory at Thamesville, and will carry on the business in future.

It is said that John McDougall & Co., of Montreal, are about to largely increase their foundry and machine shops.

The Consumers' Cordage Co., Ltd., was awarded medal and diplomas for their exhibit of cordage, twine, etc., at Chicago.

Ethelbert Wareham, of Toronto, is suing Thomas and Alexander Robertson for $5,000 damages for alleged infringement of a patent.

Peter Grant, tinsmith, of Embro, and his wife, have signed a deed of separation. Mrs. Grant received from her husband $400. Mr. Grant, it is said, will apply for a bill of divorce.

The Ophir Gold Mine in Algoma, Ont., is claimed to be the richest in Canada. It is now being worked with a capital of $3,000,000, most of the stock being held by persons in the States.

Work has commenced at the Point de Bute (N.B.) mine. J. Herbert Wright, the owner, is stocking it at $50,000, a portion of which is being sold to carry on preliminary expenses and prospecting.

A patent for a machine that will cut anything from a sheet of paper to belting or asbestos, for use in hardware stores, has been granted Messrs. P. E. Wilson and P. M. Hesch, Jr., of Titusville, Pa.

Edward Scholey, of Acadia Iron Mines, the inventor of a machine called a "perpetual motor," was in the city last week, making arrangements for exhibiting the invention to the public.—Halifax Chronicle.

Mr. Wm. Pendergast has been successful in opening up Barytes and other mines at Five Islands. An extensive New York company with which Mr. Pendergast does business has been invited to examine the mines, with the result that they are well satisfied with the prospectus, and will employ 50 or 60 men in a short time.—Gazette, St. John, N.B.

Mr. Willis, who has been examining a copper mine at Sturt Bay, Texada Island, for the past few weeks, returned on the Comox, bringing down a quantity of ore. The mine is owned by Victoria parties.

A Pittsburg despatch says that the Carnegie Steel Company has reduced the price of steel rails $5 a ton, and proposes to defeat all competition. As a result some of the smaller rail producers are likely to be forced out of business.

The hot metal carried from Homestead to Braddock by the Carnegie Co., stood six hours in the car, a few days ago, before it was emptied. It was found not to have chilled in that time, and the new route is a demonstrated success.

George G. Wood will retire from the wholesale hardware firm of Messrs. Geo. D. Wood & Co., but the business will be continued under the same name. It is understood that Mr. Woods will take up his residence in the East.—Free Press, Winnipeg.

The citizens of New Britain, Conn., proudly and patriotically claim that there is not a hardware store in the world that handles American builders' hardware, in which the output of some one of their factories is not represented.—Hardware.

Peter Beattie, blacksmith, who has had Wm. Forsythe's shop, on the Eramosa road, rented for some time, has purchased Mr. John Maitland's residence and blacksmith shop at Ponsonby for $1,100. He will move there immediately.—Herald, Guelph.

United States Patents have just been allowed as follows: Thomas Davidson, Mount Brydges, Ont., ore concentrator or mineral saving machine; Eli Danner, Willoughby, Canada, churn; Charles Kelley, Toronto, commode; F. L. H. Sims, Toronto, rotary brick press; Arcand Bros., Montreal, (trade mark), hygienic coffee.

Tilbury Centre has advertised for an arc system of electric lighting for the village. The dynamo is to have a capacity of thirty-five arc lights, generating a six ampere current. Purchasers to have thirty days trial of plant before acceptance. Tenders received until 16th inst.

A noteworthy piece of work has just been turned out at Dundas by the Messrs. John Bertram & Sons, of the Canada Tool Works. It is what is stated to be the largest turning lathe ever built in Canada, and was constructed for the Nova Scotia Steel Co., of New Glasgow, to be used in turning heavy steamboat shafts and forgings. It takes in a shaft 34 feet long and will swing over the bed 60 inches, and 8 feet in the break. When tested on Saturday this lathe reduced a 14 inch shaft four inches at a cut, and will do a great deal better when put on a proper foundation. The total weight is 68,000 lbs., and when taken apart the various pieces filled three cars.—Ex.

Engineer Ferris, of wheel celebrity, is now engaged in constructing a cantilever bridge at Cincinnati which will have a sheer span of 1,800 feet and be 60 feet wide. It will be the second longest cantilever in the world, and, considering its width and its enormous size, it will be the greatest bridge of construction that has ever been built.

The very quaintest form of tea-table kettle comes from Japan, and is made of bronze in varying colors. The support is a silver stork from whose beak the kettle hangs, and the kettle itself is of a warm brown tone. The whole stands upon a flat strip of ornamental bronze in which the lamp is set. The price complete is $50. A rather large sum to pay for a simple kettle, but small compared with what many women expend upon mere fabrics.—House Furnishings Review.

Canada patents have just been granted as follows: Selden S. Casey, London, Ont., tool for joining the strands of wire fences or metal fabrics; Geo. Armstrong, London, Ont., (caveat), improved process of manufacturing steel carriage axles, etc.; Francis G. Westlake, London, Ont., (copyright), the Canadian Identification and Registration Bureau certificate keys.

Mineral wool steam pipe covering today adorns the Chancery Court room. The Canadian Mineral Wool Co., of Bay street, say they hold the Lamkin patent thereon and allege that the firm of L. B. Montgomery & Co. and Plumber John Sim, of Church street, are infringing the same. The defendants say that the article has been variously used for many years and that it is practically not a patentable article.—Toronto Telegram.

A half befuddled individual wandered into an Olive street hardware store on Saturday afternoon and said to the first

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Johnson's Liquid Colors
Johnson's Carriage Colors
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Johnson's Magnetic Oxide

Etc., Etc., Etc.

The injunction three times confirmed is here to stay! No visionary claims, or fair promises, will dissolve this Final Order of the Superior Court which

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and confirms our claims as the only makers of these goods.

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FERGUSSON, ALEXANDER & CO.
THE WILLIAM JOHNSON CO.
THE A. G. PEUCHEN CO.

clerk he met: "Shay, just p' me up a gal'n dem'zhong of gd old apple wh-wh-isky, will y'?" "My friend," said the clerk, "this is not a liquor store." "'Tain't! 'tain't, eh! Then w't in blazesh tha' sign out front mean, anyhow—thash w't I'd like to know." "What sign?" asked the clerk. "Thish'n," said the befuddled one, zigzagging to the door and pointing to the one word: SKATES.—Ex.

Take the hours of reflection or recreation after business, and never before it.

A reputation for truthfulness is indispensable to permanent and satisfying success.

When you hear a young man say, "the world owes me a living," you can make up your mind that he owes the world's people enough to balance the debt.—Exchange.

A Nashville collection agency uses a black covered wagon on the sides of which are painted pictures of the devil in red and gold. When the rig stands in front of a man's house or place of business, everyone knows the inmate has secured a high place on the agency's "black book."—Ex.

W. H. Crooker, the Waterdown merchant, who was recently mulcted for selling rape seed for what was purported to be turnip seed, has, through his solicitor, S. F. Washington, issued a writ for $1,000 damages against John A. Bruce & Co., Hamilton, from whom he purchased the seed.

The visiting Dominion Ministers have learnt that coal oil which costs from 9 to 10 cents a gallon in Petrolea brings 40 cents in Manitoba. It costs but 18 or 19 cents in all to land in Manitoba, whence it is clear that the middleman makes an undue profit. The the Ministers have exposed.—News, Vancouver.

The statement of revenue and expenditure for the first four months of the current fiscal year is not as encouraging as last year, the revenue showing a decrease of $278,000. The total revenue for the four months is $14,166,357, and the expenditure $8,125,298, leaving a surplus of $4,291,049. The capital expenditure to October 31 was $1,863,508, as against $1,364,547. The total net debt on October 31 was $239,214,299, a decrease of $234 983 in the month.

The bursarship of the Central Prison is one of the plums in the gift of the Mowat Government which is being eagerly sought for two friends of the party, Alex. Jaffray and G. R. VanZandt. Mr. Jaffray is understood to base his claim on his being a brother of Robert Jaffray, who, of course, has big claims on the party, while Mr. VanZandt, ex-reeve of Markham village, is one of the old war horses of East York, who thinks it is time he was rewarded.—Toronto News. Mr. VanZandt is a wide awake hardware merchant, and his friends in the trade are praying that the plum may fall into his lap.

GATHERED IN RETAIL STORES.

Hardware dealers will do well to lay in their winter stock of skates if they have not previously done so. Skates are beginning to be seen in the hardware store windows.

A Toronto hardware man, who seems to be of a philosophic turn of mind, on being asked as to the state of trade, expressed himself thus: "Well, I can't complain; business in shelf hardware is somewhat dull, but it's moving. In the stove line and tin shop we have all we can do, and there is a season for everything. We don't expect a big call for fly-traps and stove heaters at the same time.

There is being introduced to the Canadian trade a new style of gas heater which resembles greatly the ordinary steam radiator, and can be connected to any gas jet by a rubber tube. It is called the Dangler Gas Radiator. McDonald & Willson, Toronto, are the sole agents, and report that it is having a good sale.

The Collins Mfg. Co. have a new style of weather strip which they are now offering to the trade. It is made of tin and felt. Mr. Collins says that it is easily adjusted, and surpasses all others for tightness.

The McClary Mfg. Co. report large sales in japanned goods and smokers' sets for the holiday trade. They have received a large stock of star heaters that are extremely handsome and are selling well.

The Clauss Cutlery Co. report a great demand for their sets of bread, cake and paring knives from the trade in anticipation of the coming holidays.

The cold snap has come and the stove dealer is all smiles. A Toronto dealer was heard to say as he watched the first snow flurry through his store window, "All good things come to them that wait."

TRADE SALES.

The stock of C. D. Ferguson, merchant of Aurora, has been sold by Suckling to N. Hockin of Toronto for 77½c. on the dollar cash.

The stock of the estate of L. B. Montgomery & Co. of this city was sold at Sucklings for 29½c. on the dollar to the Canadian Mineral Wool Co. of Bay street. The stock was about $6,000.

CUSTOMS REGULATIONS.

The attention of the Customs department having been called by the authorities of the Post Office Department, to the fact that frequently dutiable postal parcels forwarded by mail under manifest, arrive at their destination without the manifest attached thereto, in consequence of the manifest being attached to such parcels insecurely at the sending port—sometimes only with elastic bands. Also that such parcels are frequently not addressed plainly to the Customs officer for whom they are intended, thus interfering with the prompt delivery of the same, the collectors at the different ports of entry have been instructed to see that all postal parcels forwarded from their port, by mail under manifest, have the manifest firmly attached thereto, and that such parcels are plainly addressed to the officer at point of destination.

The attention of the Customs department having been called to the practice which exists at many offices, of delaying the return of manifests to the sending port for the full period of 30 days, collectors have been reminded that so soon as manifests are completed by entry or re-manifest, the one copy is without fail to be transmitted to the sending port; and in no case is the manifest to be held until the expiration of 30 days, unless the goods are not entered and have to be carried to the unclaimed list.

October traffic through the great Sault Ste. Marie canal, that passes the business of Lake Superior, was larger by 128,000 tons this year than in 1892, strange to say, as everybody had looked for a large decrease. For the past month the canal's business amounted to 1,560,292 tons, while 1,432,536 tons was the total in 1892. Freights for the month have been as follows in the larger items: Iron ore, 541,319 tons, 53,000 tons less than in 1892; wheat, 6,551,308 bushels, 450,000 more than last year; lumber, 111,969,000 feet, 40,000,000 feet more than last year; unclassified freight, 61,000 tons, about the same as in '92; coal, 408,594 tons, or 56,000 tons more than last year. A total of 1,100 passengers were carried through in the month.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton. Ontario.
SP

TORONTO PLATE GLASS IMPORTING CO.,

TORONTO.

WHOLESALE IMPORTERS

—OF—

PINKINGTON'S GLASS.

Window, Plate, Car, Figured, Ornamental and Rolled Glass.

ADVANTAGES—Stronger boxes, better packed, average loss from breakage less than ONE PER CENT.

"Pilkington Bros."
"St. Helens,"
"Lancashire."



These words and brand are on every box. None genuine without this Trade Mark. We warn our friend against misrepresentations. There is no other, Belgian or English, equal in quality to this make.

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, TORONTO

ENGLISH HOUSE: **SAMUEL, SONS & BENJAMIN**
164 Fenchurch St, London, E. C.

COW TIES, English and Oneida.

TRACE CHAINS, English and Oneida.

ROPE HALTERS, Hand and Machine Made.

WEB HALTERS.

LEATHER HALTERS.

SLEIGH BELLS and SHAFT GONGS, Large Variety.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Nov. 17, 1893.

HARDWARE.

The movement in hardware during the week has shown some diminution owing to the rushing forward of orders which characterized the last two or three days of the previous week. This rush was due to the usual fall advances of 10 per cent. in railway freights which went into effect on Monday, and since that date the volume of business has been diminished. But although this is the case, many of the jobbers say they still have fair quantities of stock to go forward, and they also expect another moderate turn previous to the close of inland navigation, which must come soon now. All in all they consider the business of the present fall fully up to that of last year, remarking that their stocks are in a very handy shape. Winter goods, such as skates, sleigh-shoe steel and sleigh bells, have shown the most activity, trade in them still being of fair volume. Values generally are steady on all lines, and payments have been fairly satisfactory. Wire makers still report being pretty busy getting forward orders for annealed wire, and the assumption is that jobbers are finding matters the same way.

CUTLERY—There is still a fair sorting trade doing in this line, pocket knives constituting a good many of the orders.

WINTER GOODS—Skates, sleigh bells, etc., have continued in fairly active demand, especially the former, the week's aggregate business in them being considerable.

SADDLERY SUPPLIES—Currycombs, whips and horse blankets are still going out in fair quantity.

NAILS—Cut and wire nails continue dull, with buyers operating very carefully.

TACKS—These continue dull and unchanged.

HORSESHOES—Quite a few horseshoes and horsenails have gone forward during the week, and a fair demand is still to note for them.

IRON PIPE—There has been a moderate movement in this article on city account.

SPORTING GOODS—Orders are not quite so good as they were, but there is still a fair business doing in them.

CHAIN—There is a moderate business doing in coil and cow ties in a small way.

TOOLS—Furnish nothing of importance.

BUILDERS' SUPPLIES—These continue dull and featureless. In fact jobbers state that it has been the quietest season in them for a long while.

PLUMBERS' SUPPLIES—These meet with a moderate but perfectly satisfactory demand.

WARE—Some fair orders have been secured on this line during the week for enamelled goods, but as a rule it is quiet.

LAMP GOODS—There is nothing to note in this line except that business is rather quieter.

NAVAL STORES—Owing to cutting in the west prices on turpentine have been rather modified since our last, but a meeting of the trade is to be held this week, when it is probable prices will be put back to last week's level. In the meantime business has been doing at 47 to 48c., and we quote that as the range. Prices have been steady, while the cold, fine weather has led to roofing repairs and consequent demand for tar, felt paper, oakum, etc. We quote: — Turpentine 50c.; resins, $2.50 to $5.00, as to brand; coal tar, $3.75 to $4; cotton waste, 5½ for colored, and 7 to 10c. for white; oakum, 5½ to 7½c.; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep-sea line; pure Manilla, 11c. for 7-16 and upwards and 12c. for smaller sizes.

METALS.

There is nothing new to note in metals or heavy iron, the movement being small and values generally the same, although the tone is easy on many lines.

PIG IRON—The market for imported pig iron continues extremely quiet, the only sales reported being a few car lots of Summerlee at $18.50. Nova Scotia pig has moved at $17.50 for No. 1 with considerable shading on this in the case of inferior grades. We quote: Summerlee, $18.50 to $19; Eglinton, $17 to $17.25; Carnbroe, $16.50 to $17; Langloam, $18.50; Nova Scotia, $17 to $17.50.

SCRAP IRON—There have been some sales of builders scrap during the week, one lot of 250 tons No. 1 cast scrap selling at $15. Prices on wrought scrap continue the same $15 to $16.

BAR IRON—Bar iron continues quiet and unchanged, what business there is doing being on the standard basis.

TIN PLATE—The easiness in tin plate continues and holders have shaded values still further, as good sized lots of cokes have changed hands at $3.05 to $3.20 and charcoal is easier also at $3.50 to $4.

CANADA PLATES—A fair demand has been noted for these during the week to fill up some blanks in stocks previous to the close of navigation, but it is temporary as the season is over. We quote $2.40 to $2.45.

TERNE PLATES—The price for ternes is nominally unchanged in the absence of business at $7.25, etc.

GALVANIZED IRON—There is still a fair movement to note in this line at unchanged prices 4¾ to 5c.

SHEET IRON—Business is small and unimportant at $2.40 to $2.60 according to grade.

HOOPS AND BANDS—Some good sized lots have been put through, but the demand is not by any means general in its character. We quote as before, $2.35.

STEEL—Demand for sleigh shoe steel has been good, the week witnessing a fair movement in it. We quote sleigh shoe $2.40; tire $2.50 to $2.75; spring $2.50 and best cast steel 10½ to 12c.

COPPER—This line remains dull and featureless with values unchanged at 11½ to 12c.

TIN—A small movement is to note in ingots at 21½ to 22c.

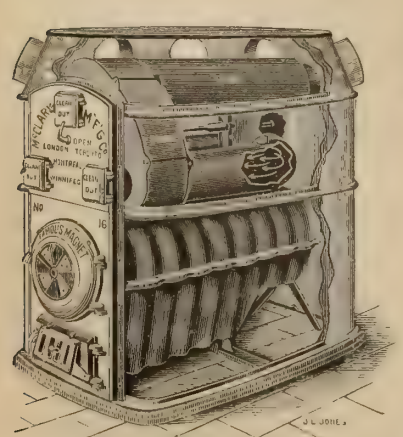
ANTIMONY—This article continues quiet and unchanged at 10½ to 12c.

SPELTER—A moderate demand is to note for spelter, which remains steady at $4.60 to $4.75.

LEAD—The lead market remains much the same under a moderate demand. Prices, however, are steady at $2.85 to $3.

ZINC SHEETS—There is a fair demand in a small way for zinc sheets at former rates, $5 to $5.25.

CEMENT—The cement market has been rather quiet since the advance in freight, but



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Our New Wood Furnace

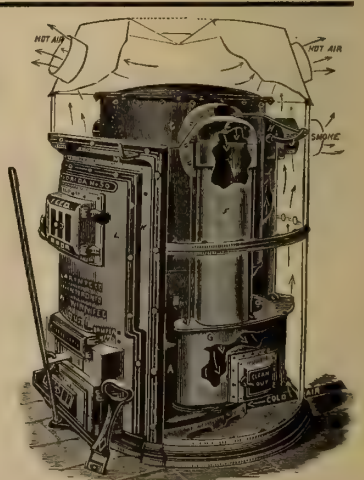
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"Pioneer" and "Sloss" PIG IRON

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Of English, Canadian, and American designs. . .

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WE DON'T CARE

What the Turpentine **Combine** may say or do. We are not members, and no action on their part can force us to join them. Our prices are not governed by any **Combine,** but regulated solely by the Southern market, and we would rather our customers should continue to share with us the benefits of our special arrangements for purchasing in the cheapest market, even though for a time our business may suffer through the action of the **Combine** in trying to force us out of business, or into their association, so that thereby they might be able to exact from the consumer any price their **Combine** might determine.

As the LARGEST DEALERS in TURPENTINE in this PROVINCE, we are satisfied we will have your support in the action we have taken, and with confidence ask a continuance of your favours.

Francis Frost & Co.

33 Front St. West, Toronto.

THE INVINCIBLE. EVERY SAW WARRANTED.

THE FASTEST AND BEST CUTTING SAW ON THE MARKET.



Guaranteed four Guages Thinner on Back than Front and Made from the Highest Quality of Double Refined Silver Steel.

Manufactured only by

The James Robertson Co. (LIMITED.)

SAMPLE ORDER SOLICITED. **Toronto.**



You will Insure Success

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STOVE

Business, by selling



"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.



The Gurney-Tilden Co. Ltd.

Successors to The E. & C. Gurney Co.

HAMILTON - - ONTARIO.



JOHN WILSON'S

BUTCHER KNIVES

and Steels,

Farriers' and Shoe Knives

Are the Best in the World.

TRADE MARK.

TORONTO CUTLERY CO.,

65 and 67 Yonge Street, Toronto

M. MAYER, Propr.

NON-XLL	Pocket Knives	WARRANTED
IMPERIAL	Razors	
T. C. Co.'s	Nickel Steel Shears	
WILLIAMS	Dble Shear Steel Butcher Knives	

We fully guarantee all goods named above.

MONTREAL Markets continued

prices hold steady, although a quiet time is looked for. We quote English brands at $2.10 to $2.25, and $1.95 to $2.05 per cask for Belgian brands ex-ship. The demand for firebricks is slow and stocks on spot are large, quotations ruling from $16 to $20 per 1,000 ex-ship for round lots, according to brand.

PAINTS AND OILS.

The fall trade in paints, varnishes, leads, etc., is nearly over, and as a result the market is quiet with little to note. A meeting of the trade is to be held this week, however, in connection with linseed oil, and it is possible that prices may be advanced on it in consequence of the firmer feeling in England. We quote: Choice brands of white lead, government standard, $5; No. 1, $4.75; No. 2, $4.50; No. 3, $4.25; No. 4, $4; dry white lead, 5c.; red lead, pure, 4½c.; No. 1, 4¼c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, raw, 60c., boiled 63c.

GLASS.

The glass market is quiet, with a moderate jobbing trade doing. We quote as before: $1 25 for first break and $1.35 second break per 50 feet, and $3.25 for first break per 100 feet. Putty in bulk is unchanged, at $1.85.

PETROLEUM.

The movement in petroleum is not large, but dealers are satisfied, saying that business is good as can be expected at this season. We quote Canadian at 11½c. in shed in Montreal for round lots, and 12c. for small quantities. American petroleum, 16½c. in car lots, 17c. in 10 barrel lots, 17¼c. in 5 barrel lots, and 17¾c. for single barrels, net cash; American benzine, 23 to 25c.; Canadian benzine, 10¾c., Petrolea; 12½c. Montreal.

MONTREAL TRADE NOTES.

The Canada Iron Furnace Co. intend working an iron mine near East Sherbrooke in the Eastern Townships shortly.

W. McMaster, managing director of the Montreal Rolling Mills, is down in Quebec this week on business.

The paints and oils trade hold a meeting the week when it is considered probable that some advance in the price of linseed and turpentine will be made.

W. H. Cottingham & Co. report a large increase in their sales of "Green Seal" paints. They are the sole proprietors of the brand of goods.

Thos Davidson & Co. still note a fair demand for tinware, their seamless flanged drip pan in the medium sizes going out freely.

Francis Hyde & Co. have done quite as large a business this fall in their drain and tile pipes as in former seasons. Their line of Pleuboy fireclay drain pipes is meeting with great favor.

TORONTO MARKETS.

TORONTO, Nov. 17, 1893.

HARDWARE.

There is a nice trade doing in some lines, and generally speaking business is fair for the season. Quietness, however, is expected just now and during the last two or three days there have been some indications of its approach. The usual winter advance in freights went into effect Monday last, and this of course will have some influence on trade. The goods which are at the moment occupying the most attention are furnace scoops, snow shovels, game traps, building paper. Rifles, which have been the best sellers in the way of firearms lately are giving place to guns. There are a good many of the latter selling; also ammunition. Axes and ax-handles are still going out in nice quantities. Hay baling wire is still in demand, but in rope there is a falling off in the sale. In cutlery stocks are complete for the Christmas trade and there is a good business doing. Stocks of coil chain are complete and prices are easier. Horseshoes are not as much wanted as they were, and much the same may be said of at least some lines of winter goods. Payments are reported to be improving slightly, but they are still unsatisfactory.

WIRE—There is still a good movement in hay-baling wire of 14 and 15 gauge. Oiled and annealed is receiving but little attention.

ROPE—Trade, except in small sizes, is slackening off.

CUTLERY—Orders for cutlery continue to go out nicely, and stocks are complete for the Christmas trade. The same may be said of flat ware, such as spoons, etc.

NAILS—Demand is being fairly well maintained for both cut and wire nails, but in horseshoe nails trade exhibits some falling off.

TACKS—Trade is springing up a little, but does not amount to much, or is it expected to until after Christmas.

CHAIN—Stocks of coil chain are complete, but there is not much doing and prices are dropping. Demand for cow ties during the week has been large.

HORSESHOES—The bulk of the orders have been filled, and those now coming in are largely of a sorting-up character. The volume of business is not, therefore, as large as it was.

WINTER GOODS—Business shows some falling off in this line also, the demand for such articles as cinder-sifters, stove-boards, and coal hods having been largely supplied, and about the only thing that is doing is in the way of sorting.

SPORTING GOODS—Demand for rifles has dropped off, and attention is now more directed towards shot guns. A great deal of ammunition and large numbers of game traps are going out.

WARE — Orders have been going out nicely for tinware, peerless and white ware during the week.

LAMP GOODS—Trade in this line is fair only, the bulk of the trade, as previously noted, having been already satisfied.

PLUMBERS' SUPPLIES—Trade continues fair and a good many baths and boilers are going out.

BUILDERS' SUPPLIES—Trade is on the whole still dull, but in such lines as plain building paper, tarred lining and felt a brisk trade is being done.

MECHANICS' TOOLS—Are as dull and featureless as ever.

BOILER PLATES AND TUBES—An increasing trade is reported in these.



IRON PIPE—There is a great deal going out at 62½ and 5 per cent. in small lots. Some good orders are reported for large pipes and cast soil pipes and fittings. Some small lots of American pipe are being brought in.

METALS.

The market for metals seems to have been a little more subject to change during the past week, although at the same time nothing of any great importance has taken place in this respect. Ingot tin is a little higher, while copper shows further weakness. In some metals there is a decided scarcity on the Toronto market.

PIG IRON—There has been some sales of Nova Scotia and Pioneer during the week, but there is nothing doing in Scotch pig, for the simple reason that there is none to be had. We hear of 100 tons of Nova Scotia being placed at $19.50 to $19.75 per ton. We quote: Summerlee $20 50 to $21, Carnbroe $19.50 to $20, Siemen's $19.50 to $19.75.

Rogers, Brown & Co. report Toronto market for American pig iron as follows: The market is quiet under a light demand considering the season of the year. Very little Southern iron and not much of the Northern strong iron of the States has been sold here during the past week, although attractive prices have been quoted on each. We quote on the cash basis in bond at Toronto: 1 X Foundry strong Coke Iron, Lake Superior ore, $15.05; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14.55; 2 Foundry Strong Coke Iron, Lake Superior ore, $14.05; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17.55; Southern Soft 1, $13.35; Southern Soft 2, $12.85.

BAR IRON—Quite a number of small orders are reported for bar iron at the $1.25 basis.

SHEET IRON—There is scarcely any to be had here. Stocks are all broken and supplies cannot be obtained in the Old Country. We quote as before: 22 to 24 guage, $2.50 to $2 60, and 26 guage ¼c. extra.

HOOPS AND BANDS—Hoop iron is scarce here, and there is hardly any in Montreal, and in Hamilton there is said to be none. Some orders have been taken by the American makers, but they are said to be unable to fill them owing to strikes. Prices are unchanged at $2.50 to $2.60 for one inch and upwards.

CORRUGATED IRON—Business does not appear to be as brisk as a week ago. We quote as before: $4.75 to $5 is the idea for small lots.

GALVANIZED IRON—Demand is reported good. Owing to the continuance of the strikes and advance in freights it is difficult to obtain supplies from the Old Country. Prices are unchanged. We quote Gordon Crown at $4.75 to $5 for 28 gauge and $4.65 for 26 gauge.

INGOT TIN—There is a good demand and prices are higher at 22 to 22½c. for Lamb and Flag and 21¼ to 22¼c. for Straits.

MARKETS—Continued

INGOT COPPER—Some sales of this have been made, but trade is on the whole quieter and prices easier. We quote 12 to 12½c. for small lots, with large lots obtainable at lower prices.

SHEET COPPER—An active demand is reported for bath copper, but there is not much wanted for roofing purposes. Supplies are ample and prices unchanged.

SPELTER—There have been some good sales principally of foreign, domestic ruling quiet. Some sales of Cherokee are announced at 5 to 5¼c.

SHEET ZINC—Is getting scarce, but the bulk of the trade is over, present wants being of a sorting up character; 5¼ to 5⅜c. is the idea as to price for cask lots, and ¼c. more is quoted for smaller quantities.

TIN PLATES—Some large sales of cokes are announced, but they are not altogether satisfactory on account of the small margin of profits. Supply is good. Prices remain unchanged at $3 85 to $4 for I.C., with the usual extras for I X.

TERNE PLATES—There have been a few enquiries, but there is very little business doing; $7 50 to $7.75 is quoted for 20x28, freights included.

CANADA PLATES — They are getting scarce, but demand is light. We quote: All dull, $2.60 to $2.65; half-polished, $2.75, and all bright, $2.90.

SOLDER—Is going out as usual at this season. The factories will be shutting down shortly, and it is expected trade will be quiet until the beginning of the year. Prices are unchanged at from 14 to 16c. according to composition.

ANTIMONY—Some sales are reported, and although business in this line is as a rule quiet, some think it is looking a little brighter. We quote Cookson's at 11½ to 12c. for cask lots of 1,000 pounds.

LEAD—There have been some good sales of this made during the week; 3¼c. is quoted ordinarily, but this price has been shaded and would be shaded for large lots.

GLASS.

Trade continues brisk, but stocks are low and local houses find it difficult to fill some of the larger orders pending the arrival of further shipments. We quote $1.25 ordinarily for first break with $1.20 under special conditions. Business also keeps brisk in plate glass.

PAINTS AND OILS.

There has been no change in this market during the week. Trade keeps quiet, but some houses question whether it is more so than is usual at this time of year. Linseed oil is the commodity which is most in demand, and in this there is a fair movement at unchanged prices, namely, 60 to 62c. for raw and 63 to 65c. for boiled. Some cutting is heard of in turpentine, sales being reported as low as 42c. Toronto, the regular price is unchanged at 44c. Toronto and 46c. outside, freight allowed. Demand for turpentine is light. Southern markets remain firm on this article. Prepared paints are as dull as ever. Putty is in brisk demand. Shellac continues in good demand at $1.95 to $2.05 per barrel, with an advance of 15 to 20c. for broken packages. There is some improvement in white lead, and a good trade is reported to be doing this week; prices unchanged at the 5c. basis. Payments yet stand in need of some improvement.

PETROLEUM.

There is a brisk demand in Toronto for burning oils, and lubricating oils are still selling well. We quote: 5 to 10 barrel lots, imperial gallon Toronto: Canadian 12½ to 13c.; carbon safety, 16½ to 17c.; Canadian water white, 18½ to 19c.; photogene, 22c.

The Petrolia Advertiser, in its weekly report, says: There is nothing fresh in oil matters. Prices remain firm at last week's quotations. The drill is perhaps a little livelier.

OLD MATERIAL.

Business remains dull, and there is no change in prices. We quote prices paid by dealers as follows:—Agricultural scrap, 55c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40 to 45c. per cwt.; No. 2, including sheet iron, hoop iron and mixed steel, 10c.; new light scrap copper 7½c.; heavy scrap copper 8c.; old copper bottoms, 7½c.; light scrap brass 5c.; heavy yellow scrap brass 7c.; heavy red scrap brass 7½ to 8c; scrap lead 1½ to 2c.; scrap zinc, 1½ to 2c.; scrap rubber, 3c.; country mixed rags, 75 to 80c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; boring, and turnings, 10 to 15c.

HIDES, SKINS, TALLOW, WOOL.

HIDES—Green hides remain unchanged at last week's decline. There is a steady demand for pure hides at 4 to 4¼c.

SHEEPSKINS—Are offering freely at last week's quotations—namely, 65c. Calfskins are nominal.

TALLOW—The situation in tallow is a little easier. Prices, however, remain unchanged at last week's figures—5¼ to 5½c. according to quality.

WOOL—Market remains quiet as usual; some few sales of small lots are reported, however, at prices mainly nominal. Dealers are paying from 16 to 17c. for good pulled wool, and 19 to 20c. for select quality.

MARKET NOTES.

Samuel, Benjamin & Co. are offering some nice lines of leather winter mits and gloves, lined and unlined.

The Toronto Silver Plating Co. is working night and day in order to keep up with the demand for its goods.

M. & L. Samuel, Benjamin & Co. are pushing out the Columbus skates as fast as they can get them from the manufacturers.

The Consolidated Plate Glass Co. of Canada is just opening up twenty cases of French plate glass; also several cases of English plate glass.

It is said that the 15-barrel clause giving handlers of linseed oil the privilege of selling 2c. per gallon below the ordinary price is likely to be abolished.

Rice Lewis & Co. are showing some nice novelties for the Christmas trade in the way of fancy garnet ware, brass and steel umbrella stands, trays, lamps, etc.

Frankel Bros., Toronto, have purchased from the Wanzer Sewing Machine Co. all their new and scrap iron, also their flasks, flask weights and other foundry supplies.

A local glass dealer has found fault with HARDWARE'S quotation of $1.20 first break for glass. Some explanation therefore is necessary. From enquiries made it is learned that $1.20 is only accorded in special cases, and that ordinarily $1.25 is the price. We have changed the quotation to $1.20 to $1 25 first break.

Rice Lewis & Co. have secured the exclusive sale of a special line of weather strip, and during the week there has been a big run on it. It would be to the interest of merchants to write for discounts.

Rice Lewis & Co. are putting something new on the market in the way of pipe clips. They are made of tinned steel, and the feature about them is that they clasp the pipe so tightly as to hold themselves in position, thus enabling the workman to use both hands in fastening the pipe.

The Graham Nail Works are running to their full capacity to keep up with the orders. On page 5 of this issue will be found an advertisement announcing that the cut, clinch, bright wire and blued wire nails for which these works are so well known, can be obtained by the trade from the leading wholesale dealers or direct from the works.

The creditors of John Sims & Co., the insolvent plumbers of 145 Church street, Toronto, held a meeting Thursday. The statement presented showed liabilities of $10,827, and assets of $26,452. Of the latter $7,000 are book debts, tools, etc., and all the rest real estate. It is likely that a settlement will be effected at 30c. cash on the dollar.

One of Rice Lewis & Co.'s windows is attracting a good deal of attention just now, and numbers of persons can be seen standing around it all day long. The particular thing that has such attractive property is the "fry-pan" clocks which he displayed there. The works are placed on the inside of what appears to be an ordinary fry pan, while the bottom is made to serve as a face. The figures and hands are gilt. Seven of the clocks are set to represent the time respectively in London, Berlin, Constantinople, Chicago, St. Petersburg, Paris and Toronto. The clock is valuable as a time-piece as well as a novelty, and can be retailed at $5 and net a good profit. A number of them have been sold to the trade already.

AMERICAN MARKETS.

New York, Nov. 17, 1893.

PIG TIN.—No sales were reported on 'Change. Stiff bids, say 20.50c. for spot and 20.60c. were made, but, despite the fact that London cables came lower local holders manifested no disposition to sell except at a smart advance on those figures. The distribution by jobbers was, with few exceptions, represented as having been of very commonplace type.

COPPER.—The rumor was current that the Calumet & Hecla company has recently closed some large contracts for ingot. The quantity was not divulged, nor the price, but dealers and brokers stated that the company's agents profess to have no more copper to sell for delivery this year. In this connection

MARKETS—Continued

it is significant that other producers have raised their price to 10c. for Lake Superior.

PIG LEAD.—Thus far it does not appear that consumers have paid more than 3.37 1-2 to 3.40c. for common domestic, and the general report was that their purchases had been moderate the past few days. Between comparatively moderate production, the export of nearly all lead made from Mexican ores, and present facilities for further movement in the same direction, the position of the market is kept firm. St. Louis cable to the Metal Exchange was 3.15c. London cables £9.15 for soft Spanish.

SPELTER.—Smelters offered very indifferently, and in a manner indicating that their output for the balance of the year is under contract. The virtual absence of offering, as a matter of fact, prompted intimations of the market being probably "cornered." The nominal prices were 3.75 to 3.80c. here, and 3.45c. in St. Louis for ordinary brands. London cable to the Metal Exchange quoted £17 for good merchant brands.

ANTIMONY.—The demand is of routine character, but enough business passes to keep business quite steady at 9 5-8 to 9 3-4c. for Hallett's and 10 1-8 to 10 1-4c. for Cookson's.

TIN PLATE.—Business was referred to as having been positively dull. Country orders were invariably small as well as few in number, while interest in future deliveries is exceedingly tame. There is slight irregularity in prices, with a weakish undertone.

IRON AND STEEL.—Reliable information regarding business in steel rails is exceedingly difficult to secure, since agents are unusually reticent in view of the demoralized condition of the trade. It is a fact one offer to sell at $22 f.o.b. was refused by a New England railroad company. It is known also that another seller has been down East this week. Rumor had it that 10,000 tons have been sold at $21,50 to a New England company. The surface appearances are that the market is weak on the $22 basis.

In rail fastenings there does not appear to be anything more than routine business, and prices are without radical change.

On American pig iron the reports were similar to those made yesterday, reflecting merely fair volume of business and spiritless demand, with only very narrow fluctuation in prices.

A warrant for 100 tons bib brand No. 2 charcoal car wheel iron was sold on the Metal Exchange at $9.60 in warrant yard.

For old material there was a fair demand, and several transactions involving lots of a few hundred tons were effected. A few old steel rails went at $9.50 recently, but a lot brought $10 this week, and $10.50 is now generally asked.

The first glass window in England was put in the Teltrom Abbey in the year 680 A.D. Glass windows did not come into general use for many hundred years after that date. As late as 1517 the glass casements of Ainsworth Castle were regularly taken down and packed away whenever the owner and his family went visiting.

PERSONAL MENTION.

W. R. Wandless, representing Lalance & Grosjean, New York, was in Toronto this week.

A. R. Woodyatt, the well-known manufacturer of lawn mowers, Guelph, was in Toronto this week.

A. D. MacArthur, of Craig & MacArthur, is making a business trip West. He reports business fair.

W. J. Gardner, of Millbrook, was in Toronto this week. In addition to his mercantile duties, Mr. Gardner is C.P.R. ticket agent in Millbrook and has been attending the convention of the Ticket Agents' Association in London.

Among the country merchants in Toronto this week were these: Eli Braund, of Aurora; Mr. Moore, of Moore Bros., Georgetown; J. A. W. Allen, of Newmarket; G. A. Binns, of Newmarket; Mr. Padget, of Padget & Hay, Unionville; J. W. Franks, of Woodbridge; Mr. Bundy of Claremont.

THE CANADA PAINT COMPANY.

A special meeting of the shareholders of this company was held in Toronto on the 9th inst., at which it was unanimously agreed to extend the capital of the company from $450,000, at which it now stands, to $750,000.

S. F. McKinnon, president of the company, presided, and amongst those present were Messrs. A. G. Peuchen, Thos. Walmsley, George Todd Alexander, Samuel Trees, W. H. Evans, W. H. Howland, D. A. McIntyre, H. M. Pellatt and others.

The chairman explained that all the original capital having been subscribed, it was desirable in view of the growth of the business, to obtain powers to have the capital increased and that of the $300,000 for which powers were asked, only one-half would be offered for subscription in the meantime.

On the motion of William Bell, Esq., Guelph, the resolution was carried unanimously and a large amount was immediately subscribed.

Mr .Munro, managing director, in reply to questions, reported that he had received notice from Chicago that the company had taken the highest place in all departments in which they had competed with exhibitors of the United States, England and all foreign markets, the award entitling them to medals and diplomas in fine colors and varnishes and wood stains. He also stated that the company's mines were producing oxide of iron paint of higher grade than has ever been produced from American deposits, and that the demand from Canada, England and the United States was steadily increasing.

Mr. Peuchen spoke of the complete success of the company in its operations in Toronto and the North-west.

Members present expressed their great pleasure at the high position the company has taken in the paint and varnish trade of the Dominion.

ORIGIN OF PETROLEUM.

William Anderson, D.C.L., F.R.S., delivered a lecture on the origin of petroleum before the Institute of Civil Engineers, London, of which the following is an extract:

Mendeleeff's theory is that petroleum is the product of the action of water on the carbides of metals at high temperatures at no very great relative depths in the crust of the earth, that this production is continually in progress, and that deposits thus actually forming may be reached in many places by sufficiently deep borings. It is somewhat humiliating when thus drawing attention to the recent rapid advance of science, and to the manner in which the engineer has adapted the discoveries of the abstract investigator to the use and convenience of man, to be obliged to confess how utterly insignificant are human operations with reference to the size of the planet. The deepest mine is a mere scratch on its surface, so that the theory of Mendeleeff may be true, the question arises whether there be any hope that the wealth inferred to exist may ever be realized, whether the powers of the engineer will ever be so exalted so as to enable him to reach those stores of combustibles which that theory supposes must exist in many localities, especially in those where the surface has been much shaken by primeval convulsions, and where the deposits may, therefore, be expected to be at relatively short distances below the surface. In view of recent progress in mechanical skill, it certainly would be rash to say that borings of immensely greater depth than any that we are as yet acquainted with will never be made, for if accumulated evidence as to the correctness of Mendeleeff's views, together with the ever-increasing cost of fuel, shall hold out hopes of success, enterprising men will be found ready to embark their means in undertakings the risks of which would not seem to be more formidable than those which surrounded the laying of the first Atlantic cable, and the rewards of success which would be incomparably greater.

BY

Suckling & Co.

The undersigned have received instructions from E. R. C. Clarkson, trustee, to offer for sale by Public Auction at their warerooms, No. 64 Wellington street west, Toronto, on

Wednesday, Nov. 22nd,

at 2 p.m., in one parcel, the following assets belonging to the estate of

The Toronto Plate Glass Importing Co.

1. Sheet Glass	$24,813 57
2. Mirror Glass	18,994 09
3. Machinery	5,010 00
4. Trade Furniture and Fittings	4,985 00
5. Stable Equipment	962 50
Total	$54,815 16

If the reserve price be not obtained each of the above five sections will be offered separately.

TERMS.—If sold in one parcel, one-fourth cash; balance in two, four, six and eight months, with interest at 7 per cent, secured to the satisfaction of the inspectors.

If sold separately the same terms for section one. Three and six months' credit for sections two and three, and for the other sections cash in 30 days. Ten per cent. deposit required at time of sale.

SUCKLING & CO.

A HILL-CLIMBING BICYCLE.

An engineer employed at the Toronto waterworks, is at work on a new bicycle destined to remove the great difficulty of climbing high hills. This wheel is to have the usual gear of the present safety, which can be changed at the wish of the rider to a direct motion on the front wheel, which will be 36 inches in diameter, the hind one being only 24 inches. Mr. Hughes has previously invented a water motor, and also an hydraulic syphon.

BUSINESS CHANCE.

Advertisements inserted under this heading two cents per word each insertion.

STORES and Offices to rent in The Thomson Bros. Block, Calgary, a three story stone building, plate glass front, heated with hot water, lavatory, closets, etc., most central location in the city, ready for occupation in about a month. Address, THOMSON BROS., Calgary.

SITUATION WANTED.

EXPERIENCED Hardware Clerk wants situation in good live town. References furnished from late employer. Address, J. E. WESTCOTT, 298 Wolfe St, London, Ont



Ontario Nut Works, Paris
BROWN & CO.
Manufacturers of
All sizes of Hot Pressed Nuts, Square and Hexagon

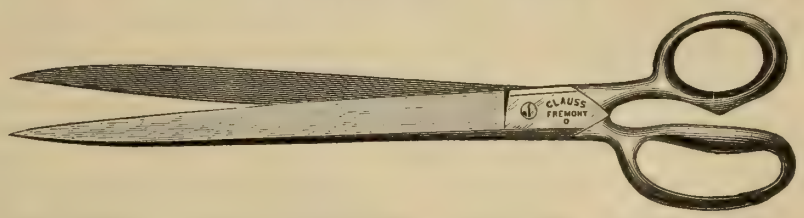
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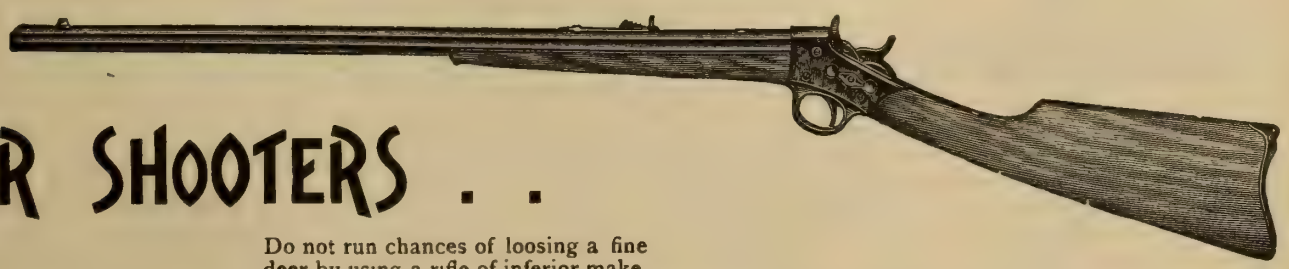
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Any infringements of our Name and Corporate Mark will be promptly prosecuted.

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DEER SHOOTERS . .

Do not run chances of loosing a fine deer by using a rifle of inferior make.

Just Received a shipment of 1893 MODEL MARLIN RIFLES 32/40 and 38/55. Send for our catalogue and discount sheet free to the trade.

THE BOWMAN HARDWARE AND SPORTING GOODS CO., - - HAMILTON, ONT.

CENTRIFUGAL INGOT CASTINGS.

The new method of consolidating steel ingots by subjecting the freshly filled mold to pressure developed by centrifugal action, which was introduced some time ago at the Nykroppa iron works in Sweden, is a very successful innovation. The apparatus consists of upright shaft in the centre of a cylindrical casting pit carrying a frame of four arms,to each of which is articulated a platform, supporting four ingot molds, says the Boston Journal of Commerce. While the shaft is at rest tne molds are upright, and are filled in the usual way, but when it is set in rapid rotation they fly up into the horizontal position, and a pressure in the direction of the length of the ingot is developed equal to thirty times that due to the column of liquid metal in the mold, that drives the gases out and produces a perfectly solid casting. Uniformity of composition is also induced, as, on account of rapid cooling, liquidation is prevented. The process, which has now been in use about two years, has been applied to both the Bessemer converter and to the open-hearth furnace. The ingots are free from external defects and the loss by defective ends has been diminished 40 per cent, the metal being so compact as to bear rolling to finished sizes without the use of the cogging mill. The cost of the apparatus is about $2,000 for a three-ton, and $4,000 for a ten-ton charge. The circumference described by the bottom of the molds, when spun up into the horizontal position, is about sixty-seven feet, corresponding with the working speed adopted of 125 revolutions, to a velocity of nearly 10,000 feet per minute. The pressure on the mold taken at thirty times the depth of the ingots, will be about 150 feet of iron, or from 500 to 600 pounds per square inch. In the form of the apparatus intended for smaller ingots, the molds are arranged on an inclined position, and radially to a central fixed vertical feeding tube upon a turn-table, which is set in rotation after filling, or the latter operation may be performed while the table is actually in motion.

There is a latter modification of the apparatus in which the rotating table, being smaller in diameter than that previously adopted, can be driven at a higher speed—up to 200 revolutions per minute. There are eight pivoted molds, each divided by internal walls, so as to give nine small ingots suitable for wire billets or thin sheets. By means of a central annular funnel lined with refractory material, and provided with eight feeding spouts, or one for each group of molds, the whole number of seventy-two ingots is cast by a single pouring from the ladle, which contains from four to six tons of steel.—Mechanical News.

SEAMLESS STEEL PIPES.

A Dusseldorf mechanic named Ehrhardt, says Stahl and Eisen, invented a method of making steel tubes by punching the pipes from hot metal The method gives, it is said, promises of success in the manufacture of seamless tubes of moderate lengths. The process consists in placing a bar of steel of square cross section in a matrix of a sufficient strength, having a hole of the exact diameter of the outside of the tube. Then, without giving time for the steel to cool, a mandrel, having a rounded end, is forced lengthwise into the mass.

It is said that tubes nearly 8 inches in diameter have been made by this process, the pressure required to operate the mandrel being 180 tons. The end of the heated bar furthest from the mandrel is first made to abut against a strong and heavy slide. When the rounded nose of the mandrel has nearly passed through the bar, this slide is moved transversely so as to bring a hole in line with the advancing mandrel, which, continuing to move, punches its way through. Its protruding end is then seized by tongs and entirely withdrawn.

The operations as described complete only the first stage of the process. The bar with its perforations is now finished by drawing and redrawing until the required thickness of the shell is reached.

THE LIFE OF IRON BRIDGES.

Sir William Arrol, in a recent letter, according to a contemporary, gives some instructive particulars relating to the life of iron bridges. He says: The life of an iron bridge depends entirely on how it is kept and the material with which it is painted for its preservation. I may say that in my experience I have examined a considerable number of iron bridges, and one I have examined was up for 50 years, and the parts of which were properly looked after were practically as good as the day they left the works. Some three months ago I examined another bridge over the river; it had been up 30 years, and had not been painted for 15 years, but there was very little corrosion; the parts that were rusted were parts where drips of water had fallen and had not been properly attended to. Then, again, I examined another a few weeks ago which had been up for 38 years, and every part of the bridge is practically as good as the day it was put up. A few days ago I bought the material of the old Hammersmith Bridge, London, for the purpose of using it as a temporary plant in the erection of the Forth Bridge. It had been up for 62 years, and a great many of the parts had not been painted since its erection, as it was impossible to get at them, yet these parts were in a good state of preservation, in fact quite as good as when they left the works. I took some of the material with which it had been painted to ascertain the reason for the good state of preservation it was in, and the result of the analysis was that the material with which it had been painted was genuine lead. You can see from these samples that an iron bridge properly taken care of by those responsible for it will last practically for any length of time.

LOAD ON BEARINGS.

At the discussion on the loads permissible on ball and roller bearings, at a recent meeting of the Engineers' Club, of Philadelphia, says a contemporary, Wilfred Lewis stated that a manufacturer informed him that almost nothing was known on the subject. Some crude experiments with 3-8 inch balls showed them to have an ultimate strength of two thousand pounds, and a safe working limit of four hundred pounds, though when used in car journals, in which the motion was continuous and rapid it was better not to exceed 200 pounds. Whether a three-fourths inch ball would carry twice or four times as much as a three-eighths inch ball was not known, but there was an impression that over a given extent of surface more load could be carried on small balls than on large ones. The effect of hardening was believed to increase tenfold the carrying capacity of a ball bearing.

THE AGE OF INVENTION.

The following are a few of the inventions and discoveries which, says Chicago Herald, have originated or been made practical within the last half century: ocean steamships, ocean cable, telephone, phonography, photography and a score of other methods of picture making, aniline colors, kerosene, electric lights; steam fire engines, chemican fire extinguishers, anesthetics and painless surgery, gun cotton, nitro-glycerine, dynamite, and a host of other explosives; aluminum, magnesium, and other new metals; electroplating, spectrum analysis, pneumatic tubes, electric motors, electric railways, electric bells, typewriters, steam and hydraulic elevators, steam heating vestibule cars and cantilever bridges.

A meeting of the creditors of the Toronto Plate Glass Importing Co. was held in Assignee Clarkson's office Wednesday, when it was decided to offer the stock for sale, and the assignee authorized to wind up the estate. The assets, amounting to $54,815 16, will be offered at auction by Suckling & Co., Toronto, and are itemised as follows: Sheet glass, $24,813.57; mirror glass, $18,994.09; machinery, $5,060; trade furniture and fixtures, $4,985; stable equipments, $962.50.

MRS. POTT'S SAD IRONS.

Since the expiration of the patents on the sad iron that is known as Mrs. Potts' Cold Handled Sad Iron, a number of firms have been manufacturing these articles, and the competition has caused the price to be lessened very materially. No sad iron has ever been introduced that has enjoyed the sale that the Mrs. Potts' iron has. A firm of Philadelphia manufacturers controlled the market on these goods until a short time ago. The goods when they were first offered to the trade were liberally advertised, not only through this country, but throughout the civilized world. This called attention to the Mrs. Potts' iron, and created a large demand for the same. The originator of the iron was Mrs. Mary F. Potts, formerly of Philadelphia, but now a resident of Austin, Ill., a suburb of Chicago.

Mrs. Potts, realizing a number of disadvantages in the construction of her original iron, has been studying for several years past how to overcome the defects, and, after considerable experimenting, has perfected an iron which she considers far superior to her former effort, and has been granted a patent for it under date of October 10, 1893. In a communication to us under date of October 27, in answer to our enquiry asking for the difference between her recent invention and her original one, she states:

"In general appearance there is no difference, but in practical use it will have a great advantage over the old iron. The pleasure in using the old irons was greatly lessened by certain defects in the construction, and also defective workmanship, the wearing parts of these being immovable and fixed,and without any means of regulating the fit of the handle to the irons, or the irons to the handle; consequently, when by misfit or wear of parts, the handle becomes loose on the irons, it produces not only a rattling noise, very annoying to the user, but also conveys a feeling of insecurity as if the irons would fall off, and consequently the iron is more difficult to guide. The breakages of these handles are frequent, and the user is very often disappointed in that the new handle does not fit on account of the wear that has taken place on the iron by use, or from a misfitted handle. My late improvements remedy the above defects by applying to or constructing these irons with a simple "take-up" or adjusting mechanism that will compensate for the wear or want of uniformity of the several parts. This improvement has been the subject of my thoughts for several years."—House Furnishing Review.

The meeting of J. C. Goddard's creditors that was to have been held at Assignee Clarkson's office has been postponed. It is expected that a compromise will be effected.

GUNS AS DRAWING CARDS.

An instance of effective work in window dressing, and also of the advisability of hardware men carrying a stock of guns is furnished by the following clipping from an Eastern daily. After describing the general appearance of a store on one of the principal streets, the article goes on to say that the western window is at present a target of observation for those interested in gunning. The entire window has been given up to a strikingly effective exhibition of firearms, ammunition and gunning paraphernalia. There is nothing that the gunner needs lacking. Guns, ammunition, belts, loaders, suits, decoy birds, etc., have been arranged in a very artistic manner, and the display at once shows the wide scope of this particular branch or department.

LIGHTING OF WORKSHOPS.

In another column we give an account of a paper read by Mr. Dobson before the Institution of Mechanical Engineers last week on "The Artificial Lighting of Workshops." Mr. Dobsons paper, which was interesting in itself, gave rise to an interesting discussion, during which a great deal was said about the reflecting power of whitewashed walls which would be difficult to substantiate experimentally. Mr. De Segundo, in the course of his remarks, drew attention to the fact that, however satisfactory the effect of the inverted arc lamp might be, from the point of view of diffusion of light it was obvious that there must be a considerable waste of light in using only the reflected rays for the purpose of illumination. This view was not received with much favor by Mr. A. P. Trotter, who suggested that engineers did not sufficiently appreciate the value of white paper or a whitewashed wall as a reflector. He quoted Dr. Sumpner's experiments on the co-efficient of reflection from blotting paper of various colors. This subject has also received great attention from Scientific men in Germany, but nowhere to the best of our knowledge have any figures approaching those quoted by Mr. Trotter been obtained. Considering that a mirror only reflects some 90 to 92 per cent. of the light thrown on it, it is hardly conceivable that a whitewashed wall should reflect 82 per cent. as suggested by Mr. Trotter, but of course it depends entirely upon the views held by Mr. Trotter as to the correct manner in which to measure the co-efficient of reflection. The inverted arc lamp exhibited in one of the rooms of the institution was an occular demonstration in itself of the fact that very considerable more than 18 per cent. of the candle power of the lamp was lost. There is no doubt that as an effect of diffusion the experiments were satisfactory, but we noticed that two sixteen candle power lamps when lighted threw a distinct and appreciable yellow tinge over objects in the neighborhood. We think that if an ordinary ten-ampere arc lamp were erected in a room about 20 feet square by 11 feet high, the effect of an additional thirty-two candle-power as represented by two incandescent lamps would not be very marked. We are inclined to agree with Mr. de Segundo that some more economical means should be obtainable for the proper diffusion of light than that of using none of the direct but only the reflected rays of light.—Industries and Iron.

YOU'LL

LOSE MORE

THAN

WE WILL

WHEN

A Fire Comes

IF YOU

DON'T HAVE

A

Taylor Safe

METAL MENTIONINGS.

Wire was known to the ancients, and was recorded as discovered in 1700 B.C. Wire drawing was protected in the reign of Charles I., and many would like to have it protected now.

The costliest metal regularly quoted in commerce is gallium; price $140 a gramme.

It has been proved that iron T girders were used by the Romans in construction before the Christial era.

When the first furrows were broken on the prairies of Illinois, there was not an iron plowshare in the world.

Scientists are exuberant at the discovery of what is supposed to be a new metal, or at least a new combination of old metals. The scene of the deposits is in Albiquin, N.M. In a large morass are several thousand logs of timber petrified into copper ore, averaging 60 per cent. of copper and from 30 to 40 ounces of silver to the ton.

Needles were first made with very rude machinery in 1545. At that date a workman did well if he turned out ten a day. It is estimated that the present product of the United States exceeds 80,000,000 a year, while England makes 110,000,000.

The largest gold nugget ever known was the "Sarah Sands," which fell to the lot of a lucky Australian miner. It weighed two hundred and thirty-three pounds four ounces, troy.—Ex.

SHELLAC.

Sticklac, the original of that product of India known under several names of seedlac, butterlac, shellac, lac-dye, etc., comprises a species of merchandise of great importance in commerce in all civilized countries, entering into manufacturers' art in various ways, so numerous that it has become familiar to artisans generally. And yet its true history is quite vague. Pretty much all that is known about it is gathered from encyclopedias, which is so little in accordance with natural history that it seems incredible to thoughtful persons. From the encyclopedias an exchange gathers the following description of it:

An animal about the size of a louse, the female being wingless, which feeds upon a plant known as the C. Ficas, or religious tea of Hindostan, Siam, Assam, Pegu, Bengal, and Malay. The male being double the size of the female and has wings. The louse penetrates the bark of the tree on the small twigs from which flows sap of a deep red and resinous nature, incrusting the small branches not larger than a pipe stem to the thickness of one's finger, which serves a double purpose of protecting the eggs of the insect, also of supplying food for the maggots in their more advanced state. The mothers are held fast by the adhesive fluid which exudes from the puncture and contribute their own substance to the mass. This lac-dye is analogous to the cochineal crocus cacti.

And then the author proceeds to describe the methods of separation of this product and its formation by the natives into various shapes from the sticklac into seedlac, shellac and lac-dye, in a very crude way. The seedlac being put into cotton bags and held over a fire until it melts and runs on slabs of bark, etc.

Such imperfect delineation of an article of commerce of such magnitude is entirely unsatisfactory to the thoughtful man; it would seem as if some insectivora would feel it his duty to remonstrate against such perversions of natural science. But being ignorant of the facts, we may be pardoned if we draw largely from our imagination in order to portray the subject.

First, the wondrous insect that produces this marvellous product in such large quantities, surely nature has provided for its natural reproduction annually; but if we accept this writer's description taken from the encyclopedia it would appear to be extinction of animan life. He says the louse punctures the bark and the sap flows and kills the insect.

Our investigation proves this fact that the eggs of the insect are regularly deposited on the branches of the shrub, and then besmeared over with a thick, gummy substance for their protection until the time of incubation. Evidently this is nature's order.

While in this state the natives break and gather in what is known as sticklac, which contains the animal matter or product called lac-dye, when it is put in form.

The sticklac is boiled and separated from the wood, and is then known as seedlac, it being strained from the gum and wood fibre. The residue is boiled down to a paste, which is spread upon boards, dried, and then cut in cubes about an inch square, and is then known as lac-dye.

Half a century ago this product alone was the all desirable portion of it, and was used for dyeing scarlet woolens for British uniforms, etc.

The uses for this gum were secondary. The seedlac has always been preferred for stiffening of hat bodies.

At the period mentioned the shellac was inferior to that of the present, not being well settled, in consequence of a want of knowledge how to clarify it, which now is done perfectly. In all probability the seedlac after being partially freed from the color by boiling, is melted, a portion of rosin being employed as a flux, and then poured upon copper sheets to cool, when it becomes the shellac of commerce, of which thousands of cases are annually exported from Calcutta to Europe and America.

The historian of this subject has told us the most wonderful stories how nature has provided for the sustenance of the larvae of this insect after it leaves the egg, by the flow of sap, which at the same time corrodes and fastens the mother's body.

Also he tells us that this sap from the tree is a very deep red color, which is the green sticklac. We cannot prove to the contrary, not being present to observe. But we do know that the laws of nature are wiser than he has portrayed.

For an example, take the moth—she lays her eggs and carefully covers them with the juices of her own body for protection, and when the proper time comes for incubation nature has opened the buds of plants suitable for it to feed upon, instead of overpowering it with the sap of a tree, which would naturally destroy it.

STEAM CARRIAGES.

The following account of a steam carriage built by C. L. Simonds, of Lynn, Mass., for his own use, is given in an exchange: The carriage weighs only 400 pounds, and can carry two persons at a time. It has the appearance of an ordinary carriage in front, except there are no provisions made for a horse. The wheels are of cycle make and are four in number. The hind wheels are 43 in. and the front wheels are 36 inches, with rubber tires. The boiler and engine are just in the rear of the seat and give the carriage the appearance of a fire engine. The steam generates in what is called a porcupine boiler, which weighs 100 pounds. The steam is made by naphtha flames from three jets. The naphtha is kept in a cylinder, enough to last for seven hours, and there is a water tank that will hold ten gallons. The steerage part consists of a crank wheel on the footboard, so that the engineer can steer and attend to the engine at the same time. The vehicle is said to make 10 miles an hour.

It appears that omnibuses driven by steam are regularly used in Paris on the principle of M. Serpollet. His new road motor and vehicle are thus referred to by the Paris correspondent of an English journal: These carriages are a great advance on all previous attempts to use steam on the highways. There is no visible steam or smoke, the products of combustion being ejected at the rear, near to the ground; there is very little more noise than is made by a heavy road carriage or an omnibus. The carriage is under excellent control, and during our ride it must have passed hundreds of horses, and only one seemed to take any notice of the carriage. Twenty or more of these vehicles are said to be in regular use in the French capital and suburbs, and others in the provinces.

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Flexible Bridles

Why? Because the bridle can be taken off and replaced in a moment. The paint circulates and the stump never hardens. You can wear the brush down shorter, therefore it will last much longer.

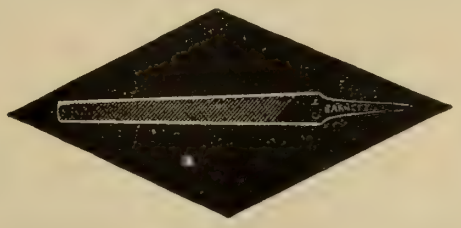
Ask your dealer for them. Made in round, oval, and flat. All sizes and qualities.

CHAS. BOECKH & SONS

Brush Manufacturers

TORONTO - - ONTARIO

BLACK DIAMOND FILE WORKS,



21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

MANUFACTURERS OF

Mill Sawfiles with two Round Edges for Band Saws.
Double Ended Taper Sawfiles.
Machine Band Sawfiles.
Great American Cross-cut Sawfiles.
Chisel Pointed Sawfiles. **Gulletting Sawfiles.**
Climax Sawfiles. — AND — **Lightning Sawfiles.**

EVERY OTHER DESCRIPTION OF SAW FILES.

Hard Wear Paper
FOR
Hardware Men

Manillas, Brown Wrapping,
Hardware Manilla . . .
Leather Manilla, Etc., Etc.

PAPER

We can supply Paper of all Grades, in any size or weight, at the best prices and most favorable terms. Write us for samples and quotations.

TORONTO BRANCH : 29 Front St. West.
MONTREAL BRANCH : 318 St. James St.

THE E. B. EDDY CO., Hull, Canada

BURGLAR'S TOOLS.

Every little while the police arrest a man with a kit of burglar's tools in his possession, and one naturally wonders where they all come from, remarks an exchange. It is easy to buy a gun of any description, and the most reputable citizen would not be ashamed to be seen purchasing the most wicked looking knife ever made, but who, says a Boston journal, would know where to get a slung shot, or a jimmie, or a device for drilling into a safe, or any of the many tools used by the professional burglar in the pursuit of his calling? There probably are places in many large cities where these things are made and sold to the users, but such places are scarce. Once in a while the police find such a factory, and then things go hard for the proprietors. It may seem a little strange to learn that most of the tools used in burglaries are made by mechanics who are respectable men in the community.

When a burglar wants any particular tool made he goes to a mechanic who can do the job, and pays him, perhaps, five times what it is actually worth for making the tool and keeping still about it. Superintendent Elbridge of the police department recalls many cases of this kind that have come to light in Boston. One in particular occurred three years ago, when an escaped convict named Williams went to a blacksmith in Roxbury and got him to make a lot of drills to be used in safe cracking. He personally superintended the tempering of the steel, and when the job was nearly completed it leaked out, and Williams was arrested. In this instance the blacksmith knew nothing of the use to which the tools were to be put, and escaped punishment. In the opinion of Superintendent Elbridge, most of the tools used by burglars are secured in this way. The only regular establishment where they were made ever discovered in Boston was at the West End. This was years ago, and the place was soon broken up.

THE MAN AND THE MACHINE.

There was a former time when an issue was made in the minds of working people principally in the form of "Men vs. Machines," and a labor saving invention was believed to be entirely antagonistic to the interests of manual labor. In mechanical processes especially brains were popularly considered a less important factor than muscle, and men clung to primitive ways because they were old, and, to their limited views, satisfactory. Happily, that time of obstinate ignorance is past, the prejudice against machines has largely abated, and the trials of inventors have taken a different form. It is probable that the triumphs of steam have so settled opposition that its competitor and possible successor, electricity, will have less to contend against. We have learned that the man and the machine are not in opposition, but are both important factors in the world of industry.

We would call attention to what may be termed the teaching of machinery, meaning the attempt to learn from its operations, if possible, a way of working which the artisan may copy to advantage. The machine, while it is on duty, so to speak, attends strictly to business, carrying on processes of construction assigned to it, whether simple or complex, in a consecutive, orderly and perhaps monotonous manner. We do not imply that the man should be a mere automaton, but that the head and the hands should both be interested. If the labor is such that the hands do it nearly independently, the head may be seeking method of helping them. In this manner inventions are generated and the machine is made which does the work faster and better than it was previously done. In those constructive operations where the machine has not replaced the man, experience has taught that the doing of the right thing at the right time, or "machine fashion," is productive of the best results. The discipline of soldiers, which is largely effective in producing a reliable fighting machine which moves at the will of a controlling mind, is illustrative of that attention to routine and detail which the young mechanic will find a good rule to work by. The machine has come to stay, and the man must adapt himself to it, learning the lesson that undivided attention to the work in hand, with a systematic progression from start to finish, will make him successful both as a man and a machine.—Metal Worker.

THE STARTING POINT OF SUCCESS.

No truer axiom was ever presented to the mature mind than that success must be founded upon a recognition of the fact that the world contains many things we do not, and never will know; thousands of men and minds far above us in present capacity, and probably in all possible attainments. In fact, the young man is on the surest road to success when his condition may be described by the trite old truism, "the best lesson learned is that he does not know anything."

Robt. J. Burdette, in one of his lectures, aptly illustrates the ridiculous leadings of self-conceit in the young by giving his own experience, as a mere boy, during the late war.

It seems that he was a private, a raw recruit, in a cavalry regiment; and he states that upon a beautiful summer morning he was grooming his horse in a field close to a public road. Filled with the ambition of youth, he had allowed it to carry him to the point of placing a very high estimate upon his own ability. All other men were at the small end of the telescope to his gaze, and he was much dissatisfied with his position in life. While working upon his horse there came to his ears the clatter of hoofs along the dusty road, nearer and nearer, until there dashed into view a large black horse and upon his back an insignificant appearing rider, yet one wearing the uniform of an officer of high rank. Burdette looked at him and noted the girlish appearance, the white gauntleted rists, the shining trappings, the jaunty straw hat with its blue ribbon, set rakishly on one side of the head, the long curly hair dropping over his shoulders—all this, and he thought to himself how much better officer he would make; what an unfitness of things appeared to his mind in this girl-boy holding position above such an important personage as himself. He learned his lesson of life, however, when that afternoon he followed Custer, his girl-boy of the morning, in one of his famous charges.

Self-conceit is an awful curse, and is sure to wreck the success of that young man who is so unfortunate as not to learn that he does not know anything.

Some very laughable things attend this over indulgence in self esteem. Not long since we came in contact with a country bred young man with the very best intentions, and we feel confident he will learn the first lesson of life before long, and then begin building for success, but his estimate of himself both plainly expressed and acted, was pitiably egotictic and ignorant. The young man was twenty-three and had taught a few terms of school in the country; had been seventy or eighty miles from home, and yet his experience in this great world was, in his own estimation, vast. He stated that, while he was but twenty-three he had the experience of thirty. Spoke of his younger brother by saying: "I am afraid the boy's father doesn't take proper care of him." Standing on the steps of the home where he was being entertained, he asked, "Can you inform me what the elevation is yonder?" and upon being told that it was a common everyday hill, he subsided until returning for a late lunch in the evening, he overwhelmed the lady of the house, who had eaten her supper before, by asking: "Had you finished your repast previous to our arrival?" Upon being presented with a book from the pen of one of our best writers, he asked: "Is this author broad and deep in his views, as I do not like to fill my mind with narrow thoughts and theories." Enough of this. It is but one case of a thousand where little—instead of "much"—learning has "made men mad." Young man get a discounted estimate on yourself if you desire to succeed.—Merchants' Review.

"POPCORN JOURNALISM."

If a newspaper has to give away a coupon or anything else to obtain and hold its circulation, the chances are that an advertiser will have to give something away to be able to sell such a paper's readers anything by advertising in it. A paper that is not bought for its news, editorials, special articles, etc., but is bought for coupons, etc., and is working the "prize popcorn" game to keep its circulation up, is not the paper that goes into the homes, and is not so valuable an advertising medium as a paper like the Boston Herald that carries your advertisement into the homes where the buyers are. Newspapers are read. Coupon papers are cut up.—Boston Herald.

SOLDER.

Half-and-Half Solder.
Plumber's Solder.
Refined Metal Solder.
Triangular Solder.

We guarantee all OUR GOODS! If found unsatisfactory can be returned at our expense.

TORONTO SMELTING and REFINING WORKS

92 and 94 Queen St. E., TORONTO.

Boyd's Skeleton Skates



Expert Racer, Crystal Racer, Junior Crystal, Hockey Club, Eclipse, Victoria Club and Dominion.

Best line of Skeleton Skates made. Send for Catalogue of Skates, Hockey Sticks, Snowshoes and Winter Sporting Goods. Ask for discount sheet.

T. W. BOYD & SON, 1683 Notre Dame St., **MONTREAL**

MIXED PAINTS



TRADE MARK

The Unicorn Brand

Has now the leading reputation for purity and durability in Canada.

They are sold all over the Dominion.

Manufactured only by

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ESTABLISHED 1842.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

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BRAND "C. I. F." THREE RIVERS

PLANTS AT

Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
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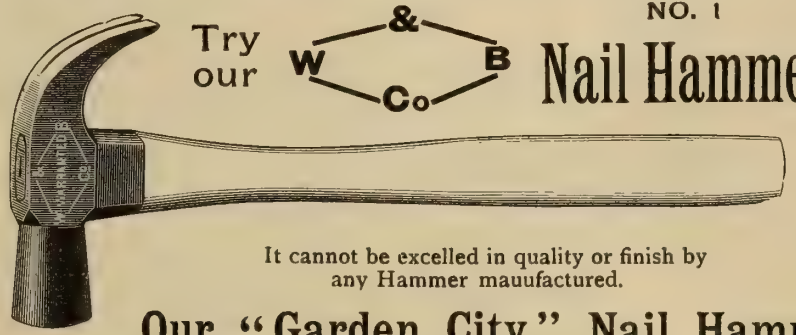
"Build to-day then, strong and sure, With a firm and ample base." —Longfellow.

DO YOU?

Wish thus to build, an advertisement in the CONTRACT-RECORD, Toronto will bring you tenders from the best contractors.

THE WHITMAN & BARNES MFG. CO.

Canadian Branch: St. Catharines, Ont.



Try our W & B Co NO. 1 **Nail Hammer**

It cannot be excelled in quality or finish by any Hammer mauufactured.

Our "Garden City" Nail Hammer

GET OUR PRICES AND TRY OUR GOODS

Is the best and cheapest "Solid Cast Steel" Hammer on the market. . . .

We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .

APTED BROS.

PRINTERS

54 YONGE ST., TORONTO

YOU LOSE MORE THAN WE DO BY NOT ADVERTISING IN THIS JOURNAL

BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

John C. Reid, painter, St. John's, Nfld., is said to be insolvent.

F. C. Dezouche, general merchant, Bripon, Que., has assigned.

James W. Wry, general merchant, Sackville, N.B., has assigned.

James R. Welsh, general merchant, Wentworth, N.B., has assigned.

R. Morrison, general merchant, Boissevani, Man., is asking an extension.

Louis Pare, general merchant, Granby, Que., has sold out to Pare & Frere.

Mrs. Catharine Bulger, trader, St. John's, Nfld., has been posted as an insolvent.

John Sims & Co., plumbers, 145 Church street, Toronto, are in financial difficulties.

T. M. Boggs and McKinnon Bros., general merchants of New Glasgow, N.B., have both assigned.

Jules Gauthier, general merchant, Grande Baie, is offering to compromise at 65c. on the dollar.

The business of Louis Lavoie, general merchant, Lause a Giles, Que., is being wound up.

Fred. Spafford, general merchant, Stouffville and Markham, has assigned to W. A. Campbell.

J. G. Thorgirsson, general merchant, Churchbridge, Man., has assigned live stock to Thomas Ryan.

J. W. Lauder & Co., trunks and valises, Toronto, is offering to compromise at 15c. on the dollar. The creditors are considering the matter.

The assignment is announced of Oliver, Coate & Co., better known as "The Mart," to E. R. C. Clarkson. Although it was generally supposed that Mr. Oliver had been doing a profitable business and was in good shape, yet it is stated that the business of late has greatly fallen off. The liabilities are not given, but the estate will pay very little.

PARTNERSHIPS FORMED AND DISSOLVED.

Carrier & Audet, foundry, St. Auseline, Que., have dissolved. Chas. Audet continues.

The Ridgetown Citizens' Gas Co. of Ridgetown, Ont., is applying for charter of incorporation.

Chas. Taillefer, St. Henri de Montreal, has registered as trading under the name of E. Lacasse & Co., plumbers.

H. Bentley & Co., general merchants, Lethbridge, Man., have dissolved. Tweed and Ewart retire and Bentley continues.

Drolet & Allaire, electro plates, Montreal, have dissolved. Honore Drolet and Ignace Drolet have registered a partnership to carry on business as electro platers under the style of Drolet & Frere.

SALES MADE OR PENDING.

Charles Stewart, general merchant, Harrowsmith, is advertising his business for sale.

The estate of R. Jamieson, general merchant, Seaforth, is advertised for sale by tender.

The stock of Laferriere & Tellier, general merchants, Berthervilie, Que., is to be sold by auction 17th inst.

The general stock of R. J. Healey, Amherstburg, has been sold to R. E. Roudot, of the same place, at 52½ cents on the dollar.

CHANGES.

Joseph Massie is starting a foundry at Granby, Que.

B. D. Derbyshire, blacksmith, Chantry, has left the place.

Frank Vancamp & Co., hardware, Hastings, has removed to Lindsay.

J. B. Anderson, general merchant, Dundalk, has sold out to A. G. Smith.

Hector Pare is starting into business at Granby, Que., as general merchant.

Edward Rice, blacksmith, Monticello, is selling out and giving up business.

H. Playter, blacksmith, New Dundee, has been succeeded by Robert Douglas.

J. A. Eddy, general merchant, Scotland, Ont., has been succeeded by J. Campbell.

James McClelland, blacksmith, Grand Valley, has been succeeded by R. W. Horn.

James McKinney, blacksmith, Glen Williams, is giving up business and has been succeeded by George Dennis.

FIRES.

The sash and door factory of J. E. Lecleue, L'Islet, Que., has been burned.

Plumbing stock of Charles Bellisle, Montreal, has been partially damaged by water.

Mason & Dales, of Bowmanville, had their stock damaged by water and smoke recently.

The stock and machinery of Macdonald Manufacturing Co., of Montreal, have been damaged by fire. Loss is covered by insurance.

DEATHS.

D. D. Anderson, agricultural implements, Wyoming, is dead.

P. Lessard, general merchant, East Broughton, is dead.

Zephirin Matte, of the firm of Vaudry & Matte, plumbers, is dead.

THE OLD TIME TIN SHOP.

In the days long departed when manufacturing was in its infancy, when every community had its quota of mechanics whose product was absorbed by local consumption, there were tinners and tin shops which were little like those that have succeeded them, except that the use of a like material gave a like name. The old shop and the old workman were for a specific and rather limited purpose, to wit: Assortment work, or the turning of tin plate into the various domestic utensils which housekeeping called for. We will not go back to the ante-machine times, but will name some now common which then were not often found in the average shop: Circular shears, double seaming, bending, crimping, forming and the more modern machines; but the raising block and hammers, also hand wedges and hollow punches, were hardly ever missing. Iron stakes were then, as now, an important part of the plant and were increased in number and varied in form as necessity prompted invention. Every piece of everything manufactured was cut to a pattern, they (the patterns) were numerous, and hung on much of the available wall space. Let us imagine ourselves at work in the old shop and about to commence a lot of milk pans. First of all we lay on the bench a pile of 10 x 14 sheets from the IX box, and by giving them singly a peculiar handling select the number required, all of uniform gauge. Then followed consecutively the marking out by pattern, usually on alternate sheets, which were then secured so as to cut out double. The sections or "pieces" next go to the "folder" or "French horse." Don't know why so called! A style of machine now obsolete, which had two levers and had six motions to turn an edge. After this the pan maker straddles a wood former and bends the pieces to proper curves locking of seams, wiring, burring, marking out of bottoms with compasses, cutting every part with bench shears, double seaming with mallet and stake and soldering. We remember that it took 22 operations in the old shop to convert the tin plate into a finished pan, and yet a day's work was quite a pile. All concave forms, like covers and tea kettle breasts, were made with the raising block and hammer, for stamping presses were not as yet. Economy of stock was desirable, and available scrap was used. Among the rudimentary articles in whose making apprentices cut and burned their fingers, were whistles, half-pint cups and pepper boxes. Those were the halycon days of tin peddlers, whose carts went too and fro in the land exchanging "tin pots, tin pans, tin nutmeg graters, tin cooking kettles for your fish and 'taters" for any commodity which their Yankee cuteness could turn into currency at a profit.

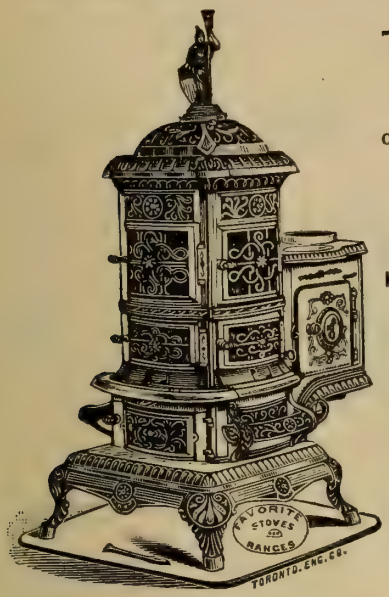
Many a treasure was found by the peddler's small boy among the junk that "Pop brought in"; curious things in old metals, including toy cannon, and much to be coveted among the rags. One of our peddlers found a copper wash basin in possession of an old maid, who fancied that the use of it was causing her to lose her youthful bloom. He told her the metal was very deleterious, and kindly (?) exchanged a new tin basin for the old hand-made without seam, and a little cash to "boot." The injurious copper was used in the shop sink for 20 years after for the ablutions of dirty tinkers.

It was said of the peddlers that they either carried or would furnish to order any article of merchandise, which assertion was endorsed by two yarns which are ancient, like our topic. One of the itinerant merchants being obliged to put up for the night at a country tavern agreed to pay his bill with any tinware that the landlord should choose. The demand of the host, who was of long and lanky build, was for a pair of tin pantaloons, and the peddler produced a pair of candle molds as the nearest to a fit that he had. Another, looking up trade in a Southern State, hailed a plantation house, on whose portico some young people were sitting, with "Want any tinware to-day?" "Have you got any tin side saddles?" responded a lady wit of the party. "I don't carry any in my cart," said the peddler, "but can furnish 'em to order. I'll take your measure and bring you a nice one, warranted to fit, if you like."
—By Fossil, in Metal Worker.

"THE RIVAL FAVORITE"

SELF-FEEDER FOR HARD COAL.

One Size With Oven. Two Sizes Without Oven.



The most popular of the . . .

"FAVORITE" LINE

Has no equal at the Price.

Orders should now be sent to the undersigned, and will have prompt attention.

We now have full stocks of these popular Heaters and can ship all orders same day as received. Please let us hear from you either by wire or by letter.

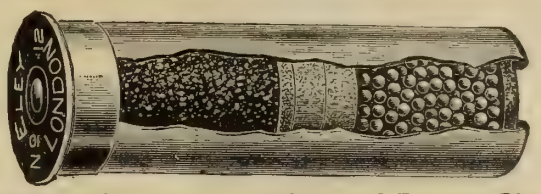
THE JAMES SMART MFG. CO., LTD.

BROCKVILLE, ONT.

Successors to the business of the Chown & Cunningham Co.

. . ELEY'S . .

CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. Wholesale Only.

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

The "ETNA"

Hot Water Heater . .

— IS —

PERFECT



And we are prepared to

GUARANTEE

Its working satisfaction in every particular. **Write for Price List and Testimonials.**

Wm. CLENDINNENG & Son, Montreal, Que.

RAZORS, SCISSORS

POCKET KNIVES

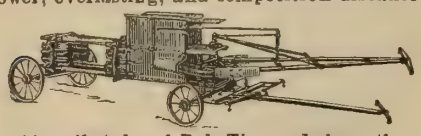


TABLE KNIVES

BUTCHER'S KNIVES

DEDERICK'S PATENT STEEL SHELL HAY PRESSES.

Made of Steel—lighter, stronger, cheaper, more power, everlasting, and competition distanced.



Also all styles of Bale Ties made from the Best Steel Wire.

Manufactured by BOYD & CO., Huntingdon, Q.

MUNN'S LIQUID GLUE

IS THE BEST.

THE ART METROPOLE, Agents.

131 Yonge Street, TORONTO.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	21, 22
Straits "	20½, 21

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
M.L.S. equal to Bradley		
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 00	4 25
I.X., "	5 00	5 25
I.X.X., "	6 00	6 25
I.XXX., "	7 00	7 25
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded y 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be urchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

	Per lb.
C okley Grade—	
.X.X., 14x56, 50 sheet bxs } 14x60, " }	6½c, 7c
14x65, }	

Tinned Plates

72x30 up to 24 gauge	6¼	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
5/16 "	2 35
⅜ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2½, 2¾
26 "	2¾, 2¾
28 "	2¾, 3

Canada Plates.

All dull	2 65
½ polished	2 75
All Bright	2 90

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head

16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Gordon Crown—

16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅝ 5
" 5-16 " "	4½ 4¾
" ⅜ " "	4¼ 4½
" 7-16 " "	4 4¼
" ½ " "	3¾ 4
" ⅝ " "	3⅜ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 11½ 0 12½
Lake Superior	0 12¾ 0 13

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22 $0 25
" round & square	
1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 18 0 19
" 35 to 45 " "	0 16 0 17
" 50 lb and above per lb	0 15 0 15½

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelte .

Foreign, per lb	0 04½ 0 05
Domestic "	0 04¾ 0 04¾

Zinc Sheet.

5 cwt casks	0 05½ 0 05⅝
Part casks	0 05½ 0 05¾

Lead.

Imported Pig, per lb	0 03 0 03½
Domestic "	0 03
Bar, 1 pound	0 04½
Sheets, 2½ lbs, sq. ft, by roll	0 04½ 0 04¾
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04½ 0 04½

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.	per lb.	
Bar Half-and-half (guar.)	0 15	0 16
Standard	0 14	0 15
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 12½
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do "	4 75
No. 2 Do "	4 50
No. 3 Do "	4 25

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 00 1 20
2nd qualities "	0 90 1 00
Barn (in bbls)	0 80 0 90

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.)bbls,p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red, (best) " "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " } " "	1 25 1 90
Canadian " }	

Paris Green, per lb	0 13½ 0 15
Burnt Sienna, pure, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure,	
8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra "	0 90
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 85
No. 1 Carriage "	1 30
Gold Size Japan "	1 00 1 20
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40
White Shellac	2 25

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 44 0 46

Castor Oil.

Best, per lb	0 07½ 0 08

Cod Oil.

Cod Oil, per gal.	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue—F. LePage's, dis. 20 t 25 per ct. off list; Munn's, dis. 25 to 30 per cent. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 50
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Canadian 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 25

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardin Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per cwt 0 60 0 65
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—Socket, Framing and Firmer

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... .... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.25	.....	1.75	
26 to 40	1.40	2.40	2.00	
41 to 50		2.70		4 50
57 to 60		3.10		5.00
61 to 70		3.40		5.50
71 to 80		3.70		6.25
81 to 85		4.10		7.00
86 to 90		4.50		8.00
91 to 95				9.00
96 to 100				10.00

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb . 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier per doz 0 50 1

Wrought Iron.

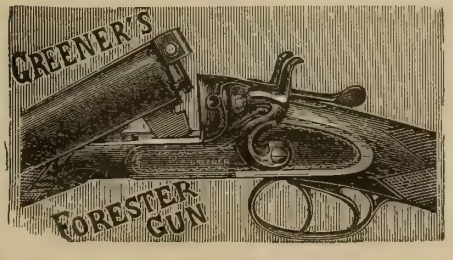
Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

NEW ARRIVALS

30 Cases CUTLERY AND GUNS

ALL NEW GOODS.

Finest Finish. Best Value.



NEW ARRIVALS

20 Casks Cattle and Trace CHAINS

10 Tons Coil Chain.

Five Cars Window Glass.

Bowman, Kennedy & Co., London, Ont

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 50 to 55 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes.

F.O.B. Toronto & Hamilton $3 80
Snow, " " ... 3 90
F.O.B. Montreal 15c. less, and London 5c. more than above.

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   - Basis—50 to 60 dy..... 2 30
   - 40dy..... 2 35
   - 30 dy..... 2 40
   - 20, 16 & 12 dy..... 2 45
   - 10 dy..... 2 50
   - 8 & 9 dy..... 2 55
   - 6 & 7 dy..... 2 70
2. American Pattern Only
   - from 4 to 5 dy 2 90
   - 3 dy. (lath)..... 3 30
3. Canada Pattern Only
   - from 4 to 5 dy 2 80
   - 3 dy. (lath)..... 3 20
   - 3 dy. A.P. Fine 3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 60 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Star, R & L Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3½
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 55 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9	10 10½
¼, 5-16, ⅜ in.....	9½	10½ 11
Cotton, per lb.....	18	20
New Zealand	8½	9
Russia Deep Sea, per lb..	12½	13½
Jute ..... " ...	06½	07½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B.& A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D, dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P., dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 special brands net price.

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis. 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Sapolio

In ½ or ¼ gross boxes, per grs. 11 30

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross	7 50	12 00
Dessert " ..... "	21 00	.....
Table " ..... "	30 00	30 00
Dessert Forks.... "	24 00	.....
Medium " .... "	27 00	.....
Table " ... "	36 00	.....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75 p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net list.
Canadian 10 to 15 per cent dis.

Tinware.

Stamped, dis. Assn list, 70, and 12½ per cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ p.c. to 35 p.c
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9 00

Twines.

Bag, per lb..... 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart " 4 " 4 & 6 " " Plain twist, 2&3 wires " Steel thorn and ribbon.....	4½ 4¾ 4¾ 5
"Lock Barb," 4 point	.... 0 04½
Ditto Glidden 2 point	.... 0 04½
Galvanized Barb, "Lyman," 2 to 4 points.....	..... 0 04½
Steel staples	0 04½ 0 04½

Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS

Manufacturers of the

Finest Quality Electro-Plated Ware.

And Sole Manufacturers of the Celebrated

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.

Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.

FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,

CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

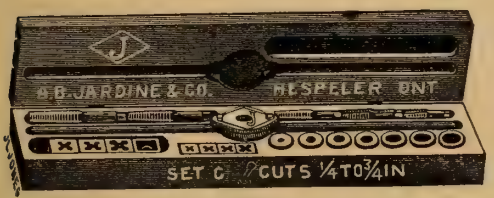
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MONTREAL.

NONE GENUINE WITHOUT THIS BRAND

JOHN LUCAS & CO. IMPERIAL FRENCH GREEN PHILADELPHIA

STAMPED IN HEAD OF EVERY PACKAGE



SAW GUMMERS.

Price $15, complete.

Will gum any cross-cut saw; anyone can work it. There is paying work for a saw gummer in every town, village or cross-roads in Canada

A. B. JARDINE & Co.

Manufacturers of Blacksmith's Tools and Tube Expanders,

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Do we make any other Skates besides our

GENUINE ACMES?

Well, We Rather Think So!

What About our Hockey? The most elegant and suitable skate for the purpose ever made.

What About our Racers? Made with wood tops and extra light runners—the only way in which lightness, combined with perfect rigidity, can be secured. Special system of strapping. The leading racers use wood-top skates. Why? Because they know from experience they are the best.

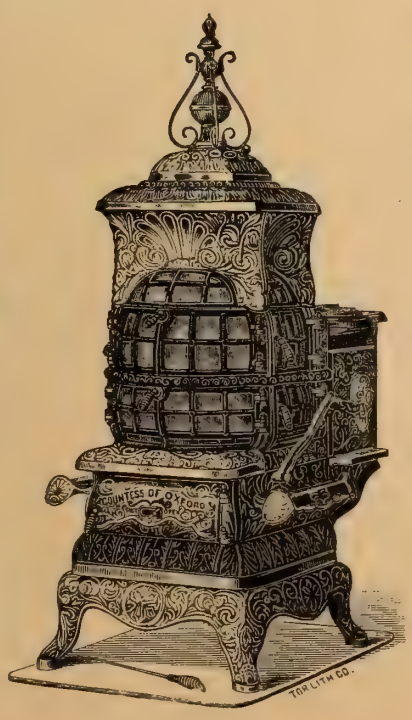
What About our Skeletons? For Rink use the most in demand. Welded iron and steel blades. Plain or nickel-plated.

Why have we secured first honors at Philadelphia, 1876—Paris, 1878—London, 1886—and now Medal and Diploma World's Columbian Exposition, 1893? Because of the superiority of goods exhibited, which are the same as those we are shipping our customers daily.

PRICE?—Ask your jobber about that, and you will find they are quite as cheap as the inferior makes.

THE Starr Manufacturing Co., Ltd.

WORKS—Dartmouth. P. O. ADDRESS—Halifax, N. S.



OXFORD "OXFORD" OXFORD

..LINES..

Our Leaders for 1893--are the

Countess of Oxford

..AND..

Art Countess

and the BASE BURNERS

DUCHESS OF OXFORD

and

KITCHEN WITCH RANGES

Put these Stoves on Your Floor and Command the Trade.....

The Gurney Foundry Co., Ltd., Toronto

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Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St, Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 x 4 Barb
Plain Twist and
Strip Fencing

And Staples for same.

Write for Prices and Discounts.

ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

The "Pittsburgh" Lamp

: : GETS : :

THE PREFERENCE

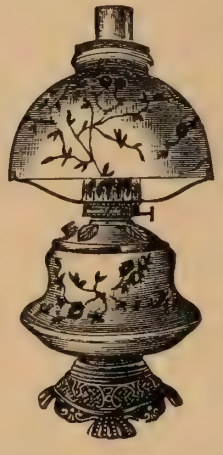
Because

It is A 1

It gives the best light

It saves trouble in cleaning

It suits all parties



ALL GOOD DEALERS KEEP THEM

Write for Primer

Gowans, Kent & Co.,

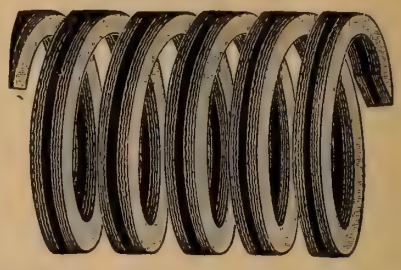
Sole Agents for Canada. TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

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"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., Toronto.

"The Seamless Flanged Drip Pan"



Improved Rolled on Edge.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife to cook or lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The improved rolled on edge making it easy to handle.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

Write for Discount.

SIZES.....	8 x 10	8 x 14	10 x 15	12 x 17
Per Doz.....	$1.91	$2.33	$3.20	$3.73

THOS. DAVIDSON & CO., Montreal, Can.

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, NOVEMBER 25, 1893. No. 47.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

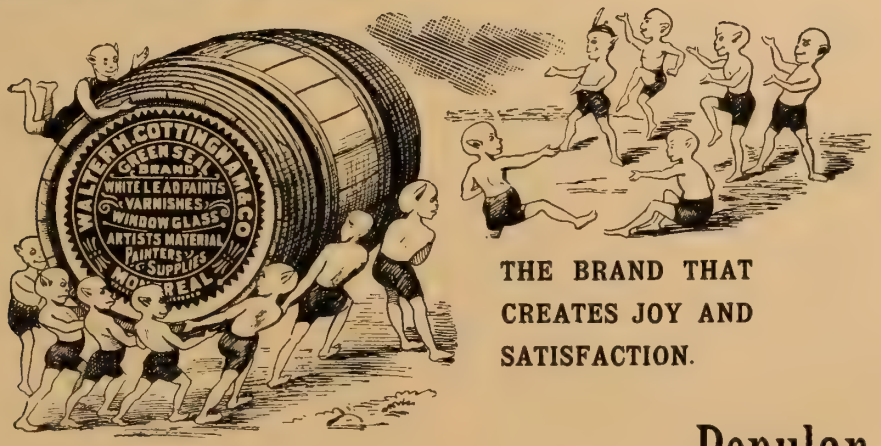
High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

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Owners and Sole Manufacturers,
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The Great Green Seal PAINTS



THE BRAND THAT CREATES JOY AND SATISFACTION.

Every Day. More Popular Grow

WALTER H. COTTINGHAM & Co.

Sole Proprietors, MONTREAL.

Large Increase in Sales for 1893.

HINTS

Selling only such goods as Bar Iron, Cut Nails, Binder Twine and Barb Wire, **DON'T PAY**

HARDWARE MERCHANTS

Should remember that a nice trade with good profit can be done at Christmas with Novelties such as Umbrella Stands, Jardinares, Onyx Tables, Piano, Banquet and Princess Lamps, Shades and Shade Frames, Crumb Brushes and Trays, Tea Trays and Servers, Tea and Coffee Pots. 5 O'clock Tea Kettles, Cutlery, Etc.

See our travelers or correspond direct for prices.

RICE LEWIS & SON, Ltd.

TORONTO

Copper Cider Kettles

(BRAZED AND HAMMERED.)



PLATE 237.

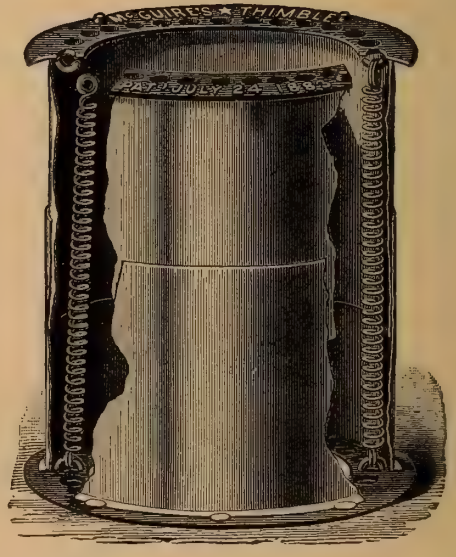
PRICES ON APPLICATION. CORRESPONDENCE SOLICITED.

MANUFACTURERS OF

Brewers, Distillers, Confectioners . . . Varnish Makers Plumbers and Marine **Copper Works**

The Booth Copper Co.

Formerly BOOTH & SON. : 122 Adelaide Street West, TORONTO



THE ABOVE CUT REPRESENTS THE

McGuire Patent Stove-pipe Thimble

It is the same cut we have used in advertising and illustrating this Thimble for the last eight years. We desire to inform our customers, and the trade in general, that we have been and still are the sole manufacturers of this Thimble in Canada, the reputation of which is so well established. No other persons whatever have been licensed, under the patents covering this Thimble, to manufacture it. Anyone infringing will be prosecuted. And to beware of those who represent they sell McGuire's Star Thimbles, who have no right whatever to manufacture the same and cannot possibly supply the genuine article.

Kemp Manufacturing Co.

TORONTO, ONT.

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, NOVEMBER 25, 1893 No. 47

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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Electricity seems destined to become the propelling force for all sorts and conditions of carriers. It furnishes power for railways, boats, carriages, etc., and now it is likely to supercede the old mule on the tow path. An experiment which seems to settle all doubts regarding its feasibility in this respect was tried last week near Rochester on the Erie Canal. One of the regular canal boats was fitted up with a couple of standard street railway motors and an old dishpan propeller. A current of electricity was brought from the Rochester Street Railway Co.'s feed wire and tapped to the canal trolley wire, from which the current was taken by the Standard Street Railway's trolley and carried to the motors on the boat, and back to another overhead trolley, completing the circuit. The boat was propelled along the canal, through its straight and crooked places at the rate of 3 1-2 miles an hour, and, although the arrangements were temporary and crude it was demonstrated to those who witnessed the experiment that canal boat propulsion by electricity was no longer a question. With the banishment of the mule and horse from the tow path will vanish the hope of any more canal boys walking therefrom to the presidential chair, as did Lincoln and Grant.

* * *

Speaking of electricity brings to mind the fact that its utility has recently been demonstrated in another direction. In this particular respect it threatens to banish the blacksmith's forge. The particular discovery is the fusing of iron by electricity. It has been found that if the two wires of an incandescent light circuit be dipped into water that there will not only be an evolution of gas and steam, but that the end last immersed will become red hot and may be fused in water. The experiment succeeds best in a solution of soapy water, or water in which some carbonate of soda has been dissolved. A writer in one of the current magazines, speaking of the commercial value of the process, says a blacksmith could dispense with his forge, and have substituted for it a tub of soapy water with a carbon plate a foot square permanently immersed in it, which could be switched into a common incandescent electric light circuit, and a pair of tongs, properly insulated, also connected by a flexible conductor, to the same circuit. With these, it is contended, a rod of iron an inch in diameter can be raised to a welding heat in ten or fifteen seconds, at a cost of three horsepower for that time. A few years ago it would have been accounted impossible that iron should become red hot and fusible in a few seconds by being dipped into a bucket of water and then afterwards cooled in the same water, but to-day it is rash to be skeptical in regard to the accomplishment of anything wherein electricity is concerned. We are scarcely at the dawn of the electric age, and it is past the recollection of man to conceive what the noon-day hour may reveal.

* * *

The great coal strike in England is at an end, and a peculiarity to be noticed is that it has been brought about by the means which the miners rejected in July last when the strike began, namely, arbitration. The strike was against a reduction of 25 per cent. in the advance of 40 per cent. in wages that had taken place at different periods since 1888; and the mine owners then offered to submit the question to arbitration, but the proposition was rejected. Over 300,000 men went out on strike, and nearly half that number were still out when Lord Roseberry, at the solicitation of Mr. Gladstone, was accepted by both miners and owners as arbitrator. It only took his lordship but a few hours to open a way whereby the men could return to work. This they did this week; and they will work at the old rate of wages till February, when a conciliation board is to be formed. The strike has been one of the most disastrous England has probably ever had. The miners themselves have lost, it is estimated, something like a million dollars in wages. But that is not the worst feature of it. The shutting down of so many mines eventually meant the closing also of a large number of such industries as iron works, glass works, etc., in fact all industries that used large quantities of coal, thus affecting trade the country wide, and breeding starvation and misery in the houses of the working classes. The iron and hardware men in Canada know something about what the closing down of so many works meant on account of the difficulty they have experienced in getting supplies in some lines. Much harm as the strike has done, it will not have been without its good results if it leads to the establishment of compulsory boards of arbitration, in favor of which there now seems to be a growing sentiment.

* * *

There is very little of the spirit of live and let live in the business world of to-day. In some quarters there seems to be an entire absence of it. And the Pharmaceutical Society of England seems to be badly afflicted in this respect. At least this is what is to be inferred from its actions of late. The law

stipulates that any person who shall sell or keep an open shop for the retailing of poisons, not being a chemist, shall for every such offence pay a penalty of £5; also that it is unlawful to sell any poison unless the box, bottle, wrapper or cover be labelled with the name of the article and the word "poison," and with the name and address of the seller. Some time ago the Pharmaceutical Society or its legal advisers put an extended construction on the law which its makers never probably intended should be. The particular construction was that patent medicines came under the category of poisons. The intention was obvious: The pharmaceutical people wanted to stop the English shopkeepers, who had been selling these medicines, for nobody knows how long, with benefit instead of injury to the public, from further trafficing in them. The legal machinery was put into operation and victims were soon struggling within its intricacies. Almost unceasingly this work of persecution has gone on for some time. Many of the cases were of a most frivolous and petty character. The bottles of medicine which the unfortunate shopkeepers had sold probably for many years were submitted to analyists for investigation. There is poison in nearly everything; and of course poison would be found in the proprietary medicines submitted to the analyist. Then ten chances to one it was woe to the unhappy storekeeper. Occasionally the pharmacists carried their persecutions too far, and then the results were against them. This was the trouble the other day in an appeal case heard before a London court. A Manchester storekeeper had been charged with an infringement of the act in having sold a preparation known as licoricine and which contained morphine. The bottle containing it had a notice pasted thereon which read: "This preparation combines the properties of licorice root, chlorodyne, etc., and to insure its careful use, according to printed directions, the Pharmacy Act, 1868, require it to be labelled 'Poison.'" The analyist who examined the preparation and found morphine therein was not prepared to say whether the taking of the whole contents of the bottle would do an adult any harm. The judge thereupon gave judgment for the defendant, hence the appeal. But in the appeal case the Pharmaceutical Society was no more successful than in the first instance, the verdict of all the presiding judges going against it. The result of this case is important in the precedent it establishes, namely, that in order to make out a case against a storekeeper for selling proprietary medicines it must be proven that the bottle containing the preparation has in it sufficient poison to kill an adult.

* * *

These persecutions that are being carried out in England against inoffending storekeepers are all the more interesting to the merchants in Ontario who handle patent medicines in that they give them an idea what they might have experienced had the Ontario Pharmaceutical Society succeeded in getting its obnoxious amendments adopted at the last session of the Ontario Legislature. It is improbable, however, that one knock-out will deter the Ontario pharmacists from making further attempts to gain their object. It may take a good many to do that. At any rate they will bear close watching. Next year the general elections for the province will be held, and it would not be at all inopportune for the merchants in every constituency to sound the candidates as to their beliefs in this matter. An ounce of prevention is better than a pound of cure.

DECISION RE ASSIGNMENTS.

An important decision was given in the Ontario Court of Appeal Saturday regarding the Law of Assignments and Preferences. July 18th last the Breithaupt Leather Co. placed a writ against the goods of a merchant named Marr in the hands of the sheriff of Simcoe, who seized the goods the same day. Two days afterwards Beardmore & Co. and Park & Co. also placed writs in the hands of the sheriff. July 26 Marr made an assignment. Between August 8 and September 5 a number of other writs were placed in the sheriff's hands for execution. In distributing the estate the sheriff proceeded to do so pro rata. This, of course, meant that the Breithaupt Leather Co., Beardmore & Co. and Park & Co. were to rank with the ordinary creditors, their writs executed before the assignment counting for nothing. The Breithaupt company took exception to this method of distributing the assets, and brought suit in the county court of Simcoe. The judge's decision was against the plaintiffs. Not satisfied they took the case before the Court of Appeal. Friday the finding of that court was contrary to that of the Simcoe court. This means that the three writs issued before the assignment was made must be satisfied before any distribution of assets is made between the other creditors. This is practically an endorsation of the decision of Justice Galt, who declared ultra vires section nine of the Ontario Assignments and Preferences Act, which section had been created to prevent writs issued prior to an assignment and still unsatisfied taking precedence over claims of other creditors.

CITY TRAVELERS' "AT HOME."

Successful was the At Home given by the City Travelers' Association Friday night in St. George's Hall. The guests were city travelers, non-members of the Association. There were over a hundred present, and everyone's cup of pleasure seemed to be well filled. And it was not surprising, for "Mine Host" the Association had anticipated to a degree the entertainment of its guests. Excellent and varied was the musical program, choice and plentiful the cigars, ample the refreshments, and attentive to the comfort of their guests were the members of the Association. This was the program the guests listened to as they paused in their card playing, conversations and puffed their cigars: Five-shot Quintet Club, Messrs. Horden, Collins, Macdonald, Charlton, Hoogs; Harmony Quintet Club, Messrs. Dinnick, Gorrie, Verral, Adamson; banjo and guitar duet, Messrs. Horden and Collins; ventriloquist, Mr. Hoogs; sexaphone soloist, J. W. King; reader, Mr. Howitt; soloists, E. B. Piggott, J. R. Morrison, Mr. Major, Macdonald, Gorrie, A. J. Tipping; piano soloist, W. Dunn. W. T. Harrison was accompanist, and R. M. Corrie master of ceremonies.

Something which the guests listened to with apparently as much interest as did they the program, was the address of the President of the Association, James Owen, in which he gave a brief and lucid history of the Association, its aims and objects, and the work it has accomplished. He said that the projectors had felt that there was no need of forming an insurance scheme in connection with the Association, because the Commercial Travelers' Association covered the ground in that respect. It was therefore decided to make the Association a beneficiary organization. "A man insures his life, he insures his property, and why should not a man insure himself against sickness?" he queried amid applause. During the past year they had had a big draught on the sick fund and yet the Association was to-day more prosperous than ever, and for a young organization had a handsome surplus. (Loud applause). "The point I want to make," continued Mr. Owen, as he took his hands from his trousers' pockets and laid his index finger in the palm of his right hand, "is this: If we can do so much with so small a membership what could we do if all the city travelers took an active interest in the Association." Those present saw the point, smiled and applauded vigorously.

WORLD'S FAIR PRIZES.

The benefit that may be derived by individual persons or firms who have won prizes, medals or awards at the World's Columbian Exhibition, suggests the idea that all this might be made a means of bringing a very great deal of special renown to Canada.

The custom in this fair, as in others, will likely be that these awards will be sent to the Dominion Government at Ottawa, who in its turn will send them to the various Provincial Legislatures to distribute, one at a time, as they are received. A prize winner in this way will not get as much credit for his efforts or expense as he really deserves, nor will his efforts bring him further reputation than he can gain by self-advertising. The benefit therefrom will be small either to him or the country. Again, it will take years before he can recoup himself for his unusual trouble and outlay.

It would be a pity, therefore, if the great efforts that have been put forward by so many of our people to bring credit to our country, should be allowed to pass away without some action having been taken to derive the greatest benefit possible out of what has been tried and accomplished.

It is proposed, therefore, by many Canadians that the Dominion Government retain the awards till all are received. Then in due time have a large gathering in Montreal for the Province of Quebec and the East, and in Toronto for Ontario and the West. To these gatherings invite all the prize winners, who may be represented by proxy if they personally could not be present, when they will receive, with special honor and renown, the reward they have so well earned.

The occasions could be made a great advertisement for Canada, showing the world in a special and marked manner months after the Chicago Fair has passed away and when its excitement cannot mar the interest of our resources and advantages in a renewed and more effective way.

With patriotic speeches by eloquent men and extensive preparations made to have them thoroughly reported in foreign newspapers, each individual would be well recompensed for what he had donefor himself and his country, and by the publicity given him induce him and others to put forward greater efforts at the next World's Fair, to show all nations that not only are we a people financially strong, but that in all that pertains to make a great nation, either in art, science, manufactures, agriculture, horticulture, mining or forestry ; educationally, piscatorially or any other way, we are able to compete and hold our own.

This idea, therefore, is commended to the care of the Manufacturers' Association and the Boards of Trade of Montreal and Toronto, to open up correspondence with the Government to the above end. There are other associations that would also be glad to join the above mentioned if they were notified and asked to assist, notably the one interested in dairy products.

This journal will be pleased to receive any suggestions from any of our readers that will help.

DIFFERENT IRON DUTIES.

A British Board of Trade return recently issued gives some interesting facts regarding the customs duties imposed on British iron by different countries. The figures in question demonstrate pretty plainly that British ironmasters are not likely to find things more easy in foreign markets, and they do not afford much encouragement to the prophets who persist in predicting the general adoption of free trade principles. The only European countries according to these figures that are wedded to free trade are Holland, Sweden and Norway. All other European countries and the United States exact high duties on iron which, however, owing to the complicated system of classification in vogue under most of the tariffs, are very difficult to ascertain exactly. This fact is too well known on this continent, as the question of tariff classification has repeatedly been made the subject of special interpretation by the United States Treasury Department and our own Canadian Commissioners of Customs. In fact the return under consideration goes to show that in most countries the tendency appears to run in the direction of greater complexity of details than in the opposite direction. Turkey is about the only country which has adopted a uniform tariff for all descriptions of iron, and it must afford considerable relief to iron exporters to that country. For instance, the German duty runs from 6d. per cwt. on pig iron down the following gamut : 1s. 3¼d. for angle iron and steel rails: 1s. 6d. to 2s 6d. on sheets and plates; 1s. 6¼d. on wire, and 2s. 6d. on tin plates. In France it is 7¼d. on pig iron, 2s. 0½d. on bar angle iron and steel rails, 2s. 10d. to 4s. 6d. on sheets and plates, 2s. 10d. to 8s. 2d. on wire and 4s. 10½d. to 5s. 3½d. on tin plates. The Austrian runs from 8d. on pig iron to 4¾d. to to 7s. 1d. on wire and tin plates, angle iron being free. Russia imposes a duty on every kind of iron, appreciating gradually from 4s. 1d. on pig iron to 16s. 9d. on tin plates. Belgium imposes a more moderate duty than the others, but still a protective duty for all that. The highest duty on pig iron is imposed by Portugal, which exacts 10s. 1½d. per cwt. In fact there are so many different duties that it must be a considerable labor to apply them except in the case of the Turkish as we have already mentioned, which is a universal rate of 8s. on everything from pig iron to tin plates. The United States duty ranges from 1¾d. on pig iron, which is the lowest duty that is imported on the article by any of the countries given in the list, to 5s. 10d. to 2¾d. on wire, and 10s. 3d. on tinplates per cwt. The figures show plainly that the majority of the duties are levied for purely protective purposes which is more particularly the case in Germany, France, Russia and the United States. The return does not refer to colonial duties at all or to the republics of South and Central America.

HOLIDAY NOVELTIES.

The coming holidays are not making the stir in the hardware trade which they ought to. A good many of the retail hardware merchants seem to think that they have nothing to do with the holiday trade, and that it all goes to the fancy goods dealers. If so is this not to a great extent the fault of the hardware men themselves ? There are numbers of useful and elegant household articles in the average retail hardware store, that if exhibited to advantage would sell well as Christmas and New Year presents. For instance, you may have in stock carpet- sweepers, sets of bread and cake knives, coffee and teapots, Japanned goods, such as parlor coal scuttles, tea trays, etc. All these things make excellent presents, and when accompanied by a few catchy show cards will sell well as such. There are numerous other things in a hard ware store which would be likely to catch the eye of those who start out to get a present for some friend of theirs, and have not the slightest idea of what is suitable. They want something that is useful and will be appreciated, and a catchy show card will often attract their attention. Place all your novelties and suitable articles in your window, accompanied by a notice, something after this style :

HERE WE ARE AGAIN !

Buy Your Friends Something Useful. We are selling at reduced rates numerous useful and elegant household goods suitable for . . . . . .

XMAS PRESENTS.

. . . . . Step Inside And See Them.

Smaller cards with the prices marked on them, and worded to suit the article on which they are to be placed,will also attract the attention of the persons whos eminds are on the balance as to what and where they will purchase, and they will step inside just to see what you have got to offer.

The holiday season and coming winter will no doubt bring a great demand for skates and children's sleighs, and there should be an increase in the demand for cutlery. Many of the large wholesale hardware houses have in stock large quantities of articles suitable for the coming holidays. The retailer will do well to look over some of their fall catalogues or take a stroll through some of their sample rooms, and he will be convinced that it is within the power of the retail hardware man to capture a big percentage of the coming holiday trade.

Dress your windows in holiday attire, giving your novelties, lamps, etc., the most conspicuous places, and use every device that it honorable to attract attention to what you have to offer, and remember that it is the enterprising man that succeeds best.

GETTING RICH ON CREDIT.

American shrewdness is well illustrated in a real estate transaction that occurred in a small town not many miles from Pittsburg. On a capital of 75 cents a man possessed himself of a capital of $220,000 worth of property. Six or seven months ago Mr. Blank met with some losses in business which cleaned out what capital he had and left him with 75 cents in his pocket. He realized that something had to be done. Having a place where he was always sure of accommodation, he wasted no time, but on the very day he met his loss he began to look about to turn something up. For a long time he had noticed a 220-acre tract of land adjoining a town of 5,000 inhabitants, which he thought would make a good real estate investment. He went to the agents of the estate and secured a 90-days option on the place for $350. He didn't have the money, but being well known in the neighborhood, was given credit. He next engaged a surveyor, who laid the plot out in 1,600 lots, and charged $750 for his services. This, likewise credit. He thought it would be a good idea to have a street railway located, and, as time was money in his case, he succeeded in getting a charter through, being a friend of the Governor, in three days.

He next announced through advertisements obtained on credit that he desired to sell a number of lots at $250 each, conditionally; that is, no money was to be paid on the purchase until he had broken ground for the location of some manufactory employing not less than 200 men. When such a factory was started, the buyers were to hand to him half the purchase money. In 18 days $85,000 worth of property was disposed of to some of the most solid citizens of that town and Pittsburg, a great deal being sold in blocks. About this time the creditors who had favored him were beginning to press for their money; so, in order to hasten a consummation of his plans, he called upon a prominent manufacturer of Pittsburg and made him a proposition that if he would move his works to this point he would give him so much ground and a cash bonus besides.

All this time the promoter had nothing but his 75 cents, and creditors were pressing him on every side. The manufacturer refused to locate until he had received a deed of the property. The promoter here met another difficulty. He couldn't get a deed until he paid for it. He finally saw a way out of it, and asked the manufacturer if he would begin digging for the foundations, assuring him the deed would be forthcoming in due time. This the manufacturer did, and no sooner was the stone hauled and the ground broken than the real estate man called upon his purchasers for half the purchase money, according to agreement. In a couple of days he had $42,000 in his possession. With this he was able to pay the manufacturer his bonus, to settle all his debts, and by placing several mortgages, to purchase the property. He now has four manufactories under way, two squares of railway laid and 1,200 lots left, after having paid for everything and allowing himself a liberal salary besides.—Pittsburg Despatch.

THE CREED OF BUSINESS.

The idea of business as uppermost in the average mind is that it is specially exempt from any encumbrance of a conscience, and the obligations usually binding on private citizens. It is supposed, as a matter of necessity, to cover a multitude of sins, and to include in its ranks no small number of decent, buggy-riding and tax-paying rogues. Store windows are an exhibit of deceptive wares, and the art of selling a commercial way of telling permissible and well laundried lies. Truth in such a place has to be looked for with a lantern, and what there may be of practical Christianity left in the world has no place behind a counter. So current and deeply rooted is this idea of business morality that the phrase "business is business" atones for much that in other circumstances would lift the hair and agitate the bile of even a relapsed moralist. Few people suppose that an honest or conscientious man can succeed even in selling soap or peanuts, or in paying rent for his store without eventually making his appearance in what is tersely described as the "little end of the horn." To have the gifts of a horse trader and the alert but wayward instincts of a trickster, a wholesale reserve of gall and a well lubricated tongue, with a soul not larger than a pea and a conscience smaller than that is the generally received idea of a successful vender of cutlery, dry goods or groceries. It is to be confessed that gentlemen of this minimized anatomy are not all molded in wax or kept in museums. It is also unfortunately true that many business men in dealing with customers are tempted to square or round the pegs according to the holes in the board. The public, when buying goods or paying bills, is not generally so honest or innocent as it seems to be at a prayer meeting, while the Golden Rule has a Mason and Dixon line when the pocket of the world is being drawn upon. It is more than probable that business men know more about the weak side of humanity than doctors of divinity, philosophy or physic, and much that to a superficial or prejudiced observer is inconsistent or delinquent is really but a fitting of the shoe to the public foot. The world of business is not nearly so selfish as some suppose. It has its cardinal virtues and its orthodox creed of success, without which it would surely come to the dogs, the sheriff and the black list. Integrity is as necessary in building up a trade as in the construction of personal character. Dishonesty is as reactionary in business as it is in picking pockets or stealing a horse. Telling lies in selling a pocket knife or a saw mill outfit comes in for a spanking as sure as it does in a school house or over a family chair. Idleness has the same results in commercial life as it has in a corn field. Extravagance and waste tell the same old story of having a dry tongue when the keg runs dry, while every other vice that in private life and personal vice that is disastrous to body, soul and spirit eventually makes the same scrap pile of a business. These facts are self evident, and are as well understood in the world of trade as else where. Thieves are not in demand as bookkeepers or salesmen, nor are advertisements for reliable men posted in gambling dens or in institutions for inebriates. In fact the need of sterling character is more recognized than ever, and in all commercial affiliations, however much smartness and shrewdness is appreciated, they are practically boycotted when not in association with reputable personal character. There may be much of the devil both with and without a fig leaf in modern business, but as a rule he gets into the hotel without stopping to register.—Fred. Woodrow in Age of Steel.

THREE GOOD THINGS.

The three great requisites to healthy, and hence happy living—good air, good water and good nature—are so cheaply obtained that they are very frequently ignored or not estimated at their real value, is the conclusion of Mr. Robert Bonner, says an exchange. In this country, where pure air is to be had for the mere demand, one often sees small windows and few of them in sleeping rooms, or else no provision is made for opening at the top to let out foul or warm air, quite as necessary as the opening at the bottom. Many an invalid would recover could he but live in a constantly purified atmosphere and drink nature's purest beverage. Many another, a victim to indifferent health, would be restored to his normal condition if his mental atmosphere were cleared of all the ill-nature, the petty complainings, envy, malice and uncharitableness of his own or his family which cloud his life. The perfect man, physically or mentally, is he who has discovered that we are simply erring, struggling children, and that an abundance of charity for others' shortcomings will meet a like return and help greatly in preserving serenity.

RESULTS OF ADVERTISING.

The market seems to be fairly well satisfied with the report of the first year of Messrs. A. & F. Pears (Limited). There have been some slight fluctuations since the dividend was announced, but the ordinary shares are still at a substantial premium. Buyers of these shares at the issue price are getting 10 cent on their investments, and those who have bought on the market get 8 to 9 per cent. The total net profit earned has been £70,955. This is within £1,000 of the best year shown by the prospectus before the business passed into the company's hands. In the prospectus a statement appeared to the effect that in the vendors' opinion the advertising expenses could be safely reduced to £80,000 a year from the £104,000 which was spent in 1891. It would appear that they have found this immense sum insufficient. They have spent more than the £80,000 in advertising, and "the vendors have agreed to bear the excess." This shows a very sensitive conscience on the part of the vendors, but it shows quite as clearly how delicately sensitive such an article as soap is to fluctuations in advertising. It is evident that the directors had very quickly found that economy in advertising was not a wise policy.

HOW TO EXTEND BUSINESS.

To advertise, according to Webster, is to "inform or apprise," and among the many and best direct means under the immediate control of the dealer is to secure and preserve the reputation of a cleanly kept and well assorted stock of all saleable lines. "All out; can't say just when I'll have more," suggests indifference or intended suspension and invites it. "One of a kind" always in sight, tastefully arranged, attracts and rivets attention, and is frequently alluring to the observer. Goods should be kept in such order that nothing need be looked for; it should always be there. When they are in fair demand, and are bulky or cumbersome, assorted samples should be kept in facile position for daylight inspection, and that all may be preserved in a cleanly condition the sample should be sold whenever possible, replacing such from the main stock. The value of racks for farm and garden tools, guns, etc., cannot be too strongly recommended, while plush or velvet lined showcases for tableware are indispensable for the exhibition of such to the best advantage.

Many hardwaremen do not fully appreciate the value of their windows and store fronts as indexes of the store contents. "What's the use? everyone knows me (or us) and what is kept in hardware." is a common excuse for ill kept windows. This is a mistake Windows tastefully arranged and frequently varied diffuse intelligence of many articles of shop or household applicability and may create demand. If there are several or more hardware stores in town, the one which attracts the most attention, other things being equal, secures the most trade. If there be but one, the display of mechanics' tools, excepting novelties, need not be so prominent, as the purchasers of such have but one resort. The front should then be devoted to household novelties and articles of popular use.

All dealers recognize seasons for special lines, and, as such approach, the exhibition of the articles should be slightly in advance of the actual needs, thus serving as a reminder to the consumer of renewals or replacements. When possible, the appliance ready for practical operation should be exhibited. In this class might be mentioned gas and oil cooking stoves, clothes and mop wringers, carpet sweepers, filled fruit jars, etc. Such a method invites confidence and dissipates the uneasiness attending the purchase of "a pig in a bag." To explain the use of an article is a cold method in comparison with the demonstration of its merits, which frequently warms the languid enquirer into actual purchase.

Because an article has never been sold in a town or never asked for is no reason why it should not be. To the drummer's solicitation in this direction should be added unprejudiced judgment, and the results may swell the general profits. Nor need a dealer await demand. He should seek to create it. Each issue of The Iron Age contains over 100 peges of advertising matter, and is a veritable compendium of reference, inasmuch as thousands of articles have their uses therein set forth.

If the town is so situated as to be visited by many from adjacent sections, some permanent signs can be erected at its rail and vehicle approaches, and made conspicuous by some symbol of trade, a few words, and prominence of name and locality. Such are impressed upon the minds of periodical visitors by the unvarying recurrence. Unaddressed circulars promiscuously distributed are of little benefit, though cards bearing a simple inscription with a bold and preferably an original design are preserved or circulated. All goods should be wrapped in strong paper, bearing the imprint of the business, for such covering frequently circulates among many hands before its usefulness expires.

Signs from kerb to store front, bulletins of skates, refrigerators, sleighs, freezers, mowers, etc., all in their seasons should be displayed, and if the dealer uses a wagon, modesty should not forbid him to paint his name and business in the largest letters. He may be known, but this is not sufficient; he should seek prominence, and employ all methods which do not violate his self respect.

As a member of one of the many secret and benevolent organizations besides deriving the benefit of their intended purposes, he can enlarge his circle of friendships and receive many favors through the peculiar clannishness of the membership. When such organizations, or those of churches, hold fairs, there is an opportunity for both benevolence and profit. Bread thus cast on the water may return in "pudding" later on. One of the best advertisements is agreeableness, if not carried to the extent of long credits on questionable premises. It is cheap, durable and broadening in its effects. The world is discoursive and argumentative, but patience is a good investment, and when there is no moral or financial principle involved, assent to or tolerance of a customer's views strengthens his own favorable impressions of himself and invites the consideration of the good sense of his auditor. Such a man who is "always right," and his name is legion, is of course invariably wrong, and since it does not take much time for him to tell all he knows, the dealer can combine amusement with business as the other becomes involved in labryinthian verbal contortions.

To win a wager from a customer is often to lose his trade, and is a poor speculation to engage in. To forget the name of a frequent buyer is worse than forgetfulness—it is a crime against one's self.

It is by all means a matter of prudence to cultivate the good graces of the neighboring storekeepers. Aside from the mutual aid of recommendation, the sociability of the intercourse establishes an informal advisory committee against the fraudulent purchaser.

The observance of some of the foregoing methods are distinctively within the legitimate province of advertising, but the local press should by no means be ignored as an important factor in extending and maintaining trade. The day of dreary announcements of 14 blurred "nonpareil" lines to the inch is past. Study something striking or ingenious in effect, and change the matter frequently. Better use but two inches of letterpress in half a column than fill it with commonplace statement. Cut talk, but not those selected from the stock of a provincial paper, as they are too aged. Clever men prepare original ones, and such should be employed. Cultivate the editor. He is interesting and entertaining. It is his business to be so. Give him cause to remember you. Upon receipt of something new for stock let him see it, or delicately convey one to him, and the occasional reading column mention or recommendation may return its cost manifold.—By F. Tusch, in Iron Age.

INDUSTRIAL PROGRESS IN JAPAN.

The development of manufacturing industries in Japan is an added illustration of the fact that as nations progress in intelligence and enterprise they are, in certain lines, less dependent on foreign supplies for home markets. As these productions exceed home demands and foreign commerce becomes an economic necessity, there is of course a general increase in the exchange of commodities, but it is evident where home production supplies the market there is less room, except on the acute lines of competition, for the foreign article. This fact is already pressing on the leading commercial nations, whose escape in the logic of progress is in the adoption of better methods and the manufacture of new and more finished products. It is on these lines and these lines alone that the industrial or commercial supremacy of any one nation must in the future depend. The bulk of all foreign commerce depends on the supply of products that are out of reach of those to whom they are sold.

In China, Japan, India, and other countries not so well informed as the manufacturers of the Western world, the market has been almost limitless for cotton goods, steel and iron products, etc. This margin, however, is narrowing. Western machinery and appliances are being introduced and intelligently appreciated, and home supply is one of the distinguishing ambitions of all modern progressive nations. In looking over the map of the world and forecasting a golden age of limitless trade, it would be well to temper our vision with the fact to which we have alluded. It will be on the line of what unites the best and the cheapest that any nation can hold its place in future international commerce.

As indicating the progress made in Asia and its adjuncts, Japan is a significant example. Among its newest industries the first in importance is cotton spinning. Previous to 1880 there was but one cotton spinning mill in the country. In about half a decade fourteen were in operation, to which twenty-three more were added during the last five years. The imports of cotton yarn have consequently declined, the figures in 1888 being over $30,000,000 in value, as against seven times that amount in 1880. In the manufacture of paper of Euro-pean quality the native product is crowding the foreign article that has made a showing of 40,000,000 pounds annually. In glass an export trade is already being done, while the matches has so far exceeded the home supply as to have an export trade to China, British India, and have made consignments to the United States. In brick and brush making, the manufacture of soap and rope, and such products as Portland cement, soda, sulphuric acid and chlorine are on the list of modern industries in Japan.

These, however, comparatively small or insignificant in their beginnings, are significant as the inceptions or germs of future developments. Till these are matured or rounded out the demand for foreign products of a like nature will be a minimizing factor, while here as elsewhere the preogress of intelligence will always be creative of new wants which, as modern civilization goes, must for many decades be from Western sources.—Age of Steel.

THE AUTOMATIC SPRINKLER.

Fire hazards are among the graver risks of modern property. To meet these risks money has been lavishly expended and fire protection perfected into a science. Organizations more or less costly are continuously maintained; equipments and apparatus are kept in line with modern progress, and the skill of the architect and engineer utilized in the construction of fire-proof buildings. It need scarcely be said that notwithstanding improved appliances and the best devices of modern skill, that none as yet have reached the point beyond which improvement is unnecessary or impossible.

Our annual fire losses are still a formidable total, while it is yet a fact that where the loss of property has been the most complete the ordinary safeguards have been up to date in supply and efficiency. In some of these instances it would seem that the installation of a fire system is one thing, and the care taken of it quite another.

There has been no time to grow moss on the period where the pump, hydrant and bucket were the only available apparatus in case of fire in a mill, factory or store, previous to the arival of the regular organized help. It has been left to later eyars to devise means that would act intermediary as an automatic agent.

The automatic sprinkler has filled the blank, and its introduction into factories and other buildings has established its recognition as an effective protection of property that as yet has no competitor in its own lines. The first automatic sprinkler of commercial importance was patented in 1874. The principles at the bottom of this device were well understood previous to that date, but their practical application and service was postponed till the date named. The progress of introduction was slow, not only because of general ignorance as to its efficiency, but for the economic reasons involved in the cost of installation. As time demonstrated their real value and importance the installations gradually increased till the automatic sprinkler became a recognized part of the equipment of numerous mills, factories and other buildings. It is not claimed, neither is it expected, that these appliances are operative only in certain limits, nor that in case of a fire making serious headway they can prevent its destructive excursions. Their value lies in the quenching of incipient fires, or in checking such as are not yet masterful in their locality.

As the majority of fires have their inception in small beginnings, it is obvious that interference at this point is the surest prevention of a conflagration, and it is just here where the service of the automatic sprinkler is of direct and immediate importance. It goes with the telling that the more complete the system of installation the greater its effectiveness in case of need. The placing should be done by competent men and arrangements so simplified that ordinary care and management would suffice for keeping the appliances in working order. There are defects, of course, in the best arranged or manufactured apparatus, that may or may not be remedied, but that in a broad sense the automatic sprinkler is the most efficient of modern agencies in the diminution of fire hazards, no one familiar with their record can seriously question.—Age of Steel.

THE GREAT ELECTRICAL TOWER.

Notwithstanding all that has been said about the electrical tower at the Midwinter Exposition, California, very few people have an adequate idea of the effect it will produce when illuminated. It will represent a display of 8,000 multi-colored incandescent lamps. Between the first and second platforms as well as between the second and third, and fourth and fifth, will be on each face of the tower a revolving wheel giving many changes of design and producing a most striking effect. There will be an intermittent current, lighting alternately from bottom to top and top to bottom, which will be in constant action; every now and then the entire number of lights will show at the same time, giving the full effect of all the lamps. The designs to be shown in the revolving wheels are the flags of all nations, various patriotic designs and specially arranged effects illustrating the local, as well as the international, features of the exhibition. All the galleries of the tower are to be open to the public except the top one. The topmost tower will extend up to within six feet of the pinnacle and will be utilized exclusively for operating the two great searchlights which will be located there. On the extreme top of the tower will be a massive golden ball bearing the emblem of the State, a massive California bear.—Ex.

H. S. HOWLAND, SONS & CO.,

WHOLESALE HARDWARE.

37 Front Street West, TORONTO.

HAY BALING WIRE.

ORDERS SOLICITED.

The Toronto Lead and Color Co.

LIMITED

MANUFACTURERS OF

Pure Prepared Paints, Carriage Varnish Colors,

Pure "Star" White Lead, Coach Colors, Etc.

Are prepared to offer all their lines at lowest cut prices.

WE ARE NOT IN THE INJUNCTION BUSINESS.

We keep right on selling the finest grade of goods in the market

14, 16, 18 and 20
Pearl Street,
TORONTO, ONT.

The Toronto Lead and Color Co., LIMITED

HAS PROVED BENEFICIAL.

The by-law appointed by the City Council of Toronto some four years ago making compulsory the inspection by the city officials of all plumbing and drainage work, as well as alterations in existing work done in the municipality, is unquestionably one of the most valuable pieces of civic legislation that has marked the history of the city. Previous to the passing of this by-law, the plumbing and drainage work throughout the city, even in the most expensive residences, was often done in a disgraceful manner, and in such a way as to prove injurious to the health of the occupants of the house. It was not unusual for drains to be laid without joints of any kind being made and in this condition covered up with earth and concrete, the character of the work being revealed when sickness entered the house. Under the present system, work of this kind is no longer possible; the owner or his architect can demand from those who are to do the work a certificate from the plumbing inspection department that everything has been done in accordance with the provisions of the plumbing by-law, and unless the work has been done in this manner, the department will not issue a certificate, and the owner may refuse payment. Another valuable feature of the by-law is, that plans for the plumbing and drainage work must be filed with the plumbing department, so that in the event of defects developing in the work in the future, the exact location of the pipes is ascertainable. A great deal of difficulty is often experienced in cases where alterations are required to work done previous to the passing of the by-law, as in such cases much trouble and expense is often necessary to discover the location of the drains.

In this connection we wish to point out that greater care should be exercised in the plumbing department for the protection of the plans which are there filed, and the value of which we have already referred to. These plans are at present kept in pigeon holes in an ordinary wooden desk, where, should a fire occur, they would be certain to be destroyed. The plumbing department should lose no time in providing a fire-proof receptacle for these plans, otherwise we may expect to hear that the valuable record of plumbing work done in the city for several years past has been irretrievably lost.—Canadian Architect.

FERRIS LOST MONEY.

The hundreds who paid their half dollar to go round the Ferris wheel in Chicago will be surprised to learn that the information has been made public that Geo. W. Ferris, the originator of the great Midway Plaisance attraction, and the construction company have lost money. The construction company received only $300,000 for building the wheel, while the actual cost was $362,000. Therefore, Mr. Ferris and the construction company are out $62,000, while the Ferris Wheel Company, which operated the wheel during the World's Fair, made a good profit. It is said that Chicago men are in Pittsburg to try to get the stockholders in that city, who hold 70 per cent. of the stock, to turn their holdings over to Mr. Ferris at ten cents on the dollar, in order that he may buy up the stock and save himself and the construction company from loss. Several of the Pittsburg stockholders, who have already received 22 per cent. on their investment, have agreed to this.

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

Eldon Station wants a blacksmith.

There are 246 applications for patents for stoves and furnaces awaiting action at the U. S. patent office.

William Gamble, tinsmith, Port Hope, died last week from hemorrhage of the lungs. He leaves a widow and six children.

The lid is lined with linoleum, and falls on projecting rubbers, obviating all slamming, and even the shovel is lined with felt.

The Krupp Gun Works claim to have manufactured a machine which will roll iron so thin that it would take 1,800 sheets to make an inch.

The latest cutlery novelty is a pocket knife, manufactured by an Ohio firm, with a celluloid handle, on which are photographed any picture, device or name wanted.

The Conservative candidate in the county of Peel for the Ontario Legislature is Richard Blain, a Brampton hardware merchant. He is spoken of as being a strong one.

A number of the business men of Aylmer have shown their sympathy for S.S. Clutton, whose mill was destroyed a short time ago, by giving a subscription towards the erection of a new mill at Vienna.

The Commercial Cable Co. have signed a contract with Siemens Brothers for the laying of a new Atlantic cable next spring, between Ireland and Nova Scotia. It will be 2,200 miles in length and will have the greatest known carrying capacity.

The B. C. Iron Works are now making a hydraulic hoist for the Customs House department. They have also secured the contract of the iron work of the Hudson's Bay Company's new warehouse, and at the present time they have their hands full of work.—News, Vancouver.

When the great tower now being constructed at Wembly Park, near Harrow, in England, is completed, it will be 175 feet higher than the Eiffel Tower. The height will be 1,150 feet, and as it stands on a hill 165 feet high, it gains so much in extent of panorama. It will be built of steel.

In England a new coal hod has been brought out which is a boon to those with sensitive nerves. It is an ordinary coal box as used in that country, with brass mountings and shovel, and a movable inside case to be taken away and replaced after refilling. The feature is in the silence with which it can be used.

The attention of the Geological Survey Department has been called to the fact that several of the gas wells in the vicinity of Port Colborne, which have been exhausted, are now flowing oil. Thirteen of these extinct gas wells have been acquired by one company, who will develop them as oil producers. —Advertiser, Petrolea.

At last the steel rail combination, which has held the price of steel rails nominally at $29 for months, has yielded, and a cut of $5 per ton is reported. It is authoritatively stated that a Pittsburg concern is quoting steel rails at $24 to $25 per ton at tidewater; a price which in all probability will lead to increased orders for rails.—Journal of Commerce.

A London, Eng., despatch says: It has been learned that 160,000 tons of steel rails have been shipped to British Columbia via Cape Horn, on which 8 insurance risks have been placed. These are for the British Columbia Pacific railway, which is to run via the Yellow Head Pass and in which Chicago capitalists are concerned.

A gentleman recently a visitor in Dakota states that the best coal oil is selling there at 12-12 to 15c. per gallon, and the people think they will get it cheaper before spring. They complain of being in the grasp of the giant octopus of the Standard Oil Co., and scarcely believe that Winnipeggers pay three times as much for the same article.—Free Press, Winnipeg.

The Chicago Telephone Company now makes claim to having the most complete as well as the busiest telephone exchange in the world. Chicago has 10,400 telephones, operated in 11 exchanges. The number of talks really represents the business of the exchange, and they number over 140,000 a day. To accommodate this vast business the company has put down 48 miles of underground conduit, containing 18,000 miles of wire.

A window screen secured to a spring controlled roller journalled in the frame, a hook being attached to the free end of the screen, while there are hooks in the sash, a connecting S shaped hook engaging the hook of the screen and the hook on the sash. The arrangement is such that as the upper sash is lowered or the lower sash is raised, the screen autiomatically covers the opening which would otherwise be left by the sash.

A new thing in the way of door bells. In outward appearance the contrivance much resembles an electric bell, and the effect when ringing is much the same, but no batteries or wires are employed, and electricity has nothing to do with it. In fixing the bell a one-inch hole is bored through the door, a neat metal gong is fixed, and on the outside a porcelain rosette and push are screwed. The pusher, of course, passes through the hole in the door, and the bell is so arranged that it will ring continuously so long as the push is pressed.—Hardware Reporter.

ELI AND CHAUNCEY.

"I was talking one day with Mr. Depew about demand and supply," writes Eli Perkins. "I said the price of any commodity is always controlled by the demand and supply."

"Not always, Eli," said Depew; "demand and supply don't always govern prices. Business tact sometimes governs them."

"When," I asked, "did an instance ever occur when the price did not depend on demand and supply?"

"Well," said Mr. Depew, "the other day I stepped up to a German butcher and out of curiosity asked:

"'What's the price of sausage?'

"'Dwenty cents a bound,' he said.

"'You asked twenty-five this morning,' I replied.

"'Ya, dat vas ven I had some. Now I ain't got none, I sell him for dwenty cends. Dot makes me a rebutation for selling cheab, und I don'd lose noddings.'

"You see," said Mr. Depew, laughing, "I didn't want any sausage, and the man didn't have any; no demand and no supply, and still the price of sausage went down five cents."

"Well, there are strange things in this world," I said. "Now, take the words 'manufacture' and 'make'; I always thought that both words meant the same thing."

"Why, they do, Eli," said Mr. Depew.

"Not always," I said.

"Now, when could they have a different meaning?"

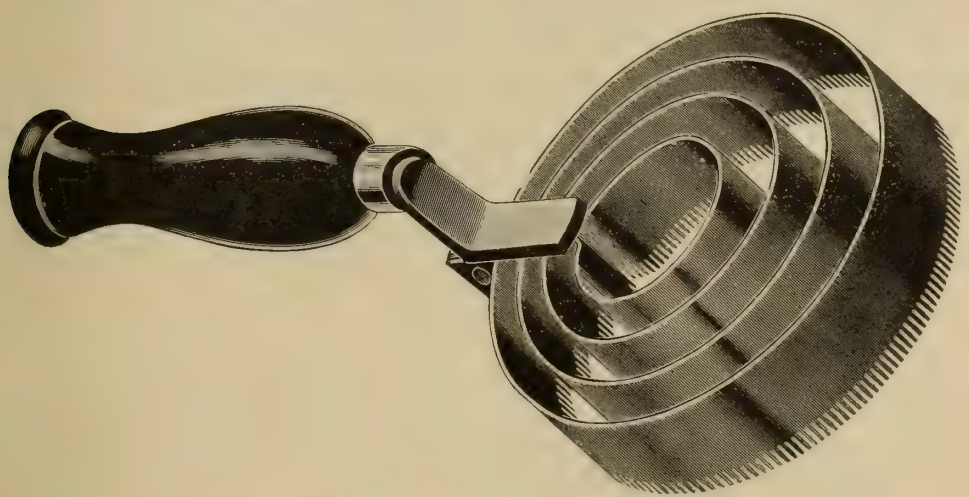
"Why, this morning I came down on a Central car manufactured to carry fifty passengers, but it was made to carry seventy-five people."

"Yes, I dare say; but we'll now talk about the Behring Sea question."—Express Gazette.

THE CONSOLIDATED
PLATE GLASS
COMPANY OF CANADA (Limited)
HEAD OFFICE:
73 and 75 Wellington Street West, TORONTO.
BRANCHES:
MONTREAL, 338 St. Paul St. LONDON. OTTAWA
FRANK J. PHILLIPS, Toronto, President.
WM. R. HOBBS, London, ALEX. RAMSAY, Montreal, } Vice-Presidents
Correspondence Solicited. Estimates Given
Special Discount to the Trade.

A DESIRABLE CURRY COMB.

A curry comb new to the Canadian trade is being put on the market by M. & L. Samuel, Benjamin & Co. It is known as the "Spring," and the accompanying cut will give the trade an idea what it is like. The features claimed for the comb are these: It is as soft as a brush, because the loops give, and enable the combing surface to get down into the hollows and slip over the elevations, to the great comfort of the animal and the great convenience of the hostler. It is a perfect self-cleaner, and the best shedder known, because it is a spring, and the vibration of the coils



readily frees them from all dirt and hair. It cleans a horse quicker and better than other combs, because it has three hundred and twenty teeth which do not track, and because it does not grate harshly over the surface, but accommodates itself to any and all parts of a horse, from his ears to his heels. It is a very strong and well made comb since the coil is made of very tough spring steel, and the shank is cast malleable and all parts are riveted together. Its teeth do not bend out of shape from rough usage, because of its circular form, and because it is elastic. The back is an excellent sweat scraper.

DISCONNECTING PLUMBING FIXTURES.

Disconnecting house fixtures from the soil pipe is sometimes practiced with us with good effect, says the National Builder, and the principle may, we think, be extended with good results inside our houses. A recent adaptation in the bathrooms of a block of flats consists in placing a small sink in the tiled floor, which in turn is laid on a span of plank like the "mill floors." Beneath the floors a "pure" tap is placed on the waste pipe of the little sink towards which the tile floor is slightly graded. The sink is so placed that the wastes of a porcelain lined iron bath and oval basin drip into it with the least possible length. These short wastes are of three-fourths inch nickeled pipes connected to the fixtures by simple means and simply movable. By this means only two holes are made in the floor for waste pipes, one for the closet and one for the sink. This little sink takes care of any overflow that may take place, and the wash of the floor as well. The basin, so apt to lose its seal by self-syphonage, is disconnected, and the usual cumbersome and expensive wastes of the bathtub are done away with. The small open waste pipes of the bath and basin have only small fouling basins, and these are easily scoured out by the rapid flow of the hot waste liquids. The number of soil pipe connections is lessened and the work generally simplified by the means taken to disconnect them. Practically the plea is that it is only a little evil, and by tolerating it things will look as much better. The sanitary engineer everywhere finds people objecting to good work because "it looks so." Show the architect or owner how some favorite trick of construction is dangerous to life and health and suggest that the work should not be concealed. The reply is "but it will look so to have it exposed." With a properly arranged bath and basin there is no difficulty in going through a tiled floor with a single opening in addition to that for the water closet.

"The number of soil pipe connections is lessened and the work generally simplified by the means taken to disconnect them." There is no possible excuse for having small fouling surfaces of this character. In the ordinary well-constructed bathtub the tap is within the length of a union from the tub, and the distance inside of the bathtub from the surface of the seal scarcely exceeds three inches, and is sometimes less. In many of our best forms of basins the whole length of pipe from the seal up to the basin can be reached for cleaning. The idea that "hot waste liquids will clean out a pipe three-quarters of an inch in diameter" is a matter of faith rather than of works. Every architect should be firmly imbued with the idea that the plumbing work is the most honorable of all that goes inside the house; there is no excuse for sacrificing it to any other requirement of construction or convenience. Its perfection is of paramount importance.

SAYS 'TWILL BE A HARD WINTER.

Loren Cushing, an aged farmer of Plymouth, Chenango County, New York, says that the coming winter will be the most severe one since 1833, with plenty of snow. He bases his opinion on the following points:

First—The husks of corn are much thicker than usual, and of a deep orange tint, instead of a light lemon hue.

Second—The hog's melt runs jagged, instead of smooth.

Third—The goose bone taken from a May-raised fowl shows larger and whiter spots than customary, which resemble the canals of Mars.

Fourth—The crop of nuts of all kinds is immense, and the squirrels and chipmunks are laying in prodigious stores early in the season.

Fifth—The partridge and woodcock are lighting in barns and outhouses, instead of trees, and ducks are flying in U-shaped, instead of V-shaped, flocks toward the South.

Sixth—The green frogs are changing their skins, and are even now seeking cool wells and springs for their winter quarters.

Seventh—The leaves have remained upon the trees longer than usual. Nature makes such a provision because in the promise of cold weather the energies of the trees are protected as much as possible.

Assignee Clarkson has taken proceedings to recover from Harry Cooper $2,445, money alleged to have been drawn by defendant from the firm of Cooper & Smith, and to which he was not entitled.

A Digby, N.S., business man with a number of outstanding accounts which he cannot collect, remarked the other day that he wished he was doing business in Texas, where he could carry a gun and use it.

The Montreal Board of Trade Council has adopted and forwarded to the Postmaster-General the report of a committee of the council on Government insurance of registered letters, declaring: (1) That the revenue derived by the Government from the sale of registration stamps amounts to a considerable sum during the course of a year, while the proportion of loss is very small; (2) that a guarantee by the Government of the safe delivery of all registered matter, or, failing that, the reimbursement of the amount lost, would be of great value to all who use that means of conveying valuables; and (3) that the Government should be urged to adopt some means whereby the desired security could be given, provided such could be done without the imposition of any material extra charge in the cost of registration.

DISCOVERIES OF PETROLEUM OIL.

Besides the petroleum oil that comes from the vast regions of Pennsylvania, U. S. A., and Baku, in Russia, the world's consumption promises to be supplied with the same kind of product from Saghalien, an island on the eastern coast of Siberia, where a Russian mining engineer, after making extensive explorations, has discovered considerable quantities of mineral oil,not only at the northern extremity of said island, but also along the shore of the Gulf of Pabil, near the Okhotsk Sea. The borings already made at a depth of twenty to thirty feet, have yielded from twenty gallons to thirty gallons of oil per diem, and its quality is not unlike the petroleum from the Baku district, having a specific gravity of 0.890 to 0.895. A careful analysis has revealed the fact that this Saghalien oil gives off about 30 per cent. of refined petroleum of good burning power, the remainder consisting of the heavier kinds, and, therefore, more suitable for lubricating purposes. This is a most important discovery for the Siberian Island, as the new source of supply is situated close to China and Japan, whither enormous quantities are sent from America every year, and if the oil wells in Saghalien answer the expectations formed of them, shippers in the United States will not only have the Russian commodity competing against them for a share of the patronage bestowed by Chinese and Japanese consumers, but will, in addition, have to take into account the underselling tactics that may be adopted by their Muscovite rivals in introducing this description of oil into such markets as heretofore have been monopolized solely by themselves. The outcome of the competition between two or three monster producers will probably be beneficial to consumers, who will witness a greater cheapening of the article; and, desperately low as some people think prices are even now, it is possible that they may go still lower in face of redundant from other and unexhausted quarters. Irrespective and independent of the above sources of production, we learn from the Board of Trade Journal that some petroleum springs have been discovered in Persia, on the Meshed road at Semnan, which, provided they can be worked successfully, will, it is said, produce enough of the petroleum oil of commerce to furnish the requisite quantity for consumption in Northern Persia, and will thus be the means of cutting off the supply that has usually flowed in direct from America alone. Experiments, of course, have yet to be tried to insure certain definite and reliable results, so as to prevent the possibility of failure should the springs run unexpectedly dry; and if mineral oil can be profitably raised in Asia as well as in Europe, the original producers in America will have to look to their laurels, or a large percentage of their huge trade in petroleum will be snatched away by their competitors in the eastern hemisphere.—Oil Trade Review.

CUT PRICES.

Some retail storekeepers have the idea when standard preparations are "cut" so that they have to be sold at or very close to cost, that it is better not to handle them, even though they may be called for repeatedly. This method of conducting business is, in my judgment, very unwise as well as unprofitable. It is unprofitable, because it acts as a hindrance to the securing of new trade.

If Mrs. Jones is aware that you do not sell such goods, she will pay her respects to a storekeeper who does, and your competitor, who, perhaps, was compelled to sell certain goods at cost, by keeping them in stock and by letting it be known that he has them on sale, has secured an order for other articles on which he has realized a good profit. And this from your customer. He has profited not only on this sale, but has opened the way for future trade, for his customer is sure to return when in need of the same goods you have refused to keep, and very often will leave an order for other goods and you will awake to find that her custom has been transferred to your competitor.

It is but idle to endeavor to impress upon your customer the fact that you are not handling cut goods, on account of the little or no margin of profit, especially when your neighbor announces in bold letters that the same goods may be obtained at his store at a figure which you have informed your customer is practically the cost of the goods. At once she supposes that you are not as shrewd a buyer as your neighbor, and assumes that if you cannot compete with him on cut goods it would be the same with everything else in your line.

The idea that it is unprofitable to handle cut goods while confined almost exclusively to retailers, is occasionally shared by wholesale houses. To instance a case: Mr. A—, a large wholesale grocer, refused to handle certain goods for the above reason, and gave notice to that effect to the company manufacturing them. By reason of a special inducement offered by this company to the retailers, orders for their goods were secured to be filled by the wholesale house with which the purchaser held business relations. A large retailer turned an order into the company with the request that it be sent to Mr. A— to be filled. Knowing that Mr. A— would "turn down" the order, the purchaser was requested to give the name of another firm with whom he kept an account; which he accordingly did, and they delivered him, not only the cut goods, but secured at the same time, what another member of the firm regarded a "very nice" order for other goods. This house, by cheerfully filling his order, is held in higher esteem by the retailer than is Mr. A—, who, by refusing the order, has sacrificed his customer's future trade which sometimes reached as high as a thousand dollars a month.

When conversing with a certain grocer regarding this action of Mr. A—'s, I was told that not for a moment would he think of acting in this manner to any of his regular trade. He was of the opinion that certain standard preparations would always be sold for less than prices established by the proprietors of the goods; and that it seemed small business for a storekeeper to accept orders on which a good profit was realized, and refuse to supply other goods in his line on account of the small margin.

This to me is the right view of the question, and I find that it is shared by all merchants who are awake to a very important consideration nowadays—the pleasing of one's customers.—J. H. Ingersoll, in Trade.

The claims of the British Columbia sealers against the United States, amounting to $1,000,000, have been forwarded to the Dominion Government.

The trade returns for the month of October and for the four months of the present fiscal year were issued by the Customs Department Friday. The exports for the month show an increase over the corresponding month last year of $2,259,656, which to a certain extent reduces the decrease for the four months. The value of the exports so far this year is $52,741,554, as against $53,260,513 last year. The imports for the four months are valued at $44,063,242, as against $42,268,425, an increase of nearly two millions. The duty collected this year amounts to $7,291,824, as compared with $7,345,945.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton. Ontario.
SP



W. & S. BUTCHER, Sheffield, England, Makers for over ***ONE HUNDRED YEARS*** of the celebrated "**WADE & BUTCHER**" Razors, and the Original Manufacturers of Hollow Ground Razors, can with confidence highly recommend their goods and particularly their SPECIAL Brand as being the most perfect ***Extra Hollow Ground*** Razors ever manufactured and especially suited for the use of Barbers and for private use. Genuine Razors are marked with one of the following Corporate Trade marks :

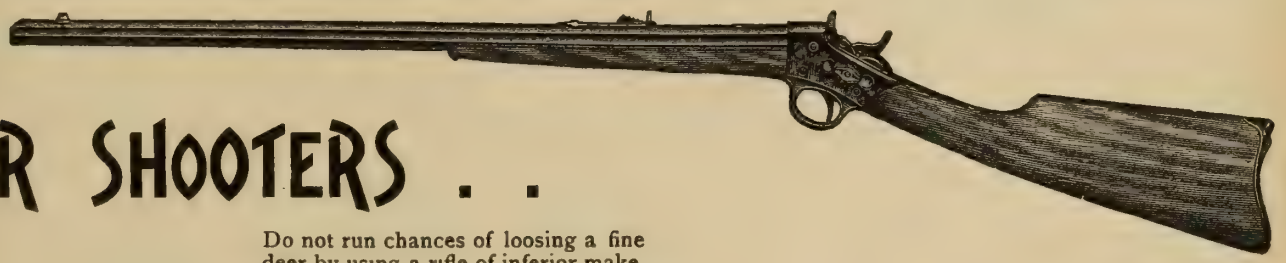
WADE & BUTCHER, SHEFFIELD, ENGLAND.

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OR SPECIAL

FOR SALE BY ALL DEALERS IN HARDWARE, CUTLERY and FANCY GOODS

JAMES HUTTON & CO., Agents, - - Montreal



DEER SHOOTERS . .

Do not run chances of loosing a fine deer by using a rifle of inferior make.

Just Received a shipment of 1893 MODEL MARLIN RIFLES 32/40 and 38/55. Send for our catalogue and discount sheet free to the trade.

THE BOWMAN HARDWARE AND SPORTING GOODS CO., - - HAMILTON, ONT.

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, **TORONTO**

ENGLISH HOUSE: **SAMUEL, SONS & BENJAMIN**
164 Fenchurch St, London, E. C.

COW TIES, English and Oneida.

TRACE CHAINS, English and Oneida.

ROPE HALTERS, Hand and Machine Made.

WEB HALTERS.

LEATHER HALTERS.

SLEIGH BELLS and SHAFT GONGS, Large Variety.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Nov. 24, 1893.

HARDWARE.

The week has furnished a fairly satisfactory volume of trade in general hardware considering the season. Naturally since the advance in freights the movement has not been so large, but no one is expressing any dissatisfaction at that. Most kinds of goods that are a necessity during the winter months are being called for to a fair extent, such as snow shovels, coal hods, etc. Sporting goods are not so active as they were, but there have been fair lots of skates, etc., going out. A certain quantity of roofing material has also been moving out, and the same is to remark regarding axes and axe handles. Cutlery has been dull, but some blanks in stocks will no doubt be discovered in certain lines of this class once the holiday demand is experienced in earnest by retailers. There is still a fair movement in baling wire to note, but makers expect to see it slacken up as soon as inland navigation really closes. Horseshoes have not shown the same degree of activity, and materially the same remarks apply to horse nails. Cut and wire nails have continued dull as last noted. Payments are much the same.

CUTLERY.—Jobbers are not quite so busy as they were in this line, but this is not surprising, as stocks are pretty well made up. Retailers, however, will probably discover some wants in the line of pocket cutlery when the holiday demand continues.

WINTER GOODS.—Skates, sleigh bells and other lines of winter goods show a somewhat decreased volume of business.

SADDLERY SUPPLIES.—Demand has not been quite so active for this line, yet some fair orders for curry combs, whips, horse blankets, etc., have been going forward.

NAILS.—Cut and wire nails generally exhibit quietness.

TACKS.—There is no change in these to report, trade ruling quiet as last noted.

HORSESHOES.—The demand for these has not been quite so brisk as last noted, and the same remark applies to horseshoe nails.

IRON PIPE.—There has been a fair demand due to the approaching close of navigation, but after it closes makers expect trade to slacken up. They say that their fall turnover has been if anything over that of last year.

SPORTING GOODS.—A smaller movement is to note in this line than last week, but no one worries over it as the movement up to the present has been fully satisfactory.

CHAIN.—There has been a moderate movement of small lots of coil and cow chain to close out some orders.

TOOLS.—The only tools that have shown any movement have been axes, axe handles and snow shovels, but it has not been noticeably large.

BUILDERS' SUPPLIES.—Continue dull and featureless except for the movement of a few lots of roofing material.

PLUMBERS' SUPPLIES.—There has been a fair city trade doing in these, but orders from the outside have been conspicuous by their absence.

WARE.—Business is quiet, with only a few small lots moving. The chief call has been for coal hods.

LAMP GOODS.—Business rules quiet, with nothing special to report.

NAVAL STORES.—There has been a fair demand for turpentine at 47 to 48c., but other lines of ship chandlery are neglected business as a rule being dull. We quote: Turpentine, 47 to 48c.; resins, $2.50 to $5.00, as to brand; coal tar, $3.75 to $4; cotton waste, 5 1-2c. for colored, and 7 to 10c. for white; oakum, 5 1-2 to 7 1-2, and cotton oakum, 10 to 12c. Cordage—Sisal, at 9 3-4c. for 7-16 and upwards, and 15c. for deep-sea line; pure manilla,11c. for 7-16 and upwards and 12c. for smaller sizes.

METALS.

With higher freights and navigation soon to be locked up, the movement in heavy iron and metals is not very conspicuous. In fact, it is remarkably quiet if it could possibly be any quieter than it has been this fall. Only a few lots of Scotch pig are moving, and Nova Scotia pig has not furnished any notably large sales. There is nothing new in tin plate, bar iron, hoops and bands, etc., while copper and other metals have been featureless. Values generally remain unchanged, except that there has been some shading in coke tinplates.

PIG IRON.—Pig iron has ruled very quiet, a few small car lots of Summerlee at $18.50 being all there is to note in the case of Scotch pig. Nova Scotia iron has been dealt in in a moderate way at former rates We quote: Summerlee, $18.50 to $19; Eglinton, $17 to $17.25; Carnbroe, $16.50 to $17; Langloam, $18.50; Nova Scotia, $17 to $17.50.

SCRAP IRON.—Further business has transpired in small lots of cast scrap during the week at $15 to $15.50. Otherwise there has been nothing to note.

BAR IRON.—There is no change in bar iron, which rules quiet.

TIN PLATE.—Some shading has been spoken of in the case of coke tin plate, but for ordinary business quotations are unchanged and the tone is easy. We quote cokes $3.05 to $3.20; and charcoal $3.50 to $4.

CANADA PLATES.—There has been some good sized lots of these moved during the week at former prices. We quote $2.40 to $2.45.

TERNE PLATES.—Ternes continue nominally unchanged at $7.25 to $7.50.

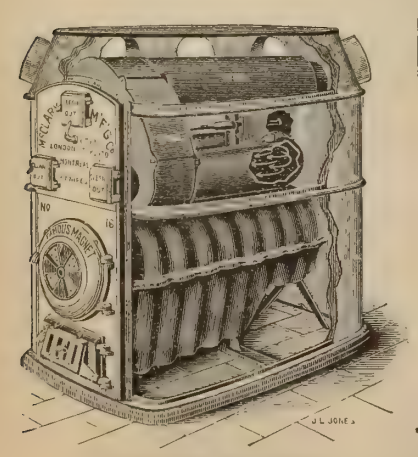
GALVANIZED PLATES.—Business in these has not been so active. We quote as before 4 3-4 to 5c. for No. 28 ordinary brands.

SHEET IRON.—Only a small trade is doing, with prices the same, $2.40 to $2.60, according to grade. Russian sheet iron 10 1-2 to 11c.

HOOPS AND BANDS.—Business has been of a purely hand to mouth character, with prices possibly a shade easier at $2.30 to $2.35.

STEEL.—The demand noted previously for sleigh shoe steel has not been so brisk, but some lots have been moving by boat. We quote: sleigh shoe, $2.40; tire, $2.50 to $2.75; spring, $2.50, and best cast steel 10 1-2 to 12c.

COPPER.—One or two small lots of copper have been moved, but the mar-



FAMOUS MAGNET.

Our New Wood Furnace

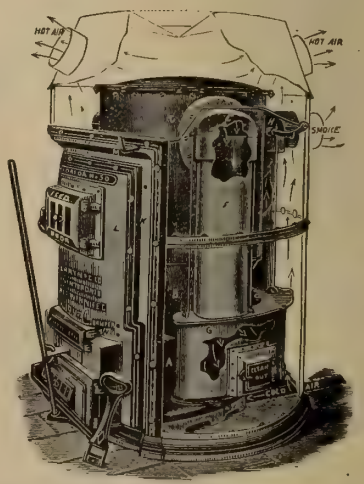
The Famous Magnet has taken the trade by storm. It fills every want.

The changes made this Season in our

Steel Dome Low Radiator Coal Furnace

make it apparently perfect. **The only three flue furnace in Canada.** If you have any furnace work in view it will pay you to let us send you full particulars of them.

THE McCLARY MFG. CO., London, Toronto, Montreal, Winnipeg, Vancouver.



STEEL DOME LOW RADIATOR.

ADAM HOPE & CO., HAMILTON

Offer for Sale

"Pioneer" and "Sloss" PIG IRON

These are fine foundry irons, being strong and large scrap carriers.

Also all the well-known—

Scotch Brands, Broken Car Wheels, and Railway Cast Scrap.

GAS, ELECTRIC, AND COMBINATION

Fixtures

Of English, Canadian, and American designs. . .

Globes and Shades

Staple Brackets and Gas Fittings. Select stock of above always on hand.

Jas. Barwell, 88 Bay St., Toronto

SHOWROOMS OF JAS. BARWELL, SONS & CO., Birmingham, Eng.

Drawings and Estimates on application.

WE DON'T CARE

What the Turpentine **Combine** may say or do. We are not members, and no action on their part can force us to join them. Our prices are not governed by any **Combine,** but regulated solely by the Southern market, and we would rather our customers should continue to share with us the benefits of our special arrangements for purchasing in the cheapest market, even though for a time our business may suffer through the action of the **Combine** in trying to force us out of business, or into their association, so that thereby they might be able to exact from the consumer any price their **Combine** might determine.

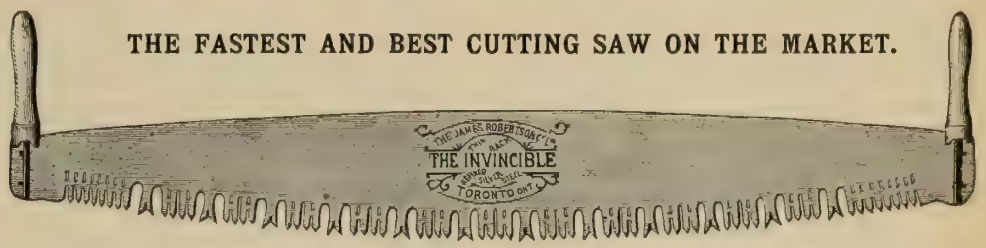
As the LARGEST DEALERS in TURPENTINE in this PROVINCE, we are satisfied we will have your support in the action we have taken, and with confidence ask a continuance of your favours.

Francis, Frost & Co.

33 Front St. West, Toronto.

THE INVINCIBLE. EVERY SAW WARRANTED.

THE FASTEST AND BEST CUTTING SAW ON THE MARKET.



Guaranteed four Guages Thinner on Back than Front and Made from the Highest Quality of Double Refined Silver Steel.

Manufactured only by

The James Robertson Co. (LIMITED.)

SAMPLE ORDER SOLICITED. **Toronto.**

You will Insure Success IN THE **STOVE** Business, by selling

"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.

The Gurney-Tilden Co. Ltd.

Successors to The E. & C. Gurney Co.

HAMILTON - - ONTARIO.

H. Boker & Co.

ARE FAMOUS FOR THEIR FINE QUALITY

RAZORS, SCISSORS, —AND— POCKET CUTLERY

TRADE MARK. (TREE BRAND)

For Sale by Leading Wholesale Houses.

TORONTO CUTLERY CO.,

65 and 67 Yonge Street, Toronto

M. MAYER, Propr.

NON-XLL	Pocket Knives	WARRANTED
IMPERIAL	Razors	
T. C. Co.'s	Nickel Steel Shears	
WILLIAMS	Dble Shear Steel Butcher Knives	

We fully guarantee all goods named above.

MONTREAL Markets Continued.

ket is dull on the whole. We quote 11 1-2 to 12c.

TIN. — Business restricted to small lots for actual necessities. Prices are before, 21 1-2 to 22c.

ANTIMONY.—Remains dull and unchanged as before, 10 1-2 to 12c.

SPELTER.—A few small orders have been attended to during the week, but hardly sufficient to be worthy of mention. We quote $4.60 to $4.75.

LEAD.—The tone on lead is easy and business dull as in other lines of metals. We quote as before, $2.85 to $3.

ZINC SHEETS.—Demand is falling off but prices are unchanged at $5 to $5.25.

CEMENT.—Receipts have been heavy and the market is overstocked, and a quiet time is now looked for as outside work will soon have to cease. Prices are a shade easier in consequence, and ex-wharf English cement is offered at $2.05 to $2.15, and Belgian at $1.90 to $2. Fire bricks are scarce, and light stocks have stiffened prices to $17 to $21 per 1,000, according to brand and quantity.

PAINTS AND OILS.

It was expected that the close of last week would see some change in linseed oil. The trade, however, at a meeting which they held decided to make no change in values. Paints, leads and varnishes rule dull and unchanged. We quote choice brands of white lead, Government standard, $5; No. 1, $4.75; No. 2, $4.50; No. 3, $4.25; No. 4, $4; dry white lead, 5c.; red lead, pure, 4 1-2c.; No. 1, 4 1-4c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, raw, 60c., boiled, 63c.

GLASS.

There is no change in glass, which furnishes a very moderate business. We quote as before: $1.25 for first break and $1.35 second break per 50 feet, and $1.35 second break per 100 feet. Putty in bulk is unchanged at 1.85.

PETROLEUM.

A good steady demand is noted for refined petroleum. No further cutting is noted either on the part of refiners' agents or wholesale houses. We quote: Canadian at 11 1-4c. in shed in Montreal for round lots, and 12c. for small quantities. American petroleum, 16 1-2c. in car lots, 17c. in 10 barrel lots, 17 1-4c. in 5 barrel lots, and 17 3-4c. for single barrels, net cash; American benzine, 23 to 25c.; Canadian benzine, 10 3-4c. Petrolea; 12 1-2c. Montreal.

MONTREAL TRADE NOTES.

Frothingham & Workman report that the fall movement in sleigh bells of all kinds has been unusually good.

Wm. McNally & Co. look for a quiet cement market now that the season of navigation is over.

Drummond, McCall & Co. have sent forward several round lots of Nova Scotia iron to points West this fall.

W. H. Cottingham & Co. have been filling some good orders from city carriage makers for Mander's varnishes, etc.

The Government at Ottawa has requested the attendance of several of the rolling mill proprietors here to a conference at Ottawa with regard to the tariff.

Painchaud, Squire & Co. say that orders are still coming in for the finer line of pocket cutlery in a small way, no doubt to fill up blanks in stocks.

Some handsome lots of bevelled plate glass have recently been turned out by the Messrs. Pilkington's new branch for some of the city cabinet makers.

A good demand for baths has been noted of late, and Messrs. A. McLaren & Co. say that their line of steel clad baths are wanted everywhere.

In our report of the judgment in the Canada Paint case the name of Mr. Munro, the manager of that company was spelt incorrectly owing to a typographical error.

C. J. Chisholm reports that his cables advise a very quiet feeling in Wales on tin plate, etc., owing to the labor troubles.

T. W. Boyd, Jr., of T. W. Boyd & Sons, Montreal, has just returned from a six weeks' trip to England and the continent. HARDWARE found Mr. Boyd looking well after his ocean trip, and apparently fully satisfied with the results of his voyage. He has brought back several new agencies as a result of his visit to the leading gun, bicycle and hardware centres, and expects to have some good things to offer the readers of HARDWARE when he gets his new lines into shape. One line especially, of which he has secured the control for Canada, a '94 model Dunlop tyre bicycle, that will retail at $75, he thinks will make a hit, as he says it is just the thing for a retailer who wants a medium price high grade wheel. He has also secured for the Province of Quebec and Lower Provinces the agency of the Rudge Cycle Co., the Premier Cycle Co., and the J. K. Stanley Co. cycles. With these lines we may expect to find Boyd & Co. even more "in it" than usual this coming season.

TORONTO MARKETS.

TORONTO, Nov. 24, 1893.

HARDWARE.

Trade is much about the same as a week ago. On the whole business is quiet and payments show little or no improvement. There has been a sudden falling off in the demand for hay-baling wire, while rope, on the other hand, is occupying a little more attention than it did. Trade in cutlery is much as before. Nails are going out fairly well, and tacks of certain kinds are moving a little more freely. In winter goods business is a little brisker, while in regard to sporting goods and lamp goods the opposite obtains. The improved demand previously noted for plumbers' supplies is maintained, and iron pipe has been going out freely.

WIRE—There has not been a great deal doing. In hay-baling wire there has been a sudden dropping off in the demand. There

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ILLUSTRATED CATALOGUE FREE
STEEL SHINGLES

is the usual demand for bright iron wire for tinners' use, but the quantities are of course small.

ROPE—Orders have been coming in more freely, for sizes up to one inch especially.

CUTLERY—Trade is keeping up well. Case goods are going out nicely, and a still further improvement is looked for during the next few weeks.

NAILS—A number of good shipments of cut nails have been made to the Northwest during the week, but orders for Ontario are only for immediate wants of course. Horseshoe nails are still in active demand, but quantities are not nearly so large as a month ago.

TACKS—Prices of tacks in wood kegs have been reduced somewhat, and there has since been quite a little trade doing in this particular line. Other kinds continue quiet.

CHAINS—In coil chain business is flat. Stocks are complete, and an improved demand is expected to develop during the next few weeks. Stocks are running low on cow ties, and the orders that are now being received are of a sorting up character.

HORSESHOES—Business is keeping up well. Steel horseshoes are not in much demand yet, but very few of these are stocked by the dealers.

WINTER GOODS—Orders are coming in more freely for sleigh bells, and quite a number of shipments of snow shovels have been made. Orders for skates have been pretty well filled.

SPORTING GOODS—Demand has dropped off considerably, although there is still a little doing, principally in powder, cartridges and shells.

WARE—Trade in tinware has been keeping up well, and a great deal more of peerless ware has been selling during the past ten days than for some time. Blue and white ware is also going out more freely.

LAMP GOODS—Trade is rather quiet, orders being largely confined to small parcels.

PLUMBERS' SUPPLIES—There is a better feeling in the country, although that in the city is much as before. A fairly good business is still being done.

BUILDERS' SUPPLIES—A fair business is being done on country account, but in the city the conditions are as unfavorable as ever.

MECHANICS' TOOLS—Dull and featureless.

BOILER PLATES AND TUBES—Trade much as before, fair, with prices unchanged.

IRON PIPE—Trade good. Stocks are principally imported. Prices unchanged at 62½c. and 5 per cent. to 65c. straight.

METALS.

There have not been many changes in metals. An advance of 25c. per cwt. has been made by the manufacturers of sheet zinc. Since the strike ended in England brokers have been a little more free to offer English pig, but business continues dull in

MARKETS—Continued.

this line. Terne plates are in better demand and much the same may be said in regard to Canada plates.

PIG IRON—Nearly all the small foundries in the country are shut down, and the little pig that is being taken is principally of American make. The import trade is very much smaller than is usual at this time, but since the coal strike ended agents on this side feel freer to offer English pig. We quote: Summerlee, $20.50 to $21; Carnbroe, $19.50 to $20; Siemen's, $19 50 to $19.75.

BAR IRON—Trade is not so good in this line, quite a number of country merchants have stocked themselves sometime before the advance in freights took place. The base price is unchanged at $1.95.

SHEET IRON—Has been going out more freely. Some shipments arrived during last week, but stocks are far from being heavy. A good deal of English iron selling, and some German is being placed on the market. We quote as before: 22 to 24 guage, $2 50 to $2 60, and 26 guage ¼c. extra.

HOOPS AND BANDS.—Are exceedingly scarce, owing to the coal strikes in England manufacturers being unable to fill orders. Montreal dealers are not in any better position than those in Toronto. Prices are unchanged at $2.50 to $2.60 for one inch and upwards.

SHEET STEEL—Some large orders are reported for this at the base price $2.90.

CORRUGATED IRON—There is considerable roofing work being finished and there are some large orders going out, but trade on the whole is quiet We quote as before:—$4 75 to $5 is the idea for small lots. "Owl" brand at $3 to $4 per square for painted and $4.25 to $7 for galvanized, according to gauge.

GALVANIZED IRON—This line is going out exceptionally well, and a large number of orders have been booked for import. We quote Gordon Crown at $4.75 to $5 for 28 gauge and $4.65 for 26 gauge.

INGOT TIN—Trade has improved some, but prices remain low. We quote 22 to 22½c. for Lamb and Flag and 21¼ to 22¼c. for Straits.

INGOT COPPER.—Trade quiet, stocks low, and prices unchanged at 12 to 12½c. for small lots.

SHEET COPPER.—There is not much doing in this line, although trade in brazier has improved. Ordinary roofing copper is quiet.

SPELTER—The imported article has been going out freely, but domestic is quiet. Prices are unchanged at 4¼ to 4⅜c. for small lots.

SHEET ZINC—Stocks are not improved any, they still being low. Shipments, however, are expected to arrive within the next three or four days when dealers will be able to supply the demand The market is firmer, prices having been advanced 25c. per cwt. The idea for cask lots is now 5¼ to 5½c.

TIN PLATES—There has been quite a demand for charcoal brands during the past 10 days; of cokes there has been the usual quantity going out. Prices remain unchanged at $3 85 to $4 for I.C, with the usual extras for I X.

TERNE PLATES—Some nice quantities have been shipped at $7.25 f.o.b. Toronto.

CANADA PLATES—Dealers are in a little better position than they were last week, but stocks are still comparatively light. This will, however, be aleviated in the course of a week or so, when fresh supplies will be on hand. We quote: All dull, $2.60 to $2 65; half polished, 2.75, and all bright $2.90.

SOLDER—There is the usual steady demand for this and nothing more. Prices are unchanged at from 14 to 16c. according to composition.

ANTIMONY—A fair business is reported and prices are a little firmer. We quote:—Cookson's, in cask lots of 1,000 lbs., at 11½ to 12c.

LEAD—Demand has improved, some good shipments having been made during the week at 3c.

GLASS.

Business is not as brisk as a week ago, but it is, however, good for this time of year, and dealers are finding it difficult to supply the demand for all sizes, especially some in the first break. We quote as before, $1.20 to $1.25 for first break.

PAINTS AND OILS.

The feature of trade during the past week has been a decline of 1½c., and this notwithstanding the high price of the English article. One reason advanced for the association taking this step is in order to meet the competition of American dealers, who are shipping linseed oil into the border towns of Canada at a low price. The price is now 58½c. for raw and 60½c. for boiled, Toronto, Hamilton, London and Guelph, with 2c. added for delivery at outside points. Turpentine has declined 1c. per gallon in the South to the surprise of American jobbers, the quantity produced being greater than anticipated, while foreign demand has fallen off. Prices here are unchanged at 44 to 46c. Since the decline there has been, if anything, a little better demand for turpentine, but trade, however, is still quiet. Shellac is still the only article in the varnish line that is in any sort of a demand. In white lead there is less doing than a week ago, but prices remain unchanged at the 5c. basis. Prepared paints continue dull, wants being confined to a few small sorting up orders.

OLD MATERIAL.

There is a continued dulness in trade. There is no change in prices with the exception of No. 1 wrought scrap, which has dropped $1 per ton. We quote prices paid by dealers as follows:—Agricultural scrap, 55c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40c. per cwt.; No. 2, including sheet iron, hoop iron and mixed steel, 10c.; new light scrap copper 7½c.; heavy scrap copper 8c.; old copper bottoms, 7½c.; light scrap brass 5c.; heavy yellow scrap brass 7c.; heavy red scrap brass 7½ to 8c; scrap lead 1½ to 2c.; scrap zinc, 1½ to 2c.; scrap rubber, 3c.; country mixed rags, 75 to 80c. per 100 lbs; clean dry bones, 50 to 60c. per 100 lbs.; boring, and turnings, 10 to 15c.

PETROLEUM.

Demand continues brisk on the Toronto market, and prices unchanged. We quote: 5 to 10 barrel lots, imperial gallon, Toronto—Canadian, 12 1-2 to 13c.; carbon safety, 16 1-2 to 17c.; Canadian water white, 18 1-2 to 19c; photogene, 22c.

The Petrolea Advertiser in its weekly report says: We quote the above as the market price. Crude oil has taken another drop, and we understand the Imperial Oil Co. have reduced their price for crude this week four cents per barrel, viz., $1.03 delivered at their refinery, $1.01 1-2 delivered at the late Premier Oil Co. refinery, $1.01 1-2 delivered at their East Eng station, and $1.01 1-2 at their receiving station in the Marthaville district. Now one of the most important questions of the day is: What are the crude producers going to do about it? Are they willing to sit still and see their product dwindle down in price week after week until it reaches a point at which the drill must be stopped? We would suggest that a mass meeting of the producers should be called for the purpose of taking the position into consideration and to devise some means of disposing of their oil to better advantage, and to permanently limit the downward tendency.

HIDES, SKINS, TALLOW, WOOL.

Hides.—Trade in hides continues slow. Dealers are paying for No. 1 cows 3 3-4c., and 2 3-4c. for No. 2's. Steers are 1c. in advance of the price quoted above.

Skins.—There is the usual trade doing and dealers are paying from 65 to 70c., according to quality. No pelts are being offered.

Wool.—No enquiries for car lots, and the prospects are not so bright as they were. Dealers are paying 17 to 18c. for good pulled wool, and 20c. for select No. 1.

Tallow.—Trade continues fair in tallow, with prices steady at last week's quotations, 5 to 5 1-2c. per lb.

SEEDS.

There has been a fairly liberal movement in alsike at prices ranging all the way from $4.50 for inferior to $7 for fancy. There are indications of a fair movement in red clover, but in the meantime trade is quiet at $5.50 to $5.75, with $5.90 to $6 being occasionally paid for choice to fancy. Timothy is hardly quotable, there being so much on the market that has been saved out of fall grain. This kind is quoted at $1 to $1.25, while prime is worth $1.50 to $1.60.

MARKET NOTES.

The Toronto Silver Plate Co. are about to issue a new catalogue of sterling silver goods. A number of the lines shown are particularly suitable for the Christmas trade. Copies can be obtained on application.

A. C. Leslie & Co., of Toronto and Montreal, are showing a new razor. It is named the "Excelsior," and is in different styles and sizes. It is of German make and is a good line of hollow-ground razor.

Joseph Lea, manager of the Toronto Fence and Ornamental Iron Works, has been negotiating for the purchase of the Barnum Wire and Iron Works, but the deal has not yet been consummated.

The Steel Clad Bath and Metal Co. intend to place on the market a new class of metal bath which will equal their present stock in beauty and design, and will cost less. They report large sales in their present stock.

Mr. Bostwick has just furnished the new building, Oak Hall, with all its interior fittings, shelving, tables, etc., and has also recently furnished a handsome office for the Canadian Bank of

Commerce at St. Catharines, and the Canadian Pacific Railway at London, Ont.

Mr. Geo. F. Bostwick, of 24 West Front street, Toronto, has received the contract for all the interior fittings, including counters, shelving, show cases, etc., for fitting up the new store for Michie & Co., King street west, Toronto.

The Toronto Cutlery Co. report sales of this year to be far larger than those of last year. The holiday trade is now, however, pretty well supplied, and orders have fallen off somewhat, though business seems to be still moving steadily.

Wm. McNally, of Wm. McNally & Co., Montreal, is running as vice-president of the Dominion Commercial Travelers' Association. He is a good fellow, well worthy of the honor, and his friends are using their best efforts on his behalf.

The Toronto Lead and Color Co., of Toronto, are making extra efforts to increase their trade for next year, and are effecting alterations both in factory and sampling department to accomplish this. See their special advertisement in this isue.

Any of the readers of HARDWARE who are requiring interior office or store fittings, show cases, mantels, grates and tiles, or any kind of commercial or bank furniture, wire work, metal screens, etc., will do well to correspond with Mr. Bostwick before placing their orders.

Samuel, Benjamin & Co. are putting a new butcher's steel on the market. It is named the Wapacut, and the manufacturers ask that it be used to sharpen the knives they recently put on the market under the same name. There are two kinds of steels, one being for rough work and the other for fine.

Rice Lewis & Son are in possession of the three original samples of table knives that were submitted to Princess May from which she might make a selection. They are highly finished and handsome. They have embossed gold ferrules and full ivory handles. The style of two of the handles is something unique on this market.

The Gutta Percha and Rubber Mfg. Co., Toronto, report a steadily increasing demand for "Guttaperch" brand of spiral ring, self lubricating, piston packing. It is made with the rubber casing on the outside or inside, whichever is preferable, and dealers report that Guttaperch brand will not deteriorate even when kept in stock for a long time.

The stock, etc., of the Toronto Plate Glass Importing Co. was put up for sale by auction at Suckling's Wednesday. The whole was first put up in one lot, but the offers failed to reach the reserve bid. Then blocks one and two were offered separately, and in neither instance was the reserve bid reached. The stock will now be offered to the trade by catalogue in about ten days.

Sheet zinc has been advanced 25c. per cwt.

The cases containing the light of plate glass 138 x 197, which, with other lights almost as wide, but not so long, are being imported for Oak Hall and Michie & Co.'s buildings by the Consolidated Plate Glass Co., Ltd., of this city, were smashed to pieces in Montreal, while being transported from the steamer to the railway. This is the second time these large plates have been destroyed on their way to this city. Apparently it is not all profit in the plate glass business, or all fun in attempting to eclipse the record for largest sizes of plate glass brought into Canada.

John A. Bruce & Co.'s seed store and Peter Bertram & Co.'s hardware store, Hamilton, were destroyed by fire Wednesday. The loss will be in the neighborhood of $80,000, made up as follows: Peter Bertram, stock, $20,000, almost a total loss; insured for $8,000. Bruce & Co., loss on stock, $40,000, on building about $20,000; insured for $30,000, and building for $18,000.

The McClary Mfg. Co. report a great increase in the demand for base-burners. This line has been hanging somewhat the past few weeks, but is now going out freely. "We have never before had such large sales of Canada plate as we have received within the last two weeks," says the firm. "Orders from the North, where dealers are stocking up before the close of navigation in tin plate, etc., have been unusually large. Our Eastern customers are also hustling their orders for the reason that they get half railroad rates by having their goods shipped by boat."

Rice Lewis & Son are placing an abbestos seat valve on the market. Not only is it impervious to heat, steam, etc., but the seat, when worn out, can be taken out in a minute or so and replaced with a new one at a nominal cost. The advantage of this is obvious when it is remembered that ordinarily when the seat is worn out the whole valve is in a like condition. It has had large run in the United States, and some of the largest firms in Toronto have already decided to use it.

Rice Lewis & Son report a big run on their weather strips. The firm last week advertised a "Reduction in Coal and Wood." The next day their place of business was thronged with reporters and expectant householders and manufacturers enquiring what it meant. Those that couldn't go in person wrote. When the firm ventured the information that the reduction was to be effected by using their felt and wood weather strips everybody laughed, and nearly everybody either bought strips or decided to do so later.

AMERICAN MARKETS.

New York, Nov. 24, 1893.

ed to have been pretty well closed out. There was no sign of inclination to engage in new ventures. In short, the speculative branch of the market is virtually lifeless in the absence of incentive to movement in any direction. Consumptive and trade demand is of strictly routine character, and the sales making are chiefly at prices very close to official 'Change quotations, say 20.65 to 20.70c. cash for ordinary store lots No sales were recorded on the Exchange but bids were stiff up to the close, including 20.60c. for spot, 20.65 for November, and 20.60c. for December delivery.

COPPER.—The home trade demand for ingot was moderate, and nothing came to notice in the nature of freer enquiry on export account. There was no sign of greater anxiety on the part of sellers but the offering indicated that there is an ample supply available, and that the top prices generally quoted are strictly the exception where other than small lots may be involved. Lake Superior ingot is valued at 9 7-8 to 10c, electrolytic at 9 1-2 to 9 3-4c., and common casting at 9 1-4 to 9 3-8c., according to brand and quantity.

PIG LEAD.—Except for single carloads there was hardly any demand, and the market presented no really new feature aside from slightly lower prices from the West, where speculative sentiment has thus far failed to become deep rooted. In the local market there were speculative bids of 3.37 1-2 to 3.40c. for deliveries running the balance of the year. In other quarters anything above 3.35c. was the exception. St. Louis wire to the Metal Exchange was 3.17 1-2c. London cable quoted £9 15s. for soft Spanish.

SPELTER.—The position of the market is unchanged. Offerings of stock for delivery during the balance of the year are somewhat reserved, with full former prices asked, but the demand is slow and rather disappointing. For the ordinary Western brands, early shipment, 3.75 to 3.80c. delivered here or at common point is still quoted. St. Louis wire to the Metal Exchange quoted 3.45c. London cable was £17 for good merchant brands.

ANTIMONY.—No change was noted in the market for this metal, the movement having been moderate and chiefly at former prices. We quote at 9 5-8 to 9 3-4c. for Hallett's, and 10 1-8 to 10 1-4c. for Cookson's.

TIN PLATE.—Specially low prices have led to the closing of fair contracts for ordinary cokes for delivery during the first half of next year. Otherwise the business in futures is backward. Spot sales are of very commonplace type, and the demand is moderate even for this season of the year.

IRON AND STEEL.—Foundry pig iron is taken in moderate quantities, for delivery during the next six weeks to a fair extent. Indifference with respect to deliveries later on is still manifested by consumers, however, and the market still has a languid appearance. Prices are not positively lower in any instance but rather soft nearly all along the line. Mill grades receive comparatively little attention here. Such as it is, the business passing is at prices as low as any that have prevailed during the past four or five months. Old material was in fair demand, but interest seems still to be confined to rather small lots for prompt shipment, and the business passing is not sufficient to turn prices for the better.

Steel rails are still in very uncertain position. Local sales agents maintain the peculiar atitude that they struck when the association became extinct and make none but extremely vague reports regarding business or prices. Nominal prices are $20 to $22 f.o.b. mill for heavy sections. Rail fastenings are dull at old prices.

PERSONAL MENTION.

Dugald Reid of Georgetown was touring the Toronto warehouses this week.

H. W. De Courtenay, repressenting James Hutton & Co., Montreal, was in Toronto this week.

J. W. Parish has left the Toronto Cutlery Co.'s employ, and will soon leave for Montreal, where he will probably go into business.

A. D. MacArthur of Craig & MacArthur has returned from his trip west. He reports that while trade is quiet, it was not so much so as he anticipated. Tinsmiths and stovemen, he says, are busy.

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A

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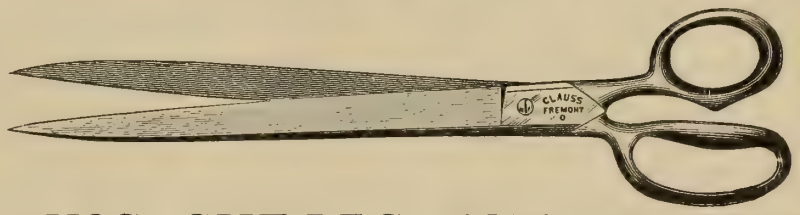
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TABLE KNIVES

BUTCHER'S KNIVES

CASH DISCOUNT.

The ironmonger who proposes to lay himself our for a cash trade has many considerations to claim his attention, amongst which I might mention selling prices, cash discounts, stores' competition, advertising, window display, etc., but the question as to the most satisfactory discount to allow for prompt cash payments is one of most importance, and a considerable difference of opinion would seem to exist as to what percentage would result in the most benefit to the business. On this account I have been tempted to raise the question in your most useful monthly. To consider the subject in a thorough spirit, we must endeavor to know what is the object sought to be gained by allowing a cash discount—by which I mean the customary deduction made for prompt cash at the time of purchase. Why should a price once fixed for an article be not strictly adhered to in any case? An ironmonger who understands his business, when calculating what rate of profit to add to cost prices, always averages a certain amount for bad debts, and these can only occur with persons who have an account on his books. With those who pay cash down "on the nail" no such risk is possible, nor is there the expense of an intricate and costly system of bookkeeping; and it is, therefore, obvious that the latter class are entitled to some advantage over the former. To treat both classes alike would be to merely offer a premium to the credit customers, because they enjoy the use of their money for one month or three months, as the case may be, longer than they who paid at time of ordering, and consequently the tradesman would need a very large capital to enable him to give such extensive credit; but the offer of an allowance off the prices when a customer is willing to pay promptly not only satisfies him, but it induces credit customers in a great many instances to pay ready money instead of allowing an article to be put down to their account, and it also serves as an attraction to bring new customers to the shop.

The amount that this cash discount should be is the next matter. It may vary between certain limits either one way or the other, but if these limits are exceeded harm may result, and the business would not receive the full benefit which ought to follow a proper application of the principle. If the discount is too small, there is wanting the inducement which ought to exist in order to encourage customers to pay cash. They will argue within themselves, "Is it worth while paying now for the sake of saving such a trifle, when I may, if I wish, have three months' credit?" and so the goods are entered. The only people who would pay under these circumstances are they who cannot obtain credit, or who, through carelessness or ignorance, have not made a comparison between the prices. People who make it a fixed rule to pay for everything on the spot, will not patronize such a trader as I have mentioned, when they learn the fact that the creditor gets practically the same terms. It is the custom to allow a settlement discount when an account is paid within a reasonable time after being rendered, and no doubt a customer is not satisfied when he is told that the monthly or quarterly statement is net; but if the cash discount is small, it may not be possible to make any abatement at the end of the month or quarter, and the consequence is that the creditors, as well as the cash customers, are offended, and likely a portion of their trade irrevocably lost.

But the cash discount can also be too great, to the ironmonger's disadvantage, and in this case it operates by discouraging otherwise good customers—who must, of necessity, keep a running account with their tradesman—from dealing with him, as they get it into their heads that they must be paying far too much for their goods when he can afford to take off such a substantial abatement for prompt cash. The general public are also led to believe, from the high gross prices of Mr. So-and-so's goods, that he looks for a greater profit than his opponent in the next street, never hesitating to calculate what the net prices would be. Inversely, if the gross prices are normal, the ironmonger must suffer from diminished profits by this system.

Heretofore, I have only hinted at the likely results of insufficient and excessive discounts for prompt cash. If, in answer to an enquiry as to what would be the most satisfactory rate to allow, I should venture to state my opinion. I would suggest 5 to 10 per cent. as being the most advantageous under all ordinary circumstances; whilst customers having an account might be allowed 2 1-2 to 5 per cent. quarterly. If as is sometimes the case, a discount of 20 or 25 per cent. be allowed off a certain article for cash, it would be both unjust and unfair to charge list price to book customers, and only allow the usual 2 1-2 or 5 per cent. at settlement. In such a case I would recommend that the price list be levelled down to your ordinary standard, and that it be subject to the usual rate of discount as the general stock.

"Clearance Sale" prices are an exception to what I have heretofore said; sometimes they are strictly net and sometimes it is usual to offer a large discount, which often takes the form of 2d. or 3d. in the shilling, 2s. 6d., 3s. or 4s. in the £1, etc.; but the latter, in my opinion, is apt to give an observant public an exaggerated idea of the profits made in the ironmongery trade. I consequently favor the system of net prices, and this would save much mental calculation and remove the liability of making mistakes. There is a class of voluntary allowances, which must not be confounded with cash discounts, though resembling them—I allude to proprietary and patented articles advertised at high list prices by the makers, from which a substantial discount is allowed to ironmongers who take up the sale of them. To create a name for low prices, a shopkeeper may divide his profit with his customers, as may often be seen from advertisements in the shop windows—Brown's Liquid Glue, in 1s. bottles—our price 9d.", and so on; and this plan appears to be in high favor with the directors of co-operative societies and similar places, for the same reason. Lawn mowers are rarely sold at the list price, but the plan I have mentioned would be equally applicable to them, namely, to compile a lower list price for one's self, which will be subject to the 5 or 10 per cent. for cash. Seven and a half per cent. being a troublesome one to calculate, I would not recommend.—Tubal Cain, Jr., in Ironmongery.

THE RAWHIDE GUN.

They have been testing Frederick La Tulip's remarkable rawhide gun up in the Onondaga valley. The piece was placed in position and pointed toward a bluff at a range of about fifty rods. The gun was pitched ten degrees. A half pound of powder and a three pound shot were rammed into the barrel. The string was pulled, and, to the visitors behind trees and abutments the report was deafening. When they observed the gun to be still intact, they regained a little confidence, and at the next discharge stood uncomfortably close to the weapon. At the first test the gun only recoiled six inches. The next charge was increased to three-quarters pound of powder, and the recoil noted at this discharge was nine inches. In the other tests the charge was enlarged to a pound. The third time the piece was fired, the bullet ploughed a deep furrow in the sod above the cliff. Then more tests were made and the gun showed no evidence of having bulged a particle. At no time was the recoil more than a foot. "An ordinary field gun weighs 1,600 pounds, while the La Tulip piece tips the scales at only 453 pounds. This vast difference is, of course, accredited to the rawhide which constitutes more than half the gun. An average man can easily lift it from the floor. The bore is two and a half inches in diameter. A steel band three-quarters of an inch in thickness encircles it; and this band is reinforced by a tube of rawhide two and a half inches thick. The rawhide is durable and as hard as the steel itself and is well shrunk on to the inner tube. Over this layer of rawhide is a jacket of wire wound to a thickness of three-eighths of an inch."—Exchange.

FLEXIBLE STONE.

Flexible stone, though by no means a novelty, is a material with which every one is not acquainted. Most museums containing geological specimens have a piece of elastic or flexible sandstone in the collection, but looking at it through a glass case is not an altogether satisfying process. The peculiarity of the stone is that, while it looks just like an ordinary piece of sandstone it is capable of being bent in the hand with considerable less force than is required to bend a piece of wet leather of equal thickness. When examined with a lens, by reflected light, the particles of which it is built up are seen to be movable individually by using a needle point. When a thin slice of the stone is looked at under a lens, by transmitted light, the fragments are seen to be locked together, like the parts of a section puzzle toy, fixed, but only loosely. Of course, there is no means of slipping out the various sections of the stone, as the interlocking is not only in one plane but in every direction. The simplest way of explaining how this stone was formed is to say that the grains of sand were once firmly cemented together by another material, which has been partly dissolved, leaving countless natural ball and socket joints of jagged shape behind.—Ex.

TALKS WITH RETAILERS.

"So you are representing HARDWARE?" said W. C. McFarland of Parliament street. "Well, it is a good paper and I manage to get a peep at it once a week. Yes, I am doing a fairly good trade just now. Things seem to be in a bad way in the United States. We have had some travelers visit us from over there, but Canadian manufacturers are cutting them out of many lines that they formerly carried. There used to be one thing that went against the Canadian manufacturer in small goods, such as screws, tacks, small shelf goods, etc. The Americans used to put their goods up so much more neatly, while the Canadian was satisfied if they were simply in a piece of brown paper and labelled, instead of a neat package or cardboard box. They are, however, falling in line, and we now receive goods of this kind much more neatly packed than we used to."

"Small sized second-hand heaters are in great demand," said T. Moses, Toronto. "Larger sized ones are not going out so well, and customers seem to be after the second-hand article. There is not much demand for the new ones. I could have sold many more small heaters lately had I had them. Stove trade has picked up considerably within the last few days in the city, and the little cold weather that we had, has been the means of bringing a great many of the laggard buyers up to time."

HAVE PRICES TOUCHED BOTTOM?

A not uncommon belief is entertained that the prices now quoted for iron and steel commodities are lower than any that have obtained in the history of the trade. So far as the United States, Germany, and one or two other continental countries are concerned, this is no doubt the case. The most remarkable and disquieting feature of the movement of the trade is the nearness with which the prices quoted for the leading descriptions of iron and steel in other countries have approximated to the lower prices previously quoted in our own. This movement has not been accompanied by any corresponding fall in the prices quoted for English iron and steel. On the contrary the prices now current are higher for most varieties than those that prevailed in the period of 1884-87, when the Continental works were a good deal ahead of us in the level of prices. The fact is that American, German and Luxembourg makers of pig iron have succeeded since then in obtaining much greater reductions of working costs than we have been able to do in England. This they have accomplished in various ways—by economy of fuel, starting from a point that England had reached a good many years ago; by economy of labor, in securing a much larger output for a given plant; by reduced costs for raw materials, in consequence of bringing other resources into operation, and by giving increased attention to the whole question of economical production. These considerations have enabled the iron makers of Luxembourg and of some works in Westphalia to both produce and sell pig iron more cheaply than we now do in England generally, while in the United States, as we have pointed out in a previous article in the Review, the prices now quoted for pig iron at the furnaces in Alabama, Tennessee and Virginia, compare not unfavorably with the quotations at home for iron of corresponding quality.

It is hardly likely that iron and steel prices in Great Britain can be materially reduced, even if the necessity were much greater than it is, unless and until the prices of raw material are brought to a lower figure, and wages are restored to something more like their old level.—London Iron and Coal Trades Review.

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BUSINESS CHANCE.

Advertisements inserted under this heading two cents per word each insertion.

STORES and Offices to rent in The Thomson Bros. Block, Calgary, a three story stone building, plate glass front, heated with hot water, lavatory, closets, etc., most central location in the city, ready for occupation in about a month. Address, THOMSON BROS., Calgary.

SITUATION WANTED.

EXPERIENCED Hardware Clerk wants situation in good live town. References furnished from late employer. Address, J. E. WESTCOTT, 298 Wolfe St., London, Ont

Clarkson & Cross

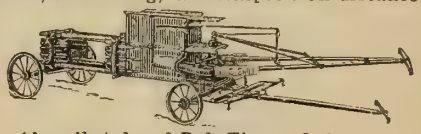
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DEDERICK'S PATENT STEEL SHELL HAY PRESSES.

Made of Steel—lighter, stronger, cheaper, more power, everlasting, and competition distanced



Also all styles of Bale Ties made from the Best Steel Wire.

Manufactured by BOYD & CO., Huntingdon, Q.

CENTRAL Business College

TORONTO AND STRATFORD.

Canada's Greatest Business Schools.

FORTY DOLLARS invested in a first-class business education will produce highly satisfactory results.

Others have found it a paying investment Why don't you try it?

Write for catalogues.

SHAW & ELLIOTT, Principals.



C. C. HARRIS

Manufacturer of Solders and Antimonial Alloys.

Cor. Wickson Ave. and Yonge St., Toronto.

E.O.W.

ENGLISH PIG IRON PRODUCTION.

The British Iron Trade Association has published its annual report showing the production of pig iron in the United Kingdom in the first half of 1893. The amount produced during the first six months was 3,665,537 tons, against 2,790,918 tons for the corresponding period of 1892, or an increase of 874,619 tons. It is pointed out, however, that the decrease in production of the first six months of 1892 over the same period of 1891 was 921,000 tons, due in a large measure to the Durham strike of 1892, and that consequently the increase noted above is more apparent than real.

Since the end of June 96 furnaces have been blown out in Great Britain, while only six have been started, leaving a net decrease in the number of furnaces in blast of 90, or representing a falling off in production of 1,530,000 tons annually.

The stocks on June 30, 1893, in producers' hands and in warrant stores amounted to 786,057 tons, or an increase of 85,607 tons over the first six months of 1892. The principal holders were Scotland, 336,383 tons, and Cleveland, 192,786 tons. It is stated that the present stocks of pig iron, taken as a whole, would not be equal to more than a month's capacity of the furnaces generally, and this fact is alluded to as one of the few satisfactory features of the present situation.

CONTINUOUS ADVERTISING.

Here is one of Fowlers' latest, being a chapter from a copyrighted series now running in some of the more prominent papers:

The Creator is the Deity of continuity. He did not build worlds on Monday and stop work on Tuesday. He did not take a holiday Thursday and work the harder Friday to make up lost time. He stopped only when there was nothing to do. In each period was done the proportionate work of its time, perfect in itself, successful because it harmonized with the work before and afterwards.

No man can raise live stock by feeding it one day and starving it the next.

Jagged intellect must be the education of the boy who skips his mathematical lessons every other month.

Perhaps the automatic bookkeeper can finish his entries, close his ledger, never to re-open the past, except for reference. Desk-sitting bookkeepers are not men of business.

The business man who pulls down the top of his roller-desk with everything done and nothing to be continued, has no business to be in business, because his so-called business isn't business.

"To be continued," is the motto of trade.

"Never to be finished" is a rule of progressive business.

Heaven is the home of the man who stops.

This world is made for workers, that there may not be shirkers in the "Continuous By and By."

"Always at it," is the trade mark of business.

The man who is in stock to-day and out of stock to-morrow, is apt to be out of business the next day.

Advertising has two distinct values. First, the initial presentation of something, accompanied by argument. Second, the continuation of that argument.

Mighty few people anywhere answer an advertisement the first time they see it, unless it be of a special bargain, or of some illegitimate article of trade.

One can advertise a cheap chromo, and secure a value from the very first advertisement. These are advertisements of the "sufficient-unto-the-day" and "insufficient-to morrow" class.

The good advertisement of good business has more value collectively than individually; that is, its value consists, not in one appearance of itself, but in that appearance in continuation of former appearance, and in the certainty of subsequent appearances.

Allow me to give a personal reminiscence. I don't deal in advertising, yet publicity is my profession. I therefore should know something about it. I ought not to be as much influenced by advertising as the man who has never studied it, for familiarity with anything sometimes breeds inappreciation. Before me for several years was the advertisement of an insurance company. I did not know anyone connected with it. When I realized the necessity of insurance, I put on my hat, went directly to the office of that insurance company, and took out a policy. The only reason I went to that particular company was because the advertisement of that company had been before me for years. I did not appreciate either the advertisement or the company, although I had seen the advertisement a thousand times, until the time came when I wanted insurance, and then I connected the advertisement of years with the necessities of my particular case, and the company got some of my money.

The advertisement which appears today, and not to-morrow, is liable to make people forget that it appeared at all.

Most folk casually read advertisements. If the next day, or the next week, they think of something they want, they may remember seeing an advertisement of it in the paper. The paper is gone. They turn to a subsequent issue of the same paper, and do not find the advertisement, consequently they either do not buy the goods then, or they buy of somebody who is advertising the same thing.

While some advertisers make every-other-day and every-other-week advertising pay, the local dealer has no right to take his advertising out of the paper so long as he advertises at all. He may cut the size a little, although the shrewd advertiser seldom does.

In the same place, occupying the same amount of space, in the same paper, month after month and year after year, not only brings new trade but converts that new trade into permanent trade, creating business of prosperity to posterity.

While there are exceptions, the majority of the men who are succeeding to-day are the men who continuously advertise.

There is the weakest kind of original logic in the argument that a man can go successfully against the natural law of success, because he knows of isolated exceptions where men thinking his way have succeeded.

It is safer to follow the law of general averages than to be guided by the rule of exceptions.

MIXING CEMENT IN COLD WEATHER

As a substitute for the use of salt water in mixing cement or mortar during cold weather, the employment of the ordinary soda of commerce has for some time successfully been resorted to in France. The soda particularly adapted to this purpose is stated to be what is known as the anhydrous carbonate, obtained by the Solway process, which costs less in France than the hydrated carbonate. The practice, as described in an exchange, is to dissolve the substance in a kettle in the proportion of one pound of soda to 24 quarts of water, at a temperature of about 85 deg. F., this solution being mixed with an equal volume of water at the temperature of the air to give the water which is used by the masons; the mortar made in this way requires more of the solution than in using water alone, about one-quarter more being considered the proper increase, and a kettle holding 10 1-2 quarts has been found sufficient to serve ten masons. It is reported that with this solution mortar will harden at a temperature of about 9 degrees below freezing, with at least twice the rate of a similar mortar without soda at a temperature 14 degrees above the freezing point. It is stated, however, that while the surface hardens more quickly, the interior remains moist longer, on which account the soda is objectionable; it is also found to cause an efflorescence of white on the surface of the masonry, lasting for months.—Metal Worker.

A reputation for truthfulness is indispensable to permanent and satisfying success.

H. D. SIMMONS & CO.,

Manufacturers' Agents,

85 YORK STREET, TORONTO.

Representing Leading Manufacturers in Canada, England, Germany and United States.

Cutlery and Plated Ware, Brass Goods, Grates and Tiles, Engineers' Tools, Painters' and Artists' Brushes, Contractors' Supplies, Etc., Etc.

SPARK GUARDS.

Brass and Blued, Open or Close Top. Standard sizes in stock.
Special sizes made to order.

BARREL CINDER SIFTERS.
FULL LINE IN STOCK.

Manufactured by **The B. GREENING WIRE CO., Ltd.**

Write for Catalogue. HAMILTON, ONT.



PAINTERS

Will find the cheapest Paint Brushes are those having our . . .

Flexible Bridles

Why? Because the bridle can be taken off and replaced in a moment. The paint circulates and the stump never hardens. You can wear the brush down shorter, therefore it will last much longer.

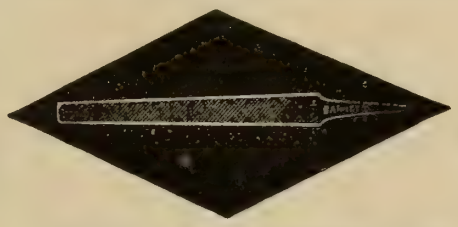
Ask your dealer for them. Made in round, oval, and flat. All sizes and qualities.

CHAS. BOECKH & SONS

Brush Manufacturers

TORONTO - - ONTARIO

BLACK DIAMOND



FILE WORKS,

21 Richmond St., Philadelphia, Pa.

G. & H. BARNETT,

MANUFACTURERS OF

Mill Sawfiles with two Round Edges for Band Saws.
Double Ended Taper Sawfiles.
Machine Band Sawfiles.
Great American Cross-cut Sawfiles.
Chisel Pointed Sawfiles. **Gulletting Sawfiles.**
Climax Sawfiles. — AND — **Lightning Sawfiles.**

EVERY OTHER DESCRIPTION OF SAW FILES.

Hard Wear Paper FOR Hardware Men

Manillas, Brown Wrapping,
Hardware Manilla . . .
Leather Manilla, Etc., Etc.

PAPER

We can supply Paper of all Grades, in any size or weight, at the best prices and most favorable terms. Write us for samples and quotations.

TORONTO BRANCH : 29 Front St. West.
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THE E. B. EDDY CO., Hull, Canada

TESTING BIG GUNS.

Guns having been made, a test of their efficiency is next in order. These tests, as well as the tests of armor plating, projectiles, gunpowders, etc., take place at the "proving grounds" at Annapolis, Md., and at Indian Head, on the Potomac, some 30 miles or so below Washington, and to the latter point one wet drizzly morning, it was my privilege to accompany the chief of ordnance. The rain was pouring down in sheets as our boat slowed up and made fast to the wooden pier at the proving grounds and our little party stepped ashore. A bomb proof to our right; in our front a high bluff, tree crowned, down the scarred sides of which the yellow soil, liquified by the pouring rain, is sluggishly creeping to the level space below, where stand the monster guns. Mud, mud, mud, oozing up between the ties of the railway track, where the great crane is moved from place to place, splashing up on us at every step, and covering everything within its reach with a sticky, custard-like plaster.

Negro laborers in mud-bespattered clothes, clothes of all conceivable patterns and cut, and a few sailor men, seamen (gunners, probably) stand about in groups, while two or three young officers, their clothing as muddy and soiled as any in the little crowd, advance to meet us. No time is lost in preparation for the test. To one side, opposite the guns, a large nickle-steel plate, 14 inches thick, backed and secured by heavy pieces of timber, behind which the earth is thrown up in a strong embankment, is to be the target for the huge 10 inch rifle that pushes its long tube and frowning muzzle out over the cast-iron platforms next to its greater mate, the 12-inch gun.

A hasty inspection is made of the plate, and, moving back to the battery, we watch the loading of the great piece of ordnance, and note the ease with which the hydraulic rammer pushes the heavy steel projectile into the bore of the gun. Two sturdy negroes turn the crank of the breech mechanism, shutting the breech firmly; hastily we cram little bunches of tow into our ears, for the concussion of the air caused by the discharge of these tremendous cannons does not cause a pleasant sensation to the delicate organs of hearing. The young officer in charge makes his last inspection, glancing over the sights, turning a wheel here, adjusting a screw there, and we watch the proceedings with ever-growing interest. We are "making history" in a small way this morning, for in the coming contest between projectile and armor we are to witness the testing of the first plate of the armor of the first modern battleship to be constructed in the United States. "Seek shelter!" is the cry, and all hands scatter to the cover of the bomb proofs, only the ensign in charge of the firing remaining outside, crouching down, lanyard in hand, under the mount of the eight-inch rifle.

The chief beckoned me to his side, and together we stand in the doorway of the bomb proof, where I have a full view of the proceedings. An easy pull on the lanyard, a lightning-like flash, a deafening roar, a cloud of gunpowder smoke, and the gun recoils gently back, sliding as easily and smoothly on the hydraulic mount as a child's boat on the waters of a duck pond. Great splashes of mud fall down on the platform in a shower as if from the sky. There is a moment's pause, and then all hasten to examine the target. The projectile has struck full in the center, leaving a perfect impression of its sharpened point in the hard steel several inches deep, and glowing hot as a furnace from the terrific force of the impact, but not penetrating through it or cracking it in the slightest degree.—Exchange.

THE CUT IN STEEL RAILS.

It is not at all singular that a reduction of $22 per ton and under has been made in the price of steel rails. The singular thing is that the combination of manufacturers was so long able to hold nominally the price at $30, and then at $29, with the price of pig iron steadily going down and the process and cost of iron mining in a fair way to be revolutionized. At last a time came when it was more profitable for an exceptionally large and well equipped concern to cut the prices and sell rails than to hold up the figures and go without business, and a cut was made that cannot fail to disturb the equanimity of manufacturers whose mills are smaller and not so well supplied with modern machinery. It is intimated that some of them will probably be forced out of business. This may prove to be the case, but it is not at all certain that they may not go on making a sufficient profit, though a much smaller one than they have been receiving. If the cut in prices should greatly increase the demand for rails these smaller mill-owners, as well as the great Carnegie concern, may find it ultimately profitable.

The manufacturers of steel rails are few in number, and, like the manufacturers of steel beams, have long been able to maintain prices by virtue of combination. While pig iron was going down and reductions of wages were enforced, the price of rails was held from February, 1891, to December, 1892, at the uniform price of $30. There is nothing to show that when that price was fixed it was not fairly remunerative; nay, liberally remunerative. The additional profits subsequently derived from lower prices for both labor and material were secured by the manufacturers.

Mr. Swank's report mentioned two periods of exceptionally low prices in the iron and steel industries, one in 1884-5 and the other between 1891 and 1893. In the former of these periods, with grey forge pig, Lake ore, selling at Pittsburg at $14, steel rails were selling at Pennsylvania mills at $26. The difference, it will be observed, was only $12. In the period of lowest prices between 1891 and 1893 grey forge pig, Lake ore, sold at Pittsburg for $12.25, and steel rails brought $29; the difference had been raised from $12 to $16 75. We compare the prices of Bessemer rails with grey forge pig instead of Bessemer pig, because Mr. Swank tabulates the former in his report for 1886, and does not tabulate the latter till some of his later reports.

The year 1886 was one of phenomenal prosperity for the iron and steel interests, as Mr. Swank testifies. The difference in price between pig iron and rails was liberal, but it was pretty uniform. The price of rails rose from $34.50 in the first half of the year to $36 at its close, and grey forge pig at Pittsburg rose from $16.50 to $19. The first quarter of 1887 carried the price of rails up to $39 50 and that of pig to $20.50. During these fifteen months the difference between pig and rails was generally a little over $18; the variation was from $17.50 to $19. This was in a period of exceptional prosperity, and the advancing prices were divided between the furnaces and the rolling mills.

When the price of rails was fixed at $30 in February, 1891, gray forge pig was selling in Pittsburg at $14.50, the difference, $15.50, being considerably greater both absolutely and relatively to the price of pig iron than the difference in the low price period of 1884 85. From this time on the price of pig iron, both gray forge and Bessemer, steadily declined; the price of rails however, was held fast at $30 for two years, it dropped a dollar in the first half of this year; then for some months there was a shading of prices, while $29 was ostensibly maintained, and finally came the Carnegie cut. In consequence of the decline of pig the difference between gray forge pig, Lake ore, at Pittsburg gradually increased from $15.50 to $16.50 in the latter part of 1891, and it was over $17 during nearly the whole of 1892. The drop of a dollar in the price of rails in the early part of this year reduced the difference to $16.75, but presently pig iron dropped more, and at the beginning of this month gray forge was selling in Pittsburg for $11 to $11.50; from the mean of those figures to the nominal price of rails was an interval of $17.75; the price of rails was about 150 per cent. above that of the variety of pig iron named. The difference was nearly as great absolutely, and greater as a matter of percentage than the difference during the exceptionally prosperous year 1886.

The cost of producing iron ore has lately been so much reduced by the discovery of enormously rich superficial deposits and by the application of the steam shovel that further reductions in the price of pig iron are inevitable, and sooner or later the price of rails will have to follow.—N. Y. Journal of Commerce.

SOLDER.

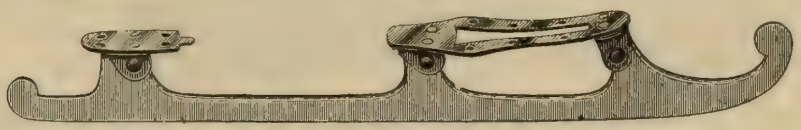
Half-and-Half Solder.
Plumber's Solder.
Refined Metal Solder.
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We guarantee all OUR GOODS! If found unsatisfactory can be returned at our expense.

TORONTO SMELTING and REFINING WORKS

92 and 94 Queen St. E., TORONTO.

Boyd's Skeleton Skates



Expert Racer, Crystal Racer, Junior Crystal, Hockey Club, Eclipse, Victoria Club and Dominion.

Best line of Skeleton Skates made. Send for Catalogue of Skates, Hockey Sticks, Snowshoes and Winter Sporting Goods. Ask for discount sheet.

T. W. BOYD & SON, 1683 Notre Dame St., **MONTREAL**

MIXED PAINTS



TRADE MARK

The Unicorn Brand

Has now the leading reputation for purity and durability in Canada.

They are sold all over the Dominion.

Manufactured only by

A. RAMSAY & SON, MONTREAL

ESTABLISHED 1842.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C. I. F." THREE RIVERS

PLANTS AT

Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

FRANCIS HYDE & CO.

Builders' Supplies

We make a specialty of **Fire Clay Sewerage Pipes,** and all kinds of Fire Clay goods of best quality.

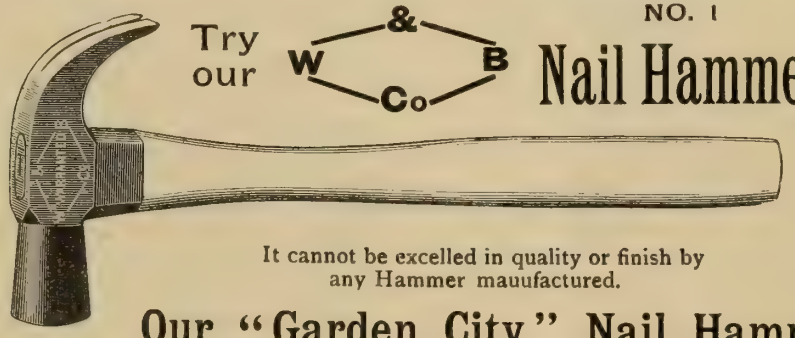
Best brands of London Portland Cement. Agents for Glenboig Union Fire Clay Co., etc.

STORES AND YARDS:

King, Queen and Wellington Sts., Montreal

THE WHITMAN & BARNES MFG. CO.

Canadian Branch: St. Catharines, Ont.



Try our **Nail Hammer**

It cannot be excelled in quality or finish by any Hammer mauufactured.

Our "Garden City" Nail Hammer

GET OUR PRICES AND TRY OUR GOODS

Is the best and cheapest "Solid Cast Steel" Hammer on the market. . . .

We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .



No. 161, NAPKIN RING.

New Goods

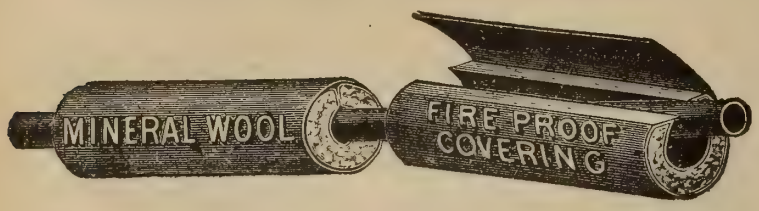
In every line of our manufacture, specially suitable for Christmas Trade

See our travellers, or write us for Catalogue, before placing your orders for Silverware.

TORONTO SILVER PLATE CO. MANUF'RS .. OF .. SILVER and ELECTRO PLATE.

TORONTO, CANADA.

E. G. GOODERHAM, Manager. JNO. C. COPP, Sec.-Treas



Fuel is a Large Item in Your Expense Account

CUT IT DOWN ONE-THIRD

By covering your Steam Pipes and Boilers with **SECTIONAL MINERAL WOOL COVERING**, preventing condensation and loss of steam.

Others have done it, why not you? Full line ASBESTOS GOODS on hand

Canadian Mineral Wool Co., Ltd.,

111 BAY STREET, TORONTO.

GEO. A COWAN, Montreal Agent, 204 St. James St. GEO. R. THOMPSON & CO., Manitoba Agents, Winnipeg.

BUSINESS CHANGES.

DIFFICULTIES, COMPROMISES, ASSIGNMENTS.

A. M. Johnson, general merchant, Port Hastings, N.B., has assigned.

Leonard & Crawford, general merchants, Red Rapids, N.B., have assigned.

John Byres, general merchant, South Monoghan, has assigned to John Ferguson, Toronto.

Henry Cross, general merchant, Maple Grove, Que., has compromised at 20c. on the dollar cash.

The stock of F. Spofford, the insolvent Stouffville general merchant, is advertised for sale by the sheriff on the 25th inst. His liabilities are estimated at $30,000.

J. H. Reid, furniture, London, has assigned to J. M. Cliff.

Wellington Parker, painter, Campobello, N. B., has assigned.

Planey & Co. and J. B. McKim, both loggers of Victoria, B.C., have assigned.

Quintard & Packard, electrical supplies, Victoria, B. C., has assigned to C. H. Stickles.

Rochon & Frere, contractors, Montreal, are offering to compromise at 35c. on the dollar.

Joseph Brassard, general merchant, Tremblay, Que., has compromised at 40c. on the dollar, cash.

Thomas Halloway & Son, blockmakers, Halifax, have assigned furniture and effects to T. R. Halloway and W. Halloway.

M. J. Courtney, plumber of Queen St., Toronto, was served with a writ, and in consequence assigned to W. A. Campbell. The estate is only about $1000.

F. F. Ferland & Co., contractors, Montreal, have assigned at the demand of Pierre Catelli, with liabilities of about $15,000. The principal creditors are Joseph Brosseau, $1,500; Thos. F. G. Foisy, $2,575; E. P. Ferland, $2,161; Montreal Loan and Mortgage Co., $5,000.

Henry Barber has been appointed permanent liquidator of the Toronto Wood and Shingle Co. The estate is in a bad way. The latest estimate of the assets is $110,000, while the liabilities are $150,000. The assets consist of stock in hand, horses, wagons, office furniture, timber limits, etc. The Bank of Toronto alone has a claim of $50,000 against the company on guarantees for money advanced. The writ was issued for that amount.

A St. John, N B., despatch says that Troop & Son, the insolvent vessel-owners of that place, still decline to make public the state of their affairs. They have trusteed their property for the protection of all creditors alike. Their liabilities will run over $150,000. J. W. Parker & Co., their New York representatives, are offering to compromise with liabilities of some $70,000. The Bank of New Brunswick and the Bank of Montreal held considerable of Troop & Son's paper. The firm's most valuable asset is their fleet, which comprises three ships, fifteen barques any two schooners. Two of their large vessels are iron ships.

William L. Bell, coal and wood dealer, 120 Brock avenue and 139 Dundas street, has assigned to W. A. Campbell. The business has always been a large and prosperous one, and was formerly carried on by Ald. Wm. Bell. The immediate cause of the failure was the crash of the Toronto Wood and Shingle Co., with whom William L. Bell had some dealings in wood. The liabilities are about $16,000 and the assets are estimated at $15,000 to $16,000.

The creditors of Raymond Walker met at Assignee Campbell's office Tuesday. As Mr. Walker was not in a position to make an offer, the assignee was directed to sell the stock at Sucklings' next Tuesday afternoon in lots. The statement showed liabilities of $29,477, and assets of $32,450. The liens held on the goods sold on the instalment plan form a large portion of the assets, and will be looked after by Mr. Campbell.

PARTNERSHIPS FORMED AND DISSOLVED.

N. Rochon & Co., painters, Montreal, have dissolved.

Duquette & Beaulien, painters, Montreal, have assigned.

Morais & Mahen, blacksmiths, Montreal have dissolved.

Pierre, Louis and Noel Beauregard have been registered proprietors of Beauregard Freres, patent fence, Ely Township, Que.

Dame L. Vannier, wife of S. Girard, St. Isidore, Que., has been registered proprietress of the firm of Girard & Co., tinsmiths.

Keiffer Bros., manufacturers of boot and shoe sewing machines, Montreal, have dissolved. V. F. Keiffer is registered as sole proprietor.

CHANGES.

P. Vallee, tinware, Melbourne, Que., has been succeeded by A. Laudry.

J. W. Tait, blacksmith, Banff, N. W. T., has been succeeded by James Hunt.

J. S. Corbin, manufacturer of desk harrows, Prescott, Ont., has sold out to the Massey-Harris Co. of Toronto, and is liquidating.

Jackson & Grierson, hotel, Canmore, have sold out to Frank Kelly,

A. McPherson, general merchant, Cherrywood, has been succeeded by John Greer.

SALES MADE AND PENDING.

The real estate of James Martin & Co., general merchants, Thurso, Que., is advertised for sale on the 30th inst.

The stock of P. Hetu, plumber, Montreal, is advertised for sale by auction Nov. 30.

The stock, etc., of Levi Carley, boat builder, Barrie, is to be sold by auction Nov. 28.

FIRES.

J. Irwin, blacksmith, and J. Tulley, general merchant, Springvale, have been burned out.

Thorne & Cassaboom, fish, Digby, N.S., have been burned out.

J. S. Henderson, boots and shoes, Parrsboro', N.S., have been burned out.

McCarthy & Co., boots and shoes, and James Williamson, fruit and confectionery, Regina, Assa., have both been burned out.

DEATHS.

J. Gourlay, of Gourlay & Rankin, general merchants, Maple Creek, Man., is dead.

Henry S. Nothrop of the wholesale drug firm of Northrop & Lyman, Toronto, is dead.

Robert Kingan, for many years in the hardware business at Peterboro, died Sunday last. He was aged 78.

THE OAKVILLE BASKET CO.,



Manufacturers of

1, 2, 3 Bushel

Grain

AND

Root

BASKETS

THE OAKVILLE BASKET CO.

"Favorite Queen"

Direct Draft Surface Burner for



COAL OR COKE

. . A . .

Powerful Heater

FOR

Stores, Hotels, School-Rooms, Factories, Etc.

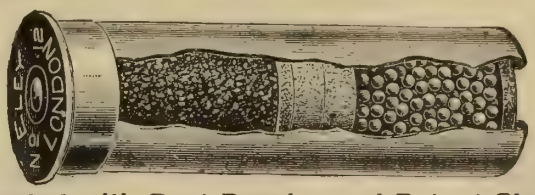
A powerful heater giving great results from small consumption of fuel.

Three sizes, 14, 17, and 20 inch fire pots.

The Jas. Smart Mfg. Co., Ltd.

BROCKVILLE, ONT.

. . ELEY'S . .
CANADIAN CARTRIDGE



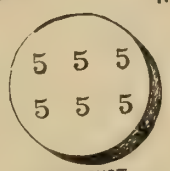
Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING

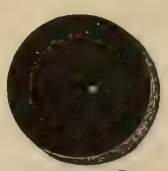

BLACK EDGE


THICK FELT


PINK EDGE



OVERSHOT


GREASE-PROOF

Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. Wholesale Only.

ELEY BROS., LTD.

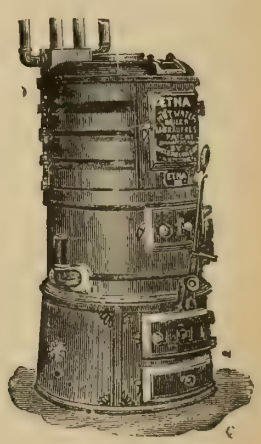
254 Gray's Inn Road, LONDON, ENG.

The "ETNA"

Hot Water Heater . .

— IS —

PERFECT



And we are prepared to

GUARANTEE

Its working satisfaction in every particular.

Write for Price List and Testimonials.

Wm. CLENDINNENG & Son, Montreal, Que.

TELEPHONE 1780.

J. H. FARR & CO. MANF'RS OF **FINE VARNISHES**

Shellacs, Japans, Asphaltums, Oil Soap, Roofing and Paving Pitch, Tarred Felt and Building Paper.

Importers and Dealers in Bronze Powders, Gold and Metal Leaf.

8 to 16 MORSE STREET, - TORONTO, ONT.

THOS. FIRTH & SONS, Ld.

Best Crucible Cast Steel

STEEL, PEECH & TOZER, Ld.

Bessemer Steel,

Open Hearth Steel.

Agents,

James Hutton & Co.

MONTREAL.



Ontario Nut Works, Paris

BROWN & CO.

Manufacturers of

All sizes of Hot Pressed Nuts, Square and Hexagon



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	21, 22
Straits "	20½, 21

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
M.L.S. equal to Bradley		
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 00	4 25
I.X., "	5 00	5 25
I.X.X., "	6 00	6 25
I.XXX., "	7 00	7 25
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be purchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

Cookley Grade—	Per lb.
X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6½	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
5/16 "	2 35
¼ " and thicker	2 25

Sheet Iron.

1 to 20 gauge	2¾, 3
22 to 24 "	2¼, 2½
26 "	2¾, 2¾
28 "	2½, 3

Canada Plates.

All dull	2 65
½ polished	2 75
All Bright	2 90

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅝ 5
" 5-16 " "	4⅛ 4⅜
" ⅜ " "	4½ 4½
" 7-16 " "	4 4¼
" ½ " "	3⅞ 4
" 5/8 " "	3½ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 11½ 0 12½
Lake Superior	0 12¼ 0 13⅜

Bolt or Bar.

Cut lengths, round, ½ to ¾ in	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 18 0 19
" 35 to 45 " " "	0 16 0 17
" 50 lb and above per lb	0 15 0 15½

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft	0 21 0 23

Zinc Spelte .

Foreign, per lb	0 04⅜ 0 05
Domestic "	0 04⅛ 0 04¾

Zinc Sheet.

5 cwt casks	0 05½ 0 05⅝
Part casks	0 05¾ 0 05¾

Lead.

Imported Pig, per lb	0 03 0 03½
Domestic "	0 03
Bar, 1 pound	0 04½
Sheets, 2½ lbs, sq. ft, by roll	0 04½ 0 04½
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04½ 0 04½

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)	0 15	0 16
Standard	0 14	0 15
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 12½
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do. "	4 75
No. 2 Do. "	4 50
No. 3 Do. "	4 25

Prepared Paints.

(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1 00 1 20
2nd qualities "	0 90 1 00
Barn (in bbls)	0 80 0 90

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red, (best) " "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " } " "	1 25 1 90
Canadian " }	
Paris Green, per lb	0 13½ 0 15
Burnt Sienna, pure, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure, 8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra "	0 90
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 85
No. 1 Carriage "	1 30
Gold Size Japan "	1 00 1 20
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40
White Shellac	2 25

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 44 0 46

Castor Oil.

Best, per lb	0 07⅞ 0 08

Cod Oil.

Cod Oil, per gal.	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue—F. LePage's, dis. 20 to 25 per ct. off list; Munn's, dis. 25 to 30 per cent. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer.
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Canadian 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin. dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardin Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per cwt 0 60 0 65
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 8 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... .... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Faucets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.25	.....	1.75	
26 to 40	1.40	2.40	2.00	
41 to 56		2.70		4 50
57 to 60		3.10		5.00
61 to 70		3.40		5.50
71 to 80		3.70		6.25
81 to 85		4.10		7.00
86 to 90		4.50		8.00
91 to 95				9.00
96 to 100				10.00

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0 0
Enamelled " 0 55 1 00

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb . 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross..... 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier per doz 0 50 1

Wrought Iron.

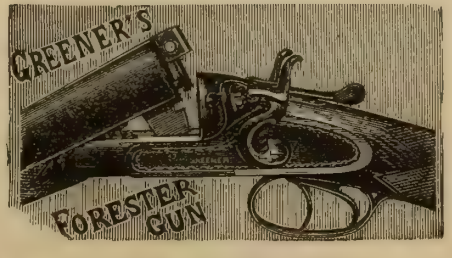
Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

NEW ARRIVALS

30 Cases CUTLERY AND GUNS

ALL NEW GOODS.

Finest Finish. Best Value.



NEW ARRIVALS

20 Casks Cattle and Trace CHAINS

10 Tons Coil Chain.

Five Cars Window Glass.

Bowman, Kennedy & Co., London, Ont

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 50 to 55 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

F.O.B. Toronto & Hamilton $3 80
Snow, " ... 3 90
F.O.B. Montreal 15c. less, and London 5c. more than above.

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., per doz. 85 to 3 00
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   - Basis—50 to 60 dy..... 2 30
   - 40dy..... 2 35
   - 30 dy..... 2 40
   - 20, 16 & 12 dy..... 2 45
   - 10 dy..... 2 50
   - 8 & 9 dy..... 2 55
   - 6 & 7 dy..... 2 70
2. American Pattern Only
   - from 4 to 5 dy 2 90
   - 3 dy. (lath)..... 3 30
3. Canada Pattern Only
   - from 4 to 5 dy 2 80
   - 3 dy. (lath)..... 3 20
   - 3 dy. A.P. Fine 3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 60 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R. Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 55 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9	10 10½
¼, 5-16, ⅜ in.....	9½	10¾ 11
Cotton, per lb.....	18	20
New Zealand.....	8½	9
Russia Deep Sea, per lb..	12¾	13½
Jute ..... " ...	06¾	07½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D, dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P,, 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 special brands net price.

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Sapolio

In ½ or ¼ gross boxes, per grs. 11 30

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net list.
Canadian 10 to 15 per cent dis.

Tinware.

Stamped, dis. Assn list, 70, and 12½ per cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application.
Pieced, " " "

Transom Lifters

Payson's, $2.50 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ p.c. to 35 p.c
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9 00

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4¼ 4½
" 4 " 4 & 6 " }
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR HOLLOW WARE

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS

Manufacturers of the

Finest Quality Electro-Plated Ware.

And Sole Manufacturers of the Celebrated

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.

Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.

FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,

CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co

MONTREAL.

NONE GENUINE WITHOUT THIS LABEL



BLACKSMITHS' TOOLS.



⊛⊛

Horseshoe Vises.

Price, No. 1, - $4.00
" No. 2, - 7.50

Will save their cost in a week's sharpening. . . . .

⊛⊛

A. B. JARDINE & Co.

HESPELER, ONT.

Do we make any other Skates besides our

GENUINE ACMES?

Well, We Rather Think So!

What About our Hockey? The most elegant and suitable skate for the purpose ever made.

What About our Racers? Made with wood tops and extra light runners—the only way in which lightness, combined with perfect rigidity, can be secured. Special system of strapping. The leading racers use wood-top skates. Why? Because they know from experience they are the best.

What About our Skeletons? For Rink use the most in demand. Welded iron and steel blades. Plain or nickel-plated.

Why have we secured first honors at Philadelphia, 1876—Paris, 1878—London, 1886—and now Medal and Diploma World's Columbian Exposition, 1893? Because of the superiority of goods exhibited, which are the same as those we are shipping our customers daily.

PRICE?—Ask your jobber about that, and you will find they are quite as cheap as the inferior makes.

THE **Starr Manufacturing Co., Ltd.**

WORKS—Dartmouth. P. O. ADDRESS—Halifax, N. S.



OXFORD "OXFORD" OXFORD

. . LINES . .

Our Leaders for 1893--are the

Countess of Oxford

. . AND . .

Art Countess

and the BASE BURNERS

DUCHESS OF OXFORD

. and .

KITCHEN WITCH RANGES

Put these Stoves on Your Floor and Command the Trade. . . . .

The Gurney Foundry Co., Ltd., Toronto

The Gurney-Massey Co., Ltd., Montreal

Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St, Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 x 4 Barb
Plain Twist and
Strip Fencing

And Staples for same.

Write for Prices and Discounts.

ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

The "Pittsburgh" Lamp

: : GETS : :

THE PREFERENCE

Because

It is A 1

It gives the best light

It saves trouble in cleaning

It suits all parties



ALL GOOD DEALERS KEEP THEM

Write for Primer

Gowans, Kent & Co.,

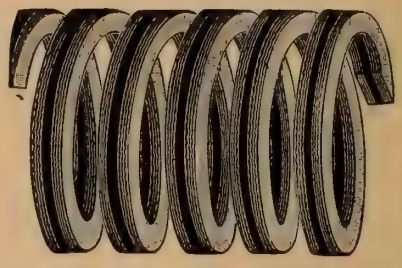
Sole Agents for Canada. **TORONTO and WINNIPEG**

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., Toronto.

"The Seamless Flanged Drip Pan"



Improved Rolled on Edge.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife to cook or lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The improved rolled on edge making it easy to handle.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

Write for Discount.

SIZES.....	8 x 10	8 x 14	10 x 15	12 x 17
Per Doz.....	$1.91	$2.33	$3.20	$3.73

THOS. DAVIDSON & CO., Montreal, Can.

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, DECEMBER 2, 1893. No. 48.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

MAGNOLIA METAL CO.,

London Office: 75 Queen Victoria St.
Chicago Office: Traders Building.
Montreal Office: H. McLaren & Co., Agents

Owners and Sole Manufacturers,
74 Cortland Street, NEW YORK.

LOOKING FORWARD

Having practically finished our work for 1893 we are now all actively employed with preparations for **1894**

WHERE it is possible to make improvements in any of the departments of our business this is now being accomplished. We will add several new lines for next season, and are also paying special attention to our sample cards and advertising matter in view of pushing with greater energy our well known

SPECIALTIES:

Adamant Floor Paint,
Green Seal Liquid Colors,
Green Seal Lead,
Carriage Gloss Paints,
English Ivy Green,
Blundell's Enamel,
Mander Bros. Varnish, Etc.

Looking Backward

WE have every reason to feel satisfied and proud of the success we have attained in our business, thus far. Our progress has been rapid and we believe is due to the good quality of the goods we supply. Our customers have come to know that our goods are at all times reliable and just what is represented. It will be our constant aim to always deserve and increase our reputation in this direction. . . . . .

Walter H. Cottingham & Co.

Fine Paints and Varnishes. MONTREAL

TO THE TRADE.

BOYS'
GENTLEMEN'S
—AND—
MECHANICS'

From $5.00 to $7.50
$10.00 to 15.00
$20.00 to 25.00

TOOL BOXES.

WRITE FOR PRICE LIST AND DISCOUNTS.

RICE LEWIS & SON, Ltd.

General Hardware Merchants, TORONTO.

"We hold these truths
to be self-evident"



THAT . . .

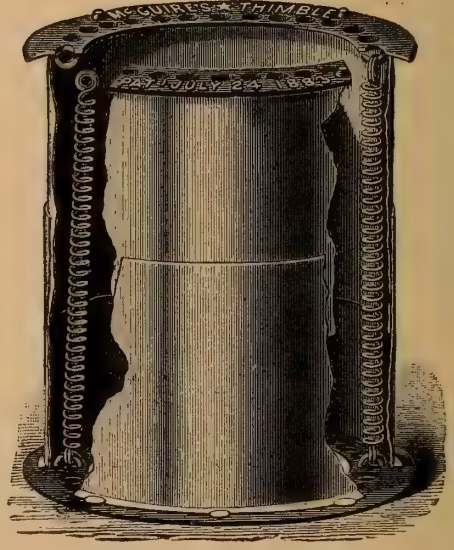
Steel Clad Baths



Are Cheapest and Best.

MANUFACTURED BY

Toronto Steel-Clad Bath and Metal Co.
LIMITED
123 Queen St. East, **TORONTO**



THE ABOVE CUT REPRESENTS THE

McGuire Patent Stove-pipe Thimble

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A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, DECEMBER 2, 1893 No. 48

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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The hardware merchant, of to-day, who is rigidly orthodox in a business sense does not make much of a success. It would scarcely be decorous to advise the hardware man to handle sugar and—sand, but at the same time there are a good many things which are not now found on his shelves that might with profit to himself be placed thereon, and that, too, without encompassing anything very radical. Such a class of goods may be found under the category of novelties. It is all very well to carry stocks of such staples as nails, horseshoes, etc. In fact it is necessary that they should be carried. But at the same time the man who devotes the whole of his energies to the selling of staples stands little chance these days of making his business much of a success. Competition has cut, as a rule, the profits on these down to so fine a margin that it could not well be otherwise. It is true in hardware, as in other lines of trade, that the merchant who hopes to succeed must be ever on the alert for the appropriation of new ideas for increasing his business and his profits. Novelties are among the things by which the desired better profits are to be secured. At present there are many things, the sale of which is now practically monopolized by fancy goods dealers, which in character belong more to the hardware merchant than to them. But while the hardware man has been pushing nails, merchants in other lines of trade have been appropriating those novelties that appertain more to the hardware trade than any other. And not only that, but they have been, and are, competing with him in his own staple lines. The holiday season is now close at hand when the demand for novelties is greater than at any other season. Opportune, therefore, is it for hardware men to make special preparations to get as big a share of it as possible. There are good profits in them as a rule, for the simple reason that there are not the same opportunities for cutting prices. By all means go in for novelties; and not only for the Christmas season, but for all the year round.

* * *

A good deal of interest in the American linseed oil market has developed in Canada during the last two or three days. The cause is an unexpected advance of 5c. per gallon over there. That market has been demoralized for some time, and while hard times had much to do with it, there were other causes besides. One of no small import was the disorganized state of the association, or combine as you may be pleased to call it. It was probably owing to this and hard times together that led to the American dealers shipping their oil into the border towns of Canada to the detriment of the Canadian jobber if not to the Canadian retailer. Now the manufacturers and jobbers across the border appear to be dwelling more amicably together again, and it is claimed that the sharp advance of 5c. per gallon is the result of this burrying of the hatchet. The only effect the advance has had on the Canadian market is the creation of a firmer feeling, but whether this will be followed by an actual advance remains to be seen.

* * *

To be forwarned is to be forearmed. This maxim is to-day applicable to trade in Canada. Although the depression does not obtain in this country to anything like the extent it does in the United States or in England, yet it is here; and to ignore its presence is neither advisable nor wise. No alarm need be taken. The trade of the country is not suffering from any chronic disease; it is slightly indisposed, and largely on account of the conditions that are affecting the commercial interests of the world at large. All that Canadian merchants need is to be careful; and one of the ways in which this can be exercised is in regard to giving credit. Those in the large cities especially need to be enjoined in this respect. One of the most unsatisfactory features is in regard to money. It has been circulating but slowly for some time, and there is no immediate prospect of a radical change being effected. With the present low prices prevailing for grain farmers' deliveries in this particular will continue to be small. At least that is what is to be expected from past experience. Only the other day an instance came under our observation where a farmer obtained a renewal of a mortgage when, according to his own statement, he could have lifted it by selling grain which he was holding. Caution is in order at all times and seasons, but just now, with the trade conditions as they are, it needs to be exercised more rigidly than usual. The shorter the retailer makes his terms of credit and the more rigidly he enforces them the better, while wherever he has a doubt regarding the ability of a customer to pay the final decision should be on the safe side. People may plead this and plead that, but the merchant is not the manager of a charitable institution. As we have said before, he is in business to make a living; and if he is careless in selling goods on credit he is neither just to himself nor to the wholesaler with whom he runs an account. Such a course will naturally lead to reduced sales—for the time being at least—but it also means fewer bad debts and proportionately higher profits. It is not the quantity of goods a man sells that makes the business a paying one; it is the profits which accrue thereto which do that.

* * *

Statistics relating to crime are more or less interesting to everybody—to the ordinary individual as well as to the student of

crimology. A cursory glance therefore at the report of the Minister of Justice as to the Penitentiaries in Canada will be in order. In that cursory glance can be comprehended much that is interesting and much that contains cause for congratulation. The total number of prisoners in the five penitentiaries—Kingston, St. Vincent de Paul, Dorchester, Manitoba, British Columbia—at the end of the fiscal year, June 30, 1893, was 1,194, a decrease of 34 compared with 1892. Those which show decreases are: Kingston 51 and Manitoba 4. Dorchester gives an increase of 6 and British Columbia 15, while in St. Vincent de Paul the curious coincidence is presented of 374 representing the number of convicts confined therein at the end of the last two fiscal years. An evidence of how carefully the movements of the convicts are guarded so that they may not wander away and be lost is seen in the fact that only one prisoner escaped during the year, and he was an inmate of the Manitoba Penitentiary. He, poor fellow, probably sauntered too far from his temporary home and, getting last on the prairie, was unable to find his way back! But while the Manitoba institution lost a prisoner in this way it lost none by death, this partially redeemed its remissness in the former particular, although the Dorchester Penitentiary went it one better by having neither escapes nor deaths. Kingston had 7 deaths, St. Vincent de Paul 3, British Columbia 1, a total, including a Kingston convict who committed suicide, of 12 deaths, or about one per cent. of the criminal population of the Canadian penetentiaries, a low average indeed, and pretty clear evidence that the health, as well as the keeping of the persons of the convicts, is carefully looked after. One sad fact is brought out in the report re Kingston Penetentiary. It is to the effect that more than one-half of the convicts are under 30 years of age, viz., 35 under 20 and 216 from 20 to 30.

* * *

The seizure for unpaid taxes of goods stored in Oliver, Coate & Co.'s auction rooms has opened the eyes of the people as they never were before to the injustice of the law governing such matters. A law should above all things be just, but this it cannot be when, in order to satisfy it, the innocent are made to contribute thereto. In the instance noted several persons, some of them in straightened circumstances, had left goods with the auctioneering firm to dispose of, but before this could be accomplished in stepped the sheriff and seized everything on the premises to satisfy a claim of the city of Toronto for taxes. That the law is unjust no one gainsays. Even the city officials regret that among the goods seized are those of citizens who are in no way responsible for Oliver, Coate & Co.'s neglect to pay their taxes, and suggestions have come from that quarter to the effect that the city remunerate these people. But it is held that the city cannot legally do this. The goods have not yet been sold, the bailiff having been restrained at the last moment from doing so by an injunction. There is little or no hope, however, of the injunction being made permanent. Whether a technicality can be created or not through which these unfortunate victims of an unjust law may be able to crawl, a determined effort should be made to amend the law so that it may be clipped of its harsh and unjust points. It ought not to be difficult to do this, for the injustice is so flagrant. The right of the city to a first claim for taxes is only proper, but when it comes to appropriating the property of other people that may happen to be on the premises, in the process of satisfying that claim, that is another thing, and its being done under the cloak of the law does not make its injustice anything the less.

A CRYING NEED.

In some respects we have a surfeit of law; in others we have a dearth. An instance of this latter condition is seen in the law relating to bankruptcy. And the question of its solution seems almost as difficult as that of the race problem in the United States or the school question in Canada.

Since the Dominion Insolvency Act was repealed in 1880 the provincial legislatures have made more or less effort to provide the desideratum for their own respective territories, but little or no benefit has resulted therefrom. The fact of the matter is they were trying to purify the waters of the branches instead of those of the main stream. In other words, the legislation was provincial instead of Dominion. Most of them probably did their best, but their best efforts were small, because the power of passing bankruptcy and insolvency laws was reposed by the Constitution in the Dominion Parliament alone. The Ontario Legislature has been the most active in turning out measures of this kind; but its best efforts have been hit hard in their most vital parts by the courts, until what is left of them today is inhert and useless.

One of the most important features of the Assignments' and Preferences' Act—in fact its very heart as far as the creditor class was concerned—was the clause which was created to prevent judgments and executions not completely executed by payment from taking precedence over assignments made for the benefit of the creditors generally. How far this has succeeded in its purpose is well known Hip and thigh has it been smitten, and while the clause is to-day still appended to the act it is of no more use than is a paralyzed limb to a man. The courts have decided this more than once. Only two weeks ago the Court of Appeal gave a decision ordering a sheriff to satisfy the claims of three creditors who had issued writs a few days before the debtor assigned before making a distribution among the other creditors, he having proposed to distribute the estate pro rata without reference to said judgments.

The need for a Dominion Insolvency law is becoming more and more apparent every year. During the last few months, probably more so than ever before, at least as far as Ontario is concerned. Probably the strongest reason that can be advanced for such a measure is the need of some provision which will eliminate preferred claims, or at least prevent their being turned to dishonest account. As the law stands to day an insolvent can give a favored creditor a hint that he proposes to assign, and that if he (the creditor) wants to get paid in full he had better get judgment against him. But this is only one of the many ways in which the present law encourages sharp and dishonest practices. Another reason for a Dominion measure is the lack of uniformity that exists, owing to which the dishonest debtor in some of the provinces can snap his fingers at his creditors in some of the others. In fact so great is the evil in this respect, that there are wholesale merchants in Toronto who have discontinued doing business in some of the lower provinces on account of the losses they have suffered in consequence thereof. It is a serious thing when the trade and commerce of the country is hampered in this way. Laws should assist, not hinder.

More or less effort has been made ever since 1880 to secure the re-enactment of an act whose provisions would embrace the whole Dominion. During the last four or five years these efforts have been more aggressive. The hope of such a measure being introduced in the House was reposed in the late Sir John Abbott, and had his health been preserved we should in all probability at least have seen some such legislation attempted if not adopted.

For some months past the different boards of trade in the country have been deliberating on the matter. The best minds, both mercantile and legal, in the country have had a part in the matter, and the result is the drafting of a bill which has met with the approval of the boards of trade at Montreal, Toronto, Hamilton, Halifax and other places, while St. John, N.B., only objected on a

few of the minor details. Last week a deputation representing the leading boards of trade in the country assembled at Ottawa and interviewed the Minister of Finance and the Premier in regard to the matter.

The bill is intended to apply to traders and trading co-partnerships, and to trading companies whether incorporated or not, except incorporated banks, insurance, railway and telegraph companies. The sheriff of each county or district, and in Quebec the prothonotary, is to be the guardian, except in counties and districts containing cities with a population of more than 20,000, where the Board of Trade is to appoint a guardian. A debtor shall be insolvent when he has called a meeting of his creditors to compound with them, or if he acknowledges insolvency, if he has absconded, or about to abscond, etc. A creditor or creditors with claims aggregating at least $500 may demand an assignment if a debtor ceases to meet his liabilities generally. Writs of attachment may be secured by any unsecured creditor for $200 if he can show the debtor to be insolvent; these will hold the goods until a liquidator is appointed. Within ten days after assignment or issue of writ of attachment, the guardian may call a meeting of the creditors, and they shall appoint as liquidator, an uninterested party. The creditors may at any meeting appoint one or three inspectors who shall superintend and direct the proceedings of the liquidators. The guardian's remuneration is fixed by an appended schedule and an inspector's at a general meeting of the creditors. The law of set off as administered by the courts of law or equity, shall apply to all claims under the act. All gratuitous contracts and conveyances shall be void if made within the three months next preceeding the insolvency. Any fradulent contract, mortgage, hypothec, or conveyance shall be void if both parties intended to defraud or delay the creditors. Preferences are void; if made within sixty days next before insolvency, they shall be presumed prima facie to be fraudulent. The insolvent is to be discharged with consent of creditors and the depositing of a sworn statement of his affairs, and he shall then be absolutely free and discharged from all existing liabilities. Every discharge procured by fraud, fraudulent preferences or promise of payment, shall be null and void.

The important fact revealed at the conference in Ottawa was that since receiving the draft measure the Minister of Finanee had given the question of insolvency legislation much attention, the result of which was that he had caused another bill to be drafted, and it would shortly be submitted to the Government for approval. Personally he was in favor of an insolvency law, but the subject, he said, was one on which the opinion of Parliament had to be taken. The Premier was non-committal, and the only thing worthy of note that he seems to have said was that it would have been impossible to have passed such a bill last year owing to the shortness of the session. Why time could be found to consider bills of much less importance and not for an insolvency bill he did not explain. The members of the deputation came away buoyed up with the hope that insolvency legislation was at last in sight. It is to be hoped they will not be disappointed.

The framing of an insolvency bill so that it will not unnecessarily trespass upon the liberties of anyone is a delicate undertaking. This is particularly so in regard to the provisions which enable creditors to compel the assignment of a debtor. There are merchants in prosperous circumstances to-day who have experienced in their early history great difficulty in meeting their liabilities. It is in determining whether a debtor is or is not an insolvent that the nice balancing is necessary. That some provision is necessary in this respect is obvious. There are men submerged so deep in the slough of insolvency that there is no hope of their ever being able to get out, and yet they do not seem to realize the fact. Something is needed to put an end to such delusion; but the difficulty lies in creating a power that will not be used unjustly. The draft bill prepared by the boards of trade deals with practically all the grievances now obtaining and it is to be hoped that the proposed Government bill will be built upon the same lines.

TARIFF CHANGES AND CANADA.

Public property has at last become the result of the deliberations of the Ways and Means Committee on the work of tariff reform. For some weeks past we have heard a good deal regarding the nature of the bill that the committee was framing, but beyond the knowledge that it would certainly aim at the overthrow of the high tariff walls, all deliverances upon its details were of a more or less speculative character. Now the bill has been unfolded for the delectation of the world, and it shows that the Democrats have well redeemed their ante-presidential election pledges. Many of the changes proposed are radical in their character. The average duty of the whole bill is estimated to be not quite three-fifths of the average duty of the McKinley bill. The main features of the bill, according to the chairman of the committee are: (1) The adoption, whenever it seemed practicable, of ad valorem instead of specific duties, and (2) the freeing from taxes of those great materials of industry that lie at the base of production. These are some of the articles to be placed on the free list: Coal, iron ore, wool, salt, timber (both logs and planks), tin ore, block tin, binder twine, apples (fresh, dried, evaporated), bacon, hams, beef, mutton, pork, meats of all kinds prepared or preserved, copper ores, copper plates or ingots, lard, nickel, ores of gold and silver, agricultural implements, soap, vegetables, fruits, eggs. Butter is down to 4c. a pound, hops 8c., potatoes 10c. a bushel, smoked, dried, salted, pickled fish, and otherwise prepared ¾c. a pound, herrings, pickled, frozen, salted, and fish frozen or packed in ice ½c. a pound, fish in cans or packages 25 per cent. ad valorem, brandy, cordials, liquors, and other beverages or bitters of all kinds containing spirits $1.80 a gallon, ale, porter and beer 30c. a gallon. The sugar schedule, which the committee found a most difficult one to deal with, reduces the present bounty of two cents on the raw article one-eighth cent. per annum, beginning July 1, 1895, and extending to July 1, 1902, inclusive, thereafter ceasing altogether. The duty on refined sugar is reduced from half cent per pound to quarter of a cent. Barley is reduced from 30c. per bushel to 20 per cent. Breadstuffs are to be free except when imported from countries putting duties on like products from the United States, when a duty of 20 per cent. will be imposed. This will make the rate about 12c. per bushel. One thing that must strike the average Canadian is that where the McKinley bill struck Canada the hardest the Wilson bill proposes to put salve. This is particularly noticeable in regard to barley, eggs, horses, etc. The bill has yet to run the gauntlet of the both houses of Congress, but as both are Democratic it is likely to pass in principle at any rate.

All the benefits from the proposed changes in the United States tariff will not by any means fall on the Canadian farmer. The development of the coal mines of Nova Scotia and British Columbia will undoubtedly be much stimulated, while coal mining in Canada generally will be benefitted if the intention of the Committee on Ways and Means to allow coal free entry is concurred in. Notwithstanding a tariff of 75 cents per ton, we last year exported to the United States 772,441 tons of coal, the product of Canadian mines, and valued at $2,790,693. The total exports to all countries was 945,125 tons, valued at $3,195,467. It is evident that with the duty of 75 cents per ton removed Canada will do a much larger business with the United States in this respect. There is no doubt about that. The New England States are particularly anxious to get the Nova Scotia because it can be laid down at their doors cheaper than can the home product. To the manufacturing industries particularly this is all important. Much the same conditions obtain on the Pacific Coast.

Much benefit will also accrue to the mineral industries of Canada by the adoption of the tariff reform bill as it now stands. It is not likely to be felt as quickly, however, in this respect as it will in regard to coal. A more ready market can be found for the latter, but in regard to minerals our neighbors

have already a superabundance of most kinds in stock. Nickel ore and matte they already admit free. The value of it for armor plates was discovered some time ago, and as they had to depend practically upon Canada for their supply of this metal, a tax on the plea of protecting home industries was neither in order nor desirable. Upon nickel ore and nickel oxide a duty of 10c. per pound was imposed, but under the new order of things it is proposed to make these free. The amount of nickel ore and matte exported to the States for the year ending June 30, 1892, was 12,532,904 tons, valued at $466,517. The change in the tariff, while it may not affect the export of ore and matte, it should stimulate the home work on the more finished article. The removal of the duty of 75c. per ton on iron ore will doubtless, in time at any rate, assist in developing the Canadian iron mines, which in spite of their richness have been so little utilized. Our exports of iron ore last year to the States aggregated but 7,707 tons, valued at $36,935, and until there is a big revival of the latent industries on the other side we cannot expect to see a materially enlarged trade in this respect. Of the total amount exported Ontario sent 6,420 tons, Quebec 200 tons and British Columbia 1,087 tons. Mica is another Canadian mineral likely to reap benefit should the proposed change be made. At present this article bears a duty of 35 per cent., but in spite of this the United States last year took of the crude and cut article 1,362,535 pounds, valued at $63,708. It is now proposed to remove the duty on this article. Copper ore, upon which there is now a duty of ½c. a pound, is to be admitted free. The amount of this article that the United States took from us last year was but 58 tons, valued at $2,605.

THE CORDAGE REORGANIZATION.

It is expected that by the end of the current year, according to the statement made to HARDWARE'S Montreal representative, that the assets and property of the National Cordage Co. will be handed over to a new corporation entitled the United States Cordage Co., as the reorganization committee appointed for the purpose have practically concluded their labors. That they have done so in so short a time, considering the unfavorable financial conditions, is considered surprising, and certainly reflects credit on the gentlemen who had the work in hand. When the reorganization is complete the old element, which the public believe to be largely responsible for the fate of the old National Co., will be in a decided minority in the councils of the new concern. The latter, when everything is in working order, will control establishments which represent between 60 and 70 per cent. of the output of cordage in the United States, the plants involved being worth from $24,000,000 to $26,000,000. The complete acquisition of the eight mills leased to the old concern, but owned by the Security Corporation, is contemplated, and also of five mills that so far have been constructed by the Union Cordage organization. On the former it is proposed to issue $6,000,000 of new guaranteed preferred stock which will be utilized to take up the bonds of the security, Corporation and other liens amounting to $6,000,000. Omitting the Security Company and Union Mills the total assets are placed at $13,649,822, of which $4,837,978 are assets already pledged to secure claims. The total liabilities, on the other hand, are some $54,000 less than the assets, but shrinkage in the value of merchandise, cancelled orders, bad debts, financial depression, and maturing obligations will probably increase the total debt by $1,600,000 odd. The underlying liens on the various properties probably amount to $2,113,000, of which $456,000 matures during the present year, and to provide for these bonds to the extent of $6,000,000 to $7,000,000 are to be issued. By the provisions of the settlement the unsecured creditors get 25 per cent. cash by January 31st, 1894, 65 per cent. of the new 6 per cent. bonds at par and 10 per cent. in trust liquidation certificates, secured by pledge of accounts receivable, after providing for the 25 per cent. cash above mentioned and the other expenses of reorganization and liquidation. These certificates will entitle the holders to a pro ratio share in the assets to an amount not exceeding 10 per cent. and interest. The stockholders of the old National concern made cash payments of $2,7000,000, which will be further increased to about $3,000,000 in due time, and the amount will be used as working capital for the new concern.

TALKS WITH RETAILERS.

"I have not been in business on this street for twenty-two years without seeing some ups and downs," said J. T. Wilson, Queen street. "I have seen business better and worse than it is at present. When I feel like grumbling I look around. You can generally find someone who is worse off than yourself, and if we always compared ourselves with our less fortunate and not more fortunate neighbors we would feel far more contented."

"You see that there is one men that is busy in these hard times." Thus spoke Mr. Brown, of Queen street west, as he peered over the counter at a line of small children who were waiting with their cans for oil. He told his clerk to see to them, and hustled off to attend to the wants of a lady customer.

"I do not think that the stove dealers have much to complain of this season," said Albert Welch, Queen street. "The weather has been somewhat against the sale of heaters, but I have sold a great many ranges. I handle the Gurney ranges and heaters and sell a great many."

"I have had to enlarge my store," said Mr. Pearsall, Yonge and McGill streets. Our store now extends back into the brick block on McGill street, which I have had built. We have a large repair shop which we are fitting up with new machinery, and will soon be in a position to do all kinds of repairing."

Hatch & Co. have started in the hardware, house furnishing and stove business recently at 446 Queen street west. Mr. R. Hatch was in business some years ago at the corner of Adelaide and Yonge streets. He reports business fairly good.

The Toronto Gas Stove and Supply Co. are moving to more commodius premises at 237 Yonge street. They intend confining themselves solely to the gas range and heater business, and will run strictly on a cash basis.

MECHANICAL DRAWING IN CANADA

The increase in demand for new and artistic designs in hardware, iron railing, gateways and interior fixings, and also the rapid strides that Canada has lately made in the way of inventions, will spur on the ambitious mechanic to the study of mechanical drawing, drafting and designing. In mechanical genius Canada is not to be surpassed by its many competitors. The immense increase in the use of iron for household, office, and store fittings, opens a wide field for the manufacturer in which to exercise his artistic tastes. The European art iron worker places the Canadian (and American) at great disadvantage, especially in bronze and other fine metals. There is no reason why this should be. Canada has many institutes in which mechanical drawing, designing and drafting are taught, for a mere nominal fee, and the mechanic should not be backward in embracing the privileges held out by these. The Central School of Art and Industrial Design in Toronto is one of these. Annual examinations are held under the direction of the Educational Department and medals and certificates are awarded. Holders of Government certificates issued at these examinations are legally qualified to teach the subjects named therein in any art school, high school, or mechanics' institute in the Dominion. The mechanical course comprises plane and solid geometry, architectural drawing, machine drawing, building construction and designing. This institute is partly supported by public subscriptions, and the charges for tuition are low enough to be within the reach of any mechanic.

SUNDRY NOTES ON HEAT.

The following was read by Chas. Heal at the recent meeting of the C.A.S.E., held in Toronto, and published in Electrical News :

I lay no claim to originality in this paper, the matter having been gleaned from time to time from standard works and papers, and memorized or recorded in my note books. The object of the paper is not to settle any theoretical tangle, but to create discussion. Further, I wish you to understand that I am not here as a teacher, only as a learner, and I hope the members will give all the aid in their power either by reading a paper or giving their experience on any matter appertaining to steam, electricity or kindred subjects. There is no such thing as knowing it all ; the most diligent only learns what he can, and that learning continues through life to those that desire to work near the top. With these few preparatory remarks, I will now proceed with the paper.

The object of the study of steam and its application is to obtain the greatest possible amount of work with the least possible expenditure of fuel, and in order to arrive at a correct understanding of the principles which underlie the economical production and use of steam, we must study, among other subjects, the nature and effects of heat. And here a difficulty meets us which we cannot altogether overcome ; which is to define what heat really is ; it is however so familiar to us in the effects it produces on our bodies and on objects around us, that we need not be deterred in our enquiries from our inability to solve the question.

The chief physical source of heat which we enjoy is the sun, which, although situated at such a great distance, warms the earth with its rays. Of this source nothing is known. In addition to this external heat we have an internal source known as terrestrial heat ; this heat is very great, and it is computed by scientists that at the depth of a few miles it is capable of melting the most refractory substances. Though we are mainly dependent on these sources for maintaining our temperature, there are mechanical and chemical sources for maintaining our temperature, there are mechanical and chemical sources which are of great importance to us, the most important being chemical action. Nearly all chemical combinations are attended with the production of a greater or less degree of heat, and it is the chemical combination termed "combustion" which we as engineers are mostly interested in. I will not touch directly on the subject of combustion, as that will be dealt with in a separate paper.

The temperature of a body indicates how hot or how cold it is, and should be distinguished from the quantity of heat in that body ; for example if a cup of water be taken from a vessel the temperature is the same, but the quantity of heat varies as the weight in each vessel, the temperature or intensity being measured by the thermometer, but the quantity of heat is the temperature multiplied by the weight in pounds.

The specific heat of bodies varies considerably, water being the highest of any (except hydrogen) it being the standard and considered as 1, while that of iron for instance is .113 = 1 9, so that the quantity of heat that would raise one pound of iron through 9 degrees would only raise one pound of water 1 degree. These properties are taken advantage of by the engineer to ascertain approximately the temperature of bodies beyond the range of the ordinary thermometer —the uptake of a boiler for instance. Nearly all bodies expand by the action of heat, and the mechanic and engineer have ever to keep in view this fact or disaster is the result. For instance, cracked boiler fronts and settings, broken steam pipes and leaky joints. At the same time this property is daily utilized in our workshops ; cranks and pins are secured, locomotive tires shrunk on and many defects made good by the judicious application of heat.

The transfer of heat from one body to another may take place in any of the following ways : Radiation, conduction or convection. Heat is given off from the hot bodies in rays which radiate in all directions in straight lines ; this is the process of radiation. Conduction is the process by which heat passes from hotter to colder bodies by contact. The conducting power of bodies varies considerably. Iron and copper are good conductors ; wood and some other mineral substances are bad ones. The engineer uses good conductors to transfer the heat from the furnace to the water in the boiler, and the poor ones to prevent loss of heat by radiation from steam pipes, cylinders, etc. Convection or carried heat is that which is transmitted from one point to another by currents ; the freer and more direct the currents the more readily is the heat transmitted ; steam boilers should be so constructed as to secure a free circulation of the water.

Before quantities of heat can be measured we must have an unity of heat, just as we require an unit of weight or length as the pound or foot ; and the unit of heat is the quantity required to raise one pound of water through one degree Fah. But the all important point with the engineer is the conversion of heat into work; we will therefore consider the relations between the two. By the term "work," is understood the overcoming of a resistance through space, and the amount of work done is measured by the resistance in pounds overcome, multiplied by the distance through which it is overcome in feet ; thus if seven pounds be lifted through ten feet, $7 \times 10 = 70$ foot pounds. Thus it will be seen that work is not measured by the pound or foot, but by the product of the two, and the unit of work is the lifting of one pound through a verticle height of one foot, and is termed the foot pound. It will also be noticed that the unit of work has no reference to the time taken, as the same amount of work is done whether it takes one minute or one hour. The power of an agent is measured by the rate it can do work, and is represented by the lifting of 33,000 pounds one foot high in one minute. In the case of pumping engines, the work done is measered by the foot pound, and is termed "duty" per pound of coal.

We will now consider the effect of heat in producing a change of state in different bodies, as ice, water and steam. The temperature of a body ceases to rise while it is melting. An illustration of this fact may be obtained in this way : take equal weights of water at 32 degrees and 174 degrees, and mix ; the temperature of the mixture will be the mean of the two, 103 degrees. Now take equal weights of ice at 32 degrees and water and 174 degrees and mix as before ; the temperature will be only 32 degrees instead of 103 degrees ; all the ice however will be melted. The 142 degrees of heat have evidently been consumed in melting the ice and are now latent in the water, as this heat would require to be given off again before the water could be transformed into ice. Were it noted for this provision, as soon as a body of water had sunk to 32 degrees, it would immediately become a mass of ice. A simple experiment which may easily be tried will enable any one to determine exactly the quantity of heat which becomes latent when ice is converted into water or water into steam. Procure a uniform source of heat, and place a pound of water over it to ascertain the exact amount its temperature rises in a given time. Assume it rises 10 degrees in one minute ; now remove and place one pound of ice at a temperature below 32 degrees ; the temperature will rise to 32 degrees and remain at that point until all the ice is melted, which will be in about 14 minutes. Now in this time the amount of heat would have raised one pound of water 10 degrees x 14 minutes = 140 degree—but the water is only 32 degrees —than the 140 degrees have been rendered latent. Continue the heat, and in 18 minutes it will have attained the boiling point $10 \times 18 + 32 = 212$ degrees. Still continue the heat, and in 95 minutes, or about 5½ times as long as it took to raise it from 32 degrees to 212 degrees, it will have all boiled away, and yet the temperature of the steam has at no time exceeded 212 degrees. All this heat, nearly 1000 degrees, has been rendered latent. It is this large amount of latent heat in steam that renders it so useful as a heating agent, and were it not for this property the moment water attained the boiling point would be one of extreme danger, as it would be immediately converted into steam with an explosive force akin to gunpowder.

I will continue this subject at a future meeting, and also internal and external work of steam and rejected heat.

THE HYDROGRAPH.

The remarkable property possessed by water for conducting sound is well known, but we are not aware that any successful attempt has hitherto been made to turn that property to account for signalling purposes. Its utilization in that direction, however, seems to have been effected in a practical manner by Captain Neale, who has devised a system by means of which signals can be given, messages exchanged, and conversation held between ships on the sea or on rivers, whether moving or stationary, or between ships or lighthouses and harbors, forts or pier on the shore, or vice versa. Communication, moreover, is effected without any connection whatever between the two objects except the body of water in which the ships float or the lighthouse stands, the water being the whole medium through which the message is transmitted. The system depends for its action upon harmonics, and its principle by a reference to the well known fact that upon a musical note in a given key being sounded an object capable of emitting sound in the same key will, under certain conditions, sympathetically respond by emitting a sound similar to that which awakened its vibration.

It is, of course, a primary condition that the two objects shall be normally timed in unison. Working upon this fixed principle, and utilizing the high conductivity of water for the transmission of sound, Capt. Neale has constructed a signalling apparatus, which consists of a transmitting and receiving instrument, which, when in operation, are in no way connected with each other except through the medium of water. The apparatus as described by the London Electrical Engineer, is mounted on two punts, the transmitter on one and the receiver on the other. The transmitter consists of a bell about 16 inches diameter attached to the lower end of a framing which is fixed to the side of the punt, the bell being submerged about six feet. At the upper end of the framing is a crank handle, which is worked from the punt and actuates a double beat hammer which strikes and sounds the bell. The Morse code is employed, and signalling is at present carried on by hand, but electricity is intended to be used. The operator gives the handle a quarter turn for the dots and a revolution for the dashes. The receiver, which is on the second punt, consists of a pair of metallic drums about ten inches diameter, open at one end and fixed, mouth to mouth, upon a piece of board which is sandwiched in between them. These drums are suspended in the water and are connected up with a small battery, and through it with a tape recording instrument. As at present arranged the operator has an acoustic apparatus connected with the drums, by means of which he hears the sounds of the bell as they are received by the drums, and, by a manual arrangement, he records each sound on the tape.

Upon the occasion of the inspection, the two punts were moored in the Thames at Kingston, about two thirds of a mile apart, and signalling was successfully carried on from one to the other. Messages were correctly transmitted and recorded, although naturally somewhat slowly, owing to the apparatus being at present worked by hand. The trial, however, is said to have demonstrated the practical character of the invention and the correctness of the principle upon which it is based.—Journal of Commerce, Chicago.

THE PIPEAGE OF OIL.

One of the earliest problems in the commercial distribution of petroleum, was that of transportation. The market for the crude product was the refineries, mostly located in large cities, especially those on the seaboard. The crude oil was put in barrels and loaded on trucks and transferred to a central point, the damage to barrels and the leakage of oil being considerable. Where water courses were available the barge became a popular method of transport. The tank car on the railroad followed, and in keeping with supply and demand has improved in plan of construction and gallon capacity. As the petroleum industry developed in magnitude and the economics of transportation became an important commercial question, the pipe line came in logical sequence to the railway car and the barge. This meant a considerable reduction in cost of transit, and as a commercial consequence the locating of immense refineries in the most available centres for distribution and a revolution in methods of manufacture as in costs. The introduction of the pipeage system met with the usual experience of all such innovations, the owners and drivers of oil wagons anticipating a loss of occupation, resorting to violent methods of prevention. Pipe lines were cut, tanks set on fire, and armed patrols necessary to furnish security to life and property. As usual, obstruction of this kind was forced to the wall, the new method gradually extending till the oil regions became a network of pipes and trunk lines conveying oil found their way as channels of supply to central points in New York, Philadelphia, Baltimore, Cleveland, Buffalo, Pittsburg, Chicago, and elsewhere. As an instance of this development, the trunk lines carrying Pennsylvania crude oil, not including local networks of two-inch pipe, are placed as near 3,000 miles in length. The total of pipe, according to evidence given before the State Legislature in 1891, was said to cover a line length of 25,000 miles, carrying the Pennsylvania product from local to terminal points. The amount of pipe and material used in this method is simply prodigious, and representing an equally broad deployment of industries concerned in manufacture and construction. Some of these tanks have a storage capacity of from 30,000 to 35,000 barrels, and the pumps employed in certain forms of severe service are magnificent machines. The pipes used in the trunk lines are made of wrought iron, and are tested to stand a pressure of 2,000 pounds to the square inch. The loading of cars by moveable pipes is in line with the simplicity and efficiency of the transportation apparatus. By this method a number of cars are loaded at the same time, the economics in labor and time being carefully studied and applied. It is to such factors as these that the commercial importance of the American petroleum industry is largely due.—Age of Steel.

LUMBER FOR NEW SOUTH WALES.

A representative of the Victoria Times has just interviewed Mr. J. A. Curtis, of New South Wales, the largest importer of lumber into that country, a passenger of the Warrimoo now in port here. He has been in the lumber business in New South Wales for 30 years and consequently knows most things about it.

During the year 1892, not by any means the best in the history of the country, there were imported to New South Wales about 22,000,000 feet of lumber. Of this nearly 20,000,000 feet were shipped from Puget Sound and other United States ports. "There is no reason,' said Mr. Curtis to a Times representative, "why all or at least most of the lumber used in New South Wales should not come from British Columbia. We are Britishers over there and consequently would prefer to deal with Britishers. The object of my trip is to endeavor to arrange with the British Columbia mills to supply us with lumber. I have had one trip from here but it was not equal to the Tacoma lumber. There was a great deal of sap in it and it appeared to be carelessly cut. The lumber itself is just as good as the best, and I think I will probably be able to make arrangements with some of the mills. Of course they will be able to remedy the defects when they are pointed out to them. You might also supply some of the doors used in Australia, which at present come from San Francisco. The doors are made of sugar pine, which makes them expensive. The cedar doors should be just as good and could be supplied much more cheaply. But they must be made the same style as the San Francisco doors, as the people have become accustomed to them.

Mr. Curtis will visit the different mills of the province during his stay and expects to make arrangements with them. —B. C. Commerce.

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NICKEL-STEEL ARMOR-PLATE.

The United States lead the world in the manufacture of nickel-steel armor plates, says the correspondent of an English exchange. Those turned out of the leading factories here have a greater resisting force than armor plates made in any other country. The American article is superior in every respect in which a test can be applied. It has the further merit of being supplied to the Government at a mere trifle compared with what European Governments have to pay their contractors for an inferior article. It costs the French Government, for example, 140 dollars per ton to have their steel armor plates properly nickeled. The United States Government pays its contractors just 11.20 dollars per ton for doing the work. The superiority has been demonstrated by the most critical and scientific tests that could be applied, and has also been proved by actual trial. During the month of July two contracting firms competed for Government orders for nickel-steel plates for some of the new armored vessels now under construction. They produced sections of the plates they proposed to furnish, and three shots were fired at each section. The section of one of the competing firms was 6ft. 4in. wide by 9ft. 7in. long. It was 9in. thick, and weighed 10 tons. Three Holtzer projectiles were fired at it, each weighing 250lbs. They were fired from an 8-in. gun, the muzzle of which was 58ft. from the target. The velocity of the first shot was 1,400ft. per second. It penetrated the steel plate and the backing to the depth of 11.7 in. The second shot had a velocity of 1,683 feet per second. It penetrated the plate, 3 feet of the backing, and buried itself in the earth beyond. The velocity of the third was 1,536 feet per second. It penetrated the plate and the backing to the depth of 14 1-2 inches. The merit of the plate was shown by the fact that the most minute examination of it that could be made after it had been bombarded in this way failed to discover any sign of a crack. The projectiles had made clean cuts through it, leaving the unhit parts as solid as before the tests were made. Similar tests were applied to the tests made by the other firm, and they were even more satisfactory, so much so that it secured the order for the entire quantity required at the present time. These tests were made in the presence of some foreign official experts in such matters, who freely expressed their surprise at such satisfactory results, and admitted the superiority of the American plates.

In the first half of this century iron had attained artistic importance, especially in Berlin, as regards castings for fret work. Founding is still carried on in the Hartz Mountains with excellent results. The productions are mostimitations of ancient weapons and ornamental articles, says Kuhlows. Work in wrought iron has attained great perfection, and has now very generally taken the place of cast iron, not only for fret work, but also as a favorite material for lustres, candelabra, and stands of various kinds, including even those which do not need so durable and elastic a material. Not only in Berlin, Munich, and Frankfort-on-the-Main, but all over Germany, excellent artistic smiths are to be found, who who satisfy the local taste for various forms, ranging from Gothic to rococo. Highly specialized forms are rendered possible by the Mannesmann tubes, drawn out of malleable iron.

THE LOCKS OF ANCIENT DAYS.

It would be rather difficult to name the first man who made use of a lock to fasten himself in or someone else out, says N. Y. Hardware. Adam certainly had none, as in his early days of innocence he had no use for hardware of that character; and there could have been none upon the Garden of Eden, else the presence of the angel of the flaming sword would not have been required to make Adam's eviction permanent. The Tower of Babel was not carried to that state of completion where the plans and specifications called for builders' hardware; and if there were any locks or bolts upon the Ark, the sacred historian has forgotten to mention that fact.

Yet they certainly had locks in the days when the earliest books of Scripture were written, and we find in Solomon's Song, chapter v., and 5th verse, the significant passage: "I rose up to open to my beloved, and my hands dropped with myrrh, and my fingers with sweet smelling myrrh, upon the handles of the lock." In Nehemiah, chapter iii., verse 3, we read: "But the fish-gate did the sons of Hassenaah build, who also laid the beams thereof, and set up the doors thereof, and the locks thereof and the bars thereof." And in Judges, chapter iii., verses 23 and 25: "Ehud went forth through the porch, and shut the doors of the parlor upon him, and locked them. When he came out his servants came; and when they saw that, behold the doors of the parlor were locked, they said, 'Surely he coverath his feet in the summer chamber.' And they tarried till they were ashamed; and behold he opened not the doors of the parlor; therefore they took a key and opened them."

All of this certainly goes to show that they had locks and keys, and knew how to use them in those far-off ancient days.

In the "History of Ninevah and its Palaces,' by Joseph Bonomi, we find a description of, perhaps, the oldest lock ever discovered. It was used in securing the gate of the apartment in one of the palaces of Khorsabad. In describing this ancient piece of hardware—if such terms may be applied to wooden locks—he says: "At the end of the chamber, just behind the first bulls, was formerly a strong gate, of one leaf, which was fastened by a large wooden lock, like those still used in the East, of which the key is as much as a man can conveniently carry, and by a bar which moved into a square hole in the wall. It is to a key of this description that the prophet probably alludes: 'And the key of the House of David will I lay upon his shoulder'; and it is remarkable that the word for key in this passage of Scripture, 'Mu'tah,' is the same in use all over the East at the present time. The key of an ordinary street door is commonly thirteen or fourteen inches long; and the key of the gate of a public building, or of a street, or a quarter of a town, is two feet or more in length. The iron pegs at one end of the piece of wood correspond to so many holes in the wooden bar or bolt of the lock, which, when the door or gate is shut, cannot be opened until the key has been inserted, and the impediment to the drawing back of the bolt removed by raising up so many iron pins that fall down into holes in the bar or bolt corresponding to the peg in the key."

This description, and others of a corroboratory character, prove that this form of lock and key was in use in Egypt four or five thousand years, during which extended period of time it does not appear to have undergone any successful changes. We find it described as early as 1798 in a book entitled "A Survey of the Turkish Empire," but it was not generally known in Western Europe until the French invasion of Egypt early in the present century, when an extended account of it was given in a French work upon that country. In a comprehensive work upon the manners and customs of those hardy old fellows, the ancient Greeks and Romans, some interesting details in this line of investigation are given. The doors, we are told, turned upon large pivots in the center, let into sockets in the lintel and threshold, so that one of the sides opened inwards and the other outward. Plutarch gravely gives the reason why visitors were expected to knock before entering, lest he "should surprise the mistress or daughter of the family busy or undressed, or servants under correction, or the maids quarrelling." (Old times, it seems then, were very much like modern times, after all.)

From the fact that the visitor might walk in if he chose one would judge that the Roman or Grecian door bore no locks. This meant probably that they were so little guarded only by day, as elsewhere we read of bolts upon the doors which were held in place by chains. "The doors at first," says one writer, "were fastened by long bars passing into the wall on both sides; and by degrees, smaller bolts, hasps, latches, and locks and keys succeeded."

In the average ancient Roman house, the fastening usually consisted of a bolt placed at the base of each half-door, so that it might be pushed into a socket made in the sill to receive it. In some of the houses uncovered at Pompeii may still be seen two bolts in the sill which correspond to the bolts in the door. When night came, the front door of the house was made still more secure by means of a wooden or iron bar placed across it, and inserted into sockets on each side of the doorway, and the bar had to be removed before the door could be opened. There is ancient mention of an arrangement for bolting or unbolting a door from the outside. It consisted of a leather thong inserted through a hole in the door, and by means of a loop, ring or hook, took hold of the bolt so as to move it in the manner desired.

There is no doubt, however, that the old Romans had keys and locks in the real meaning of the term. At Herculaneum and also at Pompeii have been found keys which prove that some kind of a warded lock was well known. Keys of this character can be seen at the British Museum. There is a passage in the "Odyssey" which clearly refers to the primitive mode of fastening the valves or folding doors of a house, in these words:

"Whilst to his couch himself the prince addressed,
The duteous nurse received the purple vest;
The purple vest with decent care disposed,
The silver ring she pulled, the door reclosed;
The bolt, obedient to the silken cord,
To the strong staple's inmost depth restores,
Secured the valves."

DOES A CASH BUSINESS.

"Yes, we are running a strictly cash business," said a Yonge street hardware man. "It cost me some customers at first, and some were inclined to resent it when they found that a bill accompanied each article that was delivered, but I am doing better than I was when I gave credit. It cost at least 15 per cent. to collect the majority of my debts this year. Money is tight and collections are extremely hard to make, and a dealer scarcely knows whether accounts are going in or out. A man can sell only half of what he does on the credit system, give ten per cent. off, and then be in pocket. The merchant often carries a customer on his books for years and then perhaps he dies or goes into liquidation and you lose all that he owes you."

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TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The ditor will always welcome such information.]

Canadian exhibitors of butter carried off 27 medals at the World's Fair.

John Blowne has a permit to make alterations to a blacksmith shop, 176 York street, to cost $500.

The Employers' Liability Bill passed the third reading in the British House of Commons Friday evening without division.

W. H. Waun, of Townsend, Ont., has purchased a blacksmith business in Eagle, and will take up his residence there at once.

A cutting tool overheated in hardening, even though it may be drawn to a temper color, will crumble off like sand and cannot be made to hold a sharp, enduring edge.

The Dominion Burglary Guarantee Company, Ltd., will ask Parliament for power to operate an electric wire protection service and a patrol service.

E. W. Leith has purchased the good will of the general store kept by Mr. Daniel Gorrie in Haliburton, and will carry on the business as successor to Mr. Gorrie.

P. E. Island potatoes were selling at the market yesterday for 25 cents per bushel. It was reported last evening .that the price would be raised today.—Chronicle, Halifax.

A curiosity in the cutlery line has been made in a Meriden, Conn., factory. It is a perfect pocket knife, with 30 blades, shears, files, piercers, awls and other tools. It weighs one-eighth of an ounce.

Don't be afraid of using cast steel for springs if you haven't a piece of spring steel of the right size and shape. Some think that cast steel would be too hard and brittle, but, as a matter of fact, good spring steel is of higher carbon than much tool steel, especially that furnished for dies.—Sparks.

Clifford & Son, late of Kirkfield, have purchased the mill property of the late Capt. John McDermid, Janetville,which consisted of grist and saw mills. They are overhauling the grist mill to get it in order for grinding. There has been a great dearth of flour in the village since the old mill was burned down.

A big delegation, representing the Electric Street Railway Companies of Montreal, London, Toronto, Hamilton, Port Arthur, Peterboro' and Ottawa, waited on the Dominion Government last week and asked that the street rails used for electric roads be imported on the same terms as rails for steam railways. The steam rails are free, while electric companies pay $6 a ton.

The total capital invested in the oil industry in Pennsylvania is $300,000,000. Pipe lines aggregating 25,000 miles have been laid, and 59 tank steamers are employed in conveying the oil abroad. In 1861 a gallon of oil in bulk cost not less than 58 cents, and in 1892 the price was not more than 3 1-2 cents. It is shown that a larger percentage of oil product is now shipped abroad than of any other product except cotton.

A few years ago what is known as the Joggins mines was but a few rude buildings erected after the style of the old log cabin and occupied by miners employed in the coal mine. To-day it is a prosperous and growing mining town of 1,500 population, and possessing many elements of substantial progress. About 300 men are employed and 400 tons of coal are raised daily.—Critic.

An ingenious and novel fire alarm. This consists of a hollow sphere of aluminum supported at one end of an arm, with a counterpoise at the other end, the two being arranged to balance at the ordinary temperature and pressure of the air. The apparatus is not made sensitive enough to record natural changes of pressure, etc., but if from some unnatural cause, such as fire or even a large accumulation of coal gas in the atmosphere, the specific gravity of the air is disturbed the ball drops, and in falling rings an electric alarm.

One of the most wonderful time-keepers known to the horologist was made in London about 100 years ago and sent by the president of the East India Company as a gift to the Emperor of China. The case was made in the form of a chariot, in which was seated the figure of a woman. This figure was of pure ivory and gold and sat with her right hand resting upon a tiny clock fastened to the side of the vehicle. This beautiful ornament was made almost entirely of gold and was elaborately decorated with precious stones.

W. D. Sommers, Atlantic City, N. J., patentee of the "roundabout" wheels, has secured a verdict against the Ferris Wheel Company of Chicago for an infringement of his patent. The case was tried in the Circuit Court of Chicago and afterwards carried to the United States Court in Philadelphia, where evidence was taken two weeks ago. Mr. Ferris, on the witness stand, testified that in 1892 he was in attendance at Atlantic City and rode on the Sommers wheel. He considered it a popular amusement and afterwards built from this suggestion the big Ferris wheel. The court has not yet fixed the amount of damages or royalty.

H. F. McCrae, of Tilsonburg, was in town Wednesday evening and yesterday looking out for a site for establishing a branch foundry. He was favorably impressed with the Centre, and before leaving made arrangements for locating a plant here. McCrae & Sons, of Tilsonburg, manufacture engines and boilers at present being engaged in constructing a number for the Britih Columbia trade. H. F. has golden propects before him here, and we will gladly welcome him to our thriving burg. Tilbury is destined to become the business hub of Western Ontario, and other manufacturers in quest of a location should follow Mr. McCrae's example.—Tilbury correspondent St. Thomas Journal.

J. B. Futvoye, superintendent of the Central Vermont Railway, St. Johns, and John Mott, roadmaster of the same line, Waterloo, have invented and patented in Canada a new rail joint fastening, which is believed to be so much superior to the rail fastening in common use that it promises to supersede the old style altogether on all the leading railways, both in Canada and the United States. The new device is simplicity itself. It consists of a bevelled, slotted steel bolt, held firmly and securely in place by a bevelled steel wedge. The invention does away entirely with the threaded bolt and the nuts and washers go with it, and will effect an immense saving of labor as well in track laying as in maintaining the road in good repair after it has been built.

"It am a mighty good thing fer a man to hab a hopeful an' sangwine disposition," says Uncle Mose, "but 'w'en it gits sich a holt on heem dat he b'liebes he kin git a libbin' by waitin' fer it, he is got a little too much sangwinity fer to be any good."—Indianapolis Journal.

Proceedings have been taken at Osgoode Hall to wind up the business of the Polson Lenders Company of Toronto and Owen Sound. This step has been taken at the instance of Dugald Graham, of Montreal, and James Worthington, of Toronto, two of the Polson Lenders, a corporation which succeeded the Polson Iron Works Co. early in 1892. The assets of the company were mortgaged to the Polson Lenders who have, since the spring of 1892, carried on the business both here and in Owen Sound. Now, however, it is thought judicious by some of the lenders to have the company's affairs wound up and the rights and liabilities of the interested parties determined. The application for the winding-up-order however may be opposed. The defendants in the writ are John B. Miller, Frank B. Polson, Wilbur Matthews, T. F. Chamberlain and William Polson. The present assets of the company are valued at about $150,000.

SMOKELESS POWDERS.

Much attention is now being paid to the search for a smokeless powder of American invention for use both in magazine small arms and in heavy guns. Briefly, the qualities sought for may be enumerated as follows: It must have a progressive rate of burning so as not to exert undue pressure and with a comparatively low pressure to obtain the greatest muzzle velocity; it must be permanent so as not to be affected by time or by atmospheric changes, and it must be uniform in quality in order that like results under like conditions can always be obtained.

The question of the rate of burning is one of the most important, since upon it depend the velocity and pressure. Why this is the case is readily understood. If the explosion of the charge is instantaneous the gun is at once subjected to the maximum pressure and the proejctile is driven out by a constantly decreasing pressure due to the expansion of the gases as they follow the projectile and fill the bore. It is, therefore, evident, that with quick-burning powders the strength of the gun controls the velocity of the projectile, and since a certain pressure must not be exceeded the velocity cannot, with such powders, be increased. The explosive acts upon the projectile as a blow, and although the effect is continuous until the projectile leaves the gun, it is the initial excessive pressure that is dreaded.

On the other hand, the factors of the problem are changed when slow-burning powder is used. In this case the projectile is started with a comparatively low pressure, and is pushed forward by a regularly increasing—instead of decreasing—pressure, the aim being to obtain the maximum at the instant the shot leaves the muzzle. Although the gun is not strained with this powder to the same degree that it is with the quick burning, and consequently there is much less injury done to it at each discharge, the muzzle velocities are far greater with progressive-burning powder than have ever been reached with the other.

The rate of burning, or, in other words, the time required for complete explosion, is an important element. The aim is to procure a rate of burning which shall be continuous while the projectile is in the gun. If complete explosion takes place before the muzzle is reached, then the projectile for a certain portion of its passage is forced by a decreasing pressure, and if combustion continues after the projectile has left the gun, then there is a waste.

The recent tests at Sandy Hook of the Leonard smokeless powder show the wonderful properties of these powders. With the new regulation army field piece of 3.2 inch caliber an initial velocity of 2,430 feet was obtained, while the five-inch segmental wire gun gave the extraordinary velocity of 2,865 feet, the pressure being 46,800 pounds per square inch. Looking at what has been done with other powders we find that the Monroe powder made at Newport for experiments in naval guns, gave a velocity of 2,100 feet, with a pressure of only 14 tons in a four-inch rapid fire gun. In a five-inch gun a velocity of 2,540 feet was reached with a pressure of 15.2 tons. It is not too much to assume that velocities of 3,000 feet and perhaps more will soon be obtained.—Iron Age.

AN INGENIOUS DEVICE.

It is surprising the number of little leakages there are in the average hardware store which in the aggregate amount to a great deal. One of them is in regard to pocket cutlery. The merchant or his clerk is showing a customer samples of penknives. He probably picks up a handful of knives from the show case and places them on the counter for the investigation of the would-be buyer. Just at that moment in all probability another customer enters the store, and to ascertain his wants the merchant leaves the first customer for a moment. While his back



is turned the latter has a good opportunity, if he so chooses, to pocket one of the knives. Occasionally he does so. Sometimes he takes more than one knife. He has been known to take a whole box. But that is not the only way in which losses are incurred. The customer may be honest, and by far the greater part of them are, but in showing the knives the merchant or his clerk may have got the different priced knives so mixed up that he is not for the moment able to tell the knife that is worth fifty cents from that which may be worth ten, fifteen, or twenty-five cents less. And under such conditions he is as likely as not to sell the knife the customer selects at a less price than he bought it from the wholesaler. Then there is the damage from rust owing to frequent handling.

Moritz Mayer, of the Toronto Cutlery Co., recognized these losses long ago, and one day recently, while ruminating over the matter he hit upon a device for obviating the evil. It was simple and yet it has proved effective. The device is nothing more nor less than a simple spiral wire clip, a reproduction of which is given in the accompanying cut. Mr. Mayer's idea is that the clip, in order to be of the best advantage, should be attached to a hinged cover of a small cardboard box. In this box might be a half-dozen or a dozen knives or more of the same style and price. To the cover of each box should be attached, by means of the clip, a sample knife. Instead, therefore, of taking out a handful of knives for the inspection of a customer all the merchant need do is to take the knife that is in the clip. If that knife suits he can sell it and take another from the box and place it in the clip. By this means the knives are handled less, and every hardware merchant knows what that means. Then if he has to show half a dozen or more knives he would know in a moment if one was surreptitiously taken, for one clip would be minus a blade. Another advantage is that there would be no danger of a mistake being made in regard to price. If thought advisable the boxes on the shelves may be kept empty as long as there is a sample fastened to the cover by the clip. The stock may be kept where burglars are less apt to find them, for it is for the shelf goods that the midnight mechanic first makes a rush, and if he takes an odd sample or two or even empty boxes, it is not much loss. Mr. Mayer's ingenious device is taking well with the trade, its price being almost nominal.

Business in lamps and lamp goods has been extremely dull," said a member of the firm of G. & J. Murray, Yonge street, Toronto. "There is no demand for the better class of goods, and the extreme scarcity of ready money makes customers want the cheapest in everything they buy."

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
Hamilton. Ontario.
SP

BERTRAM & CO.

TORONTO Hardware and Iron Merchants

MANUFACTURERS OF

Toronto Files and Dundas Axes

Quality and finish of our Files and Axes unsurpassed. . . .

Special Attention to Letter Orders.

JOHN WILSON'S

BUTCHER KNIVES

and Steels,

Farriers' and Shoe Knives

Are the Best in the World.

TRADE ◇ MARK.

TORONTO CUTLERY CO.,

65 and 67 Yonge Street, Toronto

M. MAYER, Propr.

NON-XLL	Pocket Knives	WARRANTED
IMPERIAL	Razors	
T. C. Co.'s	Nickel Steel Shears	
WILLIAMS	Dble Shear Steel Butcher Knives	

We fully guarantee all goods named above.

CORPORATE MARK

JOSEPH RODGERS & SONS, Limited.

MANUFACTURERS OF

Pocket and Table Cutlery, Scissors, Razors, Erasers, Etc.

These goods have fully maintained their reputation as the best cutlery in the world for over

ONE HUNDRED AND FIFTY YEARS.

Any Infringements of our Name and Corporate Mark will be promptly prosecuted.

Sole Agents for Canada,

JAMES HUTTON & CO., - - Montreal

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, TORONTO

ENGLISH HOUSE: **SAMUEL, SONS & BENJAMIN** 164 Fenchurch St, London, E. C.

COW TIES, English and Oneida.

TRACE CHAINS, English and Oneida.

ROPE HALTERS, Hand and Machine Made.

WEB HALTERS.

LEATHER HALTERS.

SLEIGH BELLS and SHAFT GONGS, Large Variety.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Dec. 1, 1893.

HARDWARE.

The hardware market has not shown anything striking during the week. There is still a fair business doing, however, and none of the houses can complain that they are absolutely idle. Demand for lines of winter material is still conspicuous, and quite a fair movement is to note in roofing material, such as felt paper, etc. Shelf hardware has not furnished much movement, the volume of trade being decreased in this line as compared with last week, but then no one is surprised at this. Horse nails are also an active line, low values inducing buyers to take hold, not so much for actual wants as in a stocking up way. Cut and wire nails rule quiet, and the same is to note about most other lines. Payments are fair on the whole.

CUTLERY—There is a fair trade in this line in a small way with nothing special to note. Jobbers anticipate more enquiry for pocket cutlery in the course of a week or so.

WINTER GOODS—The orders for sleigh bells are not quite so good as they were, but there is still a moderately good demand experienced for skates, etc.

SADDLERY SUPPLIES—There have been somewhat smaller orders for curry combs, whips, horse blankets, etc.

NAILS—Both cut and wire nails continue quiet and dull as previously reported.

TACKS—These furnish no change or any feature worthy of special mention.

HORSESHOES—Demand for horseshoes is falling off, but makers report good orders for horsenails. They attribute this, however, more to stocking up at the low prices than to supply necessities called for by actual jobbing demand.

IRON PIPE—Makers are still sending out good sized quantities of this material both east and west.

SPORTING GOODS—Business in these has been rather smaller than previously noted.

CHAIN—A few sorting orders for cow chain is all there is to note, business on the whole being very quiet.

TOOLS—Business is dull without anything calling for comment.

BUILDING SUPPLIES—The enquiry in this line has mainly been for roofing supplies, and business on the whole is dull.

PLUMBING SUPPLIES—A moderate movement is all that there is to note, and it shows a decrease.

WARE—A fair trade has been doing in tinware, but jobbers complain of quietness in other lines.

LAMP GOODS—A quiet trade doing with no special feature.

NAVAL STORES—No change to report in this line, and values are without any material alteration. We quote:—Turpentine 47 to 48c.; resins, $2.50 to $5.00, as to brand; coal tar, $3.75 to $4; cotton waste, 5½ for colored, and 7 to 10c. for white; oakum, 5½ to 7½c.; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep-sea line; pure Manilla, 11c. for 7-16 and upwards and 12c. for smaller sizes.

METALS.

There is scarcely any change to report in the market for heavy iron and metals, but it is said that some lots of American bar iron have been brought into the city. Makers do not appear to be put out at the occurrence, and do not look for any serious competition from this source in the near future at least. Advices from primary markets on tin give a decline of $1, but the spot price remains much the same.

PIG IRON—With navigation closed the week has been a featureless one in pig iron. Stocks of Scotch pig are not heavy, but values are easy in tone. Offerings of Nova Scotia pig are considered ample for the small business doing. We quote: Summerlee, $18.50 to $19; Eglinton, $17 to $17.25; Carnbroe, $16.50 to $17; Langloam, $18.50; Nova Scotia, $17 to $17.50.

SCRAP IRON—There has been nothing to note in the case of scrap iron, which we quote $15 to $16.

BAR IRON—There has been some talk occasioned by the sale of some American bar on the market, but makers who have been spoken to do not manifest much anxiety on account of the fact. Present business in the article is fair with them for prompt shipment, the demand being not from ordinary jobbers but the agricultural implement makers.

SHEET IRON—Very little business to note and prices unchanged, $2.40 to $2.60. Russian sheets move in a very small way as before, 10½ to 11c.

HOOPS AND BANDS—A small jobbing trade is doing in these at former prices, $2.30 to $2.35.

STEEL—A fair lot of sleigh shoe steel is still going forward at steady prices. We quote: Sleigh shoe, $2.40; tire, $2.50 to $2.75; spring, $2.50, and best cast steel, 10½ to 12c.

GALVANIZED SHEETS—There is a moderate movement in these at steady prices, 4¾ to 5c.

TIN PLATE—These are very dull, but prices remain unchanged as follows: Cokes $3 15 to $3 20, and charcoal $3.50 to $4.

CANADA PLATES—Business in these is of very small dimensions, with prices nominally unchanged at $2.40 to $2.45.

TERNE PLATES—Nothing to report in the case of these, which rule quiet at $7.25 to $7.50.

COPPER—This metal continues as flat as ever, and quotations remain at 11½ to 12c.

TIN—Foreign advices report tin lower than ever before in England, but there is no change in the spot quotation, which remains at 21½ to 22c.

ANTIMONY—Dull and featureless at 10½ to 12c.

SPELTER—A moderate business is to note of a jobbing kind. We quote as before: $4.60 to $4 75.

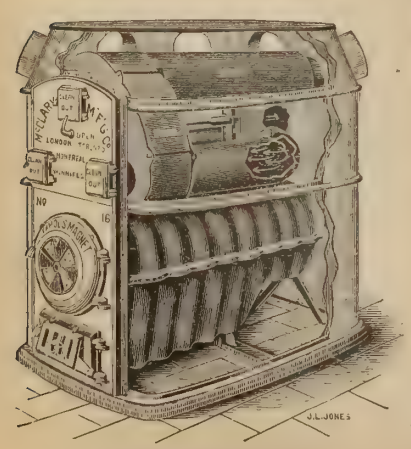
LEAD—The easy tone noted in previous reports continues, and it is likely that prices would be cut a trifle. In any case we give a slightly lower range, $2.80 to $3.

ZINC SHEETS—No change, and business dull at $5 to $5.25.

CEMENT—The open season is over, and business in cement is of a less important character, being confined to a few jobbing sales. Prices remain as before. Ex-store English cement is offered at $2.10 to $2.30, and Belgian at $1.90 to $2.05. Fire bricks are scarce, and light stocks have stiffened prices to $17 to $21 per 1,000, according to brand and quality.

PAINTS AND OILS.

The movement in leads and paints is confined to a small jobbing one with prices much the same as they were. Linseed oil re-



FAMOUS MAGNET.

Our New Wood Furnace

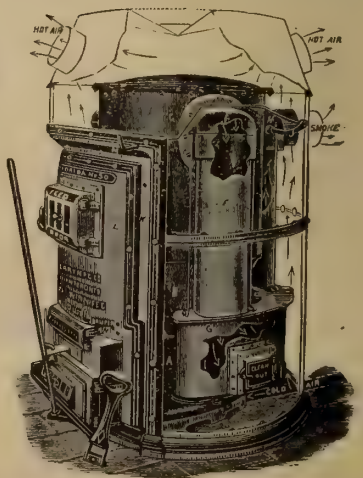
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The changes made this Season in our

Steel Dome Low Radiator Coal Furnace

make it apparently perfect. **The only three flue furnace in Canada.** If you have any furnace work in view it will pay you to let us send you full particulars of them.

THE McCLARY MFG. CO., London, Toronto, Montreal, Winnipeg, Vancouver.



STEEL DOME LOW RADIATOR.

ADAM HOPE & CO., HAMILTON

Offer for Sale

"Pioneer" and "Sloss" PIG IRON

These are fine foundry irons, being strong and large scrap carriers.

Also all the well-known—

Scotch Brands,
Broken Car Wheels,
and Railway Cast Scrap.

GAS, ELECTRIC, AND COMBINATION

Fixtures

Of English, Canadian, and American designs. . .

Globes and Shades

Staple Brackets and Gas Fittings. Select stock of above always on hand.

Jas. Barwell, 88 Bay St., Toronto

SHOWROOMS OF JAS. BARWELL, SONS & CO., Birmingham, Eng.

Drawings and Estimates on application.

WE DON'T CARE

What the Turpentine **Combine** may say or do. We are not members, and no action on their part can force us to join them. Our prices are not governed by any **Combine,** but regulated solely by the Southern market, and we would rather our customers should continue to share with us the benefits of our special arrangements for purchasing in the cheapest market, even though for a time our business may suffer through the action of the **Combine** in trying to force us out of business, or into their association, so that thereby they might be able to exact from the consumer any price their **Combine** might determine.

As the LARGEST DEALERS in TURPENTINE in this PROVINCE, we are satisfied we will have your support in the action we have taken, and with confidence ask a continuance of your favours.

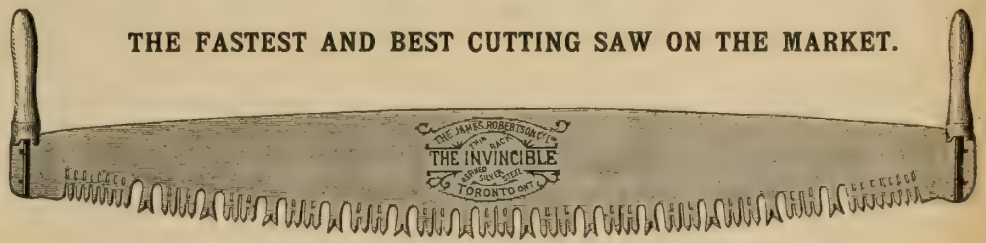
Francis, Frost & Co.

33 Front St. West, Toronto.

THE INVINCIBLE.

EVERY SAW WARRANTED.

THE FASTEST AND BEST CUTTING SAW ON THE MARKET.



Guaranteed four Guages Thinner on Back than Front and Made from the Highest Quality of Double Refined Silver Steel.

Manufactured only by

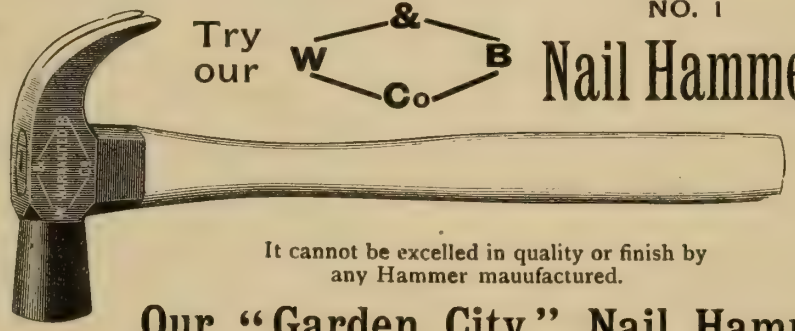
The James Robertson Co. (LIMITED.)

SAMPLE ORDER SOLICITED. **Toronto.**

THE WHITMAN & BARNES MFG. CO.

Canadian Branch: St. Catharines, Ont.

Try our W & B Co NO. 1 **Nail Hammer**



It cannot be excelled in quality or finish by any Hammer mauufactured.

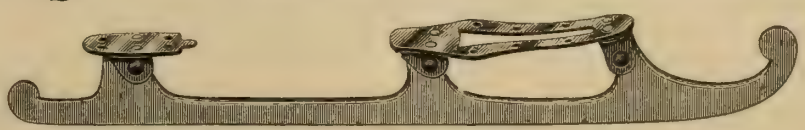
Our "Garden City" Nail Hammer

GET OUR PRICES AND TRY OUR GOODS

Is the best and cheapest "Solid Cast Steel" Hammer on the market. . . .

We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .

Boyd's Skeleton Skates



Expert Racer, Crystal Racer, Junior Crystal, Hockey Club, Eclipse Victoria Club and Dominion.

Best line of Skeleton Skates made. Send for Catalogue of Skates, Hockey Sticks, Snowshoes and Winter Sporting Goods. Ask for discount sheet.

T. W. BOYD & SON, 1683 Notre Dame St., **MONTREAL**

MONTREAL Markets Continued.

mains as it was. We quote : Choice brands of white lead, government standard, $5 No.; 1, $4.75; No. 2, $4 50 ; No. 3, $4.25; No. 4, $4 ; dry white lead, 5c.; red lead, pure, 4½c.; No. 1, 4¼c.; zinc white, pure, $7; No. 1, $6; No. 2, $5 ; linseed oil, raw, 60c., boiled 63c.

GLASS.

The glass market is dull and unchanged. We quote as before : $1 25 for first break and $1.35 second break per 50 feet, and $1.35 second break per 100 feet. Putty in bulk is unchanged, at $1.85.

PETROLEUM.

Refined stock meets with a good demand with a fair volume of trade both in Canadian and American. We quote Canadian at 11¼c. in shed in Montreal for round lots, and 12c. for small quantities. American petroleum, 16½c. in car lots, 17c. in 10 barrel lots, 17¼c. in 5 barrel lots, and 17¾c. for single barrels, net cash ; American benzine, 23 to 25c.; Canadian benzine, 10¾c., Petrolea ; 12½c. Montreal.

MONTREAL TRADE NOTES.

Francis Hyde & Co. are still sending forward some good orders of Glenboig drain pipes.

The Gurney-Massey Co. note quite a demand for stove fittings which has kept up right through the fall.

There has been no change as yet in the shape of the advance predicted in linseed oil by some of the trade.

The lowest quotation on tin from England in years was received here during the past week. It was £75 10s.

Another round cargo lot of 1,800 tons Ferrona iron was received last week from Nova Scotia by Drummond, McCall & Co.

Pale description of resin are decidedly scarce on this market, but with the close season the effect is not apt to be felt in a serious way.

Painchaud, Squire & Co. say that business in cutlery is dull just now, but they expect the demand for the pocket varieties to pick up shortly.

W. H. Cottingham & Co. are busy stock-taking at present. They call attention to the change in their ad on the front cover of this number.

Although quotations on window glass at the time of writing are unchanged, it is considered not at all unlikely that they may advance before the end of the week.

The sale of a lot of American bar iron occasioned some talk among the trade here. It may be remarked, however, that buyers don't manifest much anxiety over the matter.

Wm. McNally & Co. have been busy during the past week in getting their stock of cement, etc., into store from the wharf. Quotations will now mean ex store and not ex wharf.

The Montreal Rolling Mills Co. say they are still behind with many of their orders for horsenails. They attribute the enquiry more to stocking up on account of low prices than to fill actual wants.

TORONTO MARKETS.

TORONTO, Dec. 1, 1893.

HARDWARE.

Business has somewhat improved during the past week. It is nowever principally in the direction of holiday novelties and seasonable goods. In regard to heavy goods people are buying cautiously. Skates, sleigh bells, cross cut saws are in active request and large orders are reported for cutlery, particularly carvers. The colder weather has stimulated the demand for horse-shoes and horseshoe nails, but there is not so much doing in cut and wire nails. Sporting goods are scarcely receiving any attention. One satisfactory feature of the situation is that fewer complaints are heard in regard to payments, although at the same time they are far from being satisfactory.

WIRE—There has been a fair demand for bright iron wire for tinners' use, but in other kinds of wire there is nothing worthy of mention.

ROPE—A good business is doing in sizes up to one inch.

CUTLERY—This line is receiving a little more attention than a week ago, but the orders are of course largely of a sorting-up character.

NAILS—Horseshoe nails are in better demand than a week ago on account of the colder weather. Cut and wire nails are not as much wanted as they were.

TACKS—A continued fair trade is reported in tacks in wood kegs at the recently announced reduction. Other kinds are still dull.

CHAIN—Nothing new. There is a complete stock of coil chain but there is not much business doing. Cow ties are also neglected.

HORSESHOES—Since the colder weather set in an improved demand has sprung up for horseshoes.

WINTER GOODS—Skates, sleigh bells, snow shovels are still in brisk demand.

SPORTING GOODS.—There is still a little doing in a sorting up way in ammunition, and cartridges, but there is practically nothing doing outside these.

WARE.—Tinware, peerless ware, blue and white ware are receiving a little attention, but there are no distinct features in these lines.

LAMP GOODS.—In this line there is the usual quiet seasonable demand for small parcels.

PLUMBERS' SUPPLIES.—Nothing new has developed, business still being characterized as fair.

BUILDERS' SUPPLIES.—A fair trade is being done in the country, but practically nothing is doing in the city.

METALS.

There has been no material change during the week on the spot either in regard to prices or volume of business. Boiler plates and tubes are selling well, but pig iron is inactive and bar iron slow. American iron pipe has been receiving some attention. Demand for hoops and bands is gradually becoming more easy to satisfy. A consideable quantity of sheet steel is moving. Ingot copper is a little stronger, while in ingot tin the opposite condition prevails. Further repeat orders are announced for Canada plates.



PIG IRON—There is nothing doing and quotations are purely nominal. We quote : Summerlee, $20.50 to $21; Carnbroe, $19 50 to $20 ; Siemen's, $19.50 to $19.75.

Rogers, Brown & Co., Buffalo, N. Y., report the Toronto market for American pig iron as follows : The trade generally is pretty well stocked for the year. Buying is therefore light, though consumption is fairly good. We quote for cash in bond f. o. b. cars Toronto : 1 X Foundry strong Coke Iron, Lake Superior ore, $14.80; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14.30; 2 Foundry Strong Coke Iron, Lake Superior ore, $13.80; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80 ; Lake Superior Charcoal, $17.05; Southern Soft 1, $12.85 ; Southern Soft 2, $12.60.

BAR IRON—Business in this line has fallen to small proportion. The base prices remains unchanged at $1 95.

BOILER PLATES AND TUBES—Business is picking up in boiler material. Several large shipments of tubes have been made but at low prices. The price of English tube has dropped considerably during the past month and there is said to be a prospect of its going still lower. Since the drop in the English article the American has been crowded out of the Canadian market. There is a fair demand for tank plates, but prices are low.

IRON PIPE—A good deal of American pipe is coming in, and some large sales are reported. Generally speaking a fairly good trade is doing, and prices are unchanged at 62½ and 5 per cent. to 65 straight.

SHEET STEEL—There is considerable moving in stock sizes, but there is not much doing in an import way. The base price is unchanged at $2.90.

CORRUGATED IRON—Greater part of the work is over, but there have been a few sales at $4.75 per square. We quote : "Owl" brand at $3 to $4 per square for painted and $4.25 to $7 for galvanized, according to gauge.

GALVANIZED IRON—Some fair orders of Queen Head brand are reported for shipment first of year, but there is not a great deal doing for immediate requirements. We quote : Queen's Head and Gordon Crown at 5 to 5¼c. for 16 to 24 gauge.

INGOT TIN—Market is a little stronger and the demand here more active. It is claimed, however, by those who profess to know that the market will go lower when the large stocks now held in the States for speculative purposes are offered. The proposed change in the tariff is also expected to have its influence. We quote 22 to 22½c. for Lamb and Flag and 21¼ to 22¼c. for Straits.

INGOT COPPER—Market is weak and buyers are pretty well filled up. There is some copper held here that is being placed on the market, it is said, at surprisingly low figures. We quote 12 to 12½c. for small lots, but these prices could be shaded for quantities.

MARKETS—Continued.

SHEET COPPER—There is a fair business still doing in braziers, but trade otherwise is dull.

SPELTER—Trade has dropped off considerably in the imported article, but in domestic spelter a good business is doing. We still quote small lots at 4¼ to 4⅜c.

SHEET ZINC—A fair trade is doing in this line and prices are steady at the recent advance; 5¼ to 5½c. remains the idea for cask lots

TIN PLATES—Charcoal brands have been in good demand, and there has been a fair demand for cokes. Prices remain unchanged at $3 85 to $4 for I.C., with the usual extras for I.X

TERNE PLATES—There have been some fair shipments at $7.25 f.o.b. Toronto.

CANADA PLATES—Market is unchanged as before, with stocks still light. We quote: All dull, $2.60 to $2.65; half polished, $2 75, and all bright $2 90.

SOLDER—Trade fair at 14 to 16c.

ANTIMONY—Not much doing and no improvement is expected till first of the year. We quote:—Cookson's, in cask lots of 1,000 lbs., at 11½ to 12c.

LEAD—A business is reported at about 3c. There is a good deal of American lead coming on the market. This article has been falling for some time. The demand is fair for English lead.

GLASS.

Demand has fallen off during the week, although storm-sash sizes are still in request. Trade is practically over for the season. Prices are unchanged at $1.20 to $1.25 first break. In plate glass a fair trade is reported.

PAINTS AND OILS.

Trade is even quieter than a week ago. Most of the travelers are in the houses, They want go out again till first of the year. except it be for a special trip or so. Payments are improving and some houses report them pretty good. Demand has fallen off considerably for linseed oil, but prices are unchanged at 58½c. for raw and 60½c. for boiled Toronto, Hamilton, London and Guelph, with 2c. added for delivery at outside points. Linseed oil is 5c. higher in the United States, and the feeling here is steadier in consequence. Turpentine is in rather better demand, but stocks are large and several shipments are coming forward. Prices are unchanged at 44 to 46c. White lead continues dull at the unchanged base price of 5c. Prepared paints continue quiet, although no more so than a year ago. Demand has fallen off for shellac. A fair business is reported for glue.

OLD MATERIAL.

This trade shows no new features and prices remain unchanged. The dulness in business continues. We quote prices paid by dealers as follows:—Agricultural scrap, 55c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40c. per cwt.; No. 2, including sheet iron, hoop iron and mixed steel, 10c.; new light scrap copper 7½c.; heavy scrap copper 8c.; old copper bottoms, 7½c.; light scrap brass 5c.; heavy yellow scrap brass 7c.; heavy red scrap brass 7½ to 8c; scrap lead 1½ to 2c.; scrap zinc, 1½ to 2c.; scrap rubber, 3c.; country mixed rags, 75 to 80c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; boring, and turnings, 10 to 15c.

HIDES, SKINS, WOOL, TALLOW

HIDES—There is practically no change in the price of hides; trade remains quiet. We quote: No. 1 cows' 3¾c., and 2¾c. for No. 2's; steers are 1c. in advance.

SKINS—Remain the same as last report; good sheepskins are bringing from 65 to 70c.; calfskins are nominal, dealers paying 5 and 6c.

WOOL—Nothing much doing in this article. Prices remain unchanged. We quote 17 and 18c. for good pulled wool, and 20c. for select No. 1.

TALLOW—There is a good demand in tallow. Prices are a little firmer, dealers paying 5½c. and selling 5¾ to 6c.

SEEDS.

Business remains much as before. Alsike is being taken at $4 50 to $6 for inferior to choice, and at $6 50 to $7 for fancy. Red clover is quiet at $5.50 to $5 75, with $5 90 to $6 being occasionally paid for choice to fancy. Timothy is quoted at $1 to $1.25 for inferior and $1,50 to $1.60 for prime.

PETROLEUM.

A good business at unchanged prices continues to be done on the Toronto market. We quote: 5 to 10 barrel lots, imperial gallon Toronto: Canadian 12½ to 13c.; carbon safety, 16½ to 17c.; Canadian water white, 18½ to 19c.; photogene, 22c.

The Petrolea Advertiser in its weekly report says: It is not an easy matter these times to ascertain the exact market price of either refined or crude, but as near as we are able to get at it, by enquiry from several sources, and drawing our own conclusions, we quote: Refined, 6 to 6½c. in bulk, or 8¾ to 9½c. in barrels in car lots f.o.b. here. Why refiners should be so reticent, or why they should appear to quote a false price to the press (if indeed they do, and if not we are at a loss to account for the difference in their quotations) we are unable to say. Be that as it may, however, discrepancies in statements there are, and these are peculiar times for Canadian oil men. Producers are harrassed beyond measure to find a scheme to raise the price of crude to a paying figure.

MARKET NOTES.

Linseed oil is 5c. dearer in the States.

Rice Lewis & Son have had a successful opening for their 1893 hockey skate.

Eight of M. & L. Samuel, Benjamin & Co.'s employes were laid up with la grippe Thursday.

The Toronto Silver Plate Co. find it necessary to run its factory up to nine o'clock two and three nights a week in order to keep pace with the orders.

Rice Lewis & Son are showing some handsome cabinets for the holiday trade. They are of brass and marble, and some have a lamp attachment.

The Toronto Fence and Ornamental Iron Works are putting new elevator fronts and iron fixings on the Manning Arcade elevators, and are also putting extensive office fixings in Hunt's Bank, Bracebridge.

Rice Lewis & Son. have been compelled to re-order weather strips from the manufacturers twice this week. The same applies to the fry-pan clocks. "One of these fry-pan clocks in the window of a country merchant," said a member of the firm, "makes a good advertisement."

There has been considerable advance in the price of bristles. This may mean an advance in price of all brushes in which they are used. Many of the English houses have already made an advance in these goods.

Brown, Boggs & Co., of Hamilton, have acquired the entire plant, patterns, building, etc., of S. J. Moore, manufacturer of tinners' and canners' tools and machines, of the same place, and propose running it in connection with their own plant.

The Collins Mfg. Co. say that business has been somewhat slacker the last week, but they have had a large demand for their new weather strip, and have been unable to fill the numerous orders for dome bottom kettles owing to a break in their machinery.

The Kemp Mfg. Co. have in stock a choice line of embossed ware, such as match safes, knife trays, combination comb, match and whisp holder, etc., which they are offering to the holiday trade. The firm has had large sales of these goods, and also steadily increasing demand for their McGuire Patent Stove Pipe Thimble.

Anderson, Robinson & Co., Toronto, Canadian representatives of the Standard Electric Co., Chicago, Ill., are tendering for the contract of lighting the city of London, Ont., with their system for the coming year. Should their tender be accepted, they claim they will put in a powerful plant, which will be equal to any light on the continent.

The McClary Manufacturing Co. report a continuance in the demand for their steel dome low radiator coal furnace. They have recently received a stock of brass goods, etc., suitable for the holidays, and daily expect several new lines of German enamel ware. They have had an unusually big run on this class of goods.

The gradual increase in the varnish business of J. H. Farr & Co. for the past three years has necessitated the enlargement of their factory, which they now have under construction. When completed they will have one of the best equipped varnish factories in the country. This firm has made a specialty of high class varnishes, and the above is the result of their efforts.

A correspondent of HARDWARE had an interview with H. W. De Courtenay, who for several years represented Jere. Abbott & Co., New York, general agents for Thos. Firth & Son, the well-known steel manufacturers, Sheffield, England. Mr. De Courtenay has entered into arrangements with Jas. Hutton Estate, Montreal, as their representative in Canada, and is now doing the west in their interest.

The Booth Copper Co. is busy manufacturing small copper fixings, and have just completed a large refrigerator and other

copper fixings for Eker's Brewery, Montreal, which was recently partially burned. Mr. Booth, Jr., in explaining the workings of this refrigerator, reversed the general order of things when he said: "The beer trickles down the outside of these pipes to cool."

Chas. Brock & Sons, Toronto, report a a steady increasing demand for their Improved Flexible Bridled Brushes. Dealers send them satisfactory reports of these brushes, stating that they never fail to wear to an even chisel edge. The stump never hardens, for the bridle can be removed with ease for cleaning out or cutting down, and replaced instantly, thereby saving an immense amount of time.

Thurston's Silver Polish is being pushed by the Toronto Silver Plate Co. The feature about this polish is that it is free from grit and grease and can be applied either in the dry or in the liquid form. It is put up in 5 oz. boxes and 6 oz bottles. It is supplied to the trade at $1.75 per dozen net and $18 per gross. Consult the firm's advertisement for further information.

PERSONAL MENTION.

A. C. Leslie of A. C. Leslie & Co., Montreal, was in Toronto Wednesday and Thursday of this week. He is making a business trip through the West and reports business in galvanized iron and tin plate unusually good for this time of year.

J. H. Morin, representing R. C. Jamieson & Co., was in Toronto this week.

REMOVING THE MERSEY BAR.

Since the transfer of the American Line from Liverpool to Southampton the authorities of the former port have doubled their energies in removing the obstruction of the Mersey bar. A few days ago the White Star liner Majestic, drawing nearly 24 feet of water, passed over the Liverpool bar within an hour of low tide, and with three feet of water under her keel. The engineers of the Dock Board state that under the worst possible conditions there is a depth of 20 feet of water under the bar, the great sandbank having been cut down no less than 9 feet, and the debris bodily transported and dumped far from the channel, on a site where it can do no possible harm. During the three years that the work at the bar has been continued, no less than 3,388,000 tons of sand have been removed. This may be taken as a record in the matter of dredging operations, and connected with it many other equally startling records have been made. During the last week the three dredgers working at the bar have removed no less than 155,000 tons of sand, while in a little over three months almost a million tons of sand have been dredged and placed on the dumping site. The work is still incomplete.

A TRICK OF TRADE.

Hundreds of men look upon A. T. Stewart's establishment as both a primary and a grammar school for the dry goods trade of this city, says N. Y. Sun, and one of these hundreds told this story the other night: "Stewart's store," he said, was opposite City Hall Park. Ball, Black & Co., jewelers, and Leary, the hatter, had stores on the the block below. Stewart noticed every day that there were private carriages standing in front of these stores while the occupants were inside, and there seldom were any in front of his store. Private carriages were conspicuous in New York at that time, for there were very few of them. Stewart wanted them to stand in front of his place as an advertisement. It would give the impression that the occupants, the wealth of New York, were inside buying goods. He hit upon a scheme that kept a row of private carriages in front of his store all day. He paid the driver of each carriage a shilling a day to drive up to his door and wait there until they were wanted."

The story is told of a deceased millionaire that he once went to have his hair cut and was charged half a dollar instead of twenty-five cents. He remonstrated; and the proprietor of the establishment himself defended the charges: "You are a rich man and can afford it." "Yes," said he, "I can afford it, but you can't." Before leaving the shop he called the proprietor's chief assistant, and taking him outside said: "Look here; if you aren't quite fixed up over there, you can open up in a place of your own. Come along, and choose one." And history says that that hairdresser learned in a short time the truth of the remark that he could not afford to overcharge.

Beggar: "Please, sir, will you lend me a penny ter get somethin' to eat?" Gentleman: "You've got sixpence in your hand now. What's that for?" Beggar: "That's to tip th' waiter."

The United Kingdom approximates 400,000,000 inhabitants. Six million voters in the United Kingdom have the power of expressing their opinion at the ballot. The English debt is about $3,550,000,000. The basis of government in the United States is a voting male population numbering about 13,000,000. Representation allows full expression on national questions only once in four years. That expression once given is taken to be final.

The ingenuity of children in getting up new and extraordinary "games" has been an astonishment to mothers in all generations. Little Billy came in one afternoon from an assembly of the children of the neighborhood, with his clothes pierced above and below with a great many little holes. "For pity's "sake," exclaimed his mother, "what has happened to you?" "Oh," said Billy, "we've only been playing grocery store, and everybody was something in it, and I was the Swiss cheese!"—Youth's Companion.

A customer secured is a promise of greater salary in time.

Goods conveniently located save time, money and temper in showing

Restore goods to their proper places as soon after using as possible

A feather duster disperses but does not remove the dust from the store.

No young man can possibly have mistaken his alling who finds in it what the world wants done

If you want books, it is rarely wise to pay double price for them to a travelling book-seller

The trader who pays his way must sell at a profit, and cannot afford to cut below others in the same line.

APTED BROS.

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YOU LOSE MORE THAN WE DO BY NOT ADVERTISING IN THIS JOURNAL

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Half-and-Half Solder.
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We guarantee all OUR GOODS! If found unsatisfactory can be returned at our expense.

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92 and 94 Queen St. E., TORONTO.

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They are sold all over the Dominion.

Manufactured only by

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CHARCOAL PIG IRON

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BRAND "C.I.F." THREE RIVERS

PLANTS AT
Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer



GALVANIZED WIRE NETTING

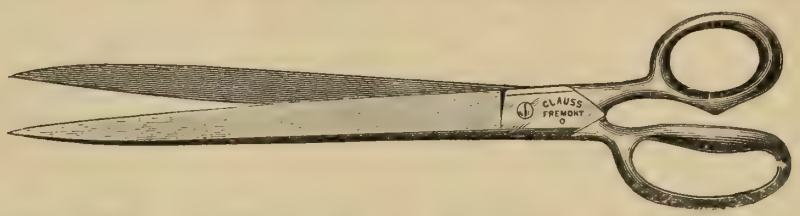
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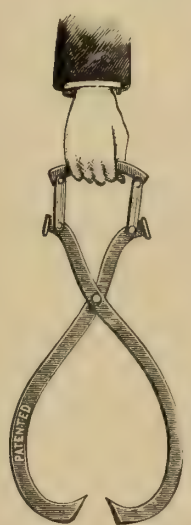
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Steel Laid. Tempered with Natural Gas. All Goods Guaranteed.

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Clauss Shear Co.

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Neverslip Ice Tongs.

(N. K. Wright's Improved Patent.)

They are the newest, best, handiest Ice Tongs made. Sold in two sizes.

MANUFACTURED BY

DENNIS IRON AND WIRE WORKS

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FLETCHER MFG. CO., 440-442 YONGE ST., TORONTO.

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Write for Circulars and Prices.

This Tool embraces in itself and in combination with an ordinary Carpenters' Rule:

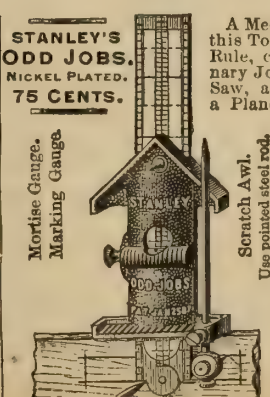
Try Square.
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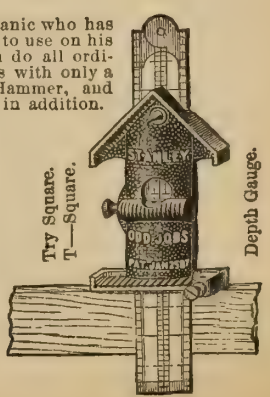
NEW BRITAIN, CONN.

SOLD BY ALL **Hardware Dealers.**

STANLEY'S ODD JOBS.
NICKEL PLATED.
75 CENTS.



A Mechanic who has this Tool to use on his Rule, can do all ordinary Jobs with only a Saw, a Hammer, and a Plane, in addition.



FIRST PRIZE ESSAY.

In writing upon a subject such as this, we must confess that it is one that is all-important, not only to the ironmongery trade, but to the whole country at large; and, now that all right-minded persons are alive to the necessity of first-class sanitary work, it behoves us to put our shoulders to the wheel, and supply that demand more fully than we have done in the past, so let us not stand back, but take the sickle in hand and share in the harvest. We must admit that in many districts the ironmongery trade has stood back; but why? Cannot the ironmongers carry out plumbing work as well as any plumber in the country? I say yes; whether he is a registered man or not. In fact, better than many, for we know that many registered plumbers have never passed any examination, either technical or practical, although these are generally the men to crow the loudest over their glorious honors. Now, I contend, if we are going to hold our own, or extend our plumbing departments, we, too, must make a noise and a show, too, and not let the grass grow under our feet; and we must bring our specialties under the notice of our customers. For this purpose we have a number of means at our disposal which the ordinary plumber has not; for, whereas many people visit an ironmonger's for one or another of the hundreds of articles in his stock, they would rarely enter a plumber's—except for plumbing work alone—to give an order, make a complaint, or such like.

Now, in the first place, make a show of sanitary ware; sometimes a display might with advantage be put in the shop window, especially where the latter is divided into sections. One end of the window would be most suitable for this, and fixed on woodwork, so as to be removable when required. An effective set made up of a 4-inch soil-pipe, showing branch into a water closet, with an air pipe of same size, and then another piece with a cowl, on the top (showing a joint between), and the bottom end of the soil pipe carried to the floor and fixed with bolt clips, wiped on to the side of the pipe (these can be cast lead, with proprietor's name on), and if space permits show a cast-iron lavatory stand, with mirror top; have this nicely decorated with silver plated hot and cold water taps, showing also waste pipe, with S trap and cleaning screw, and overflow pipe branched in and carried to floor line with nicely wiped joints. This will show a good sanitary and ornamental article, and yet easily removed for sale or otherwise. There should also be a few well-printed cards placed in a good position near this work, showing forth that this branch of the trade is a specialty, and that you are prepared to submit estimates. There should also be one or two of these cards hung up inside the shop, so as to catch the customer's eye. Then, in the showroom by all means make an exhibit of sanitary ware—say, a good valve-closet and a wash-down, also a good wash-out. These three patterns of closets can then be fixed in matchboard partitions on the side or end wall of your showroom, and paper over the woodwork with a nice tiled paper (these partitions should be at least 2 feet 6 inches wide and 2 feet 6 inches deep). With the valve water closet have a mahogany box enclosure, with hinged front and seat and hinged cover, so that the whole can be raised to show all the apparatus as it is fixed, not forgetting to have the proprietor's name on the sunk-dish and the lead safety tray under the closet. Then with the wash down water closet have this of the pedestal class, of an attractive design (I find the color mostly preferred is ivory), with cast-iron bracket supports resting on the floor and painted, and having mahogany hinged seat, with cover. Over this can be placed the flushing cistern, and if lead-lined have a casing of mahogany, with nameplate on the front, and show supply and overflow pipes with ends abutting to sides of partition. The flushing pipe can be carried to arm of water closet, with brass or ornamental lead clips. If brass clips are used one can be placed at the point where cover of water closet strikes the pipe, thus protecting it, or with rough usage the pipe may get flattened. The wash-out water-closet, which, by the way, should be one that can be cleaned in every part—can be fixed in the third compartment, with a mahogany seat only and a painted cistern, so as to show a cheaper arrangement, but yet perfect from a sanitary point of view. In a similar compartment adjoining the last water closet fix a scullery sink (with a plate rack above) with hot and cold water taps in position, the ends of the pipes terminating on the ends of the partition, and with ornamental lead flashing above the sink at the two ends and back. Provide the waste pipe with a grating and waste union, with lead S or anti-D trap, having cleaning screw; on the bottom end of waste pipe on a lead flange, with scolloped edges, and fix the flange just above the skirting to resemble the pipe passing through the wall. A combination housemaid's and slop sink may be fixed in like manner if space permits, but the waste-pipe from sink should discharge into slop sink. Adjoining this can be placed a bath, so as to show the hot, cold, and waste fittings, and if possible a lavatory, as before described. At the end of these put a kitchen range, with iron mantle and jambs and boiler and cylinder arrangement, showing the circulating pipes, as far as possible, to the various draw-offs.

The whole of these arrangements can be priced to a specification and affixed upon a card and hung over each article, stating the approximate cost when fixed at a residence. There should also be some of the show cards previously described hung in a conspicuous place near these articles. There are also other points that suggest themselves in connection with these things, such as sanitary sponge baskets and cork mats for the bath room, gas brackets fixed in suitable positions, electric bell pushes, water closet in section, or anything else that would be likely to attract the attention of customers when left for a few seconds in the showroom, as an enquiry made by a customer may lead to a conversation eventually resulting in business being done. If possible, obtain permission to call at the residence to inspect the existing apparatus, but do not appear to be over-anxious to put them in a new article—there is plenty of time for this when you have called and made an inspection; but do not be slow to condemn it if it is a pan apparatus—do not attempt to make it perfect by taking it out and cleaning, as I know some people do; these, no doubt, look very nice when burnt off and cleaned, and fitted with a new copper pan, ironwork painted and brasswork relacquered, but they are an extremely insanitary article, as every time the handle is raised a quantity of sewer gas is driven up into the user's face, and no amount of flushing will remove it, as the water cannot remove the deposit from the container from whence it arises.

I think now, having said so much on the means to be adopted in showing our various sanitary appliances, it becomes still more important to know how to carry out our work so as to please our customers and satisfy ourselves.

In the first place a matter of very great importance is to encourage the workmen to be clean and tidy in their work. I know men who seem to have an idea that the more mess they can make the better, while others will do their work as clean and neatly as it is possible for the circumstances of the work to permit. I have noted, too, that the men who will accomplish the most work and do it the best, and with the least annoyance to the customer are the latter. I often find that customers will ask for a certain man, and are willing to wait till he is at liberty, solely on account of the man being tidy in the house. This should never be neglected by the person who has charge of the job, as men can soon be trained to this by a little careful attention.

Then, when any job whatever in con-

nection with drainage work is completed, have it carefully tested. No doubt there are some who say that this is unnecessary, but I differ altogether, for no plumber should be satisfied everything is all right unless tested. We should never be satisfied if a gasfitter put up any fittings and did not test them, or a hot water fitter, a locksmith, or a bell hanger, and did not test the work; and is this matter, which affects the health of the whole house, of less importance? You may let your customer see you testing; he will certainly not object, although there is no necessity to make a boast of it, but go about it in a quiet, systematic manner, for when workmen are on the place the expense is very slight. It is not necessary for me to enter into the practical part of the work more than I have done, except to make a few minor suggestions. In the first place, use india-rubber joints for making connections to earthenware pans; you may then be sure of a tight joint. Use anti-D traps as far as possible, especially for closet-work, for experience has taught me these are better and stronger than ordinary traps. Use flushing cisterns that are quiet in action. Ladies especially complain if this is not so. Also, if it can be done, use a syphon cistern (here, however, the water company must be consulted); do not have any dips in the flushing pipe, or there will be a difficulty in starting the syphon, especially if the cistern is valveless. Leave your work clean; do not fix a closet seat and leave out a screw, or not drive it right home, nor leave a tap leaking at the stuffing box, not leave offensive sanitary articles where they can be seen from the windows, but have them removed as soon as possible. I would also urge the desirability of reading some of the books on plumbing work, for with a little study any intelligent ironmonger may soon become a tolerably good sanitary engineer, as now there are several first-class books on the subject. Take care, also, to have a really good man in charge of the jobs and impress upon him that you want really good work. Do not allow any "botching," whether estimate work or not, and frequently question him on the advantage or otherwise of various articles, so that he may see that you are interested in the work, and he will become more interested, too. You will be a gainer thereby. Then, when a good job has been accomplished, procure testimonials, if possible, especially from those of your customers who are influential in the neighborhood, and have them printed on a nicely worded circular and sent out with the quarterly bills. A short article on the necessity of good plumbing work is also advisable. One of these circulars can be enclosed with the estimate for any contemplated work. Then advertise in the local papers, or have a neat railway card printed and circulated so as to bring your name prominently before the public. The plumber will then recognize that in the ironmonger he has a powerful opponent, and we may rest assured that there will be no difficulty in retaining and extending our plumbing department.—Henry E. Tolfrey, in Ironmonger, London.

BUSINESS CHANCE.

Advertisements inserted under this heading two cents per word each insertion.

STORES and Offices to rent in The Thomson Bros. Block, Calgary, a three story stone building, plate glass front, heated with hot water, lavatory, closets, etc., most central location in the city, ready for occupation in about a month. Address, THOMSON BROS., Calgary.

SITUATION WANTED.

EXPERIENCED Hardware Clerk wants situation in good live town. References furnished from late employer. Address, J. E. WESTCOTT, 298 Wolfe St., London, Ont



For Iron Fencing, Bank and Office Railings and all kinds of Iron Work address

Toronto Fence and Ornamental Iron Works,

13 Adelaide Street West, TORONTO.

Clarkson & Cross

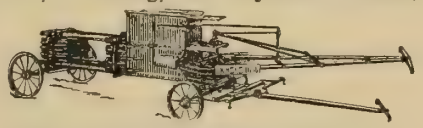
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DEDERICK'S PATENT STEEL SHELL HAY PRESSES.

Made of Steel—lighter, stronger, cheaper, more power, everlasting, and competition distanced.



Also all styles of Bale Ties made from the Best Steel Wire.

Manufactured by BOYD & CO., Huntingdon, Q.

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

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"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,

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MUNN'S LIQUID GLUE

IS THE BEST.

THE ART METROPOLE, Agents.

131 Yonge Street, TORONTO.

RAZORS, SCISSORS

POCKET KNIVES



TABLE KNIVES

BUTCHER'S KNIVES

TO THE TRADE

Targets.

We control the sale of the famous **Hamilton, Blue Rock and Expert Traps**

Send for samples and get our prices. Targets well packed and no second handling. Shipped direct from factory in Hamilton.

THE BOWMAN HARDWARE AND SPORTING GOODS CO.

HAMILTON, ONT.

BUSINESS CHANGES.

DIFFICULTIES, COMPROMISES, ASSIGNMENTS.

Chas. L. Gass, general merchant, Bayfield, N.S., has assigned.

D. Cameron, a Wiarton general merchant, has assigned to J. D. Ivey.

Joseph Sunard, general merchant, St. Paul's Bay, Que., has assigned.

Paul Gagnon, general store, St. Jean Baptiste, is arranging an extension.

J. P. Michaud, general merchant, St. Hilaire, N.B., is asking an extension.

George Josling, paints, oils, etc., Cornwall, has assigned to A. E. Evans.

E.R.C. Clarkson has been appointed interim liquidator of the Erie Glass Co.

D. K. Weber, Hawkesville, general storekeeper, has assigned to J. M. Scully.

Whitehead & Stewart, general merchants, Neepawa, Man., has assigned in trust.

J. B. Wilson, general merchant, Kalso, B.C., has assigned to C. H. Hodgson.

Alfred Martenette, tinware, is offering to compromise at 40c. on the dollar cash.

A meeting of the creditors of the Laidlaw Mfg. Co. of Hamilton has been called.

H. B. Roger, pump manufacturer, Trout Creek, has assigned to A. G. Browning.

W. & D. Fremlin & Co.. ties, telegraph poles, etc., Bar River, have assigned to J. J. Kahoe.

W. S. Dockrill, plumber, Montreal, has assigned, and his stock is advertised for sale by the bailiff.

Simon Labrie, general merchant, Isle Verte, Que., is offering to compromise at 50c. on the dollar.

It is said that the Toronto Plate Glass Importing Co. is trying to effect a settlement at 55c. on the dollar.

The creditors of Oliver, Coate & Co., Toronto, met Monday and completed arrangements for winding up the estate.

W. Freeman Copp, general merchant, Pugwash, N.S., has assigned. James Heaman, in the same line of business at Alexander, Man., has followed his example.

The creditors of W. George Hunt, hardware, merchant, Wheatley, met at Leamington recently. The assets amount to $3,000 with liabilities about $3,400. Mr. Hunt made an offer of 50c. on the dollar.

E. S. Williard of Port Perry, general merchant, has assigned to J. W. Lawrence of John Macdonald & Co. The liabilities are about $8,000, and the assets much above that sum. His brother-in-law sued him on account of a mortgage, and he thereupon decided to go out of business.

SALES MADE OR PENDING.

M. H. Smith, hardware, Oakville, is advertising his business for sale.

The stock, etc., of D. R. Hurtubise, tinsmith, Montreal, is advertised by bailiff for sale.

The general stock of Fred. Sporfard, Stouffville and Markham, has been sold to John Macdonald & Co. For that at the former place 65c. on the dollar was obtained, and that at the latter 67½c.

The stock of Cutler & Pettit, brick and tile manufacturers, Otterville, is advertised by assignee for sale.

PARTNERSHIPS FORMED AND DISSOLVED.

Mathieson & Clark, blacksmiths, Beaverton, have dissolved. Richard Clark continues.

A. J. Coronveau has been registered proprietor of the Canadian Electrical Construction Mfg. and Supply Co. of Montreal.

Vandry & Co., plumbers, Quebec, have dissolved, and Octave Matte has been registered proprietor of the plumbing firm of Vandry & Matte.

CHANGES.

The Keith & Fitzsimmons Co. have been incorporated.

The Bertram Engine Works is applying for charter of incorporation.

B. E. Brush, hardware, Leamington, has sold out to McEwen & Russell.

Richardson & Son, general merchants, St. George, have sold out to S. B. Laurason.

FIRES.

H. Gauthier, general merchant, Laurentides, Que., burnt out.

E. Sharp, furniture and undertaker, Woodstock, has been partially burned out.

Rolland & Bros., wholesale cabinet hardware, Montreal, have been burned out.

DEATHS.

F. P. Savage, general merchant, Cape Cove, Que., is dead.

HOT AIR FURNACE CASINGS.

In any discussion of the furnace question the casing should receive consideration, not that it is such an extremely important part of the equipment of the hot air furnace, but rather because it is one factor of the whole and contributes its quota to the success or failure of the completed apparatus. The casing, like all other parts of the modern hot air furnace, has had its evolutions and traditions, but it may be said to have at last settled down to its original form—the single casing—with some modifications, which will be referred to further on. Russia or smooth refined iron, I am told, was used for the first casing, but galvanized iron soon replaced that metal, probably owing to its cheapness as compared with the first and its superior appearance as compared with the second metal, and galvanized iron has continued in use, except for room heaters, for which Russia or American planished iron is still used.

The single galvanized iron casing is open to the objection of radiating into the basement too large a proportion of the heat generated by the furnace, and to avoid this loss by radiation the double casing was devised, consisting of an inner casing of black or galvanized iron about two inches smaller in diameter than the outer one and held in position by the same rings. This is a great improvement over the single casing. One disadvantage urged against the adoption of the double casing was the taking of valuable space by the inner casing.

In many constructions of furnaces too little space is provided between the fire pot and radiator and the casing, with the result that it is often impossible to admit a sufficiently large volume of air to pass up through the furnace, and this leads to the heating of the air supply to a degree of temperature entirely too high to be consistent with first-class heating, and the double casing was found to aggravate this frequent trouble. Complaints of this nature probably led to the substitution of corrugated tin lining, which has found a place in a very large proportion of the casings now made in cities where there is a call for a casing better than the ordinary common single one. This lining takes up little room, is effective, and, above all, inexpensive.

One manufacturer of furnaces, I have been informed, has made thousands of yards of this corrugated tin lining and supplied the same to his customers at a nominal figure, owing to the fact that the use of the lining would make the work of his furnace more satisfactory, and he could in consequence afford to forego all profit on the lining if he could get his customers to use the same on the casings which they made.

Another form of modern casing, and one which is growing in popularity very rapidly, is the single casing lined on the inside with two or more thicknesses of asbestos paper. This form of casing has been brought to the attention of the trade within the last 12 months, and presents advantages over any of the casings heretofore described, for the reason that the paper occupies less space than the corrugated tin lining, and at the same time is more effective, as paper is recognized as one of the best insulating materials that can be employed in connection with heating, whether by hot air or steam.

The discovery of asbestos has led to the production of many materials now used by heating engineers, and the placing on the market of a paste for attaching asbestos paper to furnace pipe and casings has made possible the construction of the improved furnace casing referred to. In point of cost the single casing lined with asbestos paper has the advantage over either of the casings referred to.

One peculiarity of the furnace trade that has been often remarked is that the best country trade as a rule uses a higher grade of material for the equipment of the modern furnace than the ordinary city trade, which is due in part to the fact that in large cities the house builder puts up buildings in long blocks, and has brought the construction of such buildings to a science, and while putting them up so as to present a good appearance and equipping the same with appliances that will undoubtedly do their work, everything has been whittled down to the lowest possible cost, and the slight extra cost of the improved casings and bonnets has been such as to prevent their use in a very large portion of the houses erected in the large cities. This is to be regretted, but nothing can be done to avoid the movement now in progress in the cities to take the building of homes largely out of the hands of the individual house owner and we must probably look to the country for the adoption of furnaces and fittings of the highest class.—A. W. Glessner, in Metal Worker.

H. D. SIMMONS & CO.,

Manufacturers' Agents,

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Representing Leading Manufacturers in Canada, England, Germany and United States.

Gutlery and Plated Ware, Brass Goods, Grates and Tiles, Engineers' Tools, Painters' and Artists' Brushes, Contractors' Supplies, Etc., Etc.



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Will find the cheapest Paint Brushes are those having our . . .

Flexible Bridles

Why? Because the bridle can be taken off and replaced in a moment. The paint circulates and the stump never hardens. You can wear the brush down shorter, therefore it will last much longer.

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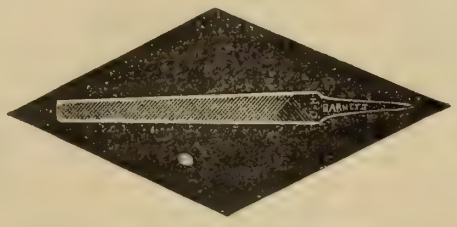
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Basement Window Guards, Factory and Mill Window Guards, School and Church Guards, Store Front Guards, Office Counter Railings, Inside Fine Woven Wire Blinds, lettered or plain.

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THE E. B. EDDY CO., Hull, Canada

A LARGE ELECTRIC LOCOMOTIVE.

It is learned from an exchange that the General Electrical Company, of Lynn, Mass., has recently completed an electric locomotive designed for moderately fast, light, railroad work. The motor weighs about 30 tons complete; is 16 feet 6 inches long, 11 feet 6 inches high, and 8 feet 4 inches wide over all. The drawbars are 2 feet 6 inches from the top of the rail. The drivers are 44 inches in diameter, and the machine is designed for a normal speed of 30 miles an hour. The drawbar pull is estimated to be 12,000. There are two electric motors of especial design and construction, one on each axle. The motors are gearless, and are supported on spiral springs resting on the side frames of the locomotive truck. This method of suspension leaves the wheels free to adjust themselves to the irregularities of the road-bed. The motor fields consist of massive iron castings, to which the hollow field spools are bolted. The armitures are of the iron-clad type, having each separate winding embedded in a mica-lined slot cut into the curved surface of the laminated iron armature body. The axles of the locomotive pass through the hollow shafts on which the armatures are mounted. These shafts rest in bearings of the motor frame, and are connected to the axles by universal couplings, which allow of freedom of motion in all directions. The commutators are of massive construction, and there are four sets of brushes to each commutator. The motors are controlled by means of a series parallel controller, set up in the interior of the cab. This device embodies all the latest improvements made in this type of apparatus by the General Electric Company. It is found that this controller allows of a more gradual and easier starting of the electric motor, and the speed can be more delicately and instantaneously controlled than in the case of the steam locomotive. The truck, suspended from the journal boxes, is constructed of heavy I beams, on which is the cab, of sheet iron, the interior finished in hard wood. Two sliding doors are placed at each side of the cab, and the windows are so arranged as to permit of an unobstructed view in all directions. There is ample space in the cab for the motorman's movements. Air for the brake is supplied by a special electrical air compressor, which also operatres the whistles. The air pump has an oscillating cylinder 6 inches diameter, with a 6 inch stroke, supplying 6,000 cubic inches of air per minute at 70 lbs. pressure. The motor is similar to the N.W. P. 2 1-2 in general appearance, but is wound for a higher speed. The normal speed of the armiture shaft is 675 revolutions, and one of the crank shaft of the pump 110 revolutions. The dimensions of the air compressor are : Length 41 inches ; width, 16 1-2 inches ; height, 25 inches. The pump motor is controlled by a special rheostat.

THE WATKIN TOWER.

The Watkin Tower at Wembley in height will eclipse the famous erection of M. Eiffel by 175 feet, the respective altitudes being as 1,150 to 975 feet. The knoll on which it stands is 165 feet above the level of the sea, and the senses may well reel at the attempt to realize the glorious and expansive view which will be available from its summit. Of its general design no one will be able to claim the sole authorship. Several years ago, it may be remembered, a competition was opened, and prizes were awarded for the best suggestions, since when Sir Benjamin Baker has adapted two of the best designs to modifications of his own. There will be three platforms to the tower, at intervening altitudes of 150 ft., 500 ft., and 950 ft., respectively. The area of the first will be about 200 feet square, and it will be covered by a concert hall, shops, restaurants, and side shows of various kinds. There will be like erections on the second platform, but on a lesser scale, and on the third a post office, with telephonic conenction, will be the leading feature. If the amount of business transacted on the highest stage of the Eiffel Tower be any criterion, the Postmaster-General will have no cause to complain of an unremunerative branch, while the patriotism of its patrons will be gratified by the circumstance that this stage is to be 40 feet higher than the loftiest which the Parisian erection can boast. Crowning all will be an electric lamp of extraordinary illuminating power, and amateur astronomers at a distance are hereby forewarned of the fact, lest they be ultimately cherishing a belief that the firmament has become miraculously enriched by the advent of a new fixed star. The entire tower will weigh about 7,500 tons,and each of its colossal legs will stand on a solid rock of concrete, already in position, and embedded to the depth of 75 feet. This weight, of course, is much lighter than that of the Eiffel Tower, but Sir James Baker, who is superintending the work, may be safely trusted in respect of stability of structure. It is interesting to note, moreover, that the men at work upon the tower are mostly "old hands" who helped to build Sir Benjamin's previous great achievement, the Forth Bridge. The four legs are already a third of the way up to the first platform, and can be seen above the trees from the Naesden side of Wembley. They stand at the corners of a square, of 300 feet base, within which four lifts—two up and two down—will work, and will be able, if required, to carry as many as 60,000 persons in a day. Messrs. Heenan and Froude, of Manchester, are contractors for the tower, which will be entirely of steel ; the same firm have now almost completed the 500 feet tower at Blackpool. The first platform at Wembley tower is under contract to be finished in November of this year, but no date has been fixed for the execution of the entire work, though that consummation may possibly be witnessed by the end of 1894. Meanwhile, there has been much activity on the Park estate generally for the past two years, said activity having now reached an interesting stage. For all the buildings —contemplated in the original plan—of which there are quite a number ning out of the grounds as a pleasure resort, are now structurally complete; and if, as is not unlikely, the place be opened for this winter's football season, the public will soon be afforded the opportunity of an inspection of the whole design. The grounds are well wooded, and in their primitive state were very pretty, while all that the experience of Mr. H. E. Hilner in the landscape-gardening line could do has been done. There will be two lakes, one for fountain displays only, the other, eight acres in area, being intended for boating. It has been expanded from the river Brent, which crosses the estate, and two bridges have been built over it. Flower beds, shrubberies, arbors, and garden seats are freely disposed about the grounds, and it is the intention of the management to offer the fullest facilities for their use, after the fashion of Continental parks and biergardens, where printed notices remind the public that they are the best protectors of the property. The chief attraction of the place, however,—next, —of course, to the colossal tower—will be the beautiful cricket and football ground, the area of which is nearly ten acres. It is a splendid piece of turf, and destined to be popular. Encircling it is a running and cycling track, half a mile in length, and therefore the finest in England, while there is a straight run for the home stretch of no less than 350 yards. A very large sum of money has been expended on the buildings, as well as on the transformation of the grounds. Chief among the former is a large restaurant and conservatory, which is faced by a band stand. There is also a fine pavilion at the lower side of the cricket ground. It has abundant accommodation for the comfort of athletes, containing as it does sufficient dressing rooms for two cricket or football teams, and half a dozen bath rooms. The reserved seats in front of the building will hold 2,000 peopie,but there is room laterally in each direction for a considerable augmentation of this total. That the public may not be entirely at the mercy of the weather, a huge shed has been erected to serve as a shelter when required, and will accommodate from 7,000 to 8,000 visitors. A band platform is being set up at the far end. Among other buildings is a tea pagoda, and there will be music and refreshment obtainable in a picturesque wood at the lower end of the grounds, the natural beauties of which will be left untouched, save that at night it will be lit with "fairy lamps."—Iron and Steel Trades Journal.



This Polish, in our opinion, is the very best that has ever been produced for the purpose intended, without wearing or scratching, and contains no grit or grease, and is having an enormous sale all over the Dominion and United States. We sell it at one price only, viz.: $1.75 per doz. net, $18.00 per gross, in powder. It is put up in 5oz. boxes, and as explained in circular we are sending out, can be applied on any metal, in either dry or liquid form.

It is also put up in liquid form in 6oz. bottles, price $18.00 per gross. The powder is much preferred among customers, as they can purchase it and make their own fluid, which prevents waste. With every gross order we pnt up 400 samples same as the one which accompanies circular. With orders for less than a gross we send blank samples to the amount ordered.

The Toronto Silver Plate Co.

MANUFACTURERS OF SILVER & ELECTRO PLATE

TORONTO, CANADA.

E. G. GOODERHAM, Manager. JNO. C. COPP, Sec.-Treasurer.

ELECTRICAL COAL CUTTING.

Of late—that is since the autumn of 1891, the ingenious appliances of the Southern mines have penetrated into several of the Nova Scotia collieries, and the primitive colliers have been much exercised recently over the threatened revolution of the mechanical coal cutter which is there rather aptly described as the "iron man." At request I descended one of the collieries to observe and note the efficacy of these—the Ingersoll machines—in the soft coal peculiar to Cape Breton, and spent some time in watching the cutter drive a heading of the same, 6x6 dimensions. Considering the inexperienced hands into which the machine was entrusted, and the physical difficulties of the "hole," the results were interesting and even valuable, but not sufficiently so to remove the insular prejudices against such innovations which there, as elsewhere, existed. Another form of cutter is, however, doing such good work as to recommend mechanical coal winners to more consideration than they have hitherto received, i.e., the electrical "Jeffreys," of which I believe there there are only one or two in the British American collieries. In the autumn of 1891 this machine was put to work at the face of one of the seams of the Gardiner mine, Cape Breton, and has proved eminently successful as an economical coal getter. A cutting of 270 square feet was made by the two men in charge in three and a half hours. In addition, the installation supplied engine houses, bank heads, and all the sundried with light, and the operations demonstrated that in the Nova Scotia mines, electricity, as a coal getter, is efficient, even in the remotest workings of a colliery. As a test case or experiment this is important to the scientific and mining world at large. By the application of such machines under certain conditions, not only may coal be cheaply procured and reduced in cost to the ordinary consumer with dependent industries, but the incidental dangers, risks, and general expenses of a large colliery must perceptibly decline. However, this is a style of coal cutting which must be certainly adopted. Personally, I am not in favor of individual collieries effecting the installation of electric plant for such purposes upon their own responsibility. This is rather a department of colliery economics in which colliery owners may effect the truest and most lasting economy by continuation and installation of a powerful plant at some central part, from which the power could radiate into the several pits. Of course this has its drawbacks, such as adjusting the proportion of power and cost which should be allotted to each mine, and undoubtedly the principle of one common machine has been already tried and discarded, as in the instance of the old pumping station at Wallsend, England, to the maintenance of which the adjacent pits contributed. Moreover, as an industry, coal mining will not always bear the cost of electric installation for cutting purposes in each individual mine. The cost of dynamos, wires and maintenance, are items which compare unfavorably with the economical steam engine, and a staff of electrical engineers is decidedly more expensive to maintain than a staff of colliery engineers. This ought to be clearly understood at this era of revolution in machines as applied to economic mining. Coal being an article of universal need is necessarily marketed at prices within the reach of the common consumer, who, as a rule, is by comparison not opulent, and the realized prices frequently do not leave sufficient profit margins to reduce the application of electricity under a system of rival installation to a practical possibility. In this coal mining differs from gold mining, for, as is well known, the latter industry will bear almost any outlay that is at all reasonable. Rather than any misconception upon this important item in colliery economics should attain, I would say at once that even under circumstances of a central installation of electrical plant for generative purposes—when distant from the centre of application the steam engine is undoubtedly more economical—adjacent supplies of fuel provided—than electricity can ever be and for the reasons alluded to above, i.e., cost of material, maintenance, higher skilled labor, etc.

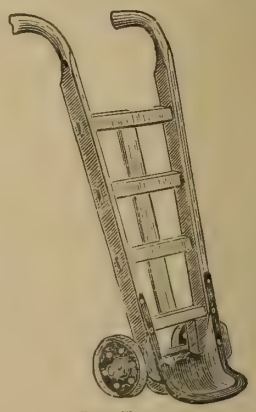
At the Mining Congress held in Montreal early this year, at which the American and Canadian mining engineers united upon the platform of scientific research if antagonistic in subjective political issues, this matter appears to have been liberally discussed, and a similar conclusion arrived at, in spite of the evidence in favor of electricity then introduced. The common idea of the delegates was that unless some adjacent and central locality for the generation of electric power could be adopted in the Nova Scotia coal fields, there was no practical justification for such an expensive industrial revolution They apparently and with justice proposed that the change should be effected by the slower process of evolution, and rightly believed that so long as a coal industry is as advantageously situate as that of Nova Scotia, the issue of electrical coal cutting is of subjective importance to other more vital problems peculiar to coal mining. This is exactly so. As coal industries grow old, as pits deepen and workings extend, some mechanical devices become very necessary to enable the industry of coal mining to be carried on in a profitable manner. From this point of view electricity as a coal cutter is of far greater importance to our home than Canadian mines, and it is in the former that the graduation should take place.—C. Ochiltree Macdonald in the Critic.

THE TRAVELERS WILL DANCE.

The Toronto City Travelers' Association met on Friday night, President Owen in the chair. Several new members were introduced and a number were balloted for and elected. It was decided to hold the annual ball December 29 in Confederation Life building. Ben. Dack of Warren Bros. & Boomer is chairman of the ball committee, and E. N. Tyrell of Lyman, Knox & Co. is secretary. The Commercial Travelers' Association will be in session in Toronto December 29, and a good many of the members of that organization are expected to grace the ball with their presence.

WAREHOUSE AND BAG TRUCKS.

There are trucks and trucks. Every man who uses them or sells them knows this. H. S. Howland, Sons & Co. are putting a truck on the market which is claimed to be of a



Bag Truck.

somewhat superior quality. It is turned out in two styles, one being for ordinary warehouse purposes and the other for bags. The accompanying cuts convey a good idea of the appearance of the respective trucks. The warehouse truck is made in three sizes rang-



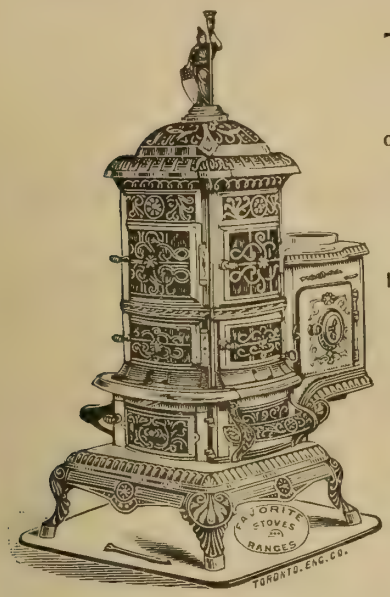
Warehouse Truck.

ing in weight from 36 to 66 lbs. Length of handles are from 4 ft. to 4 ft. 7 inch; width of nose 13 inches to 15¾ inches. The bag truck has handles 3 feet 6 inches, nose 11¼ inches wide, and its weight is 29 lbs.

"THE RIVAL FAVORITE"

SELF-FEEDER FOR HARD COAL.

One Size With Oven. Two Sizes Without Oven.



The most popular of the . . .

"FAVORITE" LINE

Has no equal at the Price.

Orders should now be sent to the undersigned, and will have prompt attention.

We now have full stocks of these popular Heaters and can ship all orders same day as received. Please let us hear from you either by wire or by letter.

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BROCKVILLE, ONT.

Successors to the business of the Chown & Cunningham Co.

. . ELEY'S . .
CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. Wholesale Only.

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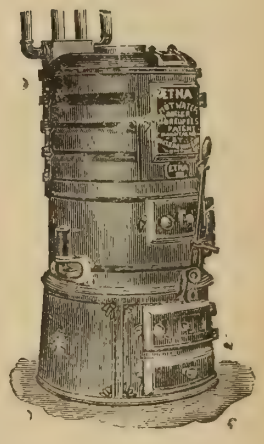
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Hot Water Heater . .

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Its working satisfaction in every particular. **Write for Price List and Testimonials.**

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J. H. FARR & CO. MANF'RS OF **FINE VARNISHES**

Shellacs, Japans, Asphaltums, Oil Soap, Roofing and Paving Pitch, Tarred Felt and Building Paper.

Importers and Dealers in Bronze Powders, Gold and Metal Leaf.

8 to 16 MORSE STREET, - TORONTO, ONT.

THOS. FIRTH & SONS, Ld.

Best Crucible Cast Steel.

STEEL, PEECH & TOZER, Ld.

Bessemer Steel,

Open Hearth Steel.

Agents,

James Hutton & Co.

MONTREAL.



Ontario Nut Works, Paris

BROWN & CO.

Manufacturers of

All sizes of Hot Pressed Nuts, Square and Hexagon



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—
56 and 28 lb ingots, per lb .. 21, 22
Straits ..... " 20½, 21

Tin Plates—*Charcoal Plates, Bright.*

	Per box
M.L.S. equal to Bradley	
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 00 4 25
I.X., "	5 00 5 25
I.X.X., "	6 00 6 25
I.XXX., "	7 00 7 25
D.C., 12½ x 17	3 75 4 00
D.X., "	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—	
I.C., usual sizes	4 00 4 25
I.C., special sizes	5 00 5 25
B.V. Grade, I.C., usual sizes	4 85 5 00

Note.—Round lots of 14x20 might be purchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—	
I.C. 20 x 28, 112 sheets	7 50 7 75
I.X. Terne Tin	9 50 9 75
Old process I.C.	.... 13 00
" " I.X.	.... 16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
I.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6½ 6¾
26 "	6¾ 7
28 "	7¼ 7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

¾-inch	10½c
1-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
1/16 "	2 35
⅜ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2½, 2¾
26 "	2¾, 2¾
28 "	2½, 3

Canada Plates.

All dull	2 65
½ polished	2 75
All Bright	2 90

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head

16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾

Gordon Crown—

16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4½ 4¾
" ⅜ " "	4¼ 4½
" 7-16 " "	4 4¼
" ½ " "	3¾ 4
" ⅝ " "	3½ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B.S "	0 11½ 0 12½
Lake Superior	0 12¾ 0 13¾

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 18 0 19
" 35 to 45 " "	0 16 0 17
" 50 lb and above per lb	0 15 0 15½

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelte .

Foreign, per lb	0 04¾ 0 05
Domestic "	0 04¾ 0 04¾

Zinc Sheet.

5 cwt casks	0 05½ 0 05⅝
Part casks	0 05½ 0 05⅝

Lead.

Imported Pig, per lb	0 03 0 03½
Domestic "	0 03
Bar, 1 pound	0 04½
Sheets, 2½ lbs, sq. ft, by roll	0 04½ 0 04¾
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04½ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 15 0 16
Standard	0 14 0 15
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 12½
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do. "	4 75
No. 2 Do. "	4 50
No. 3 Do. "	4 25

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 00 1 20
2nd qualities "	0 90 1 00
Barn (in bbls)	0 80 0 90

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red, (best) " "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " } " "	1 25 1 90
Canadian " }	
Paris Green, per lb	0 13½ 0 15
Burnt Sienna, pure, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure, 8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra "	0 90
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 85
No. 1 Carriage "	1 30
Gold Size Japan "	1 00 1 20
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40
White Shellac	2 25

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 44 0 46

Castor Oil.

Best, per lb	0 07⅞ 0 08

Cod Oil.

Cod Oil, per gal	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue—F. LePage's, dis. 20 to 25 per ct. off list; Munn's, dis. 25 to 30 per cent. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 3 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, eacn 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardin Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per cwt 0 60 0 65
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.25	.....	1.75	
26 to 40	1.40	2.40	2.00	
41 to 50		2.70		4 50
57 to 60		3.10		5.00
61 to 70		3.40		5.50
71 to 80		3.70		6.25
81 to 85		4.10		7.00
86 to 90		4.50		8.00
91 to 95				9.00
96 to 100				10.00

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0
Enamelled " 0 55

Grindstone Fixtures.

P. S. & W., per doz 3 89 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb . 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C.&B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

NEW ARRIVALS

30 Cases CUTLERY AND GUNS

ALL NEW GOODS.

Finest Finish. Best Value.



NEW ARRIVALS

20 Casks Cattle and Trace CHAINS

10 Tons Coil Chain.

Five Cars Window Glass.

Bowman, Kennedy & Co., London, Ont

Wrought Hooks and Staples, Amer- dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 50 to 55 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes.

F.O.B. Toronto & Hamilton $3 80
Snow, " 3 90
F.O.B. Montreal 15c. less, and London 5c. more than above.

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   - Basis—50 to 60 dy..... 2 30
   - 40dy..... 2 35
   - 30 dy..... 2 40
   - 20, 16 & 12 dy..... 2 45
   - 10 dy..... 2 50
   - 8 & 9 dy..... 2 55
   - 6 & 7 dy..... 2 70
2. American Pattern Only
   - from 4 to 5 dy 2 90
   - 3 dy. (lath)..... 3 30
3. Canada Pattern Only
   - from 4 to 5 dy 2 80
   - 3 dy. (lath)..... 3 20
   - 3 dy. A.P. Fine 3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 60 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, 1bs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 55 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9	10½
¼, 5-16, ⅜ in.....	9½	10¾ 11
Cotton, per lb.....	18	20
New Zealand	8½	9
Russia Deep Sea, per lb..	12¾	13½
Jute ..... " ...	06¾	07½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B. S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 special brands net price.

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Sapolio

In ½ or ¼ gross boxes, per grs. 11 30

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enanelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net list.
Canadian 10 to 15 per cent dis.

Tinware.

Stamped, dis. Assn list, 70, and 12½ per cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ p.c. to 35 p.c
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9 00

Twines.

Bag, per lb..... 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 50
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50

Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart
" 4 " 4 & 6 " "
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¼ 4¾ 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p.100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR — SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR — WM. ROGERS, KNIVES, FORKS, SPOONS

Manufacturers of the

Finest Quality Electro-Plated Ware.

And Sole Manufacturers of the Celebrated

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager.

PORTLAND CEMENTS

BEST ENGLISH BRANDS.

Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.

FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,

CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

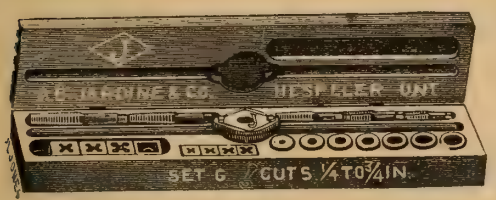
Wm. McNally & Co

MONTREAL.

None Genuine without this Brand



Stamped in head of Every Package.



SAW GUMMERS.

Price $15, complete.

Will gum any cross-cut saw ; anyone can work it. There is paying work for a saw gummer in every town, village or cross-roads in Canada

A. B. JARDINE & Co.

Manufacturers of Blacksmith's Tools and Tube Expanders,

HESPELER, ONT.

Do we make any other Skates besides our

GENUINE ACMES?

Well, We Rather Think So!

What About our Hockey? The most elegant and suitable skate for the purpose ever made.

What About our Racers? Made with wood tops and extra light runners—the only way in which lightness, combined with perfect rigidity, can be secured. Special system of strapping. The leading racers use wood-top skates. Why? Because they know from experience they are the best.

What About our Skeletons? For Rink use the most in demand. Welded iron and steel blades. Plain or nickel-plated.

Why have we secured first honors at Philadelphia, 1876—Paris, 1878—London, 1886—and now Medal and Diploma World's Columbian Exposition, 1893? Because of the superiority of goods exhibited, which are the same as those we are shipping our customers daily.

PRICE?—Ask your jobber about that, and you will find they are quite as cheap as the inferior makes.

THE **Starr Manufacturing Co., Ltd.**

WORKS—Dartmouth. P. O. ADDRESS—Halifax, N. S.



You will Insure Success

IN THE

STOVE

Business, by selling



"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.



The Gurney-Tilden Co. Ltd.

Successors to The E. & C. Gurney Co.

HAMILTON - - ONTARIO.



Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St., Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 x 4 Barb
Plain Twist and
Strip Fencing

And Staples for same.

Write for Prices and Discounts.

DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

The "Pittsburgh" Lamp

: : GETS : :

THE PREFERENCE

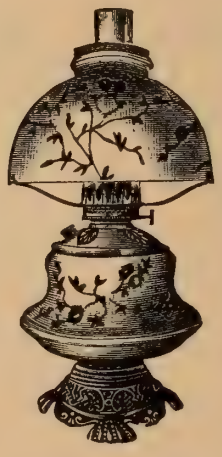
Because

It is A 1

It gives the best light

It saves trouble in cleaning

It suits all parties



ALL GOOD DEALERS KEEP THEM

Write for Primer

Gowans, Kent & Co.,

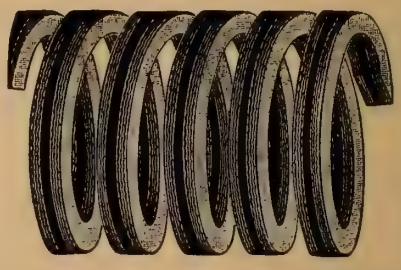
Sole Agents for Canada. TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
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"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4. 5-16, 3-8, 7 16, 1-2, 9 16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

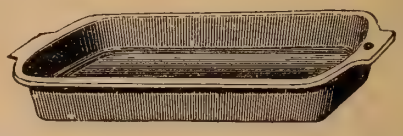
Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., Toronto.

"The Seamless Flanged Drip Pan"



Improved Rolled on Edge.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife to cook or lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The improved rolled on edge making it easy to handle.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

Write for Discount.

SIZES.....	8 x 10	8 x 14	10 x 15	12 x 17
Per Doz.....	$1.91	$2.33	$3.20	$3.73

THOS. DAVIDSON & CO., Montreal, Can.

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, DECEMBER 9, 1893. No. 49.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

MAGNOLIA METAL CO.,

London Office: 75 Queen Victoria St.
Chicago Office: Traders Building.
Montreal Office: H. McLaren & Co., Agents

Owners and Sole Manufacturers,
74 Cortland Street, NEW YORK.

LOOKING FORWARD

Having practically finished our work for 1893 we are now all actively employed with preparations for **1894**

WHERE it is possible to make improvements in any of the departments of our business this is now being accomplished. We will add several new lines for next season, and are also paying special attention to our sample cards and advertising matter in view of pushing with greater energy our well known

SPECIALTIES:

Adamant Floor Paint,
Green Seal Liquid Colors,
Green Seal Lead,
Carriage Gloss Paints,
English Ivy Green,
Blundell's Enamel,
Mander Bros. Varnish, Etc.

Looking Backward

WE have every reason to feel satisfied and proud of the success we have attained in our business, thus far. Our progress has been rapid and we believe is due to the good quality of the goods we supply. Our customers have come to know that our goods are at all times reliable and just what is represented. It will be our constant aim to always deserve and increase our reputation in this direction. . . . . .

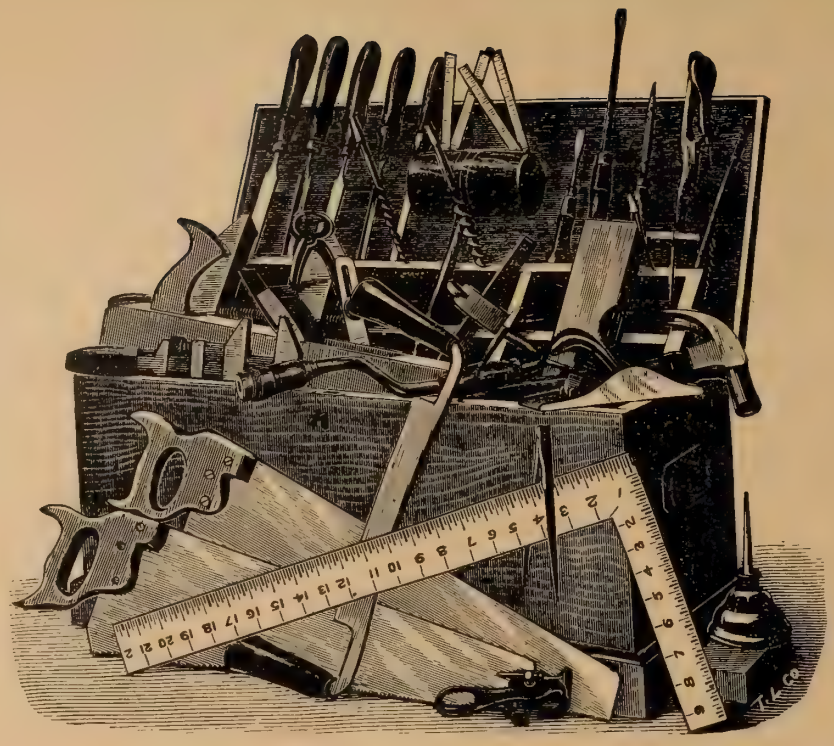
Walter H. Cottingham & Co.

Fine Paints and Varnishes. MONTREAL

BOYS' . .
GENTLEMEN'S
AND
MECHANICS'

TOOL

BOXES



At $5.00 and $7.50

$10.00 and $15.00

$20.00 and $25.00

WRITE FOR

Price Lists

AND

DISCOUNTS

RICE LEWIS & SON, Limited

General Hardware Merchants, TORONTO

Copper Cider Kettles

(BRAZED AND HAMMERED.)



PLATE 237.

PRICES ON APPLICATION. CORRESPONDENCE SOLICITED.

MANUFACTURERS OF

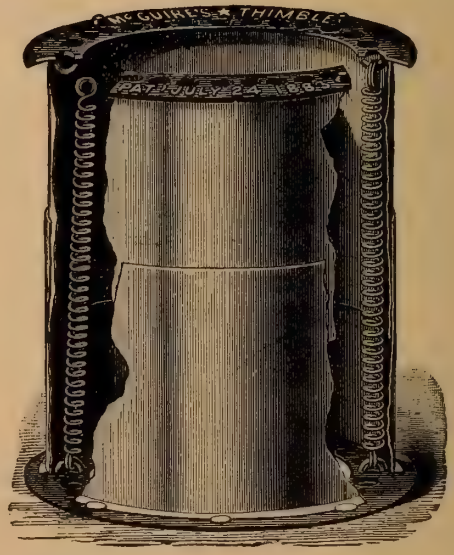
Brewers, Distillers,
Confectioners . . .
Varnish Makers
Plumbers and Marine

Copper Works

The Booth Copper Co.

Formerly
BOOTH & SON.

122 Adelaide
Street West, TORONTO



THE ABOVE CUT REPRESENTS THE

McGuire Patent Stove-pipe Thimble

It is the same cut we have used in advertising and illustrating this Thimble for the last eight years. We desire to inform our customers, and the trade in general, that we have been and still are the sole manufacturers of this Thimble in Canada, the reputation of which is so well established. No other persons whatever have been licensed, under the patents covering this Thimble, to manufacture it. Anyone infringing will be prosecuted. And to beware of those who represent they sell McGuire's Star Thimbles, who have no right whatever to manufacture the same and cannot possibly supply the genuine article.

Kemp Manufacturing Co.

TORONTO, ONT.

HARDWARE

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, DECEMBER 9, 1893 No. 49

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas.

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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No age probably in the world's history has been more prolific in invention than the present. One of the features of the inventions within the last few years has been in regard to the nickel-in-the-slot machines. They began, if we remember rightly, with the chewing gum. Now they are utilized for all manner of things. In one machine you can drop a nickel in the slot and get a newspaper. Do the same in another and you get a cigar. If you happen to be in some places in England you can get a cup of coffee on the same principle, while visitors to the World's Fair will remember the multiplicity of mineral water fountains there, out of which could be got a tumbler of sparkling aqua by simply dropping one of Uncle Sam's nickels in the slot. Even your boots, we are told, you can get polished in some places by this ingenious contrivance. Among the latest extensions of this principle is to the regulation of gas fires. It is a Liverpool hotelkeeper, we are told, who has been experimenting in this direction. The system is applied to a gas fire in the grate. When it is found necessary to raise the temperature in the room a penny is dropped in the slot and on is turned the gas in the grate. The experiment has been tried in one bedroom for a year, and so satisfactory has been the result that it has been decided to put machines in every bedroom in the house.

* * *

The efforts of electricians in the past in regard to electrical locomotion has been mostly in perfecting contrivances for passenger traffic. Much has been accomplished in that direction. Now they are seemingly finding time to pay more attention to the matter of carrying freight. In London, England, electrical parcel cars, somewhat resembling in shape the post vans, are to be launched upon the streets. The novelty in the construction of the cars, we are told, consists in placing the accumulators underneath and outside the body of the vehicle. It is estimated that for every mile run by an omnibus of one of the great companies the cost for horse traction is ten cents, while the cost of running an electric car would be just one-half that figure. The accumulators have been made so that they can be charged with electricity sufficient to last four hours. Storage electricity has already been applied to private carriages; we had ample proof of that at the World's Fair. And that it propels street cars every body knows. Why then should it not be used for omnibuses as is proposed in London? In Ottawa the postal authorities have special electric cars for the carrying of the mails to and from the trains. In Toronto the postal authorities assert that the present system of conveying the mail from post office to trains, and vice versa, by horses and wagons is the most convenient. Toronto is not at a standstill in respect to using electricity for carrying freight. The advisability of utilizing the electric service for the delivery of parcels and for sprinkling the streets has been discussed ever since the inception of the present electrical street car system. But the City Council has stepped from the theoretical to the practical in this matter of freight carrying. It has arranged with the street railway company to carry, at night, the garbage collected from different parts of the city to designated dumping grounds outside the city, and the work has already been begun, extended tracks being laid for the purpose. At present Ashbridge's Bay is the site for dumping the garbage, it being the intention to utilize it in filling up the marsh there. The carters who have hitherto been employed in this work are threatening to prevent by legal means its continuance. What grounds they have to rest their case upon we do not know, but it is likely that they, like a good many others, will have to submit to the march of progress.

* * *

Fights, in the shape of strikes, between employer and employee, seldom cause bloodshed, as in ordinary warfare, but it is questionable whether wars during the last half century have caused greater loss of money—yes, and misery too—than have strikes during that period. This thought has been created by a perusal of the statistics issued this week regarding the great coal strike in England which ended last month. The strike lasted 16 weeks, and during that period, instead of mining 63,000,000 tons, as would have been the case under normal conditions, the mines in the country only turned out 39,000,000 tons. Ordinarily 11,000,000 tons are exported and 49,000,000 consumed in England in the period mentioned, bnt during tbe strike only 875,000 tons were exported and 27,250,000 tons consumed. The estimated loss to mine owners, iron masters, railways, etc., was £13,255,615. Consumers paid in increased prices £1,767,000. Iron workers and other artizans lost £18,208,000. The total general loss is placed at $33,231,215. The workers rendered idle numbered 1,008,150, which meant 2,511,425 persons in a destitute condition. What this destitute condition meant no tongue will ever adequately be able to tell. Nor will any statistician be able to figure out all the losses resulting from the strike, or the effect of the evils it wrought, all of which would have been obviated had there been a law compelling the parties to the dispute to submit their difference to some board of arbitration. The strike was settled by arbitration in the last instance, and it could have been in the first if the men had not been so obstinate and re-

fused to consent to its being submitted to arbitration.

* * *

At last a purely business man has decided to become a candidate for the chief magistracy of the city of Toronto. As a rule for some years past our mayors have been recruited from the ranks of either the politicians or the professionals. In most instances both these elements were found reposed in the occupants of the civic chair. The mismanagement and the sins of omission and commission, in a legislative sense, which followed, have naturally led most people to blame the occupants and to seek chief magistrates from the ranks of business men. In pursuance of this object the names of Mr. Brock, Col. Davidson and Mr. Kennedy have been freely canvassed the last two or three years. Last year Mr. Kennedy was formally waited upon by more than one deputation and asked to stand for the mayoralty. But each and every time he refused on the plea of business. The same plea was advanced a few weeks ago, but when his friends became so pressing in their requests, he said he would consider the matter provided a requisition satisfactory to himself was gotten up. His friends then set to work, and on Saturday morning last presented a requisition signed by some 8,000 ratepayers, among whom were the President of the Board of Trade and two of his predecessors in office, and a number of mereantile men, manufacturers, professional men and workingmen. To the prayer of this requisition he acquiesced; and he is now in the field. So far he has it to himself, Ald. Saunders having retired, while the present Mayor has not yet announced himself in either way. It is likely, however, there will be a contest. Ald. Hallam, who said that if Ald. Saunders did not oppose Mayor Fleming, should he run for a third term, he would, and now, rumor says, he will be an opponent of Mr Kennedy if Mayor Fleming is not.

* * *

It is to be hoped the Patrons of Industry will prove more successful meddling in politics than they have meddling in business. When they imagined that one of their missions was to enlighten merchants on what percentage of profit on the invoice price of their goods they should do business they made a most egregious blunder. True they may not yet have realized it themselves, but their victims have, and that without question. In politics, however, they may find a wider and better sphere for usefulness. Their platform contains planks that are commendable, but whether we all realize this or not, one thing nearly everybody will acknowledge: As an independent factor in politics the Patrons can do much good. But like most third parties, the best of the principles they enunciate will be absorbed by one or other of the great political parties, perhaps by both, and then the Patrons as an active factor in politics will themselves disappear. In the Western States, where the Farmers' Alliance, a kindred society, was, and is yet for that matter, so strong, disintegration has already set in, a large proportion of the lodges in Nebraska having already surrendered their charters. It will ever be thus in class legislation.

RESOLVE UPON THIS.

Most people make resolves of some kind or other at the waning of the old year. A good resolve for a merchant to make is to clear off as far as possible all open accounts before the end of the year. The advantage to be gained by putting this resolve into practice is mutual, the wholesaler as well as the retailer being assisted in accomplishing what they all more or less desire—a clean slate to start off the new year with. It may be next to impossible to wipe out all the old marks, but the knowledge of that ought not to deter any one from making the attempt. It is well to have an ideal which always keeps a notch or so above your reach. Every open account means so much additional labor when a new set of books are being opened up. Even if an account is not due it seems a wise thing to try and liquidate it at the end of the year, particularly when by so doing a little extra discount can be secured, for in addition to the latter inducement, it is something to feel that your load will be all the lighter thereby when entering upon the New Year. It is scarcely necessary to add that it is advisable at all times to keep your liabilities down to as small a compass as possible at the end of every month in the year as well as at the end of December.

It is obvious that if the retailer is to wipe off at the end of the year his indebtedness to the wholesaler, he must in turn make a little extra effort to collect accounts due him by the consumer. A common complaint with country merchants lately has been regarding the slowness with which the farmers were paying their debts. And yet it is well known that most farmers have stored up in their barns grain which they could, if they would, turn into cash; but the trouble is they will not. They are waiting for the higher prices which they are hoping will materialize some of these days, although there are but few outside the farmers themselves who share with them this hope. It was thought long ago that the bottom had been touched as to prices, but it was not. And now a good many people have given up guessing when they will. If the retailer held one or more of his staples in anticipation of an advance in prices, and by so doing was unable to meet his liabilities, it is obvious what position his creditors would assume. They would put the legal machinery to work in short order and force him either to pay his debts or assign. The legal machinery may not be so effective in the retailer's behalf as it is in the wholesaler's; and even if it was it is not likely it would be used much, judging from the past. But what most retailers need is to be a little more aggressive in trying to collect their accounts. They should remember that they are not asking a favor when they request a man to pay an account that has matured. They are seeking the collection of money value for goods given in trust with the expectation that the customer was honest and would pay for them. The merchant who had goods to sell and would not sell them at the market prices, notwithstanding that his creditors were waiting for their money, would scarcely presume to account himself honest; neither can the farmer who, while he has the produce which he can at any time turn into cash, refuses to do so and compels the retailer to wait month after month for his money. What is sauce for the goose is sauce for the gander. And the retailer needs to apply a little of the same sauce to the farmer as is dealt out to him by the wholesaler.

CANADA AND AUSTRALIA.

The news so far received from the Hon. Mr. Bowell, our Minister of Trade and Commerce, who is at present in Australia, is not of a very definite kind. A well known member of the Montreal Board of Trade stated last week, however, that he had been informed that the Minister's letters intimated that the prospects were encouraging The favorable attitude of the Australian press in their comments on the objects of Mr. Bowell's visit is considered to be a good sign also. They point out that Mr. Bowell's visit must of necessity be a short one, but that during the time at his disposal he will no doubt be enabled to arrive at a pretty shrewd conclusion what goods they (the Australians) require which we are in a position to supply. With regular steam service established the Australian press consider that facilities not hitherto enjoyed will lead to profitable cultivation and development of the commercial relations between the two great colonies of the Empire. They remark that already Australia takes quite a quantity of Canadian foods, but that they are secured through the middleman in the United States, but that with direct commmunication this will cease. The fact is mentioned that Aus-

tralian exporters of wool, fruit and mutton are taking quite an interest in the Canadian's visit; in fact, in a word, the entire tone of their comments are favorable. As both Canada and Australia are anxious to deal with each other, and as the desited steamship service is already present, it seems to be only a matter of time before a brisk inter-colonial trade is assured.

A DANGEROUS RIVAL.

The Montreal correspondent of HARDWARE was shown the other day some interesting statistics which go to show that Germany in recent years has been making rapid strides in the iron and steel industries. The statistics, if correct, prove unmistakably that German developement in this respect has been steady and continuous, and that the products of the country in the lines of iron and steel are broadening their marketable area and competing successfully in many of the markets of the world with those of Great Britain itself. Successful competition with the latter country in iron and steel has usually been set down as a regular problem. British ironmasters have had the advantages of long experience, cheap and abundant coal and practically unequalled shipping facilities. In skilled labor Britain has always been at the top notch; in fact, all things considered, it should be seemingly secure from all continental rivals. The Board of Trade returns, however, from which the figures under discussion were secured, tend to dispel this idea. English reports of railway iron have fallen off during the last few years from 1,000,000 tons per annum to 467,986 tons in 1892, while German exports of the same prodct, which were insignificant in 1880, have risen to 198,421 tons in 1890 and 233,943 tons in 1891, with a total output of pig and finished iron and steel amounting to an average per year of 1,050,000 tons. In fact a comparison of the progress made by the two countries from 1880 to 1892 reveals the fact that while England shows an increase of only 70 per cent., Germany during the same period records a net growth of 400 per cent. Of course it has to be borne in mind in this connection that Great Britain has almost approached the maximum of perfection and capacity in the iron trade, whereas Germany has a long way yet to journey. Still the figures speak plainly that the latter country is not loitering by the way to any great extent. This growth in the importance of Germany is attributed to two causes. according to information secured by the United States consular bureau. First, the introduction of the basic process, permitting the use of cheap and abundant native ores by German makers of iron and steel; and secondly, the undoubted and unrivalled chemical skill of the Germans, by which they have saved the bye products of coke manufacture, thus deriving a revenue from processes which in other countries entail a waste of material and a financial loss. The nature of this process is too technical to permit of mention here, but it is more or less familiar and does not require detailed explanation. Suffice it to say that, according to the statistics, the profits derived from subsidiary products of coke manufacture are placed as high as 40 per cent., which of course goes to the credit side of the German account for its metal industries.

RUSSIAN COMPETITION IN OIL.

A recent trade return of the British Board of Trade refers to the question af American vs. Russian petroleum, stating that the Russian Ministry of Cinance publishes in its official gazette the statement that negotiations are under way with a view of abolishing, by agreement, the competition in the markets of the world between Russian and American oil. A meeting of Russian petroleum proprietors was held at St. Petersburg during the fall to discuss the matter and establish a Russian petroleum trust to regulate the production and exportation of petroleum. This trust is to make offers to American petroleum dealers on the basis of offers made by the latter to the former whereby an arrangement will be made by which the supplying of the product to the different countries of the world is to be divided between American and Russian petroleum exporters.

The Montreal correspondent of the paper obtained some statistics in relation to the petroleum trade which will be interesting to know if the above scheme is consummated. In 1892 Russia supplied the entire Australian demand tor petroleum, ninety-nine per cent of the Turkish consumption and sixty-two per cent. of the Indian. These are the only three countries where Russian oil had the best of the competition. In China and Japan, which geographically are in her radius, the consumption of American oil is seventy-one and seventy-five per cent. respectively, and in all the others American oil had decidedly the advantage in 1892. Spain and Portugal took no Russian oil whatever during the year in question, while in Germany, Belgium and Holland American oil supplied 90 per cent. of the demand. England took sixty-nine per cent. of American oil, France seventy-seven, and Italy sixty-two. From these figures therefore Russian petroleum exporters have the most to gain by an agreement of the kind proposed, and if it is correct, as stated in the return, that American dealers have made propositions, it must be solely on the assumption that at some future date the Russian petroleum industry will be developed to a stage where its competition is to be seriously feared.

TALKS WITH RETAILERS.

"I think that last Friday and Saturday were the busiest days that we have had for some time," said F. Moses, Yonge street, Toronto. "We sold a lot of stoves since the cold weather set in, but the demand is beginning to slacken. We have had a large demand for snow shovels, and the long-handled black iron ones seem to be the most saleable. We are still selling quite a few ranges, and have a good demand for the Moses combination, in which we have placed a new and improved fire pot.

"Yes, I think this cold weather ought to brighten up things a little," said Mr. Whitten of King street, Toronto. "Prices have been low for produce, and the farmers have been hanging out for higher prices, but now that the cold weather has come, we will no doubt see many more in town in the coming week. No, I do not handle skates. I am in the house furnishing and tinware business and encroach as little as I can on other lines. I wish that I could say that everyone did the same."

Retail hardware merchants in the vicinity of the St. Lawrence market report business to have improved greatly within the last week. Since the cold weather has set in there have been a great many more farmers in the city, and merchants are consequently reaping the benefit of their trade. There has already been some call for skates and sleigh bells, and hardware men are exhibiting a great variety in these lines.

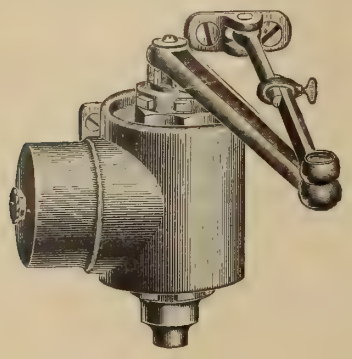
W. J. Burroughs, plumber, steam and gas fitter, Queen street west, Toronto, has been awarded the contract to place the steam, gas and plumbing fittings in the St. Lawrence branch of the Bank of Commerce which is being built at the corner of King and Jarvis streets, Toronto.

A BIG BRIDGE.

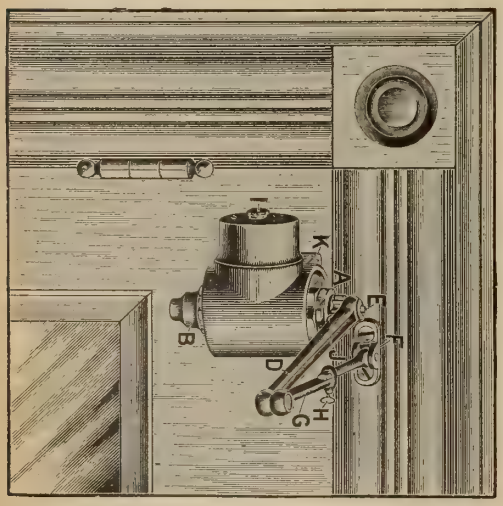
A commencement has been made with the construction of an important work which the "Annales Industrielles" describes as the greatest viaduct in Germany. It is situated on the Solingen-Remscheid Railway, which has been laid out chiefly with the object of serving one of the most important of the mining centres of that country. The viaduct has a total length of 1,600 feet, and is built entirely of iron. Its centre span consists of an elliptical arch 550 feet between bearings and 350 feet above the level of the ground line. Iron piers founded upon enormous masses of masonry support the remaining spans, which are six in number. Over 4,000 tons of iron are used in the erection of the structure, and the masonry foundations amount to 150,000 cubic yards. Side arches are provided to allow of the roads which follow the contours of the valley passing underneath the viaduct. In order to place the central span in position it will be necessary to erect a temporary staging nearly 100 feet in height. The estimated cost of carrying out this work is $625,000.

AN EVOLUTION IN DOOR SPRINGS.

In the march of invention there does not appear to be many things that have been overlooked. Door springs, at any rate, have not. The day when the piece of string with weight attachment was in common use was not so very long ago, and yet when one looks at the modern door spring and check, the jump is so wide it seems surprising that such a revolution could have been secured in so comparatively short a space of time. This thought strikes one particularly when



examining the Corbin Liquid Door Spring and Check, now being put upon the market by Rice Lewis & Son, Ltd. An idea of its character may be gathered from the accompanying cuts. Its superiority over many other kinds is marked. It is a perfect cushion and has complete control of the door no matter in what position it may be placed. Every lady knows that with the ordinary air chamber spring the check to the door comes suddenly, causing the door to vibrate considerably. This must not only



in time injure the door, but a heavy strain is brought upon the hinges as well. Then there are the same results, only in a lesser degree, when opening the door. All this is obviated by the Corbin spring, it having complete control of the door throughout the whole time it is swinging to a close, and the speed at which it travels is regulated by the small screw which can be seen at the left of the accompanying cuts. The liquid controlling the spring is said to be a glycerine compound.

THE ZINC INDUSTRY.

Mr. A. Means, of Peru, Ill., an authority on the zinc industry of this and other countries, has laid before the Ways and Means Committee of Congress some interesting statistics relating to the world's zinc production, the importance of the industry in Missouri and Kansas, the effects of the present and previous tariff upon the price of the product, and the wages paid the employes in zinc smelters and mines in this country and Europe. In 1892, he says, the world's production of spelter amounted to 365,518 tons of 2,240 pounds. Of this the Rhine district and Belgium contributed 143,505 tons ; Silesia, 87,760 ; Great Britain, 28,590 ; France and Spain, 18,462 ; Austria and Poland, 9,290 ; United States, 77,911. It will be seen that of the world's product Great Britain produced 7¾ per cent., the United States 21¾ per cent., and the Rhine district, Belgium and Silesia 63 per cent. ; that the latter are the largest and most important zinc producing countries, and that the competition for the American product in our home market comes from these lowest wage countries of Europe. In the United States the chief supply of zinc ore is the Joplin district of Kansas and Missouri (which has been developed since 1872, and in 1892 produced 133,316 tons), and from the Wisconsin mines. Arkansas supplied about 350 tons, valued at $7,200, in 1892, and with adequate transportation facilities will doubtless develop extensive mines. The total production of lead and zinc in the two States—Kansas and Missouri—in 1891 was valued at $3,840,480, and in 1892 at $4,580,787, and of this amount lead was less than one-third of the value of the zinc produced The two ores, being associated in the mines, are separated by machinery and are smelted by a different process, that of lead being simple and comparatively inexpensive, while that of zinc is by sublimation in clay retorts, containing only forty to forty-five pounds each of prepared ores, requiring a large amount of fuel to volatilize every twenty-four hours, after an expensive operation in preparing the ores by crushing and calcining for the furnaces, thus requiring a large number of skilled men per ton of product in the several processes of smelting. The imports of zinc increased from 5,447 tons in 1867 to 8,631 tons in 1873, valued at $1,103,918. In 1873 the home product was 6,556 tons, but during the next six years it increased rapidly, owing to the development of the Joplin district mines, and in 1879 was 18,750 tons, while the importations decreased to the value, in 1879, of $109,718. At the same time the price declined from $7 per 100 pounds in 1873 to $5.03 in 1879, the duty being 1½ cents per pound. In 1890 the McKinley bill increased the duty ¼ cents per pound, and the production in this country was increased 27 per cent. in 1891 to 72,176 tons, and in 1892 to 77,911 tons, while the imports declined to the value of $46,016. In 1892 the value of spelter exported was $878,529, and the average price in New York for the year was $4.63 per 100 pounds. The labor cost, says Mr, Means, is 92 per cent. of the total cost of production of zince spelter. In Silesia, in 1883, the average wages paid in zinc mines was $96.04 per annum; in the zinc works $140.81 per annum, and in the sheet zinc mills $153.64 per annum. In 1892 the wages in the zinc works in Silesia had increased to $163.74, due to the return of the German Empire to protection. In the period from 1883 to 1892 the number of laborers in Silesia increased 20 per cent., while in Great Britain the production decreased 50 per cent. because of the lower wages paid and lower cost in Silesia, the Rhine district and Belgium. In the smelting works of Missouri, Kansas and Illinois the wages per annum range from $474.50 to $795.70, according to occupation. "Should the duty be reduced," says Mr. Means, "the foreign syndicate of Silesia and Belgium will practically control the American market, and the imports, which now fluctuate greatly, will steadily increase until the smelter works in the West will be obliged to close or reduce wages, as will the mines and miners in Missouri, Kinsas, Arkansas and Wisconsin."—Hardware Reporter.

MAKING BRICKS OF SHALE.

At a recent meeting of the Association of the Technical Mine Managers, held at Essen, Herr Schumacher Dorsten made an interesting communication on the utilization of coal measure shale for making bricks. The shale is first broken by a stone braker, into pieces the size of a fist, which are then passed between crushing rolls. The product is fed by a continuous process into a kind of pug mill which tends to equalize the composition, from 5 to 9 per cent. of water only being added, according to the quantity of moisture already present in the shale. The semi-plastic mess is then fed into a mold, the contents being subjected to three blows from a tup or monkey weighing 400 kilogs. (800 lb.) ; which is raised by steam pressure, and falls apparently from a slight height only. The brick is pushed out by the machine, and the mold is refilled automatically for a fresh brick. All these actions are performed by the machine, which resembles a drop hammer, although called the Dorsten press. It was not originally designed for the present purpose, but has been adapted to it, and appears to answer admirably. Both the mold and the tup are heated by steam for causing the brick to leave the mold more readily.

At the annual meeting of the Farmers' Binder Twine Company, held in Brantford last week, a dividend of 10 per cent. was declared and a handsome sum placed to the rest account.

HOW TO TREAT CLERKS.

It is a most remarkable fact that almost every man who has made a marked success of his business has possessed and exercised the ability to gather and keep about him good assistants. To be able to do this is one of the richest faculties a business man can possess. A man's start and early growth in business depends entirely upon himself; but as business extends duties multiply, and he is forced sooner or later to divide his duties and intrust some of them to hired help. To know just the right kind of help to select, what duties to place upon it and how to treat it to secure his best services, is something that every business man must possess.

A careful study of this subject forces upon one the fact that, while all men have their own peculiarities, which must always be taken into consideration with them as individuals, yet there is a certain likeness in human nature that makes it possible and necessary to take a certain position regarding the treatment of those in the employ of another; e.g., it would not be practicable for an employer to insist upon his bookkeeper using some set rule to calculate the correctness of an invoice—how he does it is a part of his education—but it is perfectly right for an employer to insist that it shall be calculated correctly. Neither would it be policy to set up certain rules as to how a salesman shall make a sale of goods, but it is entirely correct to require that if he sells he must do so at a certain price. How he does it is characteristic to himself and must be left very largely to him, but that it shall be done, and with certain results, is something that an employer has a perfect right to require.

All men are engaged in business to make money, and the sooner an employer balances everything with this final end in view the better it will be for his best interests. Clerks should not be an exception to this rule, and no business man should keep in his employ any clerk that does not earn more than he receives, and it should be the aim of every clerk to serve the best interests of his employer, and the best service can only be given when a clerk works as if his employer's interests were his own. Few clerks work from this standpoint, but it is the only true one to work from. The rapid promotion of the clerk who is not afraid to work, who is constantly suggesting where small leaks may be stopped, expenses lessened, trade improved, business extended, is ample testimony to prove the truth of this rule—a clerk of this stamp is worth a dozen of those whose main aim seems to end in putting in so many hours for so many dollars.

While it is true that the value of a clerk to his employer lies mainly in himself, yet very often the employer himself is very largely to blame for the lack of results from his help. Instances come to mind of a young man who has left the service of one employer for that of a competitor. With one he could make but little progress, with the other his promotion has not only been rapid, but well founded. Why should this be so? The only answer that seems reasonable is: The one did not appreciate his ability and study to draw out his good qualities, whereas the other did.

Perhaps one of the most important points in dealing with a clerk is to have a definite understanding at the outset of just what is expected from him. Give him a definite field to work in and then insist upon results. Give him all the encouragement possible, but do not lose sight of results. They alone count in business. By giving him a definite field to work in the main cause for jealousies among clerks has been removed. Yet these outlines must be elastic enough to permit of suggestions that will be to the interest ef the business. Throw the responsibility of a certian department upon a clerk. Hold him accountable for its success, and then, and not until then, can his ability be fully measured. No business man can hope to aehieve success without some definite end in view. Neither can a clerk.

A business man should command the respect of his employes. It is much pleasanter to receive a word of encouragement from an employer who is thoughtful in his suggestions, sincere in his actions, thorough in his work and careful of his character, than from one who is not. A cold shoulder should be turned to all familiarities from clerks. They should cease at once. They never are productive of any good and certainly do harm. Do not confound being social and being familiar. It is an employer's duty to be social toward his employees, but familiar, never. An employer who is familiar with his clerks is generally not their best friend and seldom commands their respect.

Clerks should feel that their efforts are appreciated, and it is an employer's duty to know what they are doing. Many a faithful clerk has been wronged by an employer not making it his business to know for himself, and know beyond a doubt, where to place the credit for a valuable suggestion. Many times a trusted clerk is less competent than some of his assistants. Many times he takes credit of merits that belong to another, and in return receives the advancement that rightly belongs to an assistant.

Compensation of employees is one of the vexed questions that a business man must contend with. While it is unquestionably an employer's right to say what he can and cannot afford to pay for a service rendered, yet it is his moral duty to allow himself to be influenced in these matters by a strict sense of justice, and justice only. Relationships, friendships, favoritism or sentiment should find no consideration whatever in these matters. When a young man feels that nothing stands between him and promotion except merit, he then has an incentative to push to the front, and it is an employer's duty to see that he has credit for what rightly belongs to him. Perhaps there is no more practical way to solve this question than to have each clerk make a monthly written report of what he has done. Knowing that a report of this kind must be presented to his employer, a clerk's pride and ambition will lead him to make a good record. He becomes careful, thoughtful, ever on the alert to make a suggestion that will help the business, ambitious to produce good results. There is an incentive in these reports to a clerk to do his best. And not only this, the employer also gets better work, gets a better idea of what is being done and knows where to place the credit. An employer who will use these reports, verify them and adopt good suggestions from them, places himself both in a position to compensate his help justly, and to adopt improved methods for his business.

Honesty in a clerk is a quality that cannot be too fully appreciated, but the multitude of cash registers and similar devices in constant daily use testify to the unreliability of help. It is an employer's duty to insure honesty as far as possible, but just how to do it each employer must decide for himself.

Confidential clerks are an absolute necessity in every business, yet how difficult it is to find them—somebody who can be trusted, who is not afraid to work, who watches his employer's interests as if they were his, who has good habits, some one who can be relied upon at any time, who never says a thing is so unless it is so.

The extent to which a business man takes a clerk into his confidence must be decided by himself. There is always the liability of a man's help becoming dissatisfied and going with a competitor. This cannot always be avoided, and it is poor policy to let him know more than is necessary to the proper discharge of his duties. Unnecessary knowledge can do a clerk no good and may do an employer great harm.

In selling goods, clerks should be furnished with a complete list of the prices at which they should be sold. These are the selling prices, and if any special occasion seems to warrant a special concession it should come from the management. What a dealers pays for an article should be kept a matter of confidence to himself and his buyers. This information in the hands of indiscreet clerks would do more harm than good.

When an employer engages a clerk, he agrees to give in exchange for certain services a certain salary. If a clerk insists on his salary the employer has the same right to insist on his services. Punctuality in commencing work should be insisted upon.

Many an order is lost for no other reason than tardiness in opening up. Better be half an hour too early than three minutes too late. Dissatisfied clerks will appear in every business. There is only one of two things to do. Satisfy them or let them go. It never pays a clerk to stay after he becomes

dissatisfied—much less does it pay his employers.

Don't expect to much from clerks. Don't expect that they will not make mistakes. They certainly will, all men do. When they make a mistake, don't forget all their good qualities ; these very often more than offset the other. An employer should never lose control of his temper. Good seldom comes of it—but harm, invariably. A business man cannot afford to give way to his passion. As soon as he does, he loses the mastery of the situation. An employer cannot afford to employ uncivil clerks ; he should insist on neatness, pleasant address ; should discourage profanity, lounging, use of tobacco, drinking, gambling, gossiping. The absence of these qualities, gives character to a house, draws a better class of trade than where they are permitted. A customer never objects to good character, but very often finds fault with the opposite.

An employer should always manifest a personal interest in the private life of his help. It somehow seems to bind the interests of employer and employee more than anything else. An employer who can command both the love and the respect of his clerks can always get better service, more of it, and at less cost than one who fails in this respect.—Fred. Macey in Metal Worker.

MINING IN CORNWALL.

In another column will be found the reports of four of the more important of the Cornish tin mines, showing that their working for the past half-year has given generally favorable results. It may be noted that the success of the Dolcoath mine has lately given an impetus to deep mining in Cornwall. The Dolcoath, East Pool, Tincroft and Carnbrea mines have reached a depth of 425,280,320, and 325 fathoms, respectively, below the adit. The Cornish investor is nothing if not enterprising, and great pluck has been frequently manifested in the persistence with the opening up of certain mines has been carried on in the face of continued want of success. Nevertheless, the development of the mines and the turning of ore in reserve into money in the bank is a process of irritating slowness in Cornwall as compared to the work done in America or Australia. This condition of things does undoubtedly often prevent that waste which characterizes so much of the work done in the Western States, but it also robs tin mining in Cornwall of the attractions presented by investments in mining concerns which make quick returns and large dividends.

There has been more of a tendency of late to keep step with the times, and some noteworthy improvements have been made in the Cornish stamp mills. The visit of Capt. Josiah Thomas to Dakota resulted in the erection at Dolcoath of a new stamp mill of Californian design. This plant has been doing most satisfactory work. It consists of 40 heads weighing 800 lbs. each and falling 9 in., 80 times per minute. The crushing capacity is at the rate of two tons per stamp or about twice as much per head as is done, with the consumption of the same amount of fuel, by the average Cornish stamp. The returns of Dolcoath have been increased from 450 to 620 tons of tin per quarter.

That there still remains much room for improvements is evidenced by the methods employed at East Pool. At this mine 1,000 tons of tinstuff are sent to the stamps every week, yet it was at the last meeting that the suggestion was made that two stone breakers be erected to do the work now done by manual labor. It is time for the Cornishman to wake up, rub his eyes and look around.

Even in Cornwall the low price of silver is depressing mining. The Mexican has a proverb that it takes a gold mine to work a silver one. We may add that it is the product of the silver mines that supplies much of the capital needed to operate the tin mines. It is easy to understand that the depression of the metal market has diminished the profits of those mines which continue at work. The chairman of East Pool at the recent meeting stated that "at least two-thirds of the thirty mines working were not paying costs." But even this is above the general average of metal mining at the present time.

It may be said that the tin industry of Cornwall is yet vigorous, and that when the present cost-book system becomes entirely replaced by the modern limited liability company, when Cornishmen erect machinery and mills that are more up to date, when the Britisher puts his money in the "holes in the ground" of his own country insted of aiding visionary schemes in Kamskatka and Timbuctoo, then Cornish mining will regain an importance worthy of an industry which has been pursued without cessation from the dawn of history until to-day.—Engineering and Mining Journal.

WHERE ARE THE AGED PLUMBERS?

Why do we see so few aged plumbers in our profession ? writes a correspondent of Metal Worker. In speaking of aged plumbers I refer to the journeyman plumber, the every day worker, and not to the boss or master plumber. Being one of the profession I can, to a great extent, explain the reason, having studied the causes that remove the plumber at an early age. From observations and contact with a number of men in our profession, it can be safely said that their short life is to a great extent due to the reckless disregard which they have for their health. From a few of the facts that have a bearing on the above explanation its correctness can easily be seen. There are a number of elements of a poisonous character with which the plumber has to come in contact that are taken into the sestem of the thoughtless mechanic as if they were pure and good for him. The well known sewer gas or air, with the many diseases that mingle with it, that come from all points, the deadly illuminating or coal gas, and the quieting charcoal gas. One of the chief and most dangerous agents is the new lead pipe and sheet lead that he is constantly handling and forcing particles of the metal through his skin and into his blood, along with what he breathes into his lungs. Red lead, white lead and all other filth, of which he has a constant stock under his finger nails, that is bound to be taken up by the blood to help the rest of the poison that is taken up at other points. He breathes the foulest kind of air in filth-soaked cellars under basins and sinks, where dirty housekeepers' rubbish, and frequently garbage, are put. Rats and mice also play their part in impregnating the air. All this and what it implies are some of the reasons why we have so few old jurneymen plumbers. All this to a great extent can be remedied and bring longer life to the plumber. Bring about you all the fresh and pure air possible. Keep the deadly hot air of the charcoal and gasoline furnace away from you. Handle lead pipe with gloves, keep your finger-nails clean, keep all sewer opens closed as much as possible. Never eat with dirty hands. Keep clean overalls, or you will be carrying poison about with you all the time. Keep your working surroundings clean. Eat your meals regularly, masticate your food well, go to bed in time, and last, but not least, avoid liquor. This when mixed with the other poisons leaves the plumber no show whatever for longevity.—Metal Worker.

ELECTRICITY AS A GO BETWEEN.

Some of the men who have been making a study of the problem of transforming the soft, rutty roads of the country into satisfactory hard roads, have decided that the expense involved is too great, and that under the present system it is impossible to put and keep the roads in thoroughly good order, says an exchange. They note, however, the condition of the inhabitants of the State of Illinois, where, in almost every city or town of 4,000 inhabitants, the electric street cars are at work. These roads are not merely city services, but they stretch from the city to the small outlying villages, and afford an easy mode of town coming to the farmers, while at the same time the frieght cars of the line carry in the country produce to the market. The idea with many of the road agitators now is that a system of electric railways should be mapped out for each state, and that convict labor should be employed so that the usual expenditure of road building may be diminished. As all the outlying towns and villages would thus be brought into immediate connection with the centre market, the farmer would be spared all the inconvenience and expense to which he is now put on account of the impassibility of the roads. The promoters of the scheme are more confident than we must confess are we ourselves, that they have found the only and true solution to the ever-present road problem.—Ex.

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Beef, Game and Fish Carvers

Pocket Knives
Scissors
Razors
Butchers' Knives

Dessert and
Table Knives
and Forks
Fruit Dishes

Cruets
Butter Dishes
Pickle Dishes
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Large Asssortment of Goods for Holiday Trade.

Headquarters for Cross Cut Saws, Axes, Handles, Files, Chain, Iron, Steel, Nails and Glass, Putty, etc. . . . . ORDERS SOLICITED.

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Pure Prepared Paints, Carriage Varnish Colors,
Pure "Star" White Lead, Coach Colors, Etc.

Are prepared to offer all their lines at lowest cut prices.

WE ARE NOT IN THE INJUNCTION BUSINESS.

We keep right on selling the finest grade of goods in the market

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The Toronto Lead and Color Co., LIMITED

A SHARPER WHO BUYS KNIVES.

Weed & Co., Buffalo, and perhaps other hardware dealers elsewhere, are looking anxiously for a pleasant-faced man who sometimes answers to the name of Alexandre. Entering the Weed store some days since, he asked his way to the wholesale department, and when there threw off his coat, and began to look about him with a business air. Pocket knives were what he was after, and he picked out a good many, after considerable inspection of the stock. His purchase amounted to something over $50. After giving his order, he remarked incidentally that the goods made too large a bundle for him to carry, but he would take this, and that, and the other thing, picking out the best grades of knives ordered, and these he would carry with him ; the others could be shipped to him at Utica by express. The salesman was agreeable, and the man then suggested that he would give his check for the amount of the bill, and as the salesman was very busy, he notified the bookkeeper that a check for that amount would be presented by the man, and turned to other duties. The check was duly drawn and handed over to the bookkeeper, and the man departed with his bundle of fine knives. It was afterwards discovered that Mr. Alexandre had no account at the bank upon which the check was drawn ; and as yet he has not made a second appearance at Buffalo.—N. Y. Hardware.

PERFORATED SHEET METAL.

The following are some of the many uses for which perforated sheet metal is required, according to a trade catalogue : Corn shellers, corn screens, grain dryers, fruit dryers, malt and sugar corn kilns, wool dryers, wool rinsers, wool dusters, wheat heaters, etc., milk and provision safes, cheese safes, window guards, tree boxes, iron screen doors, shutters and gratings, water filters, vats and tanks, oil stoves, gas stoves, gasoline stoves, vapor stoves, drainers, ash sifters, fly traps, bee boxes and separators, fish boxes and culture, animal traps, dust arresters, ventilators and ventilation of public and private buildings, chair bottoms, seats, paint and chemists' sieves, brickmakers' riddles, foundry sieves, clay screens, fire-proof lathing, ventilated screen partitions, car ventilators, car deck sash lights, air brakes, air compressors, metallic blinds, lard presses, coffee roasters, cooling pans, coffee cleaners and polishers, drive wells, pump strainers, filter wells, dairy and creamery apparatus, cracker pans, bird cages, metalic galvanic belts, physicians' belts, galvanic soles, potato and peach paring machinery, pea sifters, stair plates or treads, metal tags, tree and shrub labels, door and window screen, loco. smoke stack cones, card racks, etc., mining machinery, coal and ore separators, trummels, washers, revolving screens, jigs, stamp batteries, amalgamators, silver reduction and concentrating works, grizzlies, riffle boxes, sluices, coal screens, iron, lead and zinc ore screens, gold screens, silver screens, loco. spark arresters, sand screens, gravel and stone screens, coal and coke works, gas works, water works, glucose and grape sugar works, sugar houses, centrifugals, breweries, distilleries, woolen mills, rice mills, cotton seed oil mills, linseed oil mills, cotton mills, paper and pulp mills,, drainer bottoms, shot works, standard sizes of shot screens, powder works, dye houses, filter presses, flour mills, hominy mills, pearl barley mills, glue and starch factories, fertilizing works, blood pans, canning and preserving works, zinc works, packing houses, fruit packers, threshing machines, fanning mills, mill furnishing, cotton gin condensers, grain separators, cockle machines, zigzags, buckwheat hullers, smut machine, oat meal sieves, flax riddles, wheat sieves, oat riddles, timothy sieves, rolling screens and clover hullers and separators.

METAL MENTIONINGS.

Paper with a metallic surface is one of the latest novelties.

The oldest cannon in the world are among the relics at Constantinople.

Until 1859 no pig iron was manufactured in Pittsburg. In 1892 a total of 1,775,257 gross tons were produced there.

Gold leaf, when once beaten into a sheet of the thickness of but one two hundred and fifty thousandth of an inch, appears to be of a beautiful green when held up to the light. Such sheets arereally semi-transparent.

The term penny, used to indicate the size of nails, is supposed to be a corruption of pound. Thus, a four-penny nail was one of such that a thousand of them weighed four pounds ; a tenpenny such that 1,000 weighed ten pounds.

The first forks made in England were manufactured in 1608. Their use was ridiculed by the men of the time, who argued that the English race must be degenerating when a knife and a spoon were not sufficient for the table use. Last year a Sheffield firm made over 4,000,000.

The new resistance metal in wire, sheet or casting now being introduced is stated to be a very important contribution to this class of material. The wire resembles ordinary copper wire on the outside, has a pinkish white tinge at the surface of the fracture, and is very strong without losing much ductility.—Ex.

ANOTHER STEAM BICYCLE.

A Glasgow engineer has, according to a contemporary, invented a steam bicycle upon which he has applied for patents in England, Germany and the United States, and which he expects will come into general use for long distance riding. It weighs only eighty pounds, and will cost but $50 more than a high grade safety, items which are of course of but little consequence.

The steam is generated in a boiler of galvanized iron, having an asbestos jacket, and suspended between the wheels. The wet steam is superheated through a long circular tube within the boiler. The steam then passes to the propelling machinery, which is covered by an air and water-tight rubber pouch on each side of the rear wheel. Circular crank shafts, directed by side bars on an original principle, give the speed, which can be checked or increased at will. The machinery is controlled as simply and by the same motion of the hand as the ordinary brake.

The fuel used is petroleum or benzine, which is contained in a tank above the forward wheel. Enough can be carried to heat the boiler for three hours. From the tank the oil passes through a tube to a lamp beneath the boiler. The steam supply is practically inexhaustible, as it is returned to the boiler through condensers, arranged in rows, on each side of the back wheel. It is capable of 12 to 14 miles per hour.

CURIOSITIES OF ALLOYING.

Though nine parts of copper to one of tin make gun-metal, an increased addition of tin, the softer metal, produces a gradual increase of hardness in the mixture; with about one-sixth of tin, the alloy assumes its application to mechanical uses ; with one-fourth to one-third tin, it becomes highly elastic and sonorous, and its brittleness rather than its hardness is increased. Zinc and lead will not combine without the assistance of arsenic, unless the lead is in very small quantities; the arsenic makes this and other alloys very brittle. Zinc and tin make somewhat hard and brittle alloys, but none of the zinc alloys, except that with copper to constitute brass, are much used. With two parts copper and one part tin, the alloy is so hard as not to be cut with steel tools, but crumbles under their action; when struck with a hammer or even suddenly warmed, it flies in pieces and clearly shows a structure highly crystalline instead of malleable. The alloy has no trace of the red color of the copper, but it is quite white, susceptible of an exquisite polish, and, being little disposed to tarnish, it is perfectly adapted to the reflecting speculums of telescopes and other instruments, for which purpose alone it is used.—Ex.

WILL IT LOWER THE COST.

An inventor in this city has discovered a process of making steel which, it is claimed, will cheapen the cost of manufacture and practically revolutionize the industry. The details of this process have not, of couse, been divulged, but the fact that the right of use has been purchased by a syndicate of capitalists, who will proceed at once to the erection of a large plant at Conneant, O., where the process will be exclusively used, is rather satisfactory proof of the inventor's claims, which, in effect, are that he can make steel from iron ore direct by the addition of one part of pig iron to three parts of ore.

The question at once arises, Will the new process cheapen the cost of steel to the trade and to the consumer, or will the monopoly thus established be used to maintain present prices for its own exclusive benefit in common with the process itself? This query can be answered, probably, by the statement that the monopoly, if such it can now be called, is controlled by members of the Standard Oil Co , whose methods are too well known to require further illustration, and that they threaten to drive the larger manufacturing concerns out of business. In order to do this they would necessarily lower prices at the start and trust to the trade supporting an advance after their competitors had been driven from the market. Any process of invention that will cheapen the cost of manufacture without unduly lowering the wages for labor and that will extend its advantages to the purchasing public is to be received with loud acclaim, but when this process or invention comes within the control of a monopoly whose one object is to fatten its own pocketbook, the coming is not to be greeted with any marked manifestation of welcome.—Hardware Reporter.

SOMETHING NEW IN WIRE.

Recently a Connecticut manufacturing firm has brought forward a new resistance metal in wire, sheet or castings, which is regarded as a very important contribution to this class of materials, says an exchange. The wire resembles ordinary copper wire on the outside, has a pinkish white tinge at the surface of fracture, and is very strong without losing much ductility ; the torsion test shows over 80 twists in 60 inches for an annealed wire, which still possesses 70,000 pounds of tensile strength to the square inch, and hard-drawn wire is said to run to 100,000 pounds tensile strength, with about 40 twists in 6 inches. Combined with these favorable mechanical qualities, it is claimed that the wire has the remarkable resistance of 35 times that of copper, with a temperature coefficient of less than one-tenth of that of German silver. By having the resistance lower than above described the tensile strength may be increased up to 140,000 pounds per square inch.

TRAVELERS' PATTERNS.

The frequent sameness of appearance of travelers' pattern cases is responsible for a good many mistakes and misunderstandings. At a Birmingham hotel the other day, quite a scare was caused by the complaint of a traveler for a large city house, that his case of watches, etc., valued at over £1,000, had disappeared from the room in which such cases are usually kept. Detectives were called in, and visits of warning and inspection paid to all the pawnbrokers' shops. The whole house was in a state of excitement, when suddenly another commercial who had stayed at the hotel over night, walked in with the missing case and asked that it be exchanged for his own. The two cases were externally perfect facsimilies, and commercial traveller No. 2 had not the slightest idea that he had walked off with somebody else's property until he attempted to open it in the shop of one of his customers, when he found that his key wouldn't fit. A simple initial or external mark of any kind on either of the cases would have prevented the possibility of such a mistake.—Ironmonger, London.

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TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

A hardware store has been started in Auburn by John Neagle.

Mr. F. Arthur, Rossmount's blacksmith, has removed to Fennella. They now want a blacksmith to take the vacant smithery.

A small fire at McClary's japanning department, London, gave the brigade a run Saturday evening. The damage was slight.

John Radigan, 46 Kelly street, Hamilton, has invented and patented a device for carrying off the foul air of houses heated by furnaces.

In a few days the Red Cross brewery will be lighted by its own electric light plant, which has been but in by Mr. E. Roselli.—News, Vancouver.

A remarkable find of rich-bearing gold quartz has been found near Fort Steele, B.C., by Fred Wells ; the rock will go from $300 to $1,000 to the ton.

It is too late for the hardware man to contract for a bicycle agency for this year, but he should commence to look around to secure one for next spring.—Ex.

At the general meeting of the Brantford Electric and Power Company, last week, William Buen was re-elected president, as were the other directors of the company.

The first seagoing vessel of aluminum is being constructed in the dockyards of the Loire. It is a cutter which would weigh, if made of the usual materials, 4,500 tons, instead of its actual weight of 2,500 tons.

A good paint for iron work exposed to the weather can, it is said, be made by mixing ½ gallon of linseed oil to an equal quantity of good outside varnish, and adding sufficient red lead to make it of the consistency of paint.

The obelisk in Central Park, New York, is to be crowned with a gilded aluminum cap. It is said that years ago the monument had a cap, and the authorities think that there is no reason why it should not have one now.

The hardware stock of Peter Bertram, who was burnt out at the Bruce fire, Hamilton, was insured for $14,000. A good portion of the stock can be realized on, and he has received $11,500 from the insurance companies for the losses he has sustained.

The chief difficulty in window dressing, remarks an exchange, is that too much is attempted, the fault being that the proprietor is anxious to display his whole stock. A few articles well arranged is far the better plan. A well dressed woman of the present day hardly cares to deck herself with all sorts of gems in profusion, no matter how costly or beautiful each stone might be.

News comes from the great aluminum producers in Switzerland that on January 1 the price of aluminum will be reduced to 45 cents per pound, the lowest figure it has yet reached. It will then be cheaper than copper was in 1890, and cheaper than tin is to-day.

Mayor Jennison of New Glasgow has succeeded in purchasing for a syndicate the celebrated Tenny Cape manganese mines. These mines are world renowned, and are said to be very valuable, producing larger quantities of number one manganese than any other mines know.—Chronicle, Halifax.

Gas stoves are often decried on account of the chance they offer to careless persons for wasting the gas by their neglect to turn off the supply as soon as the heat is no longer required. This objection has been overcome in England by the invention of a simple contrivance, which turns on the cock by the weight of the cooking utensil as it is placed over the burners. On the removal of the utensil a spring turns off the tap again automatically.

The cancellation of stamps by electricity is being adopted by the Post Office Department of the United States, recently patented stamping machines being used for that purpose and also for the post marking of letters. This is another instance of the many new forms of industrial service to which the potent and invisible force is being daily harnessed. The field is wide and the hitching of the electric horse continues, says the Age of Steel.

J. O. Cadman has one of the handsomest hardware stores in the province. It is 36x80 feet, two stories high with basement, and cost about $8,000. Three hundred feet of plate glass make a fine front, and the metallic sheet iron ceiling is prettier and more appropriate than any painting or oiled wood could be. The architect and builder was Mr. J. H. Cadman, of Winnipeg, brother to J. O. Mr. Cadman carries a stock of from $10,000 to $15,000.—Saturday Night, Portage la Prairie.

Mr. Bruce Robinson, traveler for the Bowman Hardware and Sporting Goods Co. of Hamilton, is in the city in the interest of his firm. The Bowman Co., who sell the Raleigh and other bicycles, have secured the services of Marshall Wells, one of Canada's fastest riders, to sell their wheels in Toronto next summer. J. A. McCulloch has placed a $3,000 bicycle order with this firm for shipment in the early spring.—Free Press, Winnipeg.

A new mat for household uses is a scrub mat. It consists of a small, oval-shaped mat made of cocoa or matting, with a guard or fender around the front extending up about a foot from the mat proper. This article is intended for a woman to kneel upon while in the act of scrubbing the floor, as it keeps her dress out of her way as well as saves it from getting wet.—House Furnishing Review.

An engineering feat worthy of note was accomplished recently in the completion of the boring of the Busk-Ivanhoe Railway Tunnel under the Rocky Mountains, at Hagerman Pass, Col. The tunnel is close upon two miles long, and is bored through solid gray granite. Its accomplishment involved three years and twenty days' work, each day being of twenty laboring hours. The tunnel is 10,800 feet above sea level, and is on the line of the Colorado Midland Railway.

The cheapest fumigator is made by placing an iron tray of large size on the floor of the room to be fumigated, putting a few ounces of sulphur in the centre, and dropping a red hot nail into it. Before commencing this, says an exchange, all articles that will bleach upon exposure to sulphur fumes should be removed, and all outlets—such as the chimney and cracks round window sashes—stuffed up. In a few houes after shutting the door all animal life in the fumigated apartment will be extinguished.

Some interesting experiments have been recently made in Germany to ascertain if rifle bullets can carry infection. It has long been known that in war gunshot wounds very frequently induce symptoms of acute tetanus, which nearly always end fatally. Messner's investigations show that if rifle bullets are purposely brought in contact with micro-organisms (Oh, those ubiquitous germs again) and then discharged in the usual way, they carry the microbes with them into whatever material they snbsequently penetrate ; the microbes, moreover, suffer no damage and grow as abundantly as ever.

One of the novel business trades of Boston is that of a dealer in second hand plate glass. Nearly all of this glass, says an exchange, is bought by the dealer from insurance companies. The large plates of this kind of glass are insured when put in a window, and when any of them is broken the owner of the injured glass usually prefers that the insurance company should replace the broken piece rather than that he should be paid its price. The dealer in the second hand glass contrives to utilize what remains of the unbroken part of the glass.

A new explosive, invented by Dr. Ochse, who was formerly connected with the Krupp works, has caused a fall in Dynamite Trust shares. The new invention consists of an explosive gas cartridge formed a glass tube, containing a few grammes of water, which, by electricity, is conveyed through a platinum contact and is decomposed into elements of vapor oxygen, which produce an explosive gas. The pressure can be produced according to requirements up to 5,800

present atmospheric pressure. The experiments which have already been made by the military authorties with the new explosive have been successful, and show that it possesses the quality of safety and that it is far-reaching in its effect.

The following list of United States patents granted to Canadian inventors Nov. 21, 1893, is reported by James Sangster, solicitor of patents, Buffalo, N.Y.: Henry J. Bickle, Gladstone, assignor of one-half to E. F. Hutchings, Winnipeg, harness, snap; Thos. Davidson, Montreal, damper; Chas. C. Davidson, assignor of three-fourths to J. A. Harris, Moncton, car coupling; Abel Klienstiver, assignor of one-half to R. S. Van Tuyl, Petrolea, regulating mechanism; Richard Smith, Sherbrooke, steam regulator for paper machines; Chas. H. Taylor, assignor to R. L. F. Strathy & Co., Montreal, wire attaching device. Total issue for the week, including patents, designs, trademarks and reissues, 484.

Some natives of Central Africa have found a novel use for old tin cans and the tin linings of packing cases. According to a recent French official report from that region the Adamawa natives are buying up the material, which they cut up and make into saddle ornaments and rude bracelets and rings. The Galaduna, or Minister of War, has been seen to take the linings immediately cases have been opened, in order to have them made into plates for covering his horses to protect them from arrows. Block tin is also imported into Adamawa and made into jewelry, which is said to be highly prized.

The North Chicago Street Railway Co. has been experimenting for some time with motors of different kinds to replace horses on street cars in that part of the north side of the city of Chicago which is not served by cable lines. Gas motors have been in operation on Garfield and Racine avenues and Centre street until the property holders say the motors have proved themselves "intolerable nuisances," "constant menaces to life and limb," and as emitting an "unbearable stench." It is claimed that they frighten horses and that pedestrians are not safe on these streets. The property owners have filed a petition with the Council stating that the motors are a nuisance and asking that the Council take such action as will insure prompt abolition of the nuisance.

Located at Finnieston Quay, Glasgow, is what is said to be the largest steam crane in the world, says an exchange. It was tested recently before members of the Clyde trust. The crane, which is intended to lift 130 tons, has been tested up to 150 tons. The framing, shafting and jib are all of steel; the gearing, with the exception of the largest wheel, is cast steel. The crane revolves on a steel pathway on seventy-five steel rollers, and the center is a strong casting weighing nine tons. There are six foundation bolts, and the center steel pin weighs six tons. The diameter of the roller path is 33 feet, and it weighs twelve tons. The jib is of the twin-tube type, and each tube is 3 feet 3 inches in diameter at the center, well braced together, and it is 90 feet long.

The general idea is that aluminum is as light as cork and as hard as steel. This is not strictly true; still it is extremely light and strong. Another popular fallacy in regard to aluminum is that it is incapable of being acted upon by acid or alkali. This, too, is a mistake. You could not make a soap dish of aluminum, as the alkali in the soap would eat the dish up. There are acids that will tear it all to pieces. Muriatic acid is death to aluminum. It is a better conductor of heat than silver or copper.—Jewelers' Review.

COMBINE ON PARIS GREEN.

A combination on Paris green has been formed. It comprises English and Canadian manufacturers. "As a result," said HARDWARE'S informant, "both the quality and the price will be uniform, a condition of things which will be much more satisfactory to dealers all over the country. Last year there was, you know, so much lying about the quality. Some of the stuff put on the market was very far from being pure, but no one claimed that it was pure. Now the Association have so fixed the green business that any green offered other than the pure article will have to be adulterated to the extent that both prices and quality must be at least 20 to 25 per cent. below the price and quality of pure Paris green. The trade by this means will be able to distinguish between the pure and that which is not. Jobbers will be in a position in a few days to book orders for spring delivery."

VIEWS AND INTERVIEWS.

I was talking with a stove manufacturer the other day, and he told me that their output of stoves this year was by far larger than last year.

* * *

"Well, people may talk about quietness in the lumber trade North," said a jobber, "but I know that our trade this season in axes and cross cut saws has been enormous. In fact our sales in this respect have been the largest since we have been in business." And then he smiled a quiet smile of satisfaction.

* * *

"No, there is not a great pile doing in cut and wire nails," remarked a jobber in reply to a query of mine. "You see it is like this," he explained as he swung himself around in his chair. "The meeting of the manufacturers takes place next month and buyers are holding off, but the jobbing trade in Toronto and Montreal do not anticipate that the manufacturers will be able to make any lower figures; neither are the jobbers and manufacturers led by the association to book any orders for delivery after January 1. Any orders taken now must therefore be for immediate delivery. However, for small lots, trade keeps about as is usual for this time of year."

* * *

"O, by-the bye," said a representative of M. & L. Samuel, Benjamin & Co., "our Mr. Casper Killer is in town on a visit. Who is Casper Killer? Why, don't you know? He's our Northwest man. He takes in Manitoba, the Territories and British Columbia for us. He looks hale and hearty and reports having had a fair season's trade. He will take a few weeks' rest before returning. Casper's an awfully decent fellow."

"Indeed he is," enthusiastically remarked one of the firm's bright young ladies who had overheard the last remark.

BYSTANDER.

"PLENUM" SYSTEM OF WARMING.

A new system both of warming and of ventilating large buildings was recently put in operation at the Temple Chambers, Brazennose street, Manchester. This is the "Plenum" system, which was highly spoken of at a meeting of the Manchester Association of Engineers the other night. The process is one by which a large quantity of fresh air is driven into the building by a fan. In the case of the Temple Chambers the plant is in the sub-basement outside the main building, where special arrangements are also made for washing and filtering the air before warming it. The fan is 54 inches in diameter, capable of moving over 30,000 cubic feet of air per minute, and the air-warmer has heating surface enough to maintain a temperature of 60 deg. throughout the building in the coldest weather, notwithstanding that the air is changed three times in the course of every hour. The fan draws the fresh air first through the filtering and then through the warming apparatus, and blows it along a large main air-duct formed on the ceiling of the basement directly under the main corridors. In the walls of these corridors are formed smaller ducts, which convey the warm fresh air up to every room separately. The occupant of each room can control the inlet into that particular apartment. The vitiated air escapes through grated panels near the bottom of each door, its exit being assisted in this building by a 42-inch electric fan fixed near the top of the main staircase.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
TACKS, SHOE NAILS, ETC.
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TORONTO — Hardware and Iron Merchants

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Toronto Files and Dundas Axes

Quality and finish of our Files and Axes unsurpassed. . . .

Special Attention to Letter Orders.

H. Boker & Co.

ARE FAMOUS FOR THEIR FINE QUALITY

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—AND—
POCKET CUTLERY

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(TREE BRAND)

For Sale by Leading Wholesale Houses.

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M. MAYER, Propr.

NON-XLL	Pocket Knives	WARRANTED
IMPERIAL	Razors	
T. C. Co.'s	Nickel Steel Shears	
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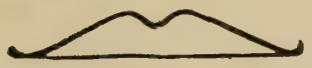
We fully guarantee all goods named above.



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26, 28, 30 Front St. West, TORONTO

ENGLISH HOUSE: **SAMUEL, SONS & BENJAMIN**
164 Fenchurch St, London, E. C.

SKATES "COLUMBUS," ACME AND "HOCKEY."

SNOW SHOVELS, Wood and Steel.

SLEIGH BELLS and SHAFT GONGS,

WEATHER STRIPS, Different kinds.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Dec. 8, 1893.

HARDWARE.

There have been few striking features in the hardware market during the week, the movement being of moderate dimensions and confined solely to small orders for lines wanted on holiday account. Heavy goods are dull with buyers very conservative. Skates, sleigh bells, etc., have been in moderate request. Makers are still sending out quite a few lots of horse-nails, but horseshoes are not specially active, Cut and wire nails continue dull. Dullness. has ruled in the case of sporting goods, and the same is to note in ware, lamp goods and plumbing and building supplies.

WIRE—Business shows a falling off in this line during the week, and there is no change to note.

CUTLERY—Pocket cutlery has received a fair degree of attention in a small way, but otherwise this line is dull.

WINTER GOODS—Skates, sleigh bells, shovels and other kinds of winter goods have attracted a fair degree of attention during the week.

SADDLERY SUPPLIES—No change to note with business quiet.

NAILS—Cut and wire nails have ruled extremely dull.

TACKS—The same remarks apply to tacks.

HORSESHOES, ETC.—Makers are still sending out a good many lots of horsenails, but horseshoes have furnished no particular activity.

IRON PIPE—The movement in the article is not nearly so brisk as it was a fortnight ago.

SPORTING GOODS—Business in these is diminishing, the week's movement being unimportant.

CHAIN—Is without new feature and the trading unimportant.

TOOLS—Nothing to call for special comment.

BUILDING SUPPLIES—A few fair sized lots of roofing paper, etc., keep moving. Otherwise there is nothing to mention.

PLUMBING SUPPLIES—These furnish nothing of particular interest.

WARE—There is very little business to note in any kinds of this line of goods.

LAMP GOODS—A small, quiet movement is all there is to note.

NAVAL STORES—These are inclined to dullness, with no change in any of the staples. We quote:—Turpentine 47 to 48c.; resins, $2.50 to $5.00, as to brand; coal tar, $3.75 to $4; cotton waste, 5½ for colored, and 7 to 10c. for white; oakum, 5½ to 7½c.; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep-sea line; pure Manilla, 11c. for 7-16 and upwards and 12c. for smaller sizes.

METALS.

The quiet spell which usually follows the close of navigation in heavy iron and metals now rules, and as a result there are few special features to mention. Advices from abroad do not give much change, but in any event the effect on prices in Canada during the month will be infinitesimal.

PIG IRON—A few lots of Nova Scotia pig have been moved during the week at $16.50 to $17.50 as to grade. In Scotch pig there has been nothing doing. We quote: Summerlee, $18.50 to $19; Eglinton, $17 to $17.25; Carnbroe, $16.50 to $17; Langloam, $18.50; Nova Scotia, $17 to $17.50.

SCRAP IRON—This line is dull and unchanged on the basis of $15 to $16.

BAR IRON—Bar is quiet and unchanged in price. Makers are still sending forward some lots to the agricultural implement makers, but there has been no new business in this connection.

SHEET IRON—No business at all to note andprices are nominal at $2 40 to $2 60. Russian sheets move as before, 10½ to 11c.

HOOPS AND BANDS.—A few small lots have been moving at quotations. We quote as before $2.30 to $2.35.

STEEL.—The demand for sleigh shoe steel that we have noted before seems to be pretty well supplied and other lines are dull. We quote: Sleigh shoe, $2.40; tire, $2 50 to $2.75; spring, $2.50, and best cast steel, 10½ to 12c.

GALVANIZED SHEETS.—No change to note, with a small movement at 4¾ to 5c.

TIN PLATE.—Some sales coke have transpired at $3.10 to $3 20, and it is said the inside has been cut in the case of a round lot. We quote coke, $3.10 to $3.20; charcoal, $3.50 to $4.00.

CANADA PLATES.—These are very quiet at last week's prices, viz, $2 40 to $2 45.

TERNE PLATES.—Prices nominal and business a bagatelle. We quote: $7.25 to $7.50, as to grade.

COPPER.—Business flat and the tone easy. We quote: 11½ to 12c.

TIN.—An easy feeling prevails, and although no actual change is noted values might be shaded. We quote: 21 to 22c.

ANTIMONY.—Featureless at 10½ to 12c.

SPELTER.—A few small orders have been received, but the market is dull on the whole at $4.60 to $4.75.

LEAD.—Continues easy in tone, with very little doing, at $2.80 to $3.

ZINC SHEETS.—Prices are unchanged and business small at $5 to $5.25.

CEMENT—The movement is naturally restricted after the close of navigation and prices are nominally unchanged. We quote: Ex-store English cement at $2 10 to $2.30, and Belgian at $1.90 to $2.05. Fire bricks are scarce, and light stocks have stiffened prices to $17 to $21 per 1,000, according to brand and quality.

PAINTS AND OILS.

In lead paints and varnishes business is confined to the local jobbing trade and the filling of a few sorting orders. Most of the firms are busy stock taking at present. Linseed oil is steady in tone and other lines are unchanged. We quote: Choice brands of white lead, government standard, $5 No.; 1, $4 75; No. 2, $4.50; No. 3, $4.25; No. 4, $4; dry white lead, 5c.; red lead, pure, 4½c.; No. 1, 4¼c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, raw, 60c., boiled 63c.

GLASS.

In window glass there have been sales of fair sized lots during the week at $1 25 for first break and $1.35 for second. Putty in bulk is unchanged, at $1.85.

PETROLEUM.

There has been a fairly good enquiry for petroleum and prices remain about the same. We quote as follows: Canadian at 11¼c. in shed in Montreal for round lots, and 12c. for small quantities. American petroleum, 16½c. in car lots, 17c. in 10 barrel lots, 17¼c. in 5 barrel lots, and 17¾c.



BROAD HOOP PATTERN.

Milk Can Trimmings
Delivery Can Trimmings
Creamery Can Trimmings
And **Milk Delivery and Creamery Cans Made Up.**

All sizes and guages of Tinned Sheets for Cans and Vats. We have a full stock and can make prompt shipment.



IRON CLAD PATTERN.

THE McCLARY MFG. CO., London, Toronto, Montreal, Winnipeg, Vancouver.

LONG WOOL DUSTERS

Manufactured by

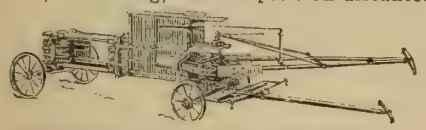
FRANK HOLT, 81 Colborne St., TORONTO

The equal of these goods was never before seen in Canada.

FIVE SIZES.

DEDERICK'S PATENT STEEL SHELL HAY PRESSES.

Made of Steel—lighter, stronger, cheaper, more power, everlasting, and competition distanced.



Also all styles of Bale Ties made from the Best Steel Wire.

Manufactured by BOYD & CO., Huntingdon, Q.

ADAM HOPE & CO.,

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"Pioneer" and "Sloss" PIG IRON

These are fine foundry irons, being strong and large scrap carriers.

Also all the well-known—

Scotch Brands,
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GAS, ELECTRIC, AND COMBINATION

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Of English, Canadian, and American designs. . .

Globes and Shades

Staple Brackets and Gas Fittings. Select stock of above always on hand.

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SHOWROOMS OF JAS. BARWELL, SONS & CO., Birmingham, Eng.

Drawings and Estimates on application.

FRANCIS HYDE & CO.

Builders' Supplies

We make a specialty of Scotch Fire Clay Flint Glazed Sewerage Pipes, Fire Bricks and Fire Clay Agricultural Drain Tiles, White Enamelled Bricks and Tiles for walls. Best brands London Portland Cement.

STORES AND YARDS:

King, Queen and Wellington Sts., Montreal

THE INVINCIBLE.

EVERY SAW WARRANTED.

THE FASTEST AND BEST CUTTING SAW ON THE MARKET.



Guaranteed four Guages Thinner on Back than Front and Made from the Highest Quality of Double Refined Silver Steel.

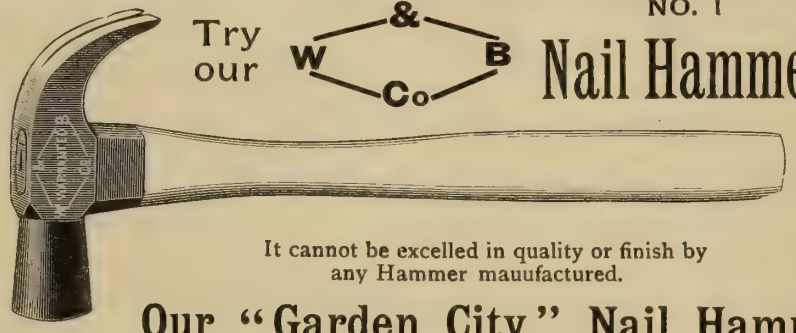
Manufactured only by

The James Robertson Co. (LIMITED.)

SAMPLE ORDER SOLICITED. **Toronto.**

THE WHITMAN & BARNES MFG. CO.

Canadian Branch: St. Catharines, Ont.



Try our W & B Co NO. 1 Nail Hammer

It cannot be excelled in quality or finish by any Hammer mauufactured.

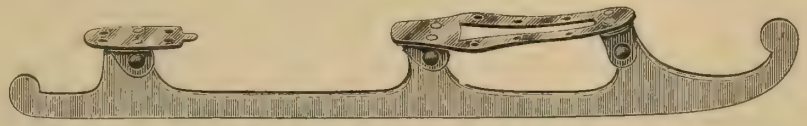
Our "Garden City" Nail Hammer

GET OUR PRICES AND TRY OUR GOODS

Is the best and cheapest "Solid Cast Steel" Hammer on the market. . . .

We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .

Boyd's Skeleton Skates



Expert Racer, Crystal Racer, Junior Crystal, Hockey Club, Eclipse Victoria Club and Dominion.

Best line of Skeleton Skates made. Send for Catalogue of Skates, Hockey Sticks, Snowshoes and Winter Sporting Goods. Ask for discount sheet.

T. W. BOYD & SON, 1683 Notre Dame St., MONTREAL

for single barrels, net cash; American benzine, 23 to 25c.; Canadian benzine, 10¾c., Petrolea; 12½c. Montreal.

MONTREAL TRADE NOTES.

Frothingham & Workman note a fair city demand for skates and pocket cutlery on pocket account.

The action against Mr. Munro, the general manager of the Canada Paint Co., by the Wm. Johnson Co., was commenced in enquete last week.

W. H. Cottingham & Co. call attention to their special lines of adamant floor paint, green seal liquid colors, and lead and carriage paints and varnishes.

H. C. McLaren & Co. say that everyone is wanting the steel-clad bath. Their sale this fall has been more than doubled.

Painchaud, Squire & Co. are offering some nice lots of pocket cutlery suitable for holiday presents.

The hockey season has commenced in earnest, and Boyd & Son's special lines of skeleton skates as usual are in brisk demand here.

The Canadian Iron Furnace Co. are adding to the number of their employees at the Raduor forges, a gang of Swedes arriving here on their way to the works this week.

Wm. Clendinneng & Son Co. state that the demand for heaters this fall has been quite up to last year.

Quotations for all heavy goods on this market are now ex-store, which of course means a slight advance usually from 25 to 50c.

It is said that petroleum is selling as cheaply laid down in Quebec as on this market owing to discrimination by the railway companies.

It is understood that the managing directors of several of the rolling mills here have been asked to confer with the government presumably about iron duties.

TORONTO MARKETS.

TORONTO, Dec. 8, 1893.

HARDWARE.

There has been no material change in trade during the week. Generally speaking there is business trade doing, and travelers have been sending some nice orders. The feature of trade is a brisk demand for cutlery and holiday novelties. Crosscut saws, saw files and axes are still receiving a good deal of attention. Coppered steel spring wire has been in little better request and some improvement is noted in coil chain. In winter goods, particularly, such lines as sleigh bells and snow shovels, trade has been brisk, and in some instances the demand has exceeded the supply. A better business is reported in some lines of ware. Such goods as plumbers' and builders' supplies and lamp goods remain much as before. Payments are still improving, but they are still far from satisfactory.

WIRE—Principal trade is still in bright iron wire, although quite a number of sales of coppered steel spring wire have been received.

ROPE—A fair trade only in small sizes is being done. Sisal is the most called for.

CUTLERY—Business in this line has improved considerably, although business in case lots does not seem to be up to expectations.

NAILS—Horse nails are still in fair demand, but quantities have not been near so large as they were. Cut and wire nails are going out as is about usual at this time.

TACKS—Trade is still reported fair for tacks in wood kegs, with that in other kinds dull.

CHAIN—Business has improved in coil chain, still the quantities going out are not large. New shipments have just been received. A few enquiries are heard for cow ties, but the season is almost over for this line.

HORSESHOES—Are still going out in fair quantities at unchanged prices.

WINTER GOODS—Considerable improvement is reported in this line. Sleigh bells are in active demand, while the run on snow shovels during the week has exceeded the supply. Skates are still being forwarded, all orders not yet being complete.

SPORTING GOODS—There is still a little business being done in rifles and ammunition; but business is practically over for the season.

WARE—Business shows some improvement in tinware and peerless ware, but in blue and white ware the movement is still light.

LAMP GOODS—Trade is still quiet and featureless.

PLUMBERS' SUPPLIES—As is usual at this season, trade in this line is flat.

BUILDERS' SUPPLIES—There is not much doing, and no improvement is anticipated for some time.

METALS.

The feature of the metal market is a stronger feeling in copper, which has been advanced in price. Pig iron is as dull and uninteresting as ever. Some improvement is shown in the demand for ingot tin, and good sales of Canada plate are reported. Other lines remain much as before.

PIG IRON—This market remains much as before—dull and featureless—with quotations nominal. There have been a few 50 and 100 ton lots taken by local foundries, but at terms that were private. We quote: Summerlee, $20.50 to $21; Carnbroe, $19.50 to $20; Siemen's, $19.50 to $19.75.

Rogers, Brown & Co., Buffalo, N. Y., report the Toronto market for American pig iron as follows: The Canadian market has not reflected the recent activity in pig iron across the border. Purchases have been steady, but on a conservative bases and only for current wants. Prices quoted below are on the cash basis in bond f. o. b. cars Toronto: 1 X Foundry strong Coke Iron, Lake Superior ore, $14.80; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14.30; 2 Foundry Strong Coke Iron, Lake Superior ore, $13.80; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17.05; Southern Soft 1, $12.85; Southern Soft 2, $12.60.



BAR IRON.—Trade in this line continues to fall off, most of the larger dealers having laid in stock before the advance in faeight. There is still a demand for sorting up sizes. Prices unchanged, the basis still being $1.95.

BOILER PLATES AND TUBES.—There is a fair demand at unchanged prices.

IRON PIPE.—Large quantities have been going out and prices are unchanged at 63½ and 5 per cent. to 65 straight.

SHEET STEEL—Nothing new has developed in this line. Movement is still fair in stock sizes, and the base price remains unchanged at $2.90.

CORRUGATED IRON—Quiet and unchanged, $4.75 still being the ruling figure. We quote "Owl brand at $3 to $4 per square for painted and $4.25 to $7 for galvanized, according to gauge.

GALVANIZED IRON—Trade in this line is keeping up exceptionally well, especially in Gordon Crown brand, which is going out quite freely. A large number of orders have also been booked for import first of the year. We quote Queen's Head and Gordon Crown at 5 to 5¼c. for 16 to 24 gauge.

INGOT TIN—Has been going out more freely. Prices are firmer, but no change has yet been made by the jobbers. We quote 22 to 22½c. for Lamb and Flag and 21¼ to 22¼c. for Straits.

INGOT COPPER—There has been an advance of nearly 1c. per lb. in ingot copper, and we now quote ton lots at 11¾ to 12c., with ½c. extra for smaller quantities. Some good shipments have been made during the past week, but, generally speaking, business is quiet.

SHEET COPPER—An advance of nearly 1c. is also reported in this line. Business has improved considerably during the week, both in braziers and in ordinary sheeting.

SPELTER—A few sales have been made in this line, but the general demand is small. Prices remain unchanged at 4¼ to 4⅝c. for small lots.

ZINC SHEET—Is still in steady demand at 5¼ to 5½c. for small cask lots. Stocks are rather low.

TIN PLATES—Have been going out exceedingly well, the large sizes especially so. Cokes are also going out freely. Prices are higher in England, but here we quote as before, at $3.85 to $4 for I.C., with the usual extras for I.X.

TERNE PLATES—The market is flat in this line. Terne plates being largely used for roofing, the demand for this purpose has of course been cut off by the cold weather. The idea as to price remains unchanged at $7.25 f.o.b. Toronto.

HOOPS AND BANDS—Stocks are still low, although jobbers are in little better position than they were to supply the demand. It is

MARKETS—Continued

claimed that it will be some time before stocks will be a complete as customary. Prices rule firm at $2 60.

CANADA PLATES—Prices remain as they were. Stocks are light but shipments arriving in the course of the next few weeks will give a plentiful supply. We quote: All dull, $2.60 to $2.65; half polished, $2.75, and all bright $2.90.

SOLDER.—A fair business is being done at 14 to 16c., according to composition.

ANTIMONY.—There is not much doing in this line, and not much improvement is expected for some time. Prices are ruling low, Cookson's being offered at 11½ to 12c. in cask lots.

LEAD.—Pig lead is unchanged at 3c. Although there is quite a demand for ingot lead, that for American lead is equally so.

GLASS.

There is still a little business doing. Shipments from stocks are light, being principally from assorted sizes, but even these are difficult to obtain. Orders are now being booked ior import to arrive about June next. Prices are unchanged, $1.20 to $1.25 still being the idea for first break.

PAINTS AND OILS.

Trade in paints and oils is about as dull as it possibly could be. In no one line is there any life. Payments continue to improve. Prices remain unchanged. We quote: Linseed oil, 58½c. for raw and 60½c. for boiled, Toronto, Hamilton, London and Guelph, with 2c. added for delivery at outside points; turpentine, 44 to 46c., the latter price being for outside points, freight included.

OLD MATERIAL.

Trade continues dull and prices remain as before. We quote prices paid by dealers as follows: Agricultural scrap, 55c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40c. per cwt.; No. 2, including sheet iron, hoop iron and mixed steel, 10c.; new light scrap copper 7½c.; heavy scrap copper 8c.; old copper bottoms, 7½c.; light scrap brass 5c.; heavy yellow scrap brass 7c.; heavy red scrap brass 7½ to 8c.; scrap lead 1½ to 2c.; scrap zinc, 1½ to 2c.; scrap rubber, 3c.; country mixed rags, 75 to 80c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; boring, and turnings, 10 to 15c.

HIDES, SKINS, WOOL, TALLOW

WOOL—Fleece wool, 17c., buying price for merchantable, and 18 to 18½c. selling price. Pulled wools, 18 to 21c. for super and 23 to 25c. for extra.

HIDES—Quiet and unchanged. Dealers are paying 3¾c. for No. 1 green, and are selling at 4¼c. for No. 1 cured.

SKINS—Sheepskins, 70 to 75c.; calfskins quiet, at 5 to 6c. for No. 1 green, and 7 to 8c. for No. 1 cured.

TALLOW—Dealers are paying 5½c. and are jobbing at 5¾ to 6c.

SEEDS.

No material change has taken place since a week ago. There has been a fair movein Alsike at $4.50 to $6 for inferior to prime, and at $6.50 to $7 for choice to fancy. Red clover is quiet at $5.50 to $5 75, with $5.90 to $6 being occasionally paid for choice to fancy. Timothy is quoted at $1 to $1.25 for inferior and $1,50 to $1.60 for prime, while choice to fancy bring 15 to 20c. more.

MARKET NOTES.

Some nice things are being shown by Rice Lewis & Son in the way of cutlery, such as ivory and pearl-handled dessert knives and forks, carvers and cutlery cabinets. A nice business is reported in these lines.

Ingot and sheet copper and tin plates are all firmer.

H. S. Howland, Sons & Co. are selling large quantities of saw files.

Rice Lewis & Son have got in a new line of papier-mache crumb brushes and trays and tea and glass trays.

"The Starr Co. seem to have struck it right in their new hockey skate," said a representative of Rice Lewis & Son, who are handling the skate.

The Toronto Cutlery Co. report orders to be of a sorting up character, the bulk of the trade having been furnished. Their firm has still a large demand for carvers.

There is a great demand this season for medium priced and cheap carvers and carving sets; also for pocket cutlery. One firm is known to have received 2,000 doz. pocket knives.

Rice Lewis & Son are showing a nice line of nickel-plated tea and coffee pots. These goods are made out of 14-oz. copper, heavily plated both inside and outside. They are finding a ready sale and prices are moderate.

The Booth Copper Co. expect to complete the work of placing the plant in the British American Brewing Co.'s brewery, Windsor, this week. They report a steady continuation of smaller orders, and a good demand for small copper boilers.

The Dominion Wire Mfg. Co. are having a large demand for their Crescent coat and hat hooks, which always find ready sales, and there is a demand for Nos. 13, 14 and 15 annealed wire for hay binding. Trade in brass and steel jack chain is moving steadily.

The Gutta Percha and Rubber Mfg. Co., Toronto, have been recently awarded several large contracts for fire hose, principally of the Maltese Cross brand. The firm reports that the above standard brand heads the list in popularity, and has been adopted by all the leading fire departments throughout the Dominion.

Chas. Boeck & Sons, brush manufacturers, Toronto, have had of late a big demand for brushes made of French wisk and rice root, which is used principally in scrubbing, and dandy brushes. They will make a specialty of these lines, and mean to have a variety of new styles for the spring trade. They have also in stock a fine line of carpet sweepers.

The Art Metropole report Munn's liquid glue to be in great demand, and that customers after once having used it, will take no other. They have also on hand a large assortment of artists' colors, and are at present making a specialty of instruments adapted for mechanical drawing. "We have sets of mathematical drawing instruments in all grades and prices, and we are selling a great many at present, this line being specially adapted for Christmas presents," they say.

H. S. Howland, Sons & Co. have had an enormous demand for the Star skate during the past week.

Toronto is soon to have a new bicycle factory. James Lochrie of Bloor street west has made all arrangements for the manufacture of a new bicycle, that will be known as the "Trotter." He says that he is prepared to manufacture a wheel that will equal any now on the market, and will sell at a most reasonable price.

The Toronto Silver Plate Co. lesire the trade to note that on pages 4 and 6 of their new silver catalogue, the "Gladys" and "Florence" table spoons and forks should read $6 extra for engraving instead of $4 as printed. In other sizes price remains the same, viz., $4 extra for engraving the dozen pieces, less catalogue and cash discount as usual.

A settlement has been affected in the matter of the Toronto Plate Glass and Importing Co. Mr. Ferguson retires and Mr. Alfred Pearson, ex-mayor of Winnipeg, has been taken in. The proprietors are now Edwin Hill and Alfred Pearson. The firm as re-organized will carry on the business as formerly, handling the same lines of plate, window and colored glass.

HARDWARE has many enterprising firms among its advertisers, but none more so than that of Walter H. Cottingham & Co. of Montreal. They have practically finished their work for 1893, but before the old year dies they will have the line of campaign for 1894 well mapped out. As in the past, so in the future, many new lines will be found in this firm's repertoire.

E. Heuser & Co., Montreal, have just bought a magnificent stone warehouse, 140 McGill street, that city, the part of the Dominion block now occupied by Thouret, Fitzgibbon & Co. E. Heuser & Co. intend to increase their lines of goods considerably and place two more travelers on the road during the next year, though they will not take any new accounts except regular wholesale houses.

The Gurney Foundry Co. have secured, among others, these contracts lately: Oxford boilers with twin connections for the officers' mess, Winnipeg barracks; steam heating for Grace church, Windsor; two carloads of Quintet steam radiators for North Ward school, Victoria, B.C. The firm is still experiencing a big demand for hot water boilers and radiators from Montreal and the east.

The Toronto Steel Clad Bath and Metal Co. say that the sales in their steel clad baths have exceeded even their expectations. "Our Montreal trade has been exceptionally good," they say, "and our baths have found favor wherever they have been

sold. We expect soon to have our No. 2 steel clad bath on the market, it will be destined to fill the great demand for a somewhat cheaper article of the pattern as our regular bath. We expect a large demand for them."

The Canadian Mineral Wool Co. is now busy fulfilling contracts for steam pipe coverings, to be placed in several of the largest mills in Canada, and have also a contract to supply the Nova Scotia coal syndicate with 2,000 feet of four-inch covering. They are carrying a full line of asbestos goods, and have now over two tons of all kinds of steam packing.

The Toronto Smelting and Refining Works report heavy sales in Hercules Babbit metal, and say "that it is used by engineers in preference to other metals in the market. Our solder business is also on the increase, we having built new furnaces and purchased the latest improved moulds for supplying demands. Our newly patented triangular mouls are the latest made."

PERSONAL MENTION.

Fred. Howland of H. S. Howland, Sons & Co., is off duty through sickness.

Mr. Moore of Bowman & Moore, Hamilton, was touring the Toronto warehouses this week.

Casper Killer, M. & L. Samuel, Benjamin & Co.'s Northwest representative, is in Toronto for the Christmas holidays.

Mr. Peaker, of Peaker & Son, Brampton, was on the street this week picking up assorted parcels for the holiday trade.

B. H. Kolh of the firm of B. & S. H. Thompson, Montreal and Birmingham, England, is paying one of his periodical visits to Toronto this week.

Mr. Nelson, representing Lockwood Bros., cutlery and tool manufacturers, Sheffield, England, is making his second annual trip to this country. He was in Toronto this week.

J. T. Conklin, traveler for Sanderson, Pearcy & Co., has been in Amsterdam, N.Y., visiting the scenes of his boyhood, and attending the wedding of his niece. He is now in the North with friends on a shooting expedition.

A TORPEDO BOAT DESTROYER.

The British torpedo boat destroyer, "Havock," recently built by Yarrow & Co. for the British Government, has, on her official trial, proved herself the fastest boat in the British Navy, having maintained during three hours a mean speed of 26¼ knots per hour, says an exchange. This speed was the more remarkable on account of the trial having taken place in a very heavy sea, the water finding its way even into the engine room. The "Havock" is the first of twelve similar vessels of an entirely new and distinctive type, which are being built for the British Admiralty by private contract, after the design of the Director of Naval Construction, W. H. White. They are intended, as their name indicates, to act against torpedo boats, and to exceed those boats in speed. The "Havock is 180 feet long by 18½ feet beam, and about 200 tons displacement. She has two sets of triple expansion engines, with cylinders 18, 26 and 39½ inches in diameter, by 26 inches stroke, designed to give 3,500 horse-power at 400 revolutions per minute. They drive twin screws, having three manganese bronze blades, 6 feet 2 inches in diameter. Her boilers are two in number and of the locomotive type, one to each set of engines, in separate stokeholds, forced draft being supplied to them by two fans by Allen & Co., and are designed for a working pressure of 180 pounds per square inch. The armament of the "Havock" consists of one 12-pounder and three 6-pounder rapid fire guns, as well as one fixed bow torpedo and two revolving deck tubes, 18 inches in diameter. She carries an electric search light. Yarrow & Co. are building a sister ship, the "Hornet," from which they expect to obtain a speed of 27 knots.

EXPECTED TO BE BENEFICIAL.

If the proprietors of rolling mills and the Amalgamated association of Iron and Steel Workers should finally agree that the existing scale of wages be made perpetual, only to be changed by three months' notice from either side, the beneficial effect will be so far reaching that the subject is worthy of notice in advance, and all interested should make earnest effects to bring about such a state of affairs. The present result of negotiations has given great satisfaction in the industrial parts of the Central States, but there will be still greater cause for gratification if the perpetual scale is adjusted.

The prevailing opinion among manufacturers and others whose interests are allied to the iron and steel industries is that greater stability in business will result; and there will be less fluctuation in values and an absence of that speculation in stocks of material which the present arrangement encourages. Under existing conditions, the annual July scare is regarded to the probable outcome of wage conferences produces an unnecessary aggitation in commercial circles, and everything runs at high pressure during several months before the time approaches, only to be followed by a distressing calm and policy of retrenchment on the part of buyers in case an amicable settlement is reached.

Consumers of rolling mill products are anxious to make certain that their orders will be filled to cover a few months' requirements in case of a lockout, and they place specifications early with jobbers or dealers, who in turn crowd the mills to their utmost capacity; but if the lockout does not take place cancellation of orders usually follows and business is thrown into a generally unsatisfactory state.

Under the new arrangement there will be a greater certainty that operations of rolling mills will continue with regularity during the year. The manufacturer will know that his stock of bar iron, sheet iron or other material which he uses can be replenished by giving a week's or ten days' notice to his jobber, and he will not have to borrow money to lay in stocks as a safeguard against July strikes. Jobbers of Chicago and the Northwest will not be compelled to place contracts for spring and summer delivery for material which they expect to sell in the fall, the quantity of which they can only guess at, as the sales throughout that territory depend, in their extent, very much upon the weather. During past years this scare has reached even small consumers in isolated terrritory, and cases are common where a tinner or blacksmith has placed his order for a few bundles of iron many months ahead for the sole purpose of being prepared against labor troubles. From these rivulets of commerce rivers grow, and the effect grows with the increasing volume of business. The jobbers speculate on the number of small consumers who are holding back their orders, and thus the ups and downs are caused.

Under the proposed changed conditions orders will be distributed over longer periods, and more stability to business will result. All concerned will be benefited, not omitting the iron worker, for he himself will soon concede that he is far better off if he only works four days of a week the year around than if he made full time for six months and was idle the balance of the year.

While discussing this subject the writer would ask, why cannot the arrangement be made still more secure by making the scale perpetual and sliding? The 1½ cent card rate may soon be as absurd as the 2 cent card rate has been in the past. Now is the time for a permanent adjustment. The scale is settled until April 1, 1894; when the average selling price of bar iron or sheet iron is known for the intervening period let that price govern the ensuing three months' scale of wages, and so during the year, and, for that matter, for all time. A committee of workmen could meet a committee of manufacturers every quarter, and there would be little trouble in reaching a satisfactory agreement.—Metal Worker.

LITHARGE CEMENT.

Litharge, mixed with glycerine to the consistency of putty, will stop cracks in iron kettles, mend stone jars, tighten loose joints of iron or wood, fasten lamp tops to their standards, and is good to rub in the seams of milk pans. It hardens in a few hours, and is perfectly harmless. It will resist acid, heat and cold.—American Artisan.



Ontario Nut Works, Paris

BROWN & CO.

Manufacturers of

All sizes of Hot Pressed Nuts, Square and Hexagon



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

SOLDER.

Half-and-Half Solder.
Plumber's Solder.
Refined Metal Solder.
Triangular Solder.

We guarantee all OUR GOODS! If found unsatisfactory can be returned at our expense.

TORONTO SMELTING and REFINING WORKS

92 and 94 Queen St. E., TORONTO.

MIXED PAINTS



TRADE MARK

The Unicorn Brand

Has now the leading reputation for purity and durability in Canada.

They are sold all over the Dominion.

Manufactured only by

A. RAMSAY & SON, MONTREAL

ESTABLISHED 1842.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C.I.F." THREE RIVERS

PLANTS AT

Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

GALVANIZED WIRE NETTING

Quotations given for Import orders

A. C. LESLIE & CO., Montreal and Toronto.

& CUTLERY

Full assortment in stock; best values in all lines, especially in Carvers. . .

ALMOST EVERY STYLE AND SIZE KNOWN TO THE TRADE



CLAUSS SHEARS AND SCISSORS.

Steel Laid. Tempered with Natural Gas. All Goods Guaranteed.

Highest Medals and Diplomas awarded by World's Fair judges. Catalogue mailed on application.

Clauss Shear Co.

67 Adelaide St. East . . TORONTO, ONT.

TO THE TRADE

Targets.

We control the sale of the famous **Hamilton, Blue Rock and Expert Traps**

Send for samples and get our prices. Targets well packed and no second handling. Shipped direct from factory in Hamilton.

THE BOWMAN HARDWARE AND SPORTING GOODS CO.

HAMILTON, ONT.

MUNN'S LIQUID GLUE

IS THE BEST.

THE ART METROPOLE, Agents.

131 Yonge Street, TORONTO.

OUR SALES OF

"BURHAM" Portland Cement

For the past 8 months have been

25,499 CASKS.

"BURHAM" Brand outranks all others
Try it and be convinced. . . . .

Sole Consignees for Canada,

McRAE & CO., OTTAWA

FURNACE CHARGING DEVICE.

In an account of a visit made to the works of the Wellman Iron and Steel Co. at Thurlow, Pa., by the Engineers' Club of Philadelphia, the following description of a changing device is given by an exchange.

Passing through the yard the visitors were conducted into the open-hearth building where several furnaces of large capacity are located. The casting pits are sunken into the floor at one side of the row of furnaces, whilst on the other side an elevated iron floor 10 or 12 feet high is provided with a narrow gauge track for the cars bearing the materials, flanked by another track, upon which an ingenious charging machine sweeps the whole line of furnaces.

The materials are placed in iron boxes or troughs of uniform size, carried on cars on the narrow gauge tracks, and each provided with a socket in the end, into which the arm of the charging machine is made to enter and clutch the box so firmly that it can be lifted from the car and moved in any desired direction.

The device of charging is of novel design, and seems almost endowed with human intelligence; it is driven entirely by electricity from an overhead trolley wire through a combination of motors. A man, comfortably seated, handles the switches, and causes the machine to move along the rails to any desired point. The projecting arm is then dropped and engaging in the socket in the end of one of the loaded boxes previously described, lifts it from the car, thrusts it into the furnace, turns it upside down by a revolving motion to empty the material, and then withdraws the box and returns it in proper position to place on the car. The device makes it possible to change turnings and light scrap with the same facility as heavy material.

NICELY KEPT SHOPS.

We recently went into an engine-building shop, and could not help noticing the extremely neat appearance of everything in it, from the engine-room to the basement.

Every lathe and planer looked as good or better than new, the painted portions were fresh and bright and the polished parts were as bright as a new dollar, no grease or oil being noticed about the machinery. It is quite probable that the machines used all the oil necessary for their smooth running and for lubricating the work, but it was not allowed to remain after having done its work, and was kept within bounds, instead of being allowed to run all over the machine. The paint had been recently applied, and looked very neat and clean, being kept wiped with waste every week or oftenener, and the time taken is very little, indeed.

We know of many shops where they make a practice of painting the machinery once a year, usually about Christmas or New Year, and they feel well repaid in the care the men take of their machines. There is much to be commended in this practice, and it necessitates an allowance being made on Saturday for a general cleaning up. A half-hour will do wonders, however.

In machine work, or anything where power feed is used, the attendant can easily keep most of the machine wiped while it is running, although we should advise care in wiping around gears, as the time saved will not compensate for the danger involved.

There is such a feeling of cleanliness and nice work in a shop of this kind that we are very apt to give it a preference in ordering goods, and it can be accepted as a safe rule that such shops do nice work. It pays to keep the shop neat; it shows good management, and we believe it is a good investment, besides being so much more cheerful for workmen and visitors.

Neat surroundings invite neatness and care in the men, and the dingy, dirty machine shop is, or ought to be, a thing of the past, as there is absolutely no excuse for this kind of a shop.

This also applies to engine-rooms, and it is hoped that this may arouse some of our readers into thinking on this subject, and that thought may lead to action.

Try painting and wiping the machinery, and see if you are not repaid in satisfaction, if nothing else.—American Mechanic.

LAMP EXPLOSIONS.

The Imperial Commission which was appointed in Germany some time ago to enquire into the causes of explosions of petroleum lamps, has, after exhaustive investigation, recently presented a report. From a copious collection of evidence the commissioners came to the conclusion that scarcely 1 per cent. of the total lamp explosions have been occasioned by attempting to extinguish the lamps by blowing down the chimney. The majority of the explosions were occasioned by special circumstances, such as knocking over or letting fall the lamps, rapid movements, or holding aslant, whereby frequently ignition of the vapors in the interior of the oil reservoir or chamber is occasioned.

The Journal of the Society of Chemical Industry gives the following rules for the prevention of explosions, which, if observed, would obviate the risk of such accidents:—1. The lamp must have a heavy foot with a base as broad as possible, so that it cannot tip over. 2. The oil reservoir ought preferably to be of metal, rather than of glass or porcelain. 3. The well fitting chimney must be adjusted so that no side drafts of air can reach the flame. 4. The burner-ring must be firmly fixed. 5. The wick ought to be soft and not too thick, also of a width that can be easily drawn into the holder. 6. The reservoir ought to be filled up completely before using the lamp; during the filling up no flame ought to be in the immediate neighborhood. 7. The lamp must always be kept clean. 8. The extinguishing of the lamp ought to be effected, after lowering the flame to the level of the burner, by blowing down the cylinder, not directly, but from one side, a kind of side-blast. The direct blowing into the cylinder is to be avoided. 9. The burning lamp ought not to be exposed to a draft. If this cannot be avoided, though, since the lamp must be carried about, then it must be protected from the draft by interposing a piece of paper or cardboard, etc.

JAPANESE BRONZE TINTS.

Japanese bronzes have a variety of tint that rivals the painter's work, says an exchange. An analysis of two kinds will show the great difference in the proportions and components of the Japanese alloys. Here are the figures giving the result of two quantitative analyses: Copper, 94.50; silver, 1.55; gold, 3.73; lead, .11; with traces of zinc and iron; the other simply copper, 67.31; silver, 32.07; lead, .52. By pickling in a mixture of plum-juice, vinegar and acetate of copper a purple tin is produced upon the surface. The effect of wood-graining produced in Japanese bronzes is done by soldering together a number of sheets of variously tinted alloys to form a thicker sheet. This is punched with irregular surfaced tools, rough flint stones being used at times. The unevenness is then filed down, leaving a curious grained effect exposed.

HOLIDAY HARDWARE WINDOWS.

Put all the cutlery and bright, plated ware in the windows, remarks an exchange. This is legitimate holiday stock, and makes a brilliant showing. Skates and sleds will attract the children, and if you will go to the trouble of fixing up a window with an imitation snow-bank or frozen pond, it will be very attractive indeed. A cutlery display may be made upon a wide board, back covered with dark Canton flannel, or a big wheel can easily be built in the window to carry the articles. If you have a spring or electric motor, it can be kept turning, or a small boy can be utilized at small expense.

Another good idea in the cutlery and plated-ware line is to set a table in the window with a snowy cover, and adorn it tastefully with such ware as you sell, of course adding whatever else is needed to complete the effect, but keeping the metallic portion prominent. If you have a large window you can easily fix up an interior, showing the night before Christmas, with various presents labeled, as, a pair of skates marked "For Johnnie," a toy stove "For Nellie," a set of razors "For Papa," a sweeper or tea pot, or silverware "For Mamma," an oil stove or foot warmer "For Grandma," and so on. A large star or rosette made of cutlery is a pretty design, and will prove attractive. If you handle lamps, set a lot of them in the window and light up a few. It will not hurt them, and you need not discount them very much to get rid of them.

TRANSMISSION OF POWER BY GAS.

In the course of several lectures on the transmission of power from central stations, recently delivered in London before the Society of Arts, Prof. Unwin incidentally alluded to the capabilities of coal gas, regarded from a novel point of view, as an agent for the distribution of power, in comparison with other methods that are in actual operation, such as water at moderate or high pressure, compressed air or vacuum, steam and electricity. Gas men now argue that the figures quoted by the professor show that the cost of distributing gas to gas engines situated in various parts of a town, is much cheaper than that of transmitting the other forms of energy. In the matter of storage, also, the gasholder is a long way ahead of the so-called storage battery, the high-level reservoir, or the hydraulic accumulator in the opinion of gas makers, as they hold that the large gasholder represents the only means by which several hours' requirements of power can be stored without loss or waste.

IRON ORES IN JAPAN.

The Japanese Government, some time ago, established steel works which have, however, for the most part, used foreign material. The government is now making a careful investigation into the iron deposits of Japan itself, and recently a number of samples of iron ores were sent to Mr. T. J. Snelus, the well known English metallurgist, for assay and report. Japan has excellent coal in abundant supply, but of the extent and value of the iron ore deposits very little is as yet known. In 1890 17,435 tons of iron were made from the iron sand of Neu and Yoshida and 4,801 tons from the iron ores of Kamashi and Rikuzen Iwatu. The Yoshida mines have been worked for nearly 1,000 years. Pig iron is made there in charcoal furnaces from the iron sands, and wrought iron in forges, run by water power. Steel has also been made in Yoshida for many years. In recent years these works have not been very prosperous, owing to the competition of foreign iron and steel, and the cost of the methods in use. It is stated that the government intends to use all possible means for increasing the iron industry, and promoting the home manufacture of iron and steel.

NOT USED FOR QUAIL.

The big Krupp cannon which was exhibited at the World's Fair is what is termed a forty-two centimeter gun. This means that the calibre of its bore is 16½ inches. The barrel is 46 feet 2 inches long, and the greatest diameter is 6 feet 7⅛ inches at the breech. The gun's weight is 270,000 pounds, and it is built of the finest quality of steel. The range is estimated at twelve miles. Each shot will cost $1500. The projectile to be fired from the gun is 4 feet long and weighs 2700 pounds, and to fire it a charge of powder weighing 700 pounds is required.

THE FUNNY DOG-WHEEL.

Long before people knew about stoves and ovens they used to cook meat before open fires, by means of turn spits. The turn spit, as described in an English journal, was a long iron rod, running across the front of the fireplace, about eighteen inches from the door. This rod was thrust through the meat, and then, by means of a crank at the end, it was kept turning, so that all sides of the meat received an equal amount of heat. After this method had been in use for a long time the crane was replaced by a small wheel, and from that wheel a leather band or a rope was stretched to a large wheel, which was fixed against the wall about three feet from the door. The large wheel was hollow and fitted with a door, and at cooking time a dog was put inside the wheel and made to run. As the dog ran the wheel turned, and the leather band passing around it made the small wheel revolve. This turned the spit and so the meat was properly roasted. "Dog wheels," as these machines were called, may still be seen in some houses, but they are generally used for working churns. Anybody who has seen a caged mouse squirrel taking exercise in his wheel will know how the dog wheel worked.

NOT DICK TURPIN, EITHER!

What's in a name? One Monsieur Turpin, the inventor of melinite, has according to an exchange submitted to the French war-office an electric gun, alleged to be capable of discharging 25,000 projectiles in five minutes and to have a range of several miles. The apparatus is comparatively light in weight, so that it may be drawn by two horses and worked by four men. The projectiles are small shells charged with a secret chemical preparation, spreading death for 60 yards around. The English government is said to be negotiating for the purchase of the invention, though skeptical of its value



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UNFAIR WHOLESALERS.

Editor HARDWARE :

SIR,—In your issue of the 18th ult. you make a reference to the necessity of retail hardware men's associations. While readily agreeing with you as to the benefits which might result were there more friendly relations between neighboring retailers, I wish to draw your attention and that of the hardware manufacturers of Canada to the fact that it is not so much ourselves that we require to be protected from as from the horde of sharks who travel the country professing to be wholesale merchants and receiving concessions from manufacturers, as such will sell at prices with which the retailer cannot successfully compete, half-pound of borax, a pound of horse nails, or a bar of iron to the country blacksmith ; a bundle of wire or a door-latch to a farmer, or the furnishings for a house or a cow stable to any person who is able to pay for them. That we have such firms in all our cities is well known to the entire retail trade, and the sooner the hardware manufacturers take steps to call these men down the better it will be for themselves.

Under the strong combines and agreements now existing in nearly all our manufacturing concerns, they find no difficulty in compelling the respectable wholesale houses not to sell to the retail trade below certain figures fixed by them. Why not apply the same rule to the disreputable class who call themselves wholesale dealers, but do the style of business I have referred to ? I know there are wholesale houses that do a city retail trade and who do not interfere with us in the country. Whether or not they are acting fairly with the city retail trade, I am not in a position to say, but will leave them to the tender mercies of the city retailer.

I have already trespassed longer on your valuable space than I intended, but I would like to add that I believe the retailers, if they choose to act, are masters of the situation ; and if my views find favor with the trade I will at some future time, with your permission, give my ideas as to what steps should be taken in the matter.

A SUFFERER.

POINTS IN PLUMBING WORK.

Baths should be found in every house so well arranged and so abundantly supplied with hot and cold water that every member of the household can use them freely and often. Copper and enamelled-earthenware baths are most suitable where the cost can be afforded, but when economy is an object, as is generally the case, cast-iron enamelled or painted baths must be resorted to. The enamel paint now applied to cast-iron baths is now so perfectly finished and polished by many makers that it has superseded glass-enamel, which is found to chip easily from the unequal expansion and contraction of the metal body and glass surface.

Some attention should be given to the position of the bathrooms. If bathrooms are situated over any important ceiling, splashing, overflow, or accident may sometimes occur, and destruction follow not only to ceilings but to tempers. Select a warm position, as near the boilers as convenient, and let the room be fairly large, lofty and well-ventilated. A close, stuffy bathroom is contrary to good taste, and will be avoided by the household more than it ought to be for health's sake.

The bathroom should be warmed in winter either by a fire or by a coil of hot-water pipes, and if water-pipes are adopted they should not be of cast or wrought iron, as such material may rust and discolor all the water in the cisterns and boiler, and render a pure water-bath unattainable. Water is made so rusty sometimes that fair Christian bathers come out of them like Red Indians, and towels and sheets are spotted by iron-mould. Copper pipes should always be used for the purpose of warming by hot water it the heat is supplied from the bath-water system. In summer the heat in the pipes must be shut off, and provision must be provided to enable this to be effectually done. It is as important for health to maintain the bath-room cool in summer as it is to have it warm in winter. The heating-pipes can be arrang ed advantageously to warm the bath sheets and linen.

Here, let it be stated that, as a rule, heating of apartments could not be done by the hot water of the house supply ; the coil, if of copper, in the bathroom is perhaps, the only exception to the rule. The hot-water cylinder may be placed in the bathroom if the position is convenient to the boiler, and if the cylinder can be encased so that in summer the heat may be diverted from the room. Linen presses or closets may be formed round the cylinder with advantage.

When the bathroom is over an important ceiling, then sheet lead, six pounds to the foot should be laid down on the bathroom floor, having a fall to one spot, where a two-inch waste-pipe should join to carry off any splash or over-flow, the lead turned up four inches round the walls and flashed where needful, and the outer edge dressed over a roll of timber three inches over the floor. The waste-pipe must on no account join the bath waste-pipe nor any other pipe, but deliver in open air, fitted with copper flap valve to exclude cold air ; no other tap should be attached to such a pipe. Care must be taken to prevent the splash water, when running down the walls near the bath, from getting in behind the turned-up edges of the lead ; this may be accomplished by a separate lead flashing being let into the wall and turned down over the edges of the turned up lead.

For baths and lavatories what luxurious accommodation is now required. Marble baths, modelled on the designs of those used in Rome in her palmy days are sometimes demanded ; but enamelled copper is so much superior a material for baths that we may recommend it safely as the best. The overflow-pipe of every bath should be ample to carry off the greatest volume that can possibly enter the bath from both hot and cold taps when turned on full bore ; any overflow less than this is to be condemned as faulty.

The waste-pipe should not be larger in area than the washer-grating area in the bath ; it should be arranged to run full to ensure perfect cleansing ; consequently, the washer-grating area should be large. If the waste-plug is fixed at botton of a stand-pipe great care must be taken by the plumber to fix it level and true, and also free from any warp. Sometimes a perfect valve-plug and washer, though proved to be staunch before fixing, will be found unreliable when fixed. The water in a bath should stand, if necessary, twelve hours without any sensible diminution by leakage, and to attain this result care and skill on the plumber's part is necessary.

The supplies are sometimes admitted to the bath through the waste-pipe and grating. This is a filthy arrangement, washing back some of the fouled waste water, which should never be allowed. The best arrangement is to admit the hot and cold fresh water about 6 inches above the bottom of the bath, independent of each other, and as near the foot of the bath as convenient. The valves known as "Lord Kelvin's patent" are the most certainly durable valves for hot water, and they suit equally well for cold. The longer they are in use the better they are, and leakage or drip is almost an impossibility with them. Many reclining baths are now fitted up with spray-douche, and wave douche and shower arrangement at the foot of the bath. The water is supplied to the pipes and jets through a series of valves grouped together in rows in a convenient position. The point to observe in these valves is to provide easy access to them for repair in the event of any leakage, for leaking values will spoil all the comfort of the bath, besides wasting the water.

All bath-makers supply these arrangements fitted together ready to fix in position, but care must be taken to select the best form. Sitz-baths and bidets are now also supplied as fixtures with hot, cold, waste, and overflow arrangements complete.

There is in fact no limit to the extent or luxury of bath accommodation which may now be called for in any mansion, and it behoves plumbers to inspect carefully every new improvement by every maker, and to keep themselves well informed up to date in all details.—Expert in Ironmonger, London.

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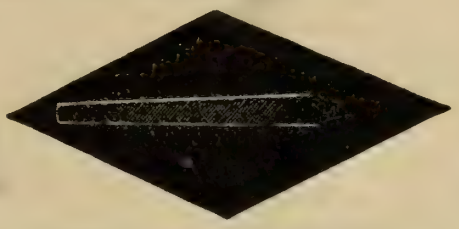
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WHETTING ONE'S TUSKS.

One of Æsop's delicious old fables treats of a fox who in strolling through the forests met a boar whom he found whetting his tusks against a sapling, and asked him why he made such needless preparation when there was no enemy in sight. "True enough" rejoined the boar, "but when the enemy does appear then there will be no time." The moral of this story is as true to-day as it was in that far-off time when it was first told for the delectation of Xanthus and his assembled guests.

Business is improving although slowly and is now slow compared to what it has been in previous years at this time. There are a great many tinners out of work or working part time; many a retail hardware man who in previous years has been rushed to death at this period of the year finds considerable spare time on his hands; jobbers and manufacturers are not in most cases overwhelmed with a rush of orders. In fact, in most lines the exigencies of business are not as pressing as they are generally, and it is consequently an excellent time to make active preparation for a rush of work. Unless all trade signs are of no avail there must shortly be a great revival of business activity, and many men will find themselves unprepared for the rush or unable to do some special thing that requiries more or less time. We should all be whetting our tusks. Many a tinner or other workman would like to be thoroughly posted in the scientific side of his craft, to know the why and wherefore of the results he obtains by following a routine, as yet largely meaningless to him, but said workman is often apt to feel that he cannot master these technical points as his daily toil exhausts him so that he is tired and perplexed when evening comes, and far more inclined to enjoy rest or recreation than to study. Many a man who has felt this way is now, owing to the business depression, in a splendid position to make rapid progress in the technical literature of his trade, and he should not put off his opportunity as a time will soon come when he will feel unequal to undertake the burning of the midnight oil after a day spent in severe manual toil. There are many retail hardware merchants who have meant to do a thousand and one things but have always been too busy until now. They have recognized that their windows did not look as attractive as a little skill and attention could easly make them look, but have regretted that they were too basy to fix them up properly. In the matter of arrangement of stock and the assortment of catalogues,etc.,they have realized that they could make decided improvements, but have been too much hurried with more important matters until now. Many a boss tinner or hardware dealer has a cub or a young salesman in his employ whom he has intended to faithfully teach his business, but as both himself and prospective pupil have had their hands full in the past this excellent idea has been neglected. These are only a few instances picked up at random. Every man who has done a rushing business knows how many things are left undone or are done poorly when customers are thronging the store or orders piling up. Many a successful business man has worked far into the night to fix up these minor as well as more important matters. The present is an admirable chance to prepare for the business activity of the future.

The commercial world should take to heart and act on this moral presented by old Æsop in more ways than one, but in one particularly. It is the worst policy possible to neglect advertising when business is dull. Dealers are not buying now so largely as they will in a few months, but they are thinking about buying. No successful retailer waits until he is in actual need of this or that article, and then orders from the first house that happens to send a salesman along his way, or that occurs to his mind as a good one to patronize. In no line of business, wholesale or retail, can you build up a big and permanent trade in a single season. The introduction of any line of goods, no matter what their merit, takes time. While the retailer is not sending in his orders as rapidly as he will, he still is on the lookout for salable articles. He reads of this range, that heater, that eaves trough hanger. He does not care to order very many of them to-day, but he resolves that he will handle them as soon as business becomes brisk again. Those firms that will reap the lion's share of the active volume of business that we all hope for, will be those who advertise now. You must sow if you would reap. The retail trade will not wait until business is rushing to make their selection of goods on the spur of the moment. They are deciding now.

Procrastination is inexcusable always. The man full af business and the man of little business are alike blameworthy for putting off till to-morrow what they should do to-day, but in meting out the degree of criticism which should be bestowed on each, it is certain that the man of little business is the greater sinner.—American Artizan.

RAILROAD CAR VENTILATOR.

The equipment of interiors of railroad coaches, particularly the vestibuled cars and Pullman and Wagner sleepers, has of late acquired such a degree of perfection that very little margin for further improvement remains. These coaches are so equipped as to afford the traveler a degree of comfort that our forefathers were not in a position to predict. Mere physical composure, however, does not alone constitute comfort. The traveler must have air, and fresh air at that.

There has recently been patented through The Age of Steel patent soliciting agency a novel car ventilator, of which the inventor is Mr. Charles Knapp, of St. Louis, Mo.

It consists, substantially, of a T-shaped pipe communicating with the interior of the car thorugh the floor thereof, and to the opposite extension of which are secured two long flaring pipes extending perhaps one-third the length of the car. During the motion of the coach in one direction, the outside air rushes with a speed equal to that of the car through the flaring pipes, but in opposite direction to that in which the car moves, and when the current reaches the T-shaped extension at the center of the ventilating device, the velocity of the current becomes accelerated in proportion to the amount of contraction the opening of said extension has over the open ends of the flaring pipes. It is a well-known law of aerodynamics that the velocity of a current passing through pipes increases the moment said current passes a contraction in the path of said pipe. It is the accelerated velocity in the present case that produces a positively induced currant from the interior of the car, through the T-shaped extension and into the atmosphere as indicated by arrows. The ventilator is recommended to builders of coaches whose object is to raise the standard of public comfort afforded by them to a maximum.—Age of Steel.

SUGGESTIONS FOR ADVERTISING.

Every retail merchant who advertises, and few indeed there be who do not, might do well to keep a combined scrap and note book for the preservation of bright ideas in the advertising line that he may run across, advises a contemporary. Particularly the small retailer who has not the time to evolve original ideas himself all the time and whose business does not warrant him employing a professional "ad" writer, may be pardoned if he takes suggestions from others or even appropriates entirely the effusions of professionals in other cities. When you come across a bright "ad," or a bright suggestion for one in your trade paper, clip it out and paste it in your scrap book. When a bright idea occurs to you but which you do not care to use immediately, why, jot it down. The results of your pains will return to you after many days anyway, and perhaps next week.

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Canada's Greatest Business Schools.
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And have a very complete line of such goods, many of which are particularly suitable for Christmas trade. See our travellers before placing your orders elsewhere.







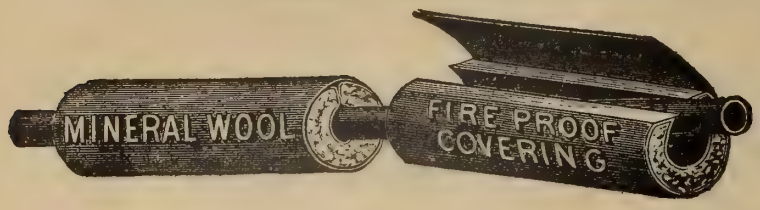




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BUSINESS CHANGES.

DIFFICULTIES, ASSIGNMENTS, COMPROMISES.

Mary B. Nadeau, general merchant, St. Jean Baptiste, has assigned.

R. Burpee Anderson, stoves and tinware, Port Elgin, N. B., has assigned.

J. N. Laird, general merchant, Tara, has assigned to J. W. Lawrence.

J. W. Silverthorn, general merchant, Olds, has assigned to W. G. M. Innis.

Rochon & Frere, joiners, Montreal, have compromised at 35c. on the dollar.

F. D. Stubbs, general merchant, Port Carling, has assigned to C. S. Scott.

A. J. Watson, general merchant, Heathcote, Ont., has assigned to W. A. Campbell, Toronto.

J. B. Wilson, general merchant, Kaslo, B. C., has assigned in trust to G. H. Hodgson.

W. B. McLamb, blacksmith, Sherbrooke, Que., has assigned book debts to K. Sweetman.

Geo. N. Gowen, general merchant, East Wellington, B. C., has assigned to J. H. Todd and M. Baker.

Leonard & Crawford, general merchants, Red Rapids Bridge, N. B., have compromised at 70c. on the dollar.

Belodeau & Renaud have been appointed curators of the estate of A. E. Hall & Co, general merchants, Grenville.

T. &W. Murray, general merchants, Pembroke, Mattawa and North Bay, has secured a compromise at 50c. on the dollar secured.

Hall & Secord, builders, Brantford, have assigned. Their failure is attributed to two causes. During a heavy windstorm recently a large building they were erecting was blown down and two of their employees who were injured some time ago by the giving way of a scaffold are sueing them for heavy damages. A good deal of sympathy is felt for the firm and it is likely to secure a settlement.

SALES MADE OR PENDING.

P. Hetu, tinsmith, Montreal, has sold out.

W. Pelch & Bro., blacksmiths, Cross Hill, are advertising business for sale.

The stock of T. Coulter & Co. (A. Stewart, prop.) is advertised for sale by tender.

The stock of T. J. Warnken, implements, Morden, has been sold to Mrs. Bertha Warnken at 60c. on the dollar.

The stock of the estate of John Byers, general merchant, South Monaghan, Ont., is to be sold by auction Dec. 12.

PARTNERSHIPS FORMED AND DISSOLVED

Hunter Bros., general merchants, Brome, Que., have dissolved.

W. H. Bigelow has retired from the Spencer Island Co., general merchants, and shipbuilders.

Learn & McGuire, the Toronto Metal Engraving Co., have dissolved. Geo. McGuire continues.

E. Langille, stoves and tinware, Spring Hill, N.S., has registered consent for his wife to do business in her own name.

J. Marcatte and Octave Marcatte have registered a partneiship in Montreal to carry on business as general merchants, under the firm name of Joseph Marcatte & Co.

CHANGES.

Ouellette & King, general merchants, Coatsworth, have been succeeded by Thos. Robinson.

L. Walterhouse, blacksmith, Cookesville, has sold out to J. Dougherty, who takes possession April 1 next.

W. H. Jackson, general merchant, and carriage maker, Brock Road, Ont., has sold out to H. C. Paynter.

The assets and liabilities of the Brockville Carriage Co., Brockville, and the Gananoque Carriage Co. have been assumed by the Canada Carriage Co.

FIRES.

L. C. Shepherd, builder, Toronto, has had his shop partially destroyed by fire.

Fire at Emerson, Man., Wednesday, destroyed a brick block occupied by R. A. Whitman as a general store. Loss, $10,000.

The stock in the factory of H. A. Wilder & Co., wholesale and retail furniture Montreal, has been partially damaged by smoke and water.

J. W. Ross' general store and contents, Sunbridge, were destroyed by fire on Friday. It was not discovered until all ablaze. Nothing whatever was saved. The loss is probably $2 500. The amount of insurance is not known.

DEATHS.

R. M. Sterling, general merchant, Noel, N. S., is dead.

J. C. Eager, general merchant, Waterdown, is dead.

Mr. Austin Cantin, well known for many years as a successful shipbuilder, is dead, at the ripe age of 84 years and 6 months. Mr. Catlin's works on the canal banks were among the oldest industrial enterprises in Montreal. Craft of all kinds have been turned out of them for both commercial enterprises and governments, both home and foreign. Two of the fleetest schooners that ever left the St. Lawrence were built by Mr. Cantin some twenty years ago for the French Government.

BUSINESS CHANCE.

Advertisements inserted under this heading two cents per word each insertion.

STORES and Offices to rent in The Thomson Bros. Block, Calgary, a three story stone building, plate glass front, heated with hot water, lavatory, closets, etc., most central location in the city, ready for occupation in about a month. Address, THOMSON BROS., Calgary.

SITUATION WANTED.

EXPERIENCED Hardware Clerk wants situation in good live town. References furnished from late employer. Address, J. E. WESTCOTT, 298 Wolfe St., London, Ont



C. C. HARRIS

Manufacturer of Solders and Antimonial Alloys.

Cor. Wickson Ave. and Yonge St., Toronto.

E.O.W.

YOU LOSE MORE THAN WE DO BY NOT ADVERTISING IN THIS JOURNAL

"Favorite Queen"

Direct Draft Surface Burner for



COAL OR COKE

. . A . .

Powerful Heater

FOR

Stores, Hotels, School-Rooms, Factories, Etc.

A powerful heater giving great results from small consumption of fuel.

Three sizes, 14, 17, and 20 inch fire pots.

The Jas. Smart Mfg. Co., Ltd.

BROCKVILLE, ONT.

. . ELEY'S . .
CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. Wholesale Only.

ELEY BROS., LTD.

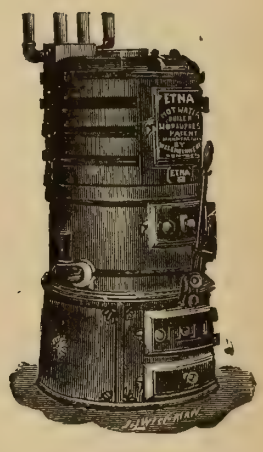
254 Gray's Inn Road, LONDON, ENG.

The "ETNA"

Hot Water Heater . .

— IS —

PERFECT



And we are prepared to

GUARANTEE

Its working satisfaction in every particular.

Write for Price List and Testimonials.

Wm. CLENDINNENG & Son, Montreal, Que.

TELEPHONE 1780.

J. H. FARR & CO. MANF'RS OF **FINE VARNISHES**

Shellacs, Japans, Asphaltums, Oil Soap, Roofing and Paving Pitch, Tarred Felt and Building Paper.

Importers and Dealers in Bronze Powders, Gold and Metal Leaf.

8 to 16 MORSE STREET, - - TORONTO, ONT.

TELEPHONE 2480.

FRANCIS, FROST & CO. Importers, Shippers and Jobbers in **TURPENTINE**

Resin, Pine Tar, Pitch, Linseed Oil, Oxides, Dry Colors, etc.

FOUNDRY FACINGS and SUPPLIES. § No. 33 Front St. West, Toronto.

THOS. FIRTH & SONS, Ld.

Best Crucible Cast Steel.

STEEL, PEECH & TOZER, Ld.

Bessemer Steel,

Open Hearth Steel.

Agents,

James Hutton & Co.

MONTREAL.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	21, 22
Straits "	20½, 21

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
M.L.S. equal to Bradley		
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 00	4 25
I.X., "	5 00	5 25
I.X.X., "	6 00	6 25
I.XXX., "	7 00	7 25
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be purchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.	13 00	
" " I.X.	16 00	

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
I.X.X., 14x56, 50 sheet bxs	
" 14x60, "	6½c, 7c
14x65,	

Tinned Plates

72x30 up to 24 gauge	6¼	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
5/16 "	2 35
⅜ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2⅞, 3
22 to 24 "	2⅛, 2⅜
26 "	2⅜, 2⅝
28 "	2⅝, 3

Canada Plates.

All dull	2 65
½ polished	2 75
All Bright	2 90

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5½, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅝ 5
" 5-16 " "	4⅛ 4⅝
" ⅜ " "	4¼ 4½
" 7-16 " "	4 4¼
" ½ " "	3⅞ 4
" ⅝ " "	3½ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B. S ton lots	0 11⅜ 0 12
Lake Superior	0 12¼ 0 13

Bolt or Bar.

Cut lengths, round, ¼ to ¾ in.	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 18 0 19
" 35 to 45 " "	0 16 0 17
" 50 lb and above per lb	0 15 0 15½

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft	0 21 0 23

Zinc Spelte .

Foreign, per lb	0 04⅜ 0 05
Domestic "	0 04⅜ 0 04¾

Zinc Sheet.

5 cwt casks	0 05½ 0 05⅝
Part casks	0 05½ 0 05¾

Lead.

Imported Pig, per lb	0 03 0 03½
Domestic "	0 03
Bar, 1 pound	0 04½
Sheets, 2½ lbs, sq. ft, by roll	0 04½ 0 04¾
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04½ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)	0 15	0 16
Standard	0 14	0 15
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 12½
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do "	4 75
No. 2 Do "	4 50
No. 3 Do "	4 25

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 00	1 20
2nd qualities "	0 90	1 00
Barn (in bbls)	0 80	0 90

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre(J.C.) bbls,p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red, (best) " "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " } " "	1 25 1 90
Canadian " }	
Paris Green, per lb	0 13½ 0 15
Burnt Sienna, pure, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure, 8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra " "	0 90
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 85
No. 1 Carriage "	1 30
Gold Size Japan " "	1 00 1 20
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40
White Shellac	2 25

Linseed Oil (in bbls)

Raw, per gal	0 58½ 0 60½
Boiled "	0 61½ 0 63½

Turpentine (in bbls)

Selected Packages, per gal	0 44 0 46

Castor Oil.

Best, per lb	0 07½ 0 08

Cod Oil.

Cod Oil, per gal.	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue—F. LePage's, dis. 20 to 25 per ct. off list; Munn's, dis. 25 to 30 per cent. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge 0 25
Thin card wads in boxes of 1000 each, 8 gauge 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge 1 15
9 and 10 gauges 1 40
7 and 8 gauges 1 65
5 and 6 gauges 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 50
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross... ... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... ... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Can'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 25

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardin Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per cwt 0 60 0 65
Red..... .. .. 0 05 0 06
Crayon, per gross 0 14 0 18
Chisels—*Socket, Framing and Firmer*
American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... .... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.20-25	2.40	1.75	
26 to 40	1.40	2.70	2.00	
41 to 56		3.10		4 50
57 to 60		3.40		5.00
61 to 70		3.70		5.50
71 to 80		4.10		6.25
81 to 85		4.50		7.00
86 to 90				8.00
91 to 95				9.00
96 to 100				10.00

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0
Enamelled " 0 55

Grindstone Fixtures.

P. S. & W., per doz 3 83 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb . 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier per doz 0 50 1

Wrought Iron.

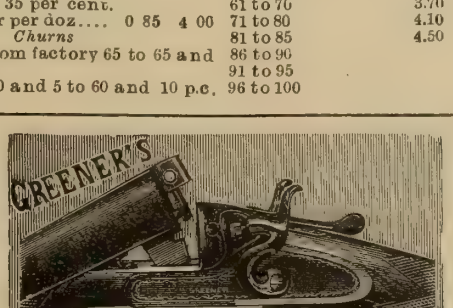
Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

NEW ARRIVALS

30 Cases CUTLERY AND GUNS

ALL NEW GOODS.

Finest Finish. Best Value.



NEW ARRIVALS

20 Casks Cattle and Trace CHAINS

10 Tons Coil Chain.

Five Cars Window Glass.

Bowman, Kennedy & Co., London, Ont

Wrought Hooks and Staples, Amer- dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 50 to 55 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

F.O.B. Toronto & Hamilton $3 80
Snow, " " ... 3 90
F.O.B. Montreal 15c. less, and London 5c. more than above.

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy.....	2 30
40dy.....	2 35
30 dy.....	2 40
20, 16 & 12 dy.....	2 45
10 dy.....	2 50
8 & 9 dy.....	2 55
6 & 7 dy.....	2 70

2. American Pattern Only

from 4 to 5 dy	2 90
3 dy. (lath).....	3 30

3. Canada Pattern Only

from 4 to 5 dy	2 80
3 dy. (lath).....	3 20
3 dy A.P. Fine	3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 60 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... . 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 35 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, 1bs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3½
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 55 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9	10 10½
¼, 5-16, ⅜ in.....	9½	10½ 11
Cotton, per lb.....		18 20
New Zealand		8½ 9
Russia Deep Sea, per lb..		12½ 13½
Jute ..... " ...		06½ 07½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D, dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 special brands net price.

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, " 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Sapolio

In ½ or ⅓ gross boxes, per grs. 11 30

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.
Stove Polish, (Catchpole's).
Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz 1 2 50

Tinner's Shears and Snips

P.S.&W., net list.
Canadian 10 to 15 per cent dis.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ p.c. to 35 p.c
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9 00

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4½ 4¾
" 4 " 4 & 6 " "
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p.100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 "
" S., per doz..... 5 80 7 0
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & Co.,

TRADE MARK FOR
SIMPSON HALL MILLER & CO. QUADRUPLE PLATE
HOLLOW WARE.

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR
WM ROGERS.
KNIVES, FORKS, SPOONS

Manufacturers of the

Finest Quality Electro-Plated Ware.

And Sole Manufacturers of the Celebrated

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

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PORTLAND CEMENTS

BEST ENGLISH BRANDS.

Keene's Coarse, Parian and Superfine Cements.

SEWER PIPES 4 in. to 24 in. diameter. Flue Linings. Chimney Taps.

FIRE BRICKS. Flue Covers, Fire Clay, Cupola Paubing Mixture, Kaolin,

CALCINED PLASTER. Enamelled Sinks, Wheelbarrows, Scotch Derricks.

Large stocks at lowest market prices.

Wm. McNally & Co
MONTREAL.

NONE GENUINE
WITHOUT THIS BRAND

JOHN LUCAS & CO. PHILADELPHIA
IMPERIAL FRENCH GREEN

STAMPED IN HEAD OF
EVERY PACKAGE

BLACKSMITHS' TOOLS.



Horseshoe Vises.

Price, No. 1, - $4 00
" No. 2, - 7.50

Will save their cost in a week's sharpening. . . . .

A. B. JARDINE & Co.
HESPELER, ONT.

Do we make any other Skates besides our **GENUINE ACMES?**

Well, We Rather Think So!

What About our Hockey? The most elegant and suitable skate for the purpose ever made.

What About our Racers? Made with wood tops and extra light runners—the only way in which lightness, combined with perfect rigidity, can be secured. Special system of strapping. The leading racers use wood-top skates. Why? Because they know from experience they are the best.

What About our Skeletons? For Rink use the most in demand. Welded iron and steel blades. Plain or nickel-plated.

Why have we secured first honors at Philadelphia, 1876—Paris, 1878—London, 1886—and now Medal and Diploma World's Columbian Exposition, 1893? Because of the superiority of goods exhibited, which are the same as those we are shipping our customers daily.

PRICE?—Ask your jobber about that, and you will find they are quite as cheap as the inferior makes.

THE **Starr Manufacturing Co., Ltd.**
WORKS—Dartmouth. P. O. ADDRESS—Halifax, N. S.



You will Insure Success

IN THE

STOVE

Business, by selling



"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.



The Gurney-Tilden Co. Ltd.

Successors to The E. & C. Gurney Co.

HAMILTON - - ONTARIO.



Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St., Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 x 4 Barb
Plain Twist and
Strip Fencing

And Staples for same.

Write for Prices and Discounts.

ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

PEOPLE WHO HAVE

The "Pittsburgh" Lamp

Speak only of it in the highest terms; and well they may, because it gives more general satisfaction than either gas or electricity.

Made in 2 sizes of Burners:



The Mammoth Hanging
300 Candle Power.

The Medium . .
Made in Vase, Banquet, and Piano, all sizes and styles.
80 Candle Power.

Write for Prices.

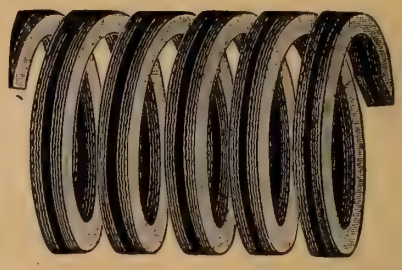
Gowans, Kent & Co.,

Sole Agents for Canada. TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
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"GUTTAPERCH"
BRAND OF



SPIRAL PACKING
ANTI-FRICTION, SELF-LUBRICATING

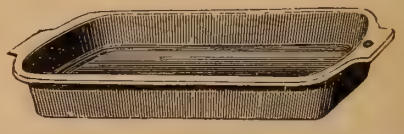
Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.
OF TORONTO, LIMITED.

61-63 FRONT STREET W., Toronto.

"The Seamless Flanged Drip Pan"



Improved Rolled on Edge.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife to cook or lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The improved rolled on edge making it easy to handle.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

Write for Discount.

SIZES.....	8 x 10	8 x 14	10 x 15	12 x 17
Per Doz.....	$1.91	$2.33	$3.20	$3.73

THOS. DAVIDSON & CO., Montreal, Can.

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, DECEMBER 16, 1893. No. 50.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

MAGNOLIA METAL CO.,

London Office: 75 Queen Victoria St.
Chicago Office: Traders Building.
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Owners and Sole Manufacturers,
74 Cortland Street, NEW YORK.

Mander Bros.' Varnishes

ARE THE RECOGNIZED STANDARD

By which all other Coach Varnishes are judged to-day. Messrs. Walter H. Cottingham & Company, the Agents for these celebrated goods, are more convinced of this fact than ever before, as the demand continues brisk and the sales are much is excess of former years. We call the attention of the Hardware Dealers to **Mander Bros.' Outside Varnish** which has proven such a boon of satisfaction to the consuming public.

A Full Line of Samples and Prices on Application.

Walter H. Cottingham & Co.

Fine Paints and Varnishes. MONTREAL

Christmas Novelties

CARVERS in SETS and CASES

LADIES' AND GENTLEMEN'S

Manicure and Toilet Sets

Piano, Banquet, and Princess LAMPS

RICE LEWIS & SON,

LIMITED

TORONTO

ANOTHER REVOLUTION!

In the Bath Trade.

"Steel Clad" No. 2

READY JANUARY 1894

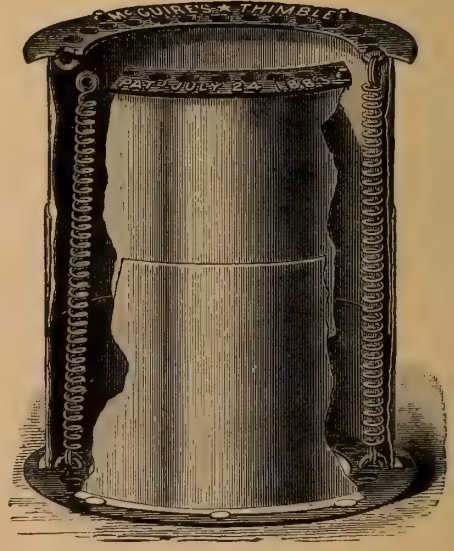
Latest - - Best

MANUFACTURED BY

Toronto Steel-Clad Bath and Metal Co.

LIMITED

123 Queen St. East, **TORONTO**



THE ABOVE CUT REPRESENTS THE

McGuire Patent Stove-pipe Thimble

It is the same cut we have used in advertising and illustrating this Thimble for the last eight years. We desire to inform our customers, and the trade in general, that we have been and still are the sole manufacturers of this Thimble in Canada, the reputation of which is so well established. No other persons whatever have been licensed, under the patents covering this Thimble, to manufacture it. Anyone infringing will be prosecuted. And to beware of those who represent they sell McGuire's Star Thimbles, who have no right whatever to manufacture the same and cannot possibly supply the genuine article.

Kemp Manufacturing Co.

TORONTO, ONT.

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, DECEMBER 16, 1893 No. 50

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

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John Cameron, General Subscription Agent.

The price of linseed oil is a fickle quantity these days. Some three or four weeks ago the Ontario Association lowered the price a cent and a half per gallon. Now an advance by that much is announced. When the decline was made it was to meet America competition. Jobbers across the line, on account of the demoralized condition of prices there obtaining, together with the stagnation in trade, being actively engaged in pushing their product in the Canadian border towns. Now the association among the jobbers and manufacturers in the United States is being galvanized into new life, as already pointed out in a former issue, and, largely owing to this, it is believed, the price of linseed oil in the United States has been going up at leaps and bounds, the advances during the past two or three weeks having aggregated no less than eight cents per wine gallon. It is in sympathy with these advances that the price in Ontario has been put up a cent and a half per Imperial gallon. Jobbers claim that American linseed oil laid down in Toronto would now cost about 66c. Trade in linseed oil is at the moment dull, and what little is moving is in the boiled article, raw, which is used for outside purposes, not being of course wanted at this season.

* * *

The revelation of England's weakness in the Mediterranean Sea will eventually strengthen the iron and steel manufacturers of that country. The £20,000,000 spent by the Salisbury administration in building vessels of war was quite acceptable to them, but how much more so will be the £40,000,000 which it is now proposed to lay out for a similar purpose, especially when the iron and steel trades are in a far worse condition now than when the last great expenditure on the navy was made? It is an ill-wind that blows nobody good.

* * *

The United States tariff reform bill is nearing an interesting stage. Monday last it was formally submitted to a full meeting of the Ways and Means Committee. When the provisions of the bill were made public some weeks ago it was through the medium of the Democratic majority of that Committee. Between that time and its submission to the full committee Monday a number of changes had been made in the schedule. Tin plate is changed from an ad valorem duty of 40 per cent. to a specific duty of 1.1-5c. per pound, and the reduction is not to take effect until October 1, 1894. Pocket knives and razors are fixed at a uniform rate of 45 per cent. The provision for ivory on the free list is amended so as to read: "Sawed or cut into logs," instead of simply "sawed or cut." Duties are restored on planed lumber at the rate of 50c. per thousand feet for each side planed; $1 for planed, tongued or grooved on one side, and $1.50 when planed, tongued and grooved on both sides. Common yellow and brown earthenware, plain or embossed common stoneware and crucibles, not decorated in any manner, 20 per centum ad valorem. China, porcelain, parian, bisque, earthen, stone and crockery ware, including plaques, ornaments, toys, charms, vases and statuettes, plain white, and not decorated in any manner, 35 per centum ad valorem. China, porcelain, tinted, stained, enameled, printed, gilded, or otherwise decorated in any manner, 40 per centum ad valorem. All other china, porcelain, parian, bisque, earthen, stone and crockery ware, including lava tips for burners, not specially provided for in this act, if decorated in any manner, 40 per centum ad valorem; if not decorated, 35 per centum ad valorem. The duties on lead products are changed from ad valorem to specific duties, and are made one-half of the rate of the present law. Magnese fire-brick is increased to $1 per ton. Pottery classification is changed and made 35 and 40 per cent; ferro-manganese from 22½ per cent. to 10 per cent.; common black plate from 35 per cent. ad valorem to a specific duty of nine-tenths of a cent; wire from 30 to 35 per cent.; lead sheets, etc., made specific at 1¼c. per pound; twine of hemp into basket clause increased from 10 per cent. to 30 per cent.; brushes and feather dusters from 25 to 30 per cent. Petroleum, crude or refined, is made free if the country producing it admits that of the United States free. Barley malt has been increased from 20 to 25 per cent., and people going into the country will have to confine the limit of their wearing apparel to $250 worth, instead of $500 worth as first proposed. These are among the most important changes made in the bill, but how many more will take place before both houses of Congress have got through dissecting it, only time can tell. One thing may be depended upon: The Republican minority will make a hard fight in opposition to the bill, which is now likely to go into operation June 1st next.

* * *

Playing loose with the customs regulations is about as risky as "monkeying" with the buzz saw. A Syrian bric-a-brac firm, doing business in Montreal, is evidently realizing this at the moment. A few days ago an United States customs official arrested three members of the firm while engaged in smuggling a consignment of English razors into the country. The official naturally came to the conclusion that as the Syrians were trying to cheat the American Government out of a portion of its revenue it had previously succeeded in eluding the Canadian Customs

authorities. He accordingly advised the latter of his suspicion, and the Montreal appraiser accordingly took possession of the premises occupied by the Syrians there. The goods seized consisted principally of silks, ornaments and other Syrian art works. Their value is said to be something like $10,000, but this is discredited. The Customs officials believe that the men have been carrying on a sort of reciprocity in smuggling between Canada and the United States. It is fortunate therefore that their operations have been cut short.

* * *

Great is the Province of Ontario as a fruit-growing centre. Few people there are, however, who have anything but a general idea of what this really means. The display which she made at the World's Fair opened their eyes a good deal, but still not sufficiently so to enable a full understanding as to the extent and value of the fruit crop in Ontario. Last week the Ontario Fruit Growers' Association held its annual meeting in Peterboro', and there the particular information was forthcoming. It was furnished by the Deputy Minister of Agriculture, and must have created no small amount of surprise to those who perused the figures adduced. A good many people at a haphazard guess would probably tell you, if queried on the matter, that the cheese product of the province exceeded in value that of fruit, while as to wheat and fruit, if a comparison was made, ninety-nine per cent. would give their verdict in favor of the former. But taking the figures of last year as a basis, it will be seen that in both instances would the guesses have been wrong. Turning to the figures submitted at the Peterboro' meeting, it is found that there were 7,000,000 bearing apple trees in Ontario, 2,000,000 grape vines, 700,000 plums, and 500,000 each of cherries, pears and peaches; while the approximate value of these trees was placed at $20,000,000. How this compares in value with the wheat crop and the cheese product of the province may be gathered from the fact that the former was worth $15,000,000 and the latter between $9,000,000 and $10,000,000.

* * *

These figures should give fresh stimulus to the industry, particularly in regard to the cultivation of apples, for which the Canadian climate is so admirably suited. There are some States in the American Union that can raise large apples, but when it comes to a comparison of quality Canada takes the palm. That Canada can achieve greater success in this respect there is no reason for doubt. There is plenty of land, and much of that which is not adapted for profitable cereal or vegetable cultivation is well suited for the growth of apple trees. Another particular in which further improvement may be made in apple growing is in regard to variety. As Mr. W. Boulter, the well-known canner, pointed out at the Peterboro meeting last week, it was a mistake to plant so many varieties. Everybody who has had anything to do with apples will tell you that there are varieties of apples on the market that are neither "fish, flesh nor good red herring," as the saying runs. As in almost everything else, it is the better class of apples that the market will the most readily absorb, and we have been getting a good illustration of that this fall and winter.

* * *

"It may be law but it is not justice," This is a saying one often hears; and it may be repeated again in regard to the judgment handed down a few days ago in the proceedings instituted to restrain the sheriff from selling the goods found on the premises of Oliver, Coate & Co. to satisfy a claim of the city of Toronto for taxes. These particular goods were placed with Oliver, Coate & Co. to be sold by auction. Some of the people were in straightened circumstances and wanted money to relieve their necessities. When the sheriff was put in to satisfy the claim for taxes these goods were appropriated along with those of Oliver, Coate & Co. To restrain the authorities from disposing of their property the owners, through a solicitor, issued an injunction, but beyond securing a temporary stay of proceedings it had no effect, for the judge before whom the case was argued, has decided that according to the assessment law the goods must be sacrificed to satisfiy the claim the city has against Oliver, Coate & Co., a claim which in equity they are no more liable for than the child unborn. Some effort should certainly be made to compensate these people who have been made the victims of such unfortunate circumstances, while the legislators should get their knives ready to prune the the law of this most unjust power at the next session.

* * *

Anything affecting the Canadian live stock industry is a matter of concern to everybody. When the British and United States governments placed extreme restrictions on the importation of Canadian cattle —the one because of the alleged presence of pleuro-pneumonia and the other for political purposes—it was felt that a serious blow, in the former instance particularly, had been aimed at the stock-raising industry of this country. But now a greater danger is menacing us. We have reference to tuberculosis. During the last two or three years a few isolated cases of this terrible disease have been announced, but they did not create any wide-spread alarm. The cattle found to be affected were slaughtered; and there the matter ended as far as the general public was concerned. Now, however, there is a suspicion that the germs of the disease have been more widely diffused than was at first supposed. Only last week the alarming fact was announced that several of the cattle in the dairy at the Agricultural College, Guelph, were affected, and had been for some months, with tuberculosis; and furthermore, that calves from afflicted heifers had been put up by auction and sold.

* * *

Since the facts have leaked out regarding the prevalence of tuberculosis at the Ontario Agricultural College, several other cases in different parts of the province have come to our knowledge. One particular case was near a town east of Toronto. One of the cows in a valuable herd was taken sick and died. An examination showed that the animal died of tuberculosis. If our memory serves us right, one or more cows followed in the same way. Alarmed least he was going to lose the whole herd, the owner shipped the remaining animals off to the United States, where he sold them. These animals may not have been afflicted, but to dispose of them as he did was most reprehensible. Another case was where the tuberculosis had been conveyed to a mare and her colt by their being placed in a stall where there had previously been tethered a cow that had succumbed to the disease. After the cow died the stall was fumigated and whitewashed, but the mare and colt caught the disease and death notwithstanding. Another case we heard of was where several animals on a farm near Stouffville were attacked. The owner immediately slaughtered all the afflicted animals His fear is now that the disease may develop in the spring in the other cows on his farm.

* * *

In the stamping out of tuberculosis we are all more or less interested in a double sense.

There is what may be termed the general one: A desire to see everything removed that may be inimical to the development of one of Canada's most promising industries. And then there is the natural one of self-protection. Milk from a cow afflicted with tuberculosis is likely to impart the disease to the person drinking it. There is a danger even, although probably one of lesser degree, through eating the meat of a diseased animal unless it be thoroughly cooked. "An ounce of prevention is better than a pound of cure;" and it is obvious that those who desire to run the least risk should boil their milk before drinking and well cook their beef before eating it. That the disease has assumed proportions large enough to be serious is evident; as it is equally so that active and radical remedial means should be adopted to stamp it out. The proper and only competent authority to undertake this is the Government; and its first duty in the premises seems to be to order an enquiry to be made forthwith.

WANT A HIGHER DUTY ON SCRAP.

There is considerable discussion among the iron trade at present in Montreal with regard to a change in the iron duties. Speaking in regard to the matter to HARDWARE correspondent, a gentleman largely interested in the pig iron industry spoke strongly in regard to the present customs provisions governing scrap iron. These have already been fully commented on in these columns, but the gentleman made the assertion that if a proper duty was imposed upon scrap iron the pig iron production in Canada would almost double itself in a year's time. At present the Canadian consumption of domestic pig was about 60,000 to 65,000 tons, and the importation of foreign scrap 40,000 to 45,000 tons. If the makers of Canadian puddled bars were properly protected, he ventured to assert that the Canadian consumption of pig would increase just the latter quantity. It was all well to talk about fostering our infant iron industry, but while the duties were worked as at present it was all poppy cock. He knew that the rolling mill men claimed that the Canadian furnaces could not supply them with what they wanted in the matter of quantity, but this was simply nonsense. How could they do so when they had not been given a chance owing to these large importations of scrap iron.

After his conversation with this gentleman HARDWARE called on Mr. A. T. Patterson, the Montreal representative of the Londonderry iron works in Nova Scotia. Mr. Patterson coincided entirely in what the previous gentleman had said and gave further details. He pointed out that no blast furnace can anywhere be permanently run upon an absolutely uniform product and in a new stage of industry, where varieties of ore fuel, etc., have to be experimentally treated, the difficulty being necessarily greater in Canada than in countries where the industry has been long established. Pig iron was usually classified as foundry and forge iron, and the former is again subdivided into soft foundry and hard foundry. Experience has shown that in the company's furnace in Nova Scotia, running under existing conditions, will turn out about one-third soft foundry, one-third hard foundry and one-third forge iron. Now at present only the soft foundry iron found a good market in Canada, the sale of hard foundry being interfered with by the extraordinary fact that our tariff permits the importation of cast iron scrap, or rather pig iron in another shape, at a disproportionate duty; and the sale of forge iron in Canada is almost precluded by this and the low rate on puddled bars and blooms, which prevents the manufacture of bar and sheet iron in Canada out of pig iron unless at a heavy loss, the extra labor required being about equivalent to $12 per ton, for which the tariff does not provide adequate protection. "With this protection accorded I have no doubt at all," said Mr. Patterson, "that as the gentleman you saw previously stated, the consumption of Canadian pig would have a pronounced increase for the plain reason that I have already outlined."

UNDERSELLING ON WINTER GOODS

Complaints are heard daily from retail hardware men of the way in which some dealers are cutting prices in such winter goods as skates, sleighs, etc. Many who are in favor of low prices and moderate profits during the holiday season cannot help but condemn the petty rivalry and lack of interest in their own and fellow merchants' welfare which prompts them to undercut one another at such a ruinous rate. The fact that they have knocked a neighboring merchant out in some lines may cause them some personal satisfaction at present, but it is bound to be detrimental to their own interest in the end.

The fruits of such dealings, like chickens, will come home to roost. An instance of the cutting of prices was noticed when a Toronto hardware man offers skates for 50c. a pair which cost him 47c. net, and yet another case is where the merchant had paid 60c. a pair for skates and was selling them at 75c. and throwing in a pair of 10c. straps along with them.

There are many cases in other lines where ruthless cutting has been going on. The attention of HARDWARE was drawn particularly to the cards of two neighboring merchants, one of whom advertised children's sleighs 12½c. a piece, while the other had the same goods marked at 12c. These goods cost the dealers $1.50 per doz.

"Where is this kind of thing going to end?" asked a hardware man. "We cannot run our business at a loss. There is no doubt that the demand for ready money and the dullnnss of business has a great deal to do with propagating this evil. The department stores do us a lot of harm, but that is no reason for legitimate dealers underselling each other and slaughtering prices to this extent."

QUEBEC MINING ASSOCIATION.

The General Mining Association of Quebec will hold its annual meeting in Montreal on the second Wednesday and Thursday in January. Arrangements have been made for papers on the following subjects: "The Diamond Prospecting Drill in mining Canadian phosphate and smaller irregular mineral deposits, by Mr. I. Burley Smith, M.E, Glen Almond, Que.; "Mine Tunnels and Tunnel Timbering," by Mr. W. A. Carlysle, M.E., Montreal; "Ore Sampling," by Mr. J. Donald, M A., Montreal; "Notes on the White Mica Deposits of the Saugenay," by Mr. J. Obalski, M.E, inspector of mines, Quebec; "Notes on the Canadian Iron Industry," by Mr. George E. Drummond, Canada Iron Furnace Company; "Curiosities of Mining Law," by Mr. B. T. A. Bell, Ottawa; "Recent Deep Borings in Germany," bp Mr. F. Cvikel, M.E, Ottawa. Papers, the subjects of which have not been announced, are expected from Dr. F. D. Adams, Montreal; Dr. Harrington, Montreal, and Dr. Robert Bell, Ottawa.

A PUSHING HARDWARE MAN.

Well-equipped for the carrying of a large business is the hardware store of Mr. Weichel of Elmira. It is 22 x 87 feet, and besides the store proper there is a cellar and two flats all of the same area as the store. One side of the main floor is filled up with 710 drawers, and to facilitate access to them there is the convenient railway ladder. The stock of lamp goods and window blinds is located in one room, and the iron house is 22 x 40 feet. Mr. Weichel handles coal, and his sheds are conveniently situated at the G. T. R. Station. A five-ton Gurney scale is situated in rear of the store. To a representative of HARDWARE, Mr. Weichel said that business had been comparatively good, but, like nearly everybody else, had to complain of the unsatisfactory character of payments. Mr. Weichel is a regular reader of HARDWARE, and feels that he would be out of pocket if he neglected to take it.

Valuable copper mines have been discovered in Paraguay.

DOMINION COMMERCIAL TRAVELERS.

If the last annual meeting of the Dominion Commercial Travelers Association at Montreal was a stormy one, that held on Saturday evening, the 9th, was even more so. The cause of all the excitement was the contest for the presidency, and over it the members who assembled in the rooms of the Natural History Museum had perhaps as stormy a time as at any meeting that has been held in Montreal for some time. The contest between Messrs. Watson and Wilson, the two candidates, has been going on for the past three weeks or so, and the canvass since the nomination has certainly been one of the most exciting in the history of the association. Last Saturday's meeting was the culmination of all this, and when the retiring president, Mr. Geo. Cains, had announced the following result the fun commenced in earnest :—

President—D. Watson, 1,085 ; L. A. Wilson, 530. Majority for Watson, 555.

Vice-President—William McNally, 826 ; Alfred Elliott, 725. Majority for McNally, 101.

Treasurer—Charles Gurd, elected by acclamation.

Directors—T. L. Paton, 1,041; John Hughes, 944 ; E. D. Marceau, 748 ; George H. Bishop, 744 ; James L. Gardner, 644 ; S. W. Ewing, 650 ; F. S. Foster, 647 ; W. Gosling, 374 ; I. Friedman, 360.

This announcement was kept back until late in the evening, as the discussion of the annual report, which was submitted first, was heated and bitter, there being, perhaps, a larger attendance of members than at any previous annual meeting in the history of the association.

The report, which referred to the fact that there was not so large an increase in numbers as in former years, which was attributed to the stringent rules enforced by the railways, went on :—By referring to the subjoined financial statement it will be seen that the total income for the year is $30,326.08, and the expenditure, including insurance indemnity, $17,804 04, leaving a net gain of $12,370.33 carried to capital account, which now reaches $129,999.02. While the number of new members admitted during the year is 46 short of last year, a fewer number of old members have dropped out, leaving a net gain of 44, making our total membership 2,394. The number of members transferred to the retired list exceeds that of any former year. The associate members now number 192, against 92 last year, showing that great care has been exercised in the issuing of certificates. In regard to the policies issued by the London Guarantee and Accident Company, all claims for weekly indemnity were reported paid, and one claim for $5,000 was settled in full. The Mutual Benefit Society in connection with the association continued in a prosperous condition. Without anticipating their annual report, the roll of membership had considerably increased, five death claims having been paid and the surplus for the year over $4,0000.

The financial statement of Mr. Fred Birks, treasurer, audited by Messrs. Riddell and Common, showed total assets of $129,-999.02, made up of, cash, $5,031.10 ; investments, $122,770 ; accrued interest, $997.92 ; and furniture, $1,200.

The president made a few remarks in reference to the report, which he considered a good one in the face of the very bad financial year, especially as they had the pleasure of carrying over the largest surplus on record in the history of the association, with the exception of one year. They had to record the loss of many old members, and of course the benefit funds had to be called on on this account.

With the close of the president's remarks, the rising of Mr. Geo. Forbes was the signal for the preliminary canter, so to speak, of the lively proceedings. Mr. Forbes' face and voice are familiar to everyone who has ever attended a Commercial Travelers' meeting, and it is on the question of the association's financial policy that he is especially strong. He criticized some of the items in the report severely, after which Mr. Hutchinson moved its adoption.

This was met by an amendment from Mr. W. Callahan that it be laid on the table for discussion, and it carried. Yet, despite a very uproarious time, the report did not come in for much serious discussion. It was simply a case of accusation and counter-accusation until the least excited portion of the gathering got visibly tired.

Mr. Woods opened fire with a complaint that the report should be in the hands of the members sooner than it was.

Mr. Cains replied to this that each member had got the report with his ballot papers.

Mr. Woods demanded what was the balance.

Mr. Cains finally replied that it was $224, but pointed out that it was difficult to give a definite statement, as the expenses were still running.

Then Mr. Galbraith went even further than Mr. Woods, moving that the report be not adopted. He moved instead that in the opinion of this meeting the president and other members of the society had been guilty of conduct subversive of its best interests and lowering to the dignity of the office of president.

The president said that this was out of order, and amid a regular babble of sounds Mr. Galbraith rose, every individual hair of his handsome whiskers bristling with wrath, announcing his determination of standing there to the "wee sma hours" to have his rights. Amid a lull in the noise he was heard to remark that it was alleged over the signature of several members that the president and Mr. Hughes had waited on Mr. Wilson and asked him to withdraw, promising him a seat on the board and an election as president next year.

This was greeted with a regular chorus of requests "sit down" and also that it had nothing to do with the report, the chair declaring Mr. Galbraith out of order.

Eventually the report was declared carried by the chair, which was the commencement of another bitter dispute. Mr. F. Younghart and Mr. D. L. Lockerby stoutly declared that it was not carried, and the discussion broke out afresh ; with considerable recrimination.

Finally Mr. Galbraith put in a requisition signed by five members asking that the "ayes" and "nays" be counted, but after a lot of more talk the chairman declared that he would not go back on his ruling. Galbraith withdrew his request and the adoption of the report was confirmed.

Then a few remarks from the president-elect, Mr. D. Watson, followed. Mr. Watson spoke very pleasantly, and so did Mr. Wm. McNally, the vice-president, and Mr. Gurd, after which Mr F. Birks moved a vote of thanks to Mr. Geo. Cains, the retiring president, which carried.

The educational report, which was submitted by Mr. Copeland, stated that progress had been made in every branch. A statement of the fund in this connection showed receipts of $217.94 and disbursements of $174.98. It was adopted.

The following notice of motion, by Mr. F. Potts, to amend the by-laws governing weekly indemnity for accident insurance was voted on :—

"In order to secure benefits all injuries must be of such a nature as to prove conclusively total disability and loss of time. Where a portion of business or occupation is attended to, the claim shall be decided by the board upon its merits. All claims must be made within thirty days of recovery."

Mr. Copeland suggested that a committee comprising G. Piche, Geo. Sumner, F. Hughes, F. Birks, and two others be appointed to incorporate the by-law amendment, all discretionary power of certificates to be left with the directorate.

The amendment was carried.

AN ANCIENT FURNACE.

An English Assyriologist recently announced that he had unearthed a furnace thousands of years old, in which the hot blast had undoubtedly been used. Just as this archæologist seeks, rightly or wrongly, to deprive Neilson of the credit of his invention so the German Egyptologist, Herr Heinrich Brugsch, endeavors to prove that Benjamin Franklin was not the deviser, but merely the rediscoverer of the lightning conductor, as he claims that he has abundant testimony that the ancient Egyptians used a form of this useful instrument for protecting their temples against discharges of atmospheric electricity.

TALKS WITH RETAILERS.

"I am hanging out my skate sign," said W. Mathieson of King street. "We have had some sales in skates and quite a few sent in to be sharpened and repaired. Yes, I have sold a few sleigh bells, and this cold weather has, no doubt, made business in these lines brisker." Mr. Mathieson is working again on some new invention, which is at present being put to practical test, and has so far been successful, but he is as modest as he is ingenious, and wants further proof of its success before he blows his trumpet, and says that his motto is, "Be sure you're right, then go ahead."

"I am cleaning my window out, and will commence fixing it up for the holidays," said J T Wilson, Queen street. "I believe in changing my display occasionally. I have noticed an increase in inquiries after such a change. No, we have not had much call for skates. Skates usually begin to sell well about a week before Christmas, when the school holidays commence. The rinks have not yet commenced to issue season tickets though some of them are open."

"We have sold all our snow shovels, but have sent down for some more," said the clerk at John Caslor's, in Queen street. "I have just sold the one that we have been using ourselves. It's a good thing that something is selling, for things are mighty dull all round, though I guess we are getting our fair share of the trade."

"Yes, I have been putting a few finishing touches on my window, and I'm glad that it is noticeable," said B. Ibbotson, of this city. "I am still doing a fair trade in the shop for this season of the year. Yes, I used all that pile of old files you see lying there, and I sold some two hundred pounds of them some time ago. Some three or four years ago, when there was a lot of building going on, we used up twice as many—more saws, of course, then coming in to be filed."

"Stoue trade is about done for the season," said J. Ivory, Queen street. "We have to pay more attention now to other lines. Customers are saving now for the holidays, and in consequence there is a lull in trade. There are some enquiries for children's sleighs and skates and a few sales. Snow-shovels are about the only things that are booming."

There is in a northern town a merchant who recently failed, but who, it is hinted, got his stock back again through a little alleged underhanded work on the part of a certain Toronto wholesale house. He is now doing business as if nothing had happened, the only difference being that the old firm name has now "& Co." tacked on after it. As he was what was termed a "cutter," the other merchants in the town are not at all pleased at the turn affairs have taken. One of them, who for convenience I will call Smith, felt particularly annoyed, and he issued a dodger reflecting somewhat upon the late insolvent, whom I will call Jones. The next issue of the local paper contained a retort from Jones, the concluding paragraph of which read: "Blessed are the people who mind their own business." Next week Mr. Smith replied, and his concluding sentence was: "Blessed are the peopie who have a business of their own to mind." This did not squelch Mr. Jones, for the following issue of the local paper he quietly asked Mr. Smith if he had ever read the little story entitled "The Curviture of the Spine." Last week Mr. Smith retorted that he had not, but he "had read of the man who blowed so much that he busted." "This little wordy warfare is the sensation of the town," said a merchant from that particular place, "and it is affording us lots of ammusement."

* * *

"The town of North Bay is very quiet at present," said a traveler to me Saturday. "The Canadian Pacific having reduced their staff more than one half. When the shops there were running full blast the C. P. R. people paid out $30,000 monthly in wages; now they are paying less than half that amount. This of course naturally makes the Bay very quiet. But the shops at Chapleau have been served still worse, the works in that place having been closed altogether."

PREVENTING DAMP IN BATH TUBS

In order to preserve bath tubs and similar things from the action of damp, which causes them to become dull in tone, the only available means is a coating with light lacquer. As zinc cannot be heated without danger of losing its adhesiveness, a lacquer must be used that dries without much warmth, and therefore a spirit lacquer must be employed. The best lacquer for this purpose is prepared from shellac and good alcohol, which can be procured from any store where varnishes are sold, in small quantities and prepared by oneself. One has only to ask for a good shellac varnish and to mention for what purpose it is required. The articles to be lacquered are easily warmed and coated with a brush of soft badger hairs. This brush must be soft, as otherwise streaks will be made, and it must also not be filled too much with varnish, otherwise the surface will appear uneven and smeared. A part of the varnish is poured into a cup or some other vessel, the brush is dipped in and then drained on the edge of the vessel, which leaves quite sufficient varnish to coat the article in question. This coating must be done with a long stroke, without any pressure and very evenly, in order that the varnish may not present any unequal surfaces. If this work is done carefully it requires a practical eye to recognize any coating at all. The articles must be previously warmed; but in case of large articles like bath tubs, etc., this warming can be effected by means of a lamp or charcoal burner. In the case of small articles they can be heated on an iron plate or disc. In the regular metal-ware factories a so-called varnish oven, or varnish furnace, is used for this purpose. This consists of an iron case, which is divided longitudinally in the middle so that the warmth enters on one side, passes over the box and passes out on the other side. The heat must not be too great—50 to 60 deg. F. are sufficient—for if the heat be too considerable the coating dries too rapidly and an even coating is impossible, not to mention that the zinc may also suffer. Large articles can be frequently coated with advantage, but in this case the lacquer must be thinned by the admixture of good alcohol; in what proportion everyone must find out for himself, as this depends exclusively on the amount of shellac in the purchased lacquer. Supposing the lacquer should contain a large proportion of shellac it must in any case be thinned.—Ex.

NATURAL GAS PRESSURE.

A document just issued by the Smitsonian Institution contains an article by Prof. Edward Orton on the natural gas supply of Ohio and Indiana especially, and the cause of the pressure which keeps up the flow of gas, even through mains 30 and 40 miles long.

He holds that this gas which exists in the Trenton limestone rock of a porous nature, is forced out of the rock by salt water which percolates through the rock, being held back by gas in its natural state until the gas pockets or cavities are tapped by wells, when, as the pressure is thus reduced, the water percolating through the rocks continues to keep up the pressure of gas through the wells and in the mains.

He finds that the salt water which is found beneath the gas usually rises in the wells to a height about corresponding with the level of Lake Superior, and his theory is that there is a connection between the water penetrating the porous rocks in which the gas is found and that of Lake Superior, though it must at first pass over or through salt beds in order to gain the salt qualities which it contains when found in connection with the gas fields. He argues that there is no danger that the great gas reservoirs of to-day will "cave in" or "blow up" after the gas is withdrawn from them. The gas will not leave the porous rock until the salt water obliges it to leave by driving it out and taking its place.—Ex.

Messrs. Lavery & Rahill of Myrtle have leased Mr. Perry's store, Kirkfield, and intend opening a general store. They take possession immediately.

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

Wm. Ferguson, a well-known hardware merchant at Kingston and Napanee, died at Kingston the other day.

John Wolfe, Jr., of Petrolia goes to Montreal as the manager of the Consumers' Oil Refining Co.'s branch in that city.

A new method of coloring iron has been discovered in England which entirely prevents rust, even though the metal be brought to red heat.

The Trottier Manufacturing Co., makers of axes, etc., at Three Rivers, have resumed operations after the fire which had destroyed the old factory.

Long & Son, St. Thomas, have secured a patent for Robt. Rushton for locomotive boilers. The improvement is in the arrangement of the flues.

C. H. Waterous, president of the Waterous Engine Works Company, has consented to offer himself as a candidate for the Brantford mayoralty for 1894.

Mr. Follott of Bolsover has removed his carriage shop to Kirkfield. He is busy erecting a fine large shop beside Mr. Wm. Foster's new blacksmith shop.

The aluminium yacht Vandennesse, built for Comte Chabannes, was launched last week at St. Denis, France. This is the first vessel to be constructed there of this metal.

Fred. Chalcraft has resigned his position as manager and secretary of the Farmers' Binder Twine Company at Brantford, and his resignation takes effect almost immediately.

Massey-Harris Co., Brantford, are working only eight hours a day. Depression in the South American trade is given as the cause. Sixty machines a day are being made.

The B. C. Iron Works Co., Vancouver, are at present busily engaged in constructing machinery for the new saw mill at Port Moody; also in repairing the B. C. Cooperage Co.'s machinery.

F. Van Camp has purchased the hardware business recently carried on by Magwood & Calhoun, Lindsay, and in addition to the fine stock kept by that firm he has added a full line of stoves and tinware.

L. M. Jones, general manager of the Massey-Harris company, has returned from an extended tour of Europe. Speaking of trade matters, Mr. Jones remarked that the company would make fully as many mowers this year as heretofore, but they would not require quite so many binders, as they had a few left over.—Ex.

J. S. Rigby, who has been engaged in Winnipeg for some time past in the construction of the C. P. R. cement works, has left for Montreal. He expects to return about March, when it is understood the cement works will be started up again.

Mr. Frank Power has a curiosity in the shape of a second-hand stove. He claims that it came from Germany 120 years ago, was used as a heater and baker at Kingsburg for a century, and during the past 20 years was used as a hen-house.—Lunenburg Progress.

A Chinaman has been granted a patent on a new device, and, as might have been expected, this is for use in laundry work. An intricate description is given on the patent pages, and it is believed Mr. Wong L. Gong is the first patentee of his race in the United States.

Oldham, England, is said to have a furnace for destroying the town refuse, which burns at such a high rate of temperature that its heat, applied to raising steam, furnishes sufficient power to more than cover the cost of collecting and burning the garbage.

The complimentary concert to be given by the members of the Commercial Travelers' Association in Horticultural Pavilion Saturday night in behalf of R. B. Linton, a fellow-traveler who recently lost his eyesight, promises to be a success, a large number of tickets being already sold.

The Michigan Central Railway has built an armed car, which was put in service on Friday It has a sheet steel turret, with proper openings for the express guards to shoot through with the rifle at would-be train robbers. Several similar cars are in process of construction.

Mr. Joseph Eager, one of Waterdown's oldest and most highly respected residents, died in that village on Saturday afternoon last. Mr. Eager kept a general store in Nelson village (now Hannahsville) for some time, and nearly thirty years ago moved into Waterdown, where he has carried on the same business ever since.

One art that seems to have vastly improved within the past twenty-five years is that of annealing glass. The lamp chimneys of to-day withstand sudden changes of temperature that would instantly have shivered those of three decades ago, and it seems now almost impossible to break one save by blow.—Ex.

Many valuable hints as to the progress of mechanical invention are to be caught from the sign-boards exhibited in the large cities. "Metal spinner" is the legend on a signboard in one street, and it must be sufficiently puzzling to such persons that do not know the process thus named is a cheap substitute for metal casting, and enables the manufacturer to produce many articles, some forms of brass andirons, for example, at less cost than they could be produced in cast brass.—Ex.

A Paris despatch says:—M. Pictet, a Swiss pupil of M. Berthelot, the famous French chemist, has announced the discovery of a new smokeless explosive, which he calls fulgurite. This explosive is as powerful as dynamite, is not affected by weather, or water, and can be handled and carried with safety. It goes off at 800 degrees centrigrade.

Overhead trolley wires are an unsightly nuisance, but it seems that underground wires are worse. The electric current escapes, and may be seen flashing intermittently on the overhead wire. Underground it goes for the nearest conductor, which is generally a gas or water pipe, and gradually eats it away. At Brooklyn it has been found that an iron pipe four feet from a trolley wire was rendered useless in a month, and in another case, where an interval of twelve feet had to be crossed, a lead-coated cable was disabled for a length of a hundred feet.—Ex.

INSOLVENCY LAW OBJECTIONS.

It is hardly to be expected that such an important measure as an insolvency bill will be allowed to be placed on the statute book without opposition of some kind.

The bill, which has been drafted by the different Boards of Trade in Canada, and which was submitted to the Minister of Finance some days since, is intended to apply to traders, trade co-partnerships, and all trading companies whether incorporated or not, except incorporated banks, insurance, railway, and telegraph companies.

This bill has already come in for some adverse criticism. In general the fault with it is that it savors of class legislation, and in particular that it does not take the farmer under its wing. When the bill, or that which is being prepared from it, is presented to Parliament, some imperfections may be discovered in it. This is to be expected. But this must be said: the draft bill is the best that has ever yet been drawn up in this country. As for the objections cited to the bill, the more they are analyzed the weaker do they seem to become.

Class legislation in its generally accepted term is to be deprecated; but there is class legislation and class legislation. If a law was enacted to regulate lawyers, it is not likely the doctors would object, or vice versa. And for the simple reason that the one was uninterested in the legislation that was being enacted regarding the other. The situation regarding the proposed Insolvency bill is much the same: It is in the interest of traders and incorporated and unincor-

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porated bodies, but practically it concerns none outside these.

There is no attempt to tamper with the consumer or with any of the professions. The object of the bill is to remedy an evil; and that evil is the want of a uniform law that will afford the British Columbia merchant the same protection against fraud and dishonesty if he is doing business in Prince Edward Island as if he was confining his energies to his own province. Prince Edward Island is as much a part of the Dominion as is British Columbia; and the merchant who sells goods to customers in any of the provinces outside his own should not run any greater risk for the payment of the same than he would at home. Yet this is in some instances what he does.

But this is not the only premise upon which the need of a Dominion insolvency measure can be urged. Under the existing condition of affairs a premium is put upon dishonest, or, as a wholesale man was heard to remark the other day, "honest men are made dishonest," on account of the loop holes that are kept open for them by the law as it now stands. And the best efforts of the Provincial Legislatures to close up these holes have proved ineffectual, because in their attempts to do so they have exceeded their constitutional powers. As the law—or rather want of it—is at present, a merchant who is in the last stages of insolvency can go on doing business, not infrequently selling goods at prices away below his competitors, almost as long as he choses. When a merchant like that develops in a community he is obviously injuring it, and it is in the interests of the local merchants that something should be done to prevent a continuance of the evil that is being wrought. This is one of the things the proposed bill aims at. But, as was pointed out in a previous issue, every precaution needs to be taken that the liberty of no merchant are unduly interfered with.

The proposed bill stipulates that a creditor or creditors with claims aggregating at least $500 may demand an assignment if a debtor ceases to meet his liabilities generally. This does not seem to be unduly harsh, but of course it is in regard to what scope may be given the word "generally" that will require careful interpretation.

As far as the farmers are concerned there is little to say. While in one sense they are producers, in another they are consumers. What they have to sell they get cash for. In a word, the farmer does not belong to the creditor class. Therefore he has no more interest in an insolvency bill than has the mechanic or the laborer.

AFTER THE WORK WAS OVER.

The salesmen of the Canada Paint Co., Ltd., having been engaged all the week with reports of the season's work and arrangements for the new year, the meeting were concluded by a social dinner party, on Friday evening, which came as a pleasant relaxation after a very hard week's work. Mr. Munro, managing director, presided, and was supported by the managers of the company's branches at Toronto and Victoria. The chairman's statements characterized the year as a "blending" and "fighting" year, the blending having reference to the unifying of the stocks of the three companies whom the present company succeeded, and the fighting to recent litigation, which had resulted very satisfactorily to the company. Notwithstanding these features, it was a year of considerable growth, though not to the extent which 1894 is expected to yield. The meeting was most enthusiastic and acknowledgments for the success of the evening's arrangements were made to the members of the committee, Lieut. Peuchen and Messrs. Evans and Cylling.—Gazette, Montreal, Dec. 9.

NARROW PROFITS.

On certain standard lines of hardware, notably well advertised specialties, the margin of profit is so small that many retailers refuse to handle them as being unprofitable. Where repeated calls are made for the specialty in question this policy cannot be looked upon as anything but a mistaken one. The commodity itself may but pay for the handling, but to relinquish its sale will almost certainly react to the dealer's disadvantage, as the impression produced on customers by this course is a distinctly unfavorable one. You tell an inquirer that there is not enough profit in the article called for to warrant your handling it. The party goes to some other hardware dealer and obtains the article. What is his inference, just or otherwise? Is it not that if your competitor can sell one article at closer prices than you can, he can sell all? Will not the logical sequence of this inference deprive you of a customer? The keeping of unprofitable articles in stock, of course, does not pay from a direct standpoint, but it does from an indirect one. Business tact tells its possessor that it pays to please a customer. Suppose you make no money on one sale, you have given a buyer what he wanted, and it stands to reason he will return and buy something which it will pay you to sell him; whereas if you turn him away unsatisfied, while a competing concern gives him what he is seeking, the likelihood is that his future patronage will be given to them and not to you.—American Citizen.

SPONGE IRON FOR STEEL.

The following telegram from Pittsburg, Pa., under date of December 3d. appeared in the New York Tribune: An announcement has been made here within a few days which possesses great commercial and scientific importance, and renders possible a serious revolution in the steel industry.

Nearly all of the steel of commerce except that used for tools and ordnance is now made by either the Bessemer or "open hearth" process. In both iron is employed which has already undergone at least one refining operation in a furnace since leaving the mine. The "charge" put into a Bessemer "converter" consists entirely of pig iron, selected with special reference to the amount and nature of the impurities therein, and costing about $12 a ton at present. When the metal is treated by the open-hearth process, a different quality of pig, $1 a ton less, may be used for a portion of the charge, say 75 per cent. and the remainder consists of "scrap," which is a trifle cheaper. The proportions are varied considerably by different makers, the quality of the material and the use to which the product is to be devoted being kept in mind. As the flame in a reverbatory furnace tends to burn out some of the carbon already in the metal, a modification of the open-hearth system, known as the Martin process, has been widely adopted. This provides for a bath of melted cast iron, abounding in carbon, into which the rest of the charge is added piecemeal as rapidly as is practicable without chilling the bath.

Another form of iron, known as "sponge," and in some respects superior to pig, may, however, be substituted for the latter in this industry if it can only be produced cheaply enough. Sponge iron is ore from which the oxygen has been removed by association with carbon, solid or gaseous, under a degree of heat considerably lower than that required for smelting, and its superiority is due to the fact that whatever impurity is left in it is held in the mass of porous metallic iron mechanically, and not chemically. Experts have long looked upon sponge iron as promising great things for the steel industry, but until recently it has never been possible to obtain it cheaply. Usually the ore was treated with solid coal. Hydrocarbon gases would also do the work effectively, but only on a small scale. Within a few years, however, Charles Adams, of St. Louis, has developed a plan for thoroughly "reducing" the ore in large quantities with gas, and the system has been so perfected that it is possible thereby to make sponge iron, wholesale, for $4.50 or less per ton. Further inventions by Thomas S. Blair, Jr., of Pittsburg, render the sponge still more available for the open-hearth treatment. These relate mainly to a form of hearth adapted to a freer use of lime with iron abounding in silica.

In making sponge by Mr. Adams' method a current of gas at red heat is passed through the ore and in much less time than is required to produce pig the iron is deoxidized perfectly. By instant removal of the mass to the hearth, the metal cannot only be used before it has grown cool (thereby imposing less of tax on the steel-making heat source), but a fresh oxidization is avoided. It is proposed that every furnace have its own reducing plant directly associated with it, therefore. According to Mr. Blair, the cost of reducing the ore to sponge is only 80 cents a ton; and this is fully met by the increased facility with which the conversion into steel is effected on the hearth. With the same amount of labor, fuel and fixed charges, it is alleged that the output of steel in a given time is increased 50 per cent.

For a time it was believed possible to use sponge exclusively for stock in the Adams-Blair process, but at present a little pig is considered necessary. In production on a large scale, say 1,000 tons of ingots per day, the cost per ton is estimated as follows:—Three-fourths of a ton of sponge $3.38: one-fourth of a ton of non-Bessemer pig, $2.75; waste amounting to 12½ per cent, 77 cents; conversion, $5; total, $11.90. By the Bessemer process the stock would cost $12 a ton, to which $1.50 for waste and $5 for conversion would have to be added, giving a total of $18.50 per ton of ingots. "Conversion" is a term here used to include the coal and labor, use of plant, office rent and interest. It is generally conceded that the cost of conversion by the open hearth and Bessemer process is virtually the same. Thus, it now seems possible that steel can be made for $6.60 less a ton than formerly, although a royalty of $2 a ton may be exacted by the patentees of the new method for a time. Not only will the product of the Adams-Blair system be cheaper, but it may also prove better in quality; for, as already indicated, the phosphorus and silicon are in merely mechanical combination with the metal in the sponge, and are eliminated by the use of lime in the furnace as slag.

Within the last three or four years experiments have been made at several furnaces in Pittsburg, Indianapolis and elsewhere with this process, and over 3,000 tons of ingots have thus far been turned out. Experts who have looked into the several operations and the product express confidence in the new scheme, and steps are now being taken to persuade capitalists to utilize it commercially.—Age of Steel.

CAUSE OF DIFFERENCE OF HEAT.

That there is a wide difference in the effectiveness both of hot water heating and steam heating apparatus is a fact known to all well informed men engaged in the heating-trade. But in many instances this difference, comments an English exchange, is accounted for by referring it to anything but the proper cause—namely, defects in the system of piping between the steam boiler or water heater and the radiators. The boiler may be good, the radiators may be the best in the market, yet the result is unsatisfactory.

In most such cases it will be found that not enough study and care have been given to arrangement of pipes and radiator connections, to their proper sizes with reference to the surface they are to supply, to their pitch, to the supply in steam heating pipes of proper relief pipes, to avoidance or traps in pipes, to provisions for expansion under the action of heat, and so on to the end of the chapter.

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WIRE NAIL ASSOCIATION IN DANGER.

There is a probability of the association on wire nails becoming disassociated. The cause which is likely to lead to this result is the contract given last week by the corporation of the city of Toronto for its year's supply of wire nails.

As all in the trade are aware there is a uniform price on this article. The price at present is $2.91 per keg with a rebate allowed to those dealers who keep faithful to the agreement. When the Committee on Works opened the six tenders that had been sent in it was found that five were for $2.91 and one for $2.81 with an allowance of 15 cents for empty boxes, bringing the actual price down to about $2.66. This tender naturally secured the award. The price paid last year was $2.76½ with 17c. allowance on boxes. The successful tenderer was the Aikenhead Hardware Company.

The trade is much exercised over the matter. "The Aikenhead Hardware Company," said a representative of the jobbing house, "is just taking chances of being able to buy nails at a price that will enable them to supply them to the city ten cents below present figures. This may, and again it may not, be possible. It is simply a business risk, which most retail merchants would not care to run. The Wire Nail Association will meet next month, and if it decides to maintain the present rate, and there is no reason to suppose it will not, we are at a loss to see how the Aikenhead Company will be able to fill its contract except at a loss."

"Well, there is only one explanation to me regarding the matter," said another jobber to HARDWARE, "and that is this: there is somebody at the back of the Aikenhead Company. What do I mean? Why simply this: Before ever they sent in that tender the Aikenhead Hardware Co. had an understanding with somebody as to what price they were going to pay for these nails. That to me seems certain. Do you think for one moment that they would have gone and made such a contract as that without having made some such arrangement? Not a bit of it. The Aikenhead people are no fools. Why goodness me look here," he continued as he pulled a pencil from his pocket and began figuring away, "they can't do it otherwise. The manufacturer's price for the nails is, without going into fractions, $2.62, this with the boxes, will bring the price to just what the Aikenhead company propose furnishing the nails at. Then they have to cart the nails to different parts of the city. But it must also be remembered that the agreement with the association positively forbids advances being made on boxes. O, well, I don't know how it is going to come out, but I know it's going to cause some trouble."

"It is just this,' said a well-known wholesaler, "the Wire Nail Association has just two alternatives—it must keep the Aikenhead company to the agreement which it, like we and others, made with the Association, or else reconcile itself to disintegration. It can do just as it chooses. I know one thing," he added, with a significant nod, "we are not going to stand by the agreement when we see others refusing to do so. Yes, sir, it's a poor outlook for the association."

SHOP HINTS.

Some men who have been about engines for years never seem to realize that for the ordinary D slide valve driven by the usual eccentric, there is but one point of cut-off available, and that, if a shorter or longer one is desired, it must be obtained by a variation of the lap.

Blue-printing for shop use seems to be holding its own, although there is now a certain French process that will produce a nearly black line upon an almost white background. The process is nearly as simple as ordinary blue-printing, and is being used considerably by architects and engineers when it is desired to send out samples of drawings before the contracts are made. It is slightly more expensive than the blue process, but not enough to cut any great figure. The work is exceedingly delicate, and the beauty of it is that lines grow darker with age.

The past few years have developed a marked tendency toward the standardization of all work that is produced in considerable quantities. The method not only cheapens the output, but, like the Irishman's wife, is a "great convanyunce." Then let me advise that a standard size be adopted for all drawings, and let that size be a small one. If one has never tried it, he will be surprized to find how much he can get upon a sheet of drawing paper ten by sixteen inches in size. These small sheets are far more easily handled in the machine and blacksmith shops than larger ones can be, and, when it comes to the care of them in the office, no comparison can be made. Have the detail drawings made with all the dimensions upon them, and then there will be no excuse for mismeasuring due to the fineness of the scale. For shop use, it is well to paste the blueprints on sheet iron, and give a coat of shellac varnish. This keeps everything neat and clean, as it should be.

I very much fear that the value of the drawing room is not fully appreciated in every shop, for, when I was down at Tompkin's the other day, I found him building a steam engine without any drawings. Steam engine building, to be sure, is not his regular busines, but rather a side issue; still, when he comes to set his valve I suspect his cut-off will not be just exactly where he wants it to be, and he will probably find it necessary to cut and try more or less before he gets it right.—Dixie, in Mechanical News.

SELLING AND USING STOVES.

How many stones dealers are there who know how to use the several lines of cooking apparatus which they handle? asks Hardware reporter. Or, to put it in another way, what proportion of the many thousand dealers in this country have made a study of the various processes of cooking and can give definite and reliable instruction to their customers? It is very probable that if a census could be taken and the dealers were put through a series of question and of practical, personal tests, the results would be surprisingly disappointing. And yet a knowledge of how to obtain the best results is as necessary in a business sense as is the ability to sell the goods, more so, in fact, since if a sale is made and the purchaser is not satisfied with the work of the stove because he has not been thoroughly posted in its use, or even to the details of construction, he complains to the dealer and the latter may be unable to explain that the fault does not lie with the stove but with those that have tried to use it.

Before any stove is placed upon the market, no matter what may be its make, it is thoroughly tested and proved. If it does not produce satisfactory results in the judgment of those whose business it is to know how a stove should be made, it is subjected to still further tests and is improved upon until it has met all the necessary requirements. When it is offered for sale to the trade, it is as nearly complete in all the essential details of construction as lies within the possibilities of the manufacturers, and in most cases it is guaranteed to perform its work satisfactorily if even the more ordinary rules for using are followed. But in too many instances the dealer acts on the general supposition that the veriest child can build a fire, regulate the drafts and do all that is necessary in managing the fire, merely because a stove is an article of common use and everyone is supposed to know all about it. But everyone does not know—not even all the dealers—and ignorance is too frequently made to take the place of a knowledge that can be obtained by a careful but not necessarily a burdensome study of fuel consumption as applied in each one of the numerous lines. Fuel consumption and its regulation are based on the one principle, with different applications in each case. The rule for operating one stove may not be effective in working another, and it is this difference which should be ascertained by the dealer and given in turn to the purchaser. And still another point is that the best stove in the world will not work satisfactorily if not properly set up and if the chimney construction is faulty. The dealer cannot be held responsible for defects in this latter respect, but he should be both able and willing to make the necessary suggestions.

CASH ONLY AT THIS STORE.

Sullivan & Key, hardwarde dealers of Nevada, Mo,, arise in the local newspapers to announce that on and after Monday, November 20th, they propose to conduct their business, both buying and selling, on the cash plan. They add : " A long experience in the hardware business has convinced us that the system of selling goods on credit, to be paid for when convenient, is a most vicious one. The increased expense of doing a credit business, on account of bookkeepers and collectors, the amount of inevitable losses every year on account of bad debts, which will occur notwithstanding the most careful discrimination, and the loss of interest in having a large amount of capital tied up in book accounts, all render necessary a larger margin of profit, which has to be considered as business expenses and be paid for by the cash buyers. Besides this, the bad feeling constantly occurring because credit is given to one customer and refused another and the disagreeable necessity of being obliged to dun customers for past due accounts, confirm us in our determination in the future to sell for cash. In these times of close competition cash buyers expect and are entitled to the very lowest prices, and should not be required to pay the losses incident to a credit business."

Wise, indeed, are Sullivan & Key—if they can make it work.—W. Y., Hardware.

THE LAING & MEHARRY FAILURE

Laing & Meharry, hardware merchants, Port Perry, have assigned to W. A. Campbell of Toronto. The firm has been speculating in Toronto real estate, and this appears to be what has driven them into a corner, although the immediate cause of the assignment seems to be writs issued Dec. 6 by Crathern & Caverhill of Montreal and the Ontario Bank, the former for $3,661 and the latter for $594. The creditors held a meeting Wednesday last at the office of the assignee. The statement submitted showed liabilities of $19,562 and assets of $17,039. The insolvents offered 25 cents on the dollar, and this was accepted subject to the approval of the absent creditors. The heaviest creditors are in Montreal.

STAMPED WARE ASSOCIATION.

A meeting of the Stamped Ware Association was held at Montreal last week to consider the situation for the coming season. There were very few changes made in prices. Pressed milk can trimmings remain the same at uniform prices. It was decided that uniform prices for straight galvanized buckets be adhered to as follows: No. 12, $2.25 per doz.; No. 14, $2.50; No. 16, $2.75. Amongst those present were representatives from Thos. Davidson Co., Montreal ; the Kemp Manufacturing Co., Toronto, and the McClary Manufacturfng Co., Toronto and London.

TRADE TAKEN BY CANADA.

" Ten years ago," says Mr. John H. Grout, jr., United States consul at Hamilton, Bermuda, in a report to the State Department, " a firm in the United States practically controlled the market in Bermuda for supplying shooks for onions, beets, and tomatoes. Today this trade is almost wholly in the hands of Canadian firms. It rests wholly with American manufacturers to decide whether the trade is worth having, and also whether they can place their goods on the market here at as cheap a cost to the consumer as the Canadian manufaucturer. The demand for shooks began here about the 1st of January, and ends the latter part of June, the end of the crop season. Should any of our manufacturers decide to compete for the trade, it need not be expected that the matter can be settled the first year, nor perhaps the second. But with a little perseverance much may be done, even in these years, and an improvement may reasonably be expected in the following years. It would be an excellent plan to send representatives here to look over the field and investigate the condition and needs of the market, as by that means the conditions attending the manufacturing end could be brought into comparison with those of the landing and consumption."

USE OF PULVERIZED FUEL.

An eminent European scientist, Prof. Franz Schwackhoefer of Austria, who has been carefully investigating the question of economy in the burning of coal dust, now makes the prediction that modern methods of heating will be revolutionized by the use of fuel in pulverized form only, whereby almost the entire heating power can be obtained from the coal and not a particle of smoke be produced, says American Manufacturer. This Austrian scientist places his argument on an altogether different basis from that taken by most of the engineers who have been publicly dentifi ed with the question of the suppression of smoke. Naturally, this question is secondary in his experiments, but the absence of smoke is so necessary to perfect combustion, that the two things may be spoken of together. He says that the loss of heat from imperfect combustion has generally been much over-estimated, even by engineers and specialists ; that the loss of heat by radiation also is not so large as has been imagined, but that by far the greatest loss is occasioned by the escape of the hot gases and air through the smokestack. The automatic stokers, shaking jets, steam grates, even the down draft furnaces he condemns as imperfect, and says that our modern grate firing is one of the most imperfect technical institutions that can be imagined. Further than this, he says : Every form of combustion requires a certain amount of air over and above what is necessary to supply the oxygen needed to enter into chemical combination with the burning body. It should be the aim to keep down this excess of air, as it will rush through the smokestack, carrying off a large amount of heat. When gas fuel is used about 1¼ to 1½ the amount of air must be admitted that is theoretically necessary to consume the fuel. Where solid fuel is used, as in all our grate furnaces, a much larger excess of air is required, as the mixture with the air of the combustible gases given off by the coal in the process of distillation cannot be so intimate as where gas fuel is supplied, so that large quantities of air leave the furnace without being utilized. Hence the importance of reducing the size of the coal, and the necessity of careful firing ; that is, spreading the coal on a grate in an even bed, as the air will naturally pass through the bare parts of the grate, or where the bed of coal is thin, seeking the line of least resistance, whereas most of the air is really required where the coal lies thickest. In this way imperfect combustion and the formation of soot and smoke will be promoted. —American Manufacturer.

A NEW INDUSTRY.

A Niagara Falls despatch to the Toronto Empire, under date of December 14, says : The Briggs Manufactnring Co. has been formed in this city of Toronto and Ohio capital. The company will manufacture the Briggs patent press feeder, said to be the most perfect machine of its kind in existence. The new company is capitalized at $1,000,000, and has for directors Samuel J. Moore, James L. Morrison of Toronto; Eugene J. Barney, the millionaire car manufacturer of Dayton, O.; C. A. Hoffman, a banker of Dayton, and Thomas A. Briggs of Boston, the patentee and inventor of the feeder. At a recent meeting in New York the following officers were elected: President, Eugene J. Barney; vice-president, James L. Morrison; secretary-treasurer, Samuel J. Moore. The main office of the compaay will be in this city. The New York office is at 17 Astor place, where the Campbell press people have one of their latest improved presses set up with the feeder attached, This press was donated for this purpose. Mr. Moore was seen at the Prospect house to-day, and said that the orders for printing press establishments already sent in will keep the present plant of the company running for two years to come.

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These goods have fully maintained their reputation as the best cutlery in the world for over

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Any Infringements of our Name and Corporate Mark will be promptly prosecuted.

Sole Agents for Canada,

JAMES HUTTON & CO., - - Montreal

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, TORONTO

ENGLISH HOUSE: **SAMUEL, SONS & BENJAMIN** 164 Fenchurch St, London, E. C.

SKATES "COLUMBUS," ACME AND "STAR."

SNOW SHOVELS, Wood and Steel.

SLEIGH BELLS and SHAFT GONGS,

WEATHER STRIPS, Different kinds.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Dec. 15, 1893.

HARDWARE.

The hardware market has furnished few new features during the week. Business is of moderate dimensions with nothing special in any particular line aside from a small jobbing trade. This movement is chiefly confined to the fancy lines of hardware suitable for hardware presents, for in general goods quietness may be looked for until the turn of the year. Winter goods show a moderate degree of activity but not as much as we have noted previously. Other lines are duller if anything than they were.

WIRE—A small jobbing trade in some lines of bright wire is all there is to note.

CUTLERY—Pocket cutlery shows considerable activity in a jobbing way on holiday account, but the aggregate volume of business is not large.

WINTER GOODS—A fair business is still doing in skates, sleigh bells, etc., but the movement is not so large as it was.

SADDLERY SUPPLIES—Are featureless and unchanged.

NAILS—Cut and wire nails are dull as before with the merest jobbing trade doing.

HORSESHOES—Horseshoes rule quiet and the same is to remark in regard to horse nails, the movement from makers hands not being so prominent as it was a week ago.

TACKS—No feature to note.

IRON PIPE—Some small lots have been moving, but the enquiry is falling off.

SPORTING GOODS—Nothing of importance in this connection.

CHAIN—A moderate business in a small way in cow ties, etc., is all there is to note.

TOOLS—No feature to comment upon.

BUILDING SUPPLIES—Very little doing, and no change in anything.

PLUMBING SUPPLIES—Business is flat and uninteresting.

WARE—Nothing doing in this line.

LAMP GOODS—A very moderate movement in fancy lamps has been done, but only in a small jobbing way on city account.

NAVAL STORES—These are moving very slowly, and prices are purely nominal. We quote :—Turpentine 47 to 48c. ; resins, $2.50 to $5.00, as to brand ; coal tar, $3.75 to $4; cotton waste, 5½ for colored, and 7 to 10c. for white ; oakum, 5½ to 7½c. ; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep-sea line ; pure Manilla, 11c. for 7-16 and upwards and 12c. for smaller sizes.

METALS.

The heavy iron and metal market is utterly without feature. Pig iron is dull, and prices are more or less nominal, the same being to state in connection with other lines.

PIG IRON—No change to note, prices remaining nominal on the former basis, but it is possible an offer for a round lot of domestic pig might lead to a cut. In the case of Scotch pig the supply of it here is not pressing. We quote : Summerlee, $18.50 to $19 ; Eglinton, $17 to $17.25 ; Carnbroe, $16.50 to $17 ; Langloam, $18.50 ; Nova Scotia, $17 to $17 50.

SCRAP IRON—The is no life to the general demand for this line. A round lot of No. 1 cast sold at $14.50 on 4 months' time, and we quote as before, $15 to $16 for wrought scrap.

BAR IRON—Bar iron is very quiet and it is said that the best price is being shaded. These reports cannot be authenticated, however, and it is possible that for ordinary jobbing trade no jobbers can make a sacrifice.

SHEET IRON—Very little demand to note. and prices unchanged at $2.40 to $2.60, according to grade. Russian sheets remain at 10½ to 11c.

HOOPS AND BANDS—Very little movement to note, and prices nominal at $2.30 to $2.35.

STEEL—Business is dull now in all lines, the demand having been pretty well supplied. We quote : Sleigh shoe, $2.40 ; tire, $2 50 to $2.75 ; spring, $2.50, and best cast steel, 10½ to 12c.

GALVANIZED SHEETS—Business is very small with prices nominal at 4¾ to 5c.

TIN PLATE—There is little or nothing doing in this line, and prices rule easy at $3.05 to $3 20 for coke and $3.50 to $4 for charcoal.

CANADA PLATE—Quiet and nominally unchanged at $2 40 to $2.45.

TERNE PLATES—Flat and purely nominal at $7.25 to $7.50 as to grade.

COPPER—Prices rule much the same, although outside advices quote firmer values. We quote 11½ to 12c.

TIN—Dull and easy at 21 to 22c.

ANTIMONY—No change and no business. We quote nominally 10½ to 12c.

SPELTER—Dull and unchanged at $4.60 to $4.75.

LEAD—No business doing and prices easy in tone at $2.80 to $3.

ZINC SHEETS—A few small lots have been moved at former prices, $5 to $5.25, but the demand on the whole is dull.

CEMENT—Nothing doing in a large way, aside from the movement of an occasional small parcel. We quote : Ex-store English cement at $2 to $2.30, and Belgian at $1.90 to $2.05. Fire bricks are scarce, and light stocks have stiffened prices to $17 to $21 per $1,000, according to brand and quality.

PAINTS AND OILS.

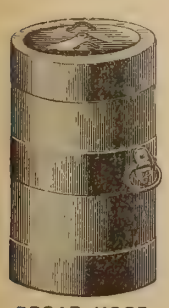
The usual jobbing trade is reported in leads and paints, but only in a small way, as the houses are finishing up their stock-taking. In fact no great activity is now anticipated until after the turn of the year. Linseed oil is unchanged, at 60c. for raw and 63c. for boiled. We quote : Choice brands of white lead, government standard, $5; No. 1, $4 75; No. 2, $4.50 ; No. 3, $4.25 ; No. 4, $4 ; dry white lead, 5c.; red lead, pure, 4½c.; No. 1, 4¼c.; zinc white, pure, $7; No. 1, $6; No. 2, $5 ; linseed oil, raw, 60c., boiled 63c.

GLASS.

There is no actual change to cite in window glass, but the tone is easy, and it is claimed that the inside price ($1.25) has been cut upon. However we report last week's quotation, $1.25, for first break, and $1.35 for second favor. Putty in bulk is unchanged at $1 85.

PETROLEUM.

The petroleum market is fairly active, refined petroleum meeting with a seasonable demand. Prices are steady, and no cutting is spoken of. We quote :—Canadian crude at $1.05 per barrel f.o.b. at Petrolia ; Canadian refined at 11¼c in shed at Montreal for round lots, and 12c for small quantities. American petroleum, 16½ in car lots, 17c



BROAD HOOP PATTERN.

Milk Can Trimmings
Delivery Can Trimmings
Creamery Can Trimmings
And Milk Delivery and Creamery Cans Made Up.

All sizes and guages of Tinned Sheets for Cans and Vats. We have a full stock and can make prompt shipment.



IRON CLAD PATTERN.

THE McCLARY MFG. CO., London, Toronto, Montreal, Winnipeg, Vancouver.

WOOL DUSTERS
WALL DUSTERS

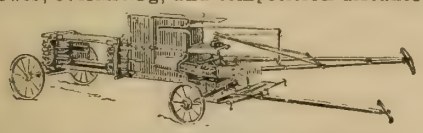
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DEDERICK'S PATENT STEEL SHELL HAY PRESSES.

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Also all styles of Bale Ties made from the Best Steel Wire.

Manufactured by BOYD & CO., Huntingdon, Q.

ADAM HOPE & CO.,

Offer for Sale HAMILTON

"Pioneer" and "Sloss" PIG IRON

These are fine foundry irons, being strong and large scrap carriers.

Also all the well-known—

Scotch Brands,
Broken Car Wheels,
and Railway Cast Scrap.

GAS, ELECTRIC, AND COMBINATION

Fixtures

Of English, Canadian, and American designs. . .

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Staple Brackets and Gas Fittings. Select stock of above always on hand.

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Drawings and Estimates on application.



"BUILD TO-DAY THEN, STRONG AND SURE, WITH A FIRM AND AMPLE BASE." —Longfellow.

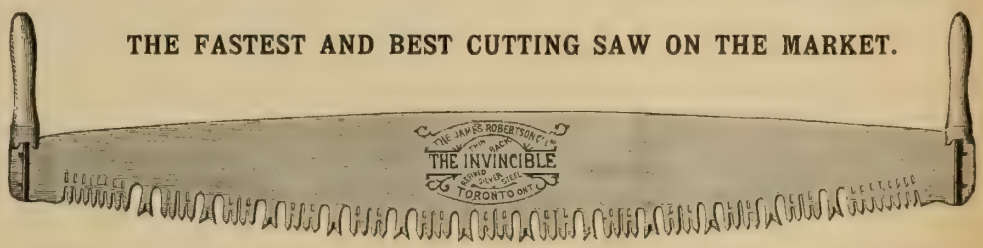
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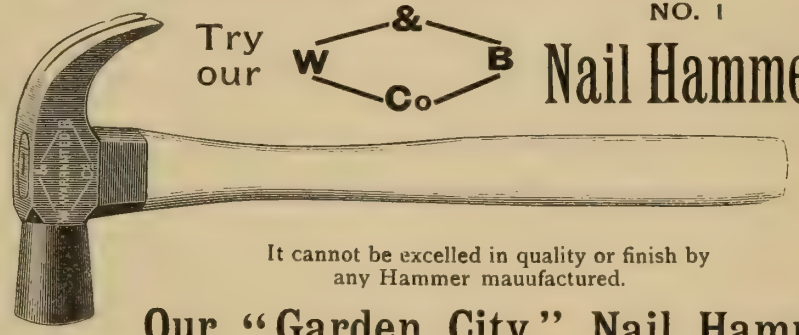
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SAMPLE ORDER SOLICITED. **Toronto.**

THE WHITMAN & BARNES MFG. CO.

Canadian Branch: St. Catharines, Ont.

Try our W & B Co NO. 1 Nail Hammer



It cannot be excelled in quality or finish by any Hammer manufactured.

Our "Garden City" Nail Hammer

GET OUR PRICES AND TRY OUR GOODS

Is the best and cheapest "Solid Cast Steel" Hammer on the market. . . .

We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .

Boyd's Skeleton Skates



Expert Racer, Crystal Racer, Junior Crystal, Hockey Club, Eclipse Victoria Club and Dominion.

Best line of Skeleton Skates made. Send for Catalogue of Skates, Hockey Sticks, Snowshoes and Winter Sporting Goods. Ask for discount sheet.

T. W. BOYD & SON, 1683 Notre Dame St., MONTREAL

MONTREAL Markets continued

in 10-barrel lots, 17¼c in five-barrel lots, and 17¾c for single barrels, net cash; American benzine, 23 to 25c; Canadian benzine, 10¾c Petrolea; 12½c Montreal.

MONTREAL TRADE NOTES.

Advice to brokers here from Scotland state that the labor troubles are having a a stiffening influence on warrants.

The new Bank of Toronto bullding at the corner of Victoria square and St. James street is approaching a completion. H. McLaren & Co are supplying it with over 100 Safford radiators.

The Messrs. Pilkington will shortly open a branch establishment in Toronto. John Thorpe, the Canadian manager, visits Toronto this week to attend to the details of the matter.

Francis Hyde & Co. report cement business very quiet at present. Still they are sending forward car lots to the west this week.

W. H. Cottingham & Co. are in negotiation at present for a number of new lines of American specialties which they will offer to the trade next season.

Painchaud, Squire & Co., Temple Building, St. James street, announce that they are about to open an office at Antwerp, Belgium, which will be in charge of one of the members of the firm. All their orders for European goods will therefore come under the direct supervision of the office which, situated, as it will be, in the centre of the great European hardware market, will ensure to their customers the prompt attention in the filling of all orders.

TORONTO MARKETS.

TORONTO, Dec. 15, 1893.

HARDWARE.

Business is characterized by much the same conditions as a week ago. Holiday novelties are of course receiving attention, while such lines as skates, sleigh bells, saws, meat cutters and snow shovels are selling briskly. For the last named article the demand is particular brisk, and the supply is insufficient for the demand. General hardware is quiet, and the volume of business in this particular is not as large as at this time last year. With the general dullness which rules in trade the world over this is not surprising. The only wonder, dealers say, is that that the quietness is not more pronounced. Novelties seem, however, this season to be receiving more attention, and thus, on the whole, the trade is kept fairly well employed. Payments continue to show some improvement, but are yet anything but satisfactory.

WIRE—A number of good orders have been filled this week for hay-baling wire, and a small demand is reported for ordinary bright wire, for tinners principally.

ROPE—Very little doing and prices remain unchanged.

CUTLERY—Trade is steadily improving in this line. Case goods are in good request, all the houses reporting good sales in this particular line.

NAILS—There is the usual seasonable demand for cut and wire nails, and horseshoe nails are still going out, although in sorting-up quantities only.

TACKS—Business in this line remains dull and uninteresting.

CHAIN—Small quantities of this are going out at unchanged prices, and a few import orders have been booked.

HORSESHOES—Orders are being received daily for these, although quantities moving are not larger. There also have been some shipments of snow shovels.

WINTER GOODS—Business in this line has developed more activity during the week. Sleigh-bells have been going out freely. The position regarding snow shovels does not seem to have improved, manufacturers still being unequal to the task of supplying the demand. Skates are still going out freely, although most of the forward orders have been filled. The demand for hockey skates has been so large that some houses are completely cleaned out. Further shipments are, however, arriving in a few days.

WARE—Business is keeping well in tinware. Some good orders have also been received for peerless-ware. In white and blue ware there is no improvement to note.

SPORTING GOODS—There is a few rifles and some ammunition going out every day, but business in this line is practically over for the season.

LAMP GOODS—Trade continues quiet, and the few orders that are being received are small.

PLUMBERS' SUPPLIES—A fairly good trade is reported. Iron pipe is going out freely, and in some sizes stocks are exceptionally low, but fresh arrivals are expected daily. A good demand is reported for galvanized boilers.

BUILDERS' SUPPLIES—Still very little doing.

METALS.

The lines occupying the most attention are Canada plates, galvanized iron and tin plates. A little more enquiry is heard for pig iron. Boiler plate is a little firmer, while boiler tubes are easier.

PIG IRON—There has been a little more enquiry for carload lots but no transactions seem to have resulted therefrom. Quotations are nominal. We quote: Summerlee, $20.50 to $21; Carnbroe, $19.50 to $20; Siemen's, $19.50 to $19.75.

Rogers, Brown & Co, Buffalo, report the Toronto market for American pig iron as follows: As the holiday approaches consuption decreases rapidly. Business is exceedingly quiet and pig iron purchases are practically nothing. The anticipated changes in duty of course have an important bearing at this time. We quote for cash f. o. b. cars Toronto in bond: 1 X Foundry strong Coke Iron, Lake Superior ore, $14.80; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14.30; 2 Foundry Strong Coke Iron, Lake Superior ore, $13.80; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17.05; Southern Soft 1, $12.85; Southern Soft 2, $12.60.

BAR IRON—As is usual at this season business is quiet, dealers only buying for actual requirements. The base price is unchanged at $1.95.



BOILER PLATES AND TUBES—Boiler plate is firm, and the cause is attributed to the late coal strike in England. There is not much doing in this line. Boiler tubes are slightly easier.

CORRUGATED IRON—There have been a few sales at $4.75, but business is on the whole quiet. We quote "Owl" brand at $3 to $4 per square for painted and $4.25 to $7 for galvanized, according to gauge.

SHEET STEEL—Business is confined to a few small orders of a sorting up character. Base price is unchanged at $2 90.

SHEET IRON—In black stocks have been very low, but shipments received, together with those arriving next week will make them complete. Demand continues good.

GALVANIZED IRON—Business continues good and prices are reported a little steadier. A large number of orders have been booked for import, principally in Gordon Crown and Queen's Head brands. We quote Queen's Head and Gordon Crown at 5 to 5¼c. for 16 to 24 gauge.

INGOT TIN—Some good orders have booked for Straits. Prices are unchanged at 22 to 22½c. for Lamb and Flag and 21¼ to 22¼c. for Straits.

INGOT COPPTR—Stocks are low, but fresh shipments are expected this week. There has not been much doing in this line during the last ten days We quote ton lots at 11¾ to 12c. and ½c. extra for smaller lots. Copper is easier in London and in New York.

SHEET COPPER—There has been a fair business doing in this line, both in braziers and ordinary sheathing. A few orders have also been booked for bath purposes.

SPELTER—Orders have been small and business generally quiet, with prices as before at 4¼ to 4⅜c. for small lots.

ZINC SHEET—There is a good deal going out and stocks of the standard sizes are low. Trade was larger this fall than last year, which accounts for the lowness of stocks. For cask lots 5¼ to 5½c. is the idea.

TIN PLATES—Trade has kept up well. Large quantities of cokes have been disposed of and there is a good demand for fair quality charcoal. We quote as before at $3 85 to $4 for I.C., with the usual extras for I.X.

TERNE PLATES—There is nothing doing on account of the cold weather; $7.25 f.o.b. Toronto is still the ruling price.

HOOPS AND BANDS—Stocks are more complete than they were and jobbers are now in a better position to fill orders. Prices are steady at $1.60.

CANADA PLATES—Shipments having arrived, dealers are better able to supply the wants of their customers. For some time it has been impossible to keep stocks complete. We quote:—All dull, $2.60 to $2.65; half-polished, $2.75, and all bright $2.90.

SOLDER—A nice business is being done in this line, but owing to the different qualities on the market competition has become keen; 14 to 16c., according to composition, is the idea as to price.

MARKETS—Continued

ANTIMONY—Business has been flat, no sales of any account being reported. Prices are unchanged, 11½ to 12c. in cask lots being the idea.

LEAD—Pig lead has been going out quite freely; prices remain unchanged at 3c. in ordinary quantities, but large quantities can be shaded.

GLASS.

Trade in glass shows a little improvement. Stocks are low in the country, and jobbers report a great difficulty in supplying the demand for some of the small sizes, especially in first and second breaks.

PAINTS AND OILS.

The feature of trade in this line is an advance of 1½c. per gallon in the price of linseed oil. The price is now 60c. for raw and 62c. for boiled, Toronto, Hamilton, London, and Guelph, with 2c. added for delivery at outside points. The association claims it was warranted in advancing the price that in consequence of the higher values on the United States market, where quotations are said to be 8c. higher than three or four weeks ago. There is a little boiled oil moving, but in raw there is practically nothing doing, There is a little demand from manufacturers for turpentine, but storekeepers, wants are at the moment supplied. Prices are unchanged at 44 to 46c. the outside figures being for outside points, freight allowed. Price of turpentine is still low in the South, and is nearly down to where it was in the spring when deliveries were so large. White lead is dull and unchanged at the base price of 5c. per pound. Trade generally is dull, with the volume of business if anything smaller than is usual at this time. Payments are fairly satisfactory.

OLD MATERIAL.

Dullness in trade continues and prices remain the same. We quote prices paid by dealers as follows: Agricultural scrap, 55c. per cwt; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40c. per cwt.; No. 2, including sheet iron, hoop iron and mixed steel, 10c.; new light scrap copper 7½c.; heavy scrap copper 8c.; old copper bottoms, 7½c.; light scrap brass 5c.; heavy yellow scrap brass 7c.; heavy red scrap brass 7½ to 8c.; scrap lead 1½ to 2c.; scrap zinc, 1½ to 2c.; scrap rubber, 3c.; country mixed rags, 75 to 80c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; boring, and turnings, 10 to 15c.

SEEDS.

Chief interest this week is centred in alsike and red clover. Alsike has been going out freely at $6.50 to $7 for prime to choice, and at $7 20 to $7.30 for extra choice to fancy. A few parcels of red clover are going out, but this article is not receiving much attention yet. Prices are unchanged at $5.50 to $5.75 ordinarily, and $5.90 to $6 for choice to fancy. Timothy is quoted at $1 to $1.25 for inferior and $1,50 to $1.60 for prime, while choice to fancy bring 15 to 20c. more.

HIDES, SKINS, WOOL, TALLOW

WOOL—The local demand for wool is slow and dragging, although some of the manufacturers are beginning to think that wool has about touched the lowest possible point. Some sales, large for this season of the year, have however been made, especially in choice lots, at ½c. advance on the standard price of pulled wools. It is reported by some dealers that the large importations of pulled wool from the States has had a disastrous effect on our own market, as it can be pulled at much lower rates there than in Canada.

HIDES—Remain quiet, and they are accumulating all over the country. The tanners who bought hides some ten or twelve weeks ago are now completely stocked and the demand is quiet and prices low. Dealers are buying pure hides from 3 to 3¼c., and 3c. for No. 3.

SHEEPSKINS—Are quiet and large stocks are being held by country dealers. Dealers are offering for fresh slaughtered skins 70 to 75c. Country stock is fetching from 25 to 50c.

TALLOW—Continues in brisk demand and dealers are paying from 5 to 5¼c. and selling at ¼c advance. Culled tallow 4½c.; rough tallow 2c.

PETROLEUM.

Business on the Toronto market continues brisk at unchanged prices. We quote Canadian at 11¼c. in shed in Montreal for round lots, and 12c. for small quantities. American petroleum, 16½c. in car lots, 17c. in 10 barrel lots, 17¼c. in 5 barrel lots, and 17¾c. for single barrels, net cash; American benzine, 23 to 25c.; Canadian benzine, 10¾c. Petrolea, 12½c. Montreal.

The Petrolea Advertiser, in its weekly review, says there is no change in either refined or crude, and it gives these quotations: Crude, $1 to $1.03 delivered; refined, 6 to 6½c. in bulk, or 8¾ to 9½c. in barrels in car lots f.o.b, Petrolea.

MARKET NOTES.

The Metallic Roofing Co. report large sales of Hay's patent lathing, and have received the contract for the Mount Royal School and the Monument Nationale, Montreal.

Frankel Bros. report large sales of cotton waste. They have the sole agency for the various kinds of XXX brand, which they say seems to be the only kind that suits engineers.

The McClary Manufacturing Co. report the fall trade pretty well supplied. Orders now received are small, and chiefly for articles to supply the holiday trade, of which they have a large assortment, and for which there has been a large demand.

The Toronto Smelting and Refining Works say: "It will be hardly creditable that one concern should manufacture 50 per cent. of the solder that is used in Canada, but if orders keep coming in the way that they have been doing we will soon beat that mark."

The Kemp Manufacturing Company have had a large demand for their goods, such as embossed ware, tinware, stove pipe thimbles and other house furnishing goods. The bulk of the fall trade is now in, and the firm will have many new articles to offer for the spring trade.

J. H. Farr & Co., having nearly completed their new factory which was recently partially burned, are now prepared to fill all orders. They are making a specialty of fine varnishes for carriage use. The firm says that the varnishes are not to be excelled. Farr & Co. are at preseut completing a carload of insulating compound for weather proof wire for a large firm in Chicago, and also have contracts to supply other firms in the United States.

The Ontario Association has advanced the price of linseed oil 1½c. per gallon.

Another shipment of Fry Pan clocks has been received by Rice Lewis & Son.

H. S. Howland, Sons & Co. expect a shipment of Samson's snow-shovels next week.

Rice Lewis & Son are sold out of hockey skates, but they have two shipments arriving in a day or so.

Craig & MacArthur have just got in a large shipment of boiler tubes which they are in a position to sell at a low figure.

M. & L. Samuel, Benjamin & Co. have received another shipment of "Columbus" skates, and still they have not enough to supply the demand.

Rice Lewis & Son have just received enquiries from both British Columbia and New Brunswick for goods which were described in recent issues of HARDWAE.

It is usual for the Gurney Foundry Co. to shut down its foundry at this season, but business has been so brisk that it has so far been found impossible to do so this winter.

Rice Lewis & Son are showing some old armor for decorating purposes in the way of spears, swords and daggers. A peculiarity about them is that they have all seen active service in the field.

Panchaud, Squire & Co., of Montreal, have secured the agency for Canada of the well-known firm of J. & F. Parkes & Co., of Birmingham, manufacturers of shovels, spades, picks, etc.

The Toronto Cutlery Co.'s travelers are in the city after successful trips over their several routes. Orders for the fall are nearly all completed, and Mr. Mayer will leave shortly for New York and other points. He says that he will offer to the spring trade a most complete line of cutlery, both in quality and variety.

The Gutta Percha and Rubber Mfg. Co. Toronto, report large sales in rubber belting, while the usual steady demand continues for their numerous other lines in rubber goods. They say: "Our goods always give satisfaction, and are therefore always in demand."

The Canadian Mineral Wool Co. have the contracts for placing steam pipe covering in the Hamilton Insane Asylum and in the Rolling Mills, Toronto. They claim to have in stock the most complete assortment of steam packing in Ontario and also a full line of asbestos goods.

One of the handsomest things in the way of a cutlery cabinet that has been seen on the Toronto market for many a day is to be seen in the sample room of Rice, Lewis & Son. It is in cherry and handsomely upholstered. It is between three and four feet high

and contains three spacious drawers with two gold-plated handles to each. The finishing touches had not been put to it when a representative of HARDWARE saw it, but its value is somewhere around $500.

The contract for heating the Assiniboia Club, Regina, N.W.T., with hot water has been secured by the Gurney Foundry Co., and the firm has just shipped one of its largest Oxford boilers out there.

The Toronto Silver-plating Co. is still working day and night getting orders through. The customers of this firm who wish to have their orders executed in time for the holiday trade would be wise to place them without a moment's delay.

The Gurney Foundry Co. are getting up an elaborate car stove for the Toronto Railway Co. The stove will be placed on the seat of the car, thus obviating the necessity of cutting a piece out of the seat in order to let in the stove as formerly. The order placed with the Gurney Co. is a large one.

H. S. Howland, Sons & Co. are in receipt of a car-load of skates, and they are now in a position to fill at sight orders for the "Star" skate in these sizes :—No. 0, No. plain, No. 0 plated, No. 7 plain, and No. 7 plated. The firm report large sales of these skates since the favourable weather set in.

Frank Holt, of 81 Colborne street, Toronto, has began the manufacture of wool wall dusters, and has already sold a large number. The duster is affixed to a six-foot pole, and is said to be one of the finest things of the kind on the market. The duster is supplied to the trade only.

Chas. Boeckh & Sons, brush manufacturers, Toronto, are busy fitting out their travelers with a very complete line of samples. The firm believe that the retailer is far better able to judge the quality of the goods by samples than when sold from a catalogue. Their travelers have met with success in the past, and with numerous new lines have great hopes for the future.

The Collins Manufacturing Co., Toronto, have been somewhat behind in their orders for their dome bottomed kettles, through a break in their machinery. They have completed repairs, however, and are now prepared to fill all orders. They report a growing demand for their new weather strip, and shortly intend to introduce to the trade a new stove damper, which they feel certain will meet with approval.

PERSONAL MENTION.

Walter McCloud of the Banner File Co. of Almonte, was in Toronto a few days ago in the interest of his firm.

Mr. David Miller, formerly of London, Ont., but for the past three years with the Boynton Furnace Co. in New York City, is about to sever his connection there to take a responsible position with the Utica firm of Hart & Crouse, who are about to open a branch of their business in New York. Mr. Mackay, another London boy, is to be the manager of the branch.

A. H. Symonds, who has represented James Hutton & Co. for some years in Canada, with headquarters in Toronto, will sever his connection with that firm January 1. He has already secured some new desirable agencies and is negotiating with regard to others.

GAS ENGINES IN GERMANY.

The last report of Frank H. Mason, U. S. Consul-General at Frankfort, Germany, contains the following :

Prominent among the economies which have been introduced during recent years in Germany is the use of gas motors in place of steam engines in all the smaller forms of manufacture where the motive force required does not exceed 70 to 100 horse-power. At the Frankfort electrical exposition of 1891 most of the dynamos were driven by gas and caloric engines, and the display of these motors at that time were almost as varied and interesting to the general public as that of the electrical apparatus to which they were technically subsidiary.

The statement is made that there were in operation in Germany at the time referred to, about 18,000 gas motors, aggregating a motive force of about 60,000 horse power, since which time, by the gradual cheapening of gas as a result of careful saving of tar, ammonia, and other subsidiary products of coal distillation, the number has increased to about 25,000. The improvement in economy in these motors has been remarkable. The Lenoir machine, the best known as late as 1861, used 1,235 cubic feet of gas per hour, while at the present time small motors only consume 28 feet, and large motors as little as 23.75 feet. As the cost of gas ranges from 95 cents to $1.36 per 1,000 feet, and 21.2 feet of gas will run a 16 candle incandescent lamp an hour, which figure is reduced to 17.6 feet in large plants, it readily appears that this motive power is very economical for the smaller forms of manufacture, and especially for electric lighting by isolated plants.

MORE LIGHT NEEDED.

One of the things very frequently overlooked in stores of the hardware and general class is light. We have seen some large stores that keep open evenings with such poor lighting facilities that it is a difficult matter to display goods at all. If night trade is sought there should be light enough in the store to show a customer where he is stepping and what he is buying. One or two lamps or gas jets are a small expense when compared with the impression conveyed by a bright store. No one likes to go into a dark or dimly-lighted room to purchase goods, and the merchant who floods his store with illumination is looked upon as a progressive man. There is a point where it is wise to stop, but few will overstep it, and the general advice to let the people have more light is not likely to go amiss.

Particularly is this applicable to show windows. Displays in the windows should be very brilliantly lighted, and the radiance should spread itself into the streets in such a measure as to attract people by that alone. It is not enough to light the windows merely enough to enable passers-by to see what is there, but the light should be doubled or trebled in the windows and made a feature of the store. When this is done there will be more of a desire to get up good window displays, and this means more trade.

Light in a small store necessitates cleanliness, and cleanliness is another forerunner of prosperity. It may cost a little more of a clerk's time to keep the lamps trimmed and burning, but it pays big interest on the investment, and only needs a trial to prove its value. It will certainly elevate the standard of trade to have plenty of light on it in every sense.—Nebraska Trade Journal.

STRENGTH OF MATERIALS.

The science of the strength of material gives us the information of the resistance of the solid bodies against forces acting upon them. The herewith used expressions of such a science have the following meaning :

1. Surface pressure. The pressure upon the unit of surface, square inch or square foot.

2. Strain. The pressure of the unit of surface returned stresses of the molecular fibers; in general : Force against the unit of surface.

3. Strain modulus. The strain, equivalent to the elastic limit. The tensile and compression module.

4. Breaking coefficient or break modulus. The stresses by which the molecular fibers release the cohesion.

5. Elasticity modulus, the measure of the elastic yielding of a material, the stresses by which a prismatic body in its length is being stretched or compressed, without changing its form after the release of the stresses"

6. Theoretical strength is the strength in which the material or body may be subjected to tensile compression, torsional or transverse stress in the highest strained fibers equals a stress of the strain modul—hence, the strength of the body being exposed to its elastic limit.

7. Practical strength of the material. We call such, when such stresses are only for safety brought to bear upon such material to a fractional part of its elastic limit.

8. Factor of safety. This is the proportion between the theoretical strength and the practical load or strain, or between the breaking strain and the stresses applied.

9. Breaking strain. This is the strain which pulls apart, crushes, shears, twists or breaks transversely.—Frank J. Roth in Industrial World.



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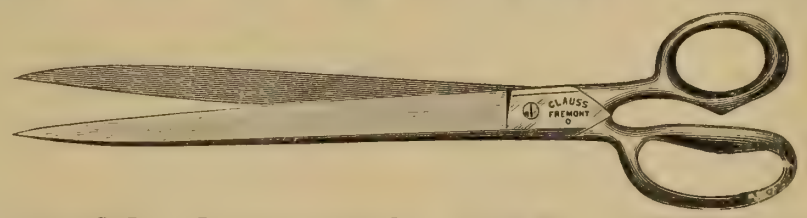
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TOYS AT NUREMBERG.

"All is but Toys."—Macbeth.

There used to be an old nursery rhyme to the effect that :

"The children of England take pleasure in breaking
What the people of Holland take pleasure in making."

Whatever this may have been in the past it does not apply to the present. We have bought toys in Amsterdam, but have been quite unable to procure a box of soldiers of Dutch manufacture. No ; the toys sold in Amsterdam, like the toys sold in London, mostly hail from Bavaria ; and from one particular town in that ancient kingdom. Nurnberg, the Bavarians call it, but by us it is known as Nuremberg.

The commerce of this quaint and picturesque place dates back to 1050 at any rate, and has therefore the charm of age in addition to the great charm of novelty which adheres to its present products, which are the delight and wonder of so many nurseries.

Dolls in thousands first see the light in Nuremberg, and the puppet population of the distriet is greater than that of the citizens. Nuremberg is distinguished from such large towns as Manchester, Chemnitz, and Liege by the fact that its industries are, to a great extent, the industries of the home in contradistinction to the industries of the factory. There is no doubt a central home or office for each firm, but the work is done by the operatives largely at their private dwelling places.

The streets are narrow, but the shops are well dressed. A large toy shop in the main street attracts many admirers at its windows, lined with toys of all sorts and conditions. The actual manufacture is carried on at S. Johannis Stadt, an industrial village, within a mile of the town of Nuremberg. The firm of Heinrichson are specialists in the production of those lead soldiers which form the subject of a well known household tale.

Soldiers as we see them in our toy shops in the Lowther Arcade and in our playrooms, appear very simple indeed, but they are not so. It may seem that they have but to be made and packed into wooden boxes, which the Nurembergers rightly prefer to those limp cardboard boxes with glass lids, which used to be so much in vogue. The soldiers in their day play many parts. The first necessary is that the manufacturer or one of his chief assistants must make a constant study ot history and of costume ere he first puts the uniform on.

Herr Heinrichson, for instance, who devotes himself mainly to the designing of the soldiers, has a good library of ancient and modern illustrated volumes on history, so he is constantly introducing novelties into the market. It is his part to furnish the sketches which act as models, and amongst the styles of soldiers he has introduced are Crusaders, Zulus, Tyrolese, Assyrians, Persians, ancient Greeks, and many of more recent costume. The services of the engraver are next in request, and two moulds are needed, in which are hollowed out the two sides of the soldier. The metal is then poured between the two moulds, which are pressed together, and a soldier is the result. Odd bits of lead at the angles have afterwards to be removed in a separate department, but otherwise the soldier is as complete as he is colorless.

The painting, which is mostly done by the "gentle" sex, is entirely from models, a series of which forms in miniature an International Military Museum. After this comes the harmless, necessary sorting and packing, which need little description. Soldiers crowded together in the immense fortress of a Nuremberg warehouse do not remain long in barracks, but speedily scatter throughout the civilized world.—Ex.

UNFAIR COMPETITION.

Unfair competion in business may be defined in general terms, for present purposes, as consisting of any device or tuick whereby one manufacturer's or dealer's goods are palmed off in the market as and for the goods of another, in fraud of the public and of the persons whose goods are so displaced; the most usual of such devices being the simulation of labels, the imitation of another's style of putting up goods, and the reproduction of the form, color and general appearance of his packages. An attempt to enumerate all such devices would be as futile as an effort to catalogue all the expedients that fraud can employ.

Within recent years a distinction has been taken in the authorities between this class of controversies and technical trade mark cases. The principles common to trade mark law, as thus narrowed, and to the subject of unfair competition in business are also applicable to competition in other kinds of business besides the sale of articles of merchandise. The correspondencies between the two classes of cases are more numerous than their differences. The object and purpose of the law is, first, to secure to him who has been instrumental in bringing into market a superior article of merchandize, the fruit of his industry and skill, and, secondly, to protect the community from impositions. In each instance the underlying principle is that one man is not to sell his own goods under pretense that they are the the goods of another; and the violation of another's rights pirates upon the good will of that other's friends and customers, or the patrons of his trade and business, by sailing under his flag without his authority or his consent.

There is this difference, however : The law of trade mark is designed to protect primarily a property right, and as incidental thereto gives redress for the injuries resulting from invasions of the right, a distinct technical trade mark being in itself evidence, when wrongfully used, of an illegal act ; while the jurisdiction exercised over cases of unfair competition in business is grounded in the prevention of fraud. Where no trade mark has been infringed or involved, courts of equity have granted injunctions on more than one occasion against the use upon goods of certain marks, labels, wrappers, showcards, etc., when the evident design of snch use was to deceive the public by concealing the true origin of the goods and making it appear that they were the product of some other manufacturer of established reputation, thereby depriving the latter of a portion of the patronage that would otherwise go to him. This is what the Supreme Court of Tennessee says in a late case where the whole subject is exhaustively considered.

Illustrations of the practical application of this doctrine are found in many cases. Where, for example, a firm which sold goods in a peculiar form of package, peculiarly marked, and another merchant at first put up his goods in a precisely similar manner, but after the beginning of suit discontinued the firm name and inserted his own, an injunction was granted restraining him from using packages similar to those of the other firm. It has been said that the principle in these cases is this : That no man has the right to sell his own goods as the goods of another. But the same principle may be expressed in a different form by saying that no man has a right to dress himself in colors or adopt the bare symbols to which he had a peculiar or exclusive right, and thereby personate another person for the purpose of inducing the public to suppose either that he is connected with or selling the manufacture of such other person while he is really selling his own. If the general effect is such as to deceive an ordinary observer, having no cause to use more than ordinary caution, being acquinted with the first manufacturer's package and label and never having seen his competitor's package and label and not expecting to see it, so that he must be, on seeing the latter, misled into thinking it is what he has known as the former's, that is sufficient to entitle the former to an injunction. A party is not compelled to file his bill at once, but may lie by until sufficient time shall elapse to enable him to gather the requisite proof.—Ex.

The affairs of the late Joseph Abbott, late traveler for the Hobbs Hardware Co., London, Ont., have been wound up at the Surrogate Court before Judge William Elliot. In the settlement between the widow and administrator, Hudson G. Abbott, carriage merchant and father of deceased, there was a claim by the latter of $75 for his late son's board before marriage and another of $27. The first claim was struck out by the Judge, and in the second case it was found that credit had been omitted, and that item was also ruled out. The estate amounted to $3,535.13, including $3,000 insurance. The disbursements reached $319.85 and the administrator's commission $80, leaving a balance to the credit of the estate of $3,135.28.

ELECTROPLATING HULLS.

Those familiar with the subject, and, therefore, well qualified to express judgment, have frequently and emphatically called attention to the necessity for sheathing the hulls of steel vessels with copper in order to obviate the troubles arising from marine growth, both animal and vegetable, on vessels not sheathed with copper, says Industrial World. It has been repeatedly pointed out that the cost of docking the vessels in the new navy will amount to many hundreds of thousands of dollars per annum, the cause for the docking being directly due to ths fouling of the bottom. All the vessels should be docked twice a year, and in some cases three or four times a year, depending upon the waters upon which they are afloat. Therefore, any method which will obviate this difficulty should be received with favor. It is estimated by the officials of the navy department that the cost of docking, cleaning and painting the cruiser Chicago at suitable intervals during a three years' cruise will require the expenditure of nearly $100,000.

A method of copper-coating the hulls of steel vessels by means of electricity is thus described in a contemporary:

Copper is deposited electrically upon the surface of the vessel in successive sections, the joints of the sections being overlapped to unite them. The joints are united so perfectly by the electroplating process that the whole coating of the vessel becomes an unbroken metallic sheet. The plating is done by means of a bath like a rectangular box, open at one side and fitted water-tight to the skin of the ship.

Any form of elastic packing can be used to make the bath water-tight where it touches the iron hull of the vessel. The frames of the bath are made flexible, and may thus be bent to suit the curved lines of the ship at the various points, and special baths are constructed to embrace the keel, and for complex surfaces like the stern bearing and rudder post.

Somewhat extended experiments have shown that the copper can be deposited so as to perfectly cover the hull, and that it will cling with such tenacity to the steel as to make its removal impossible without destroying it. Concerning the rate and cost of depositing copper of suitable thickness by this method, it has been calculated that any number of baths, 4 x 10 feet, may be operated simultaneously in 70 hours' time, with an expenditure of 6½ horse power for each bath. Upon a vessel 400 feet long 60 baths can be operated at once, in three rows on one side, with 390 horse power; or 120 baths, 60 on each side, can be operated at once, with 780 horse power, at a cost per day of $150. It is stated that the whole bottom of a ship drawing 20 feet of water can be plated from the water line down complete in eight or nine days by using 60 baths at once on each side, with 780 horse power, shifting the baths two or three times. The plated surface of such a vessel would aggregate 24,000 square feet, which, at 12 cents a pound, would cost $6,660.

A SUN FURNACE.

Sir Henry Bessemer, the well-known inventer of the steel process which bears his name, tells how he tried to construct a "sun furnace" and failed. His invention was intended to revolutionize not only the science of metallurgy, but the whole world. It was to attain a temperature of nearly 60,000 degrees, and therefore fuse anything and everything, and Sir Henry puts the blame of its failure to fulfill these expectations on the stupidity of a country lens-maker. The 'sun furnace" consisted of a wooden building thirty-five feet high and about twelve feet square. A few feet from the ground was fixed a large inclinable mirror for catching the rays of the sun. From this mirror the rays were to be reflected on to a number of powerful superimposed lenses above, which, by a simple arrangement, were to throw the enormously concentrated rays upon whatever object might be in the crucible below. Such was the mighty plan, but the manufacturer of the upper glasses brought it miserably to naught, for instead of turning them out uniform he made them all different, and thus spoiled the focus. Sir Henry was so disgusted and disheartened that he refused to go over the ground again, and so the pretentious scheme collapsed, but the peculiar furnace remains to this day a remarkable monument of what might have been.

PREVENTION OF LAMP ACCIDENTS

In view of the numerous fatal and other accidents in England caused by petroleum lamps, the London County Council has, according to an exchange, lately issued a number of suggestions in regard to the construction and management of lamps, founded partly on recommendations by experts after investigation into the cause of accidents. These suggestions are divided into three groups. The first relates to the construction of lamps, and on this point it is strongly urged that the oil reservoir should be of metal instead of china, glass or other fragile material so commonly used, while it is further said that the wick should be inclosed in a tube of thin sheet metal open at the bottom and reaching almost to the bottom of the oil reservoir. Then is is recommended that every lamp should have a broad, heavy base and a proper extinguishing apparatus. The heavy base is an important matter as tending to prevent the upsetting of lamps, for the upsetting is one of the most fruitful causes of serious accident. Special attention is directed to the management of wicks, and as to extinguishing, it is recommended that after the wick has been lowered till there is only a small, flickering flame a sharp puff of breath should be sent accross the top of the chimney, but not down it.



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UNIONS AS MANUFACTURERS.

A short time since the window glass workers who were then idle because the manufacturers had not signed the annual wages scale announced their intention of becoming manufacturers themselves. Their organization, known as the Window Glass Workers' Association, according to the announcement, was to lease factories and go to work at producing glass for the market. The plan was outlined by the head of the organization as follows.:

"The idea is to secure factories and place out men at work in them, producing glass for sale in the common market. We are all of us practical glass makers, and we see no reason why we should not be able to make as good glass under this plan as when working for s manufacturer. The association proposes to go into the field of trade and find employment for its members by manufacturing for the open market.'

For a short time there was considerable talk of this movement among the window glass workers, but nothing conclusive was done, and after the starting up of several factories nothing further was heard of the project. The window glass workers have on former occasions declared their intention of leasing factories, but they have never made any practical move in that direction. In fact they have been fully informed as to where they might secure possession of factories ready to be put in blast at once, but no effort has been made to effect negotiations. Neither is it likely that they will as an organization enter upon manufacturing. They well know the difficulties surrounding the successful operation of a factory, and the marketing of its product. They may thoroughly understand the making of glass and no doubt would be "able to make as good glass under this plan as when working for a manufacturer," but they also know that this is not all of the trade. They are aware that to produce good glass is not alone sufficient, but it must be disposed of advantageously. We believe that the industrial history of the country furnishes but one instance of a labor union, as a union, embarking in any producing project. Some years ago, the national organization of the Knights of Labor leased a mine in one of the Western States, but it was never a success in producing coal, although individual operators in the same district have continued in prosperous business. Such enterprises generally fail not because they are conducted by working men alone, but because the management usually lacks the commercial training necessazy to carry on business successfully. Mr. Powderly was right when, in an address to his constituents, he once said that if they were given the railroads of the country they would not be able to run them.—American Manufacturer.

HOW TO MEASURE YOUR COAL.

The publishers of Stoves and Hardware by the practice of much economy saved enough money to buy two and one-half tons of hard coal. But the pile looked so small compared with the hard-earned money that the editor of our contemporary measured the coal and found it 1,697 pounds short. Then he executed a war-dance and started on the trail. He had several neighbors measure up their coal, and there was a general shortage found. One man was out 3,000 pounds on 14,900 purchased. As a result of the investigations our contemporary wants everybody to measure his coal pile, and here is how to do it :—

Ascertain the number of cubic inches contained in any given quantity of coal, being careful to spread out the coal on top so that it will present an even surface. Divide the number of cubic inches by 1,728 in order to determine the number of cubic feet. Multiply this number of cubic feet by 54 and the product will be the number of pounds actually received. If the coal had been sold by the ton, divide the number of pounds by 2,000 and you will have the weight in tons and parts thereof.

If absolute accuracy is desired, construct a box with a depth, length and breadth of 15 inches exactly. Fill this with coal from that which is to be tested, leveling it carefully on the top, and ascertaining its weight on reliable scales. Multiply the number of cubic feet in the bins by the weight found in the box, and the product will be the exact number of pounds received.

IMPENETRABILITY OF ARMOR PLATE.

With the exception of three years spent helping to adjust a slight difference of opinion, I have spent 37 years in the plate business. It has been mostly tin plate, and with a light coating ; nevertheless I have had some experience in testing armor plates, which occurred during the three years mentioned. Having been on duty as wagon guard when the quartermaster issued orders to lighten baggage, it fell to my lot to be one of those detailed to go through the waggon train and select those articles which could best be dispensed with. The old quartdemaster was a fire-eater and had no sympathy for anybody who had a longing for a tree to get behind when the compliments became substantial and were passed with fervency and celerity. He made remarks which should be repeated to ladies in the original Greek when we found stowed away in one of the waggons a dozen vests of very heavy cloth, lined with a thick, soft flannel, and having between these materials thin plates of steel which had been guaranteed by the genuine Damascus brand. These vests were originally bought for $15. but their true value could have been thoroughly tested by wearing one in a campaign against Jersey mosquitoes of the World's Fair size. When the old man's back was turned I hung one on a post to test it, with the idea that I would rather come home and brag than have my folks put flowers on the soldiers' monument for a hero who was lost in he wilderness. Well, I blazed away at it, and as I was examining it the old man came back to see what the row was, and on seeing the hole ordered me to put up two, which I did, with the same result, and the old man said put up another, and still I bored a hole, and again with the fourth I proved the quality of my old smooth bore. The old man was now laughing as loud as he had cussed before, and said, "It's a cold day for the cowards, put on more clothes," but the fifth vest stopped the ball, though it made a big dent. He told us to throw all of them we found away, observing that a fighting man's skin made a better soul case than such blasted contrivances, for it didn't inconvenience his movements, while if he wore enough of them "coward's delight" to protect him they would kill him anyhow.—Ex.

COLD BOILING WATER.

"Cold boiling water, indeed! Boiling water is the hottest kind of a thing. Don't I know? Haven't I scalded my fingers more than once with water from the tea kettle?"

James is right, and yet he is wrong, says an exchange. Boiling water is not always very hot water, in spite of his painful experience.

This is the way it happens :

When water begins to boil ordinarily it is because great heat has separated the tiny particles of water, forcing upward and outward in lively bubbles the air which is contained in them.

This is done in spite of the downward pressure of the atmosphere. After the water has become hot enough to boil it can get no hotter, because the air and then the water escape and carry off the heat.

There are few places on the earth where the pressure of the water on the atmosphere is so light that it requires but little heat to push apart the particles and set free the air bubbles which are confined in the water, so it begins to boil before it becomes very hot.

It ought hardly to be called cold water, perhaps, but it is certainly far from being as hot as ordinary boiling water. This state of things is found on all high mountain tops, as the atmosphere grows weaker and its pressure less as one ascends.

A gentleman traveling at a great elevation in the Andes Mountains put some potatoes in a pot over a hot fire. The water began to boil almost immediately, but the potatoes did not cook. All the afternoon and all night the water bubbled and boiled, but still the potatoes were not cooked. The boiling water was not hot enough.—Ex.

William Howe, who has been in the tinsmith business at Lindsay with his father for one year, was taken with a violent fit of vomiting Thursday, and died in a few minutes. He leaves a wife and one child.

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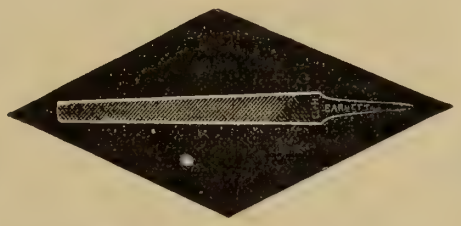
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MOISTURE ON SHOP WINDOWS.

On this topic a correspondent writes Ironmongery, London: "The cause of the steaming of shop windows is the difference in the temperature of the outside and inside the shop. The only remedy is to have an inner window or sliding windows inside the shop at a distance from the outer window of from two to four feet. These windows should be kept quite closed when the shop is hot." But how about the evening when the window must be lighted up, and the enclosed window space rapidly rises in temperature? Air must be drawn from somewhere outside the window to feed the gas or other flames ; and that air will be more or less saturated with moisture, which will begin at once to condense on the cold panes whether there be an air-tight inner window or not.

A correspondent sends us the following, which, though not a new suggestion, and though many ironmongers will support us in saying it has not by any means always been found efficient, may nevertheless supply a hint for many to work from. "The simplest and most effective cure," writes the correspondent, "for this very annoying matter is the following : Have one or two (according to the size of window) gas brackets fitted quite close to windows, and when there is moisture on them put the flame as near to the glass as possible, without endangering the glass. The glass nearest the flame will dry, and as the heat of the gas jet gradually heats up the whole plate of glass the moisture will disappear entirely. This is especially useful during the winter time. This is a certain cure, as I have seen it in operation. I got the idea originally from a draper who uses it continually in this town (when necessary), and his windows are always perfectly clear and bright. He has two fancy globes on the brackets, which are very effective also in lighting up the windows."

Mr. Frederick Horne, of Heath Bank, Wilmslow, sends us particulars of a method for which he has obtained a patent in this and several foreign countries, and for the manufacture and sale of which he grants licences. This method may be briefly described as causing a volume of hot air to flow constantly along the inside of the glass from the bottom to the top of the window. The arrangements for securing this end are, first, a line of gas pipe (where gas is available) extending along the floor of the window just inside the glass, and fitted with burners equi-distant, say 2¼ in., from each other. In place of the gas-pipe, a hot-air pipe pierced at intervals, or a hot-water pipe, connected to secure a continuous flow, could be employed if more convenient ; or, in the absence of all other means for creating the sheet of hot air, broad, flat wick lapms are suggested. Where gas is used it is advisable that the flames be covered over with a wire gauze arched or pointed above them, "thereby causing," to quote from Mr. Horne's patent specification, "a greater quantity of air to be mixed with the gas and producing a greater heat with less consumption of gas ; but, if desirable to use the gas for illuminating purposes, then the gauze can be dispensed with." Two or three inches from the window pane, and behind the gas pipe or other source of heat, is placed a sheet of thin glass, extending some distance above the flames, and to within two inches of the floor if gas lights or lamps are used ; to within one inch of the floor if hot-water pipes are employed, and quite to the floor if hot-air is the source of heat. Thus the heating device is enclosed between two sheets of glass, and the broad current of hot air is directed upwards along the inner surface of the window pane. This inner sheet of glass, it is stated, may vary in width, but a piece six inches wide is "sufficient (under ordinary conditions as to draught, etc.) to maintain from two feet six inches to three feet of the window perfectly clear of condensation, which would generally be equal to the line of sight of a man of medium height, standing on the pathway outside." The inner sheet may be secured with buttons or other fastenings to a framework in such manner as will permit it to be readily removed for cleaning, etc. It is claimed that this device will not only keep the lower part of the pane quite clear of moisture, but will in a very few minutes after being set in operation in the morning clear off any accumulations of frost during the night.

This description is drawn from the specifications of the patent as already mentioned, and we understand that some changes in details have been found advisable in actual practice, without deviating from the main features as above described. Every tradesman can estimate the advantages and disadvantages of the plan.—Ironmonger.

AIDS TO THE MEMORY.

The following is the third of a series of articles written for Ironmonger, London :—

Another geod idea is that of large pieces of cardboard, say about 24 by 28 in. Stand them on end close by your desk, or some convenient spot, and use them as follows :—Keep one for your porter for goods or repairs requiring to be fetched from your customers. As your porter starts in each direction he can look down the card, make a note of names of customers upon whom he has to call, and when he returns cross it off the card.

Another cord will be found useful for the workmen. When a customer gives an order for work to be done, make a note of it on the card. Glance at the card from time to time during the day, and copy off work to be done, and hand it to your men.

Yet another card will be useful for making notes of alterations, improvements, and a thousand and one things that will occur to the busy man during the day. When time permits scan the card and copy off, say, half a dozen or so jobs. Hand this list to your assistants and apprentices to be carried out ; and when done cross them off the card. By this means details (that no man could possibly remember) will receive attention, and your employees will never need to walk about with their hands in their pockets, waiting for something to do, and never have a moment when they will be able to say, "There's nothing to do." I may here intimate that you can always get any amount of these pieces of cardboard from any draper or milliner for nothing.

A little drawer containing a few tools, such as a hammer, vice, screw-driver, brad-awl, case-opener, and a file or so, will be found useful, as in spare moments, sometimes, an assistant or apprentice can do a little job. You always know where to find a tool when you want it, which saves rendering new ones unsaleable.

Take care of all the pieces of odd string, and roll up into balls; these will come in for tying up nails and other rough jobs, instead of using new. Take care of all the waste pieces of paper, thread them on a piece of string, they will come in for rough parcels and thus save new paper. "Take care of the pence, and the pounds will take care of themselves"—"Waste not, want not."

Keep a lot of small slips of paper handy on which to make notes of any kind ; they will be useful in many ways. Save all the old halfpenny wrappers, and half sheets of note paper, etc.; these will very often be found useful. For example :—when your porter is going his round he can use one of these on which to copy names and addresses of customers on whom he has to call for repairs, etc., etc. A list of the names of customers where repairs are to be done can be copied on one, and given to the workmen. Your own daily and hourly notes can be jotted down on one—I use one or more daily. You can also hand to your assistants and apprentices your notes of what you wish done by them on one. Some ironmongers seem to have a way of dragging out of the case a billhead, memorandum, or envelope for these notes ; they cost money and are no better for the purpose. "Oh," say they, "a billhead costs nothing." No, but a thousand do !

When I enter my shop and commence opening my business letters, I make use of an old halfpenny wrapper on which to jot down notes as they rise, and also of any notes that I may have made in my pocket book since closing the previous night. Some of the most valuable thoughts often occur while puffing a cigar or sipping a glass of "Scotch," or taking a walk, and often, too, in the silent hours of the night ; but don't encourage the latter, as we need sound, refreshing, and undisturbed sleep. I make notes of all these thoughts, and copy them on to my note card, read them over again and again, and reduce to practice those

ideas that are worth it. This is one means by which a business is built up; for, remember, that thoughts reduced to acts are the heart, soul, and kernel of business. Then, don't allow valuable ideas to remain outside of your note book. Never by any means be without a pocket book, and when a thought strikes you, make a note of it. If you meet a customer in the street, and he gives you an order, jot it down in your pocket book. Never trust to memory; it will often fail you—nay, mostly; but your pocket book never will, but will prove itself to be a true and reliable friend at all times. I have in my mind at this moment a neighboring tradesman, once in a flourishing way, but now on the verge of bankruptcy, all owing to his not using a pocket book. I met him three or four times in the street, and asked him to send his men to do a job for me. Each time he forgot it, consequently I sent to another man who, at this present moment, could retire if he chose. Customers have said to me "It's no good sending to So-and-so, you can never depend upon him." Had he made a note of each order as it was given to him, he would now be a rich man; but for want of a pocket note book he is the reverse. So don't forget to carry a pocket note book.

A check-till is certainly advisable. It is a check to some extent upon dishonesty, and is handy to refer to in cases of dispute. A cash-book, containing the record of each day's, week's, and month's takings, of course is absolutely necessary. A record of each month's and year's takings should be kept in a small book for that purpose only. You can then at a glance compare each month's takings with the corresponding month of last years, and also one year with another. By this means you will be able to see how much progress you have made, or vice versa.

Be very careful in crossing off all accounts as they are paid, and crediting goods returned. Carelessness on these points is productive of great evils, for nothing is more annoying to a customer than to receive an account which he has once paid. I have always adopted one system, viz. First credit the amount paid in the cash book; secondly, receipt the bill; then receive the cash; then hand the customer the receipt. If this method is carried out, so mistakes in this direction will occur. Directly goods are returned, credit them in waste day-book. Copy up out of waste into ordinary day-book every night; by this means you will keep your day book clean, and be likely to detect any error or omissions that may have occurred in the day's entry.

A "goods wanted" book should be kept, in which to make a note of any goods you are running out of. By this means you will be able to keep up your stock. You will find it very handy when travellers call, for you can then see at a glance what you require from them. A "special order book is a necessity in which to make a note of any orders for goods you have not in stock. A "repairs book" is also needful, in which to enter all articles sent to be repaired. Enter the name and number, putting the number only on the article before sending into the workshop. The men to give on their time sheet each night the number of each article reqaired. In copying up the men's time, this will be found to be very convenient and save a great deal of trouble. I have seen the evil of not adopting this system. A "railway and carrier's book" is needful, in which to enter all the empties and goods sent by rail or road, and get the carrier's signature. In case of delivery being disputed, you can readily refer and find the date and carrier's signature. A "name and address" book is very handy. By this I mean a book in which to copy the names and addresses of wholesale houses. For instance, when reading a trade journal, you often see fresh names and addresses representing themselves as being specially good for certain articles; make a note of their names and addresses, and when ordering their goods write them for quotations. You will often find you can do better with them than you can with the firms with whom you have been dealing. When firms know you are getting quotations from other firms, you will be sure to get bottom prices. Keep all your trade books nicely arranged and close at hand, so that when a customer comes and asks for an article you have not got in stock, you can at once put your hand upon the book you want and show your customer the illustrations and prices. A "net" price-list will be found very useful for reference when you have to quote specially low prices. By referring to your price-book you will see the exact cost of the articles you wish to quote for.

"Bumming" customers for their accounts is an evil into which a great many seem to have fallen. They are too fond of using threats, lawyers' letters, insulting messages. This won't pay! If you cannot (as a rule) "draw" money from your customers, you cannot force it; and this puts me in mind of the fable of the Wind and the Sun. The former made a wager with the latter that he'd get the man's coat off first, but after bringing all his force to bear upon it, only succeeded in blowing pieces off. But when the Sun's warm rays shone upon the man's back, he, of his own accord, removed his coat. This will be found true in ninety-nine cases out of a hundred. I will here cite a case which recently occurred in my own experience (and I could give many more if time and space permitted). A man owed me money, and also another tradesman in the same town. He said, "I can't pay you just now." I said, "All right, mate, don't you worry about my bit; any time will suit me." The other tradesman "shoved" him into the Court, and he was ordered to pay so much a month. Soon after this occurred, he came into my shop, put down the money and the bill, saying, "There's your little bit; but, as for that other———, I'll keep him waiting and give him as much trouble as I possibly can, and when I've paid him I'll steer clear of him in the future. I've got another job, and will soon be wanting a bit more furniture, etc., and I'll come to you for it." "Thanks," said I, and he bade me good-day. This tradesman did not only lose this man as a customer, but how many more no one knows. He happened to be a coachman, and as a rule they talk about one thing and another quite as much as other people. How many customers he may have recommended to me I knew not. Here I may say that businesses are largely built up by recommendation, and vice versa. Be careful, therefore, how you handle your debtors. It is even wise, under some circumstances, to allow an account to slide rather than even mildly to apply for it more than two or three times.

BUSINESS CHANCE.

Advertisements inserted under this heading two cents per word each insertion.

STORES and Offices to rent in The Thomson Bros. Block, Calgary, a three story stone building, plate glass front, heated with hot water, lavatory, closets, etc., most central location in the city, ready for occupation in about a month. Address, THOMSON BROS., Calgary.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO



BUSINESS CHANGES.

DIFFICULTIES, COMPROMISES, ASSIGNMENTS.

Alex. Fraser, blacksmith, Kirkfield, has assigned to A. C. Campbell.

J. P. Mechand, general merchant, St. Hilaire, N. B., is asking an extension.

Thomas Robertson, brick manufacturer, Toronto Junction, has assigned to C. M. Gardner.

C. Desmarteau has been appointed curator of the estate of W. S. Dockrill, plumber, Montreal.

James Hopkins & Son, general merchants, Hartney, Man., have been granted an extension.

Stock of Thompson & Co., general agents, Fredericton, N.B., has been taken under bill of sale.

The bailiff is in possession of the premises of Bracken & Co., housefurnishings and pianos, Toronto.

McLean & Irwin, general merchants, Kingston, Que., have assigned, and a meeting of creditors will be held 20th inst.

The Photo Supply Co. of 71 Bay street has assigned to W. A. Campbell. The liabilities are $2,500, with assets about the same.

P. Brownlaw & Co., general merchants, Elora, have assigned to John Ferguson, Toronto, and a meeting of creditors will be held December 20.

John P. McLeod, general dealer, Baddeck, has assigned to William McLeod. The liabilities are between $8,000 and $10,000 and the only preference is Messrs. A. & W. Smith, for $800.

Alfred Martinet, hardware and stoves, St. George East, Que., is offering his creditors 40c. on the dollar cash, liabilities are about $1,200. In business ten years, but has never made more than an ordinary living.

Sutherland Bros., general storekeepers, Newmarket, who recently asked for an extension from their creditors, have assigned to W. A. Campbell, Toronto. Their liabilities are about $6,000, and their assets nominally $7,000.

The liabilities of T. & W. Murray, the Pembroke merchants who secured a compromise the other day at 50c. on the dollar were $291,774.98. The assets consisted of stock, $97,510; book debts, $60,459.70, and real estate, $81,322.98, a total of $239,292.68, showing an apparent deficiency of $52,482.30.

The Master-in-Ordinary has appointed Assignee Clarkson liquidator of the Erie Glass Co. of Toronto. The factory of the company is situated at Port Colborne and proceedings have been the outcome of dissensions among the directors according to statements of counsel in court. The capital stock of the company was $46,000, of which $37,000 is paid up. The liabilities are placed at $7,000 or $8,000, and assets at $15,000.

SALES MADE OR PENDING.

C. Crevier, grocer, St. Jerome, Que., has assigned.

F. C. Dezouche, Bryson, Que., is to be sold by auction Dec. 22.

R. G. Fleming, blacksmith, Ravenna, is advertising business for sale.

Demand of assignment on Henri Deguire, grocer, Montreal, is being contested.

R. B. Hill, general merchant, Cloverdale, B.C., is advertising business for sale.

The stock of the estate of R. Jameson, general merchant, Petrolia, has been sold.

Stock, etc., of the estate of J. W. Clark, general merchant, Norwood, is advertised for sale 19th inst.

The stock, etc., of the estate of Angus McLeod, hardware merchant, Napanee, is advertised for sale by tender.

The stock of D. K. Weber, general merchant, Hawkesville, is advertised to be sold by auction by sheriff 18th inst. The general stock of W. Willard, Port Perry, is advertised for sale the following day.

Henry Barber, liquidator for the Toronto Wood and Shingle Company, on Saturday sold the company's coal and wood business at the corner of Spadina and King, formerly run under the name of T. Coulter & Co., to Thomas Coulter.

PARTNERSHIPS FORMED AND DISSOLVED.

F. R. Cale & Co., lamps, oils, etc., Montreal, have dissolved.

Langman & Stills, general merchants, Vernon, Man., have dissolved.

Jenkins & Donkin, stoves and tinware Spring Hill, N. S., have dissolved.

Dame T. Dufort, wife of Felix Bertrand, has been registered proprietress of Bertrand & Co., merchants, Montreal.

James E. Price, general merchant, Norton, N.B., has admitted Samuel Allison as partner. Price & Allison is the style of the new firm.

Robert L. MacFarlane has been admitted a partner in the firm of Porter, Teskey & Co., wholesale fishing tackle and guns, Montreal; style unchanged.

CHANGES.

The Thamesville Gas & Oil Co. has been incorporated.

A. & H. Lionais have been registered proprietors of Le Prix Courant.

F. Richardson, general merchant, Nanaimo, B.C., has sold out to W. H. S. Perkins.

The Blaine Sliding Blind & Manufacturing Co., Toronto, is applying for a charter.

E. J. Williams blacksmith, Cranbrook, has sold out to John Forest, who takes possession Jan. 1.

D. S. Henderson, merchant, Brantford, has been succeeded by Bonham & Lunn.

The Bowman Hardware and Sporting Goods Co. (Ltd.), Hamilton, has obtained charter of incorporation.

J. B. Henderson, general merchant, Carberry, is opening a branch store at Portage la Prairie.

FIRES.

G. Smith, plumber, Montreal, has been burned out.

A. A. Decado, general merchant, St. Johns, Nfld., has been partially burned out.

R. A. Whilman, general merchant, Emerson, Man., has been burned out; reported loss $15,000, insurance $5,000.

DEATHS.

Frank Squibb, plumbers' and electrical supplies, Hamilton, is dead.

A. Rossiter of A. Rossiter & Sons, brush manufacturers, Toronto, is dead.

E. Heuser of E. Heuser & Co., hardware importers, Montreal, is dead.

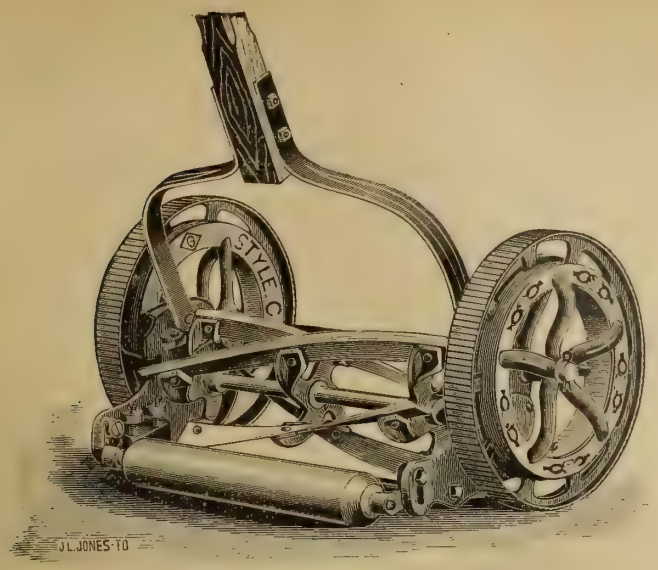
DISCONNECTING FIXTURES.

Disconnecting house fixtures from the soil pipe is sometimes practiced with good effect and the principle may, we think, says Plumbers' Trade Journal, be extended with good results inside our houses.

A recent adaption in the bathrooms of a block of flats consists in placing a small sink in the tiled floor, which in turn is laid on a span of plank like the "mill floors." Beneath the floor a trap is placed on the waste pipe of the little sink toward which the tile floor is slightly graded. The sink is so placed that the wastes of a porcelain lined iron bath and oval basin drip into it with the least possible length. These short wastes are of ¾-inch nickeled pipes connected to the fixtures by simple means and simply movable. By this means only two holes are made in the floor for waste pipes, one for the closet and one for the sink. This little sink takes care of any overflow that may take place, and the wash of the floor as well. The basin, so apt to lose its seal by self syphonage, is disconnected, and the usual cumbersome and expensive wastes of the bathtub are done away with. The small open waste pipes of the bath and basin have only small fouling surfaces, and these are easily scoured out by the rapid flow of the hot waste liquids. The number of soil pipe connections is lessened and the work generally simplified by the means taken to disconnect them.

Practically the plea is that it is only a little evil, describes a Chicago building exchange, and by tolerating it things will look as much better.

The sanitary engineer everywhere finds people objecting to good work because it "looks so." Show the architect or owner how some favorite trick of construction is dangerous to life and health and suggest that the work should not be concealed The reply is, "but it will look so to have it exposed." With a properly arranged bath and basin there is no difficulty in going through a tiled floor with a single opening in addition to that for the water closet.



THIS IS A CUT OF OUR NEW

"Style C" Lawn Mower

FOR 1894.

10½ in. Driving Wheels for sizes 14 to 20 inch, 9½ in. Wheels for 12 in. New and Improved Gearing throughout. Reserve your orders until you have seen samples and obtained our prices.

THE JAMES SMART MF'G CO. LTD.

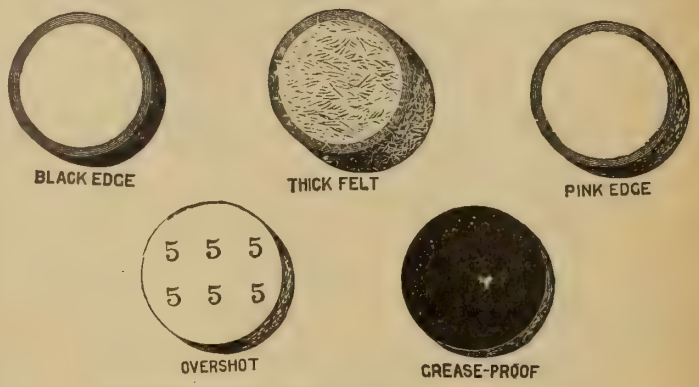
BROCKVILLE, ONT.

. . ELEY'S . .
CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. **Wholesale Only.**

ELEY BROS., LTD.

254 Gray's Inn Road, LONDON, ENG.

A NOVEL SLEIGH.

A sleigh has been designed, according to an exchange, that can be readily propelled and steered over ice and snow, either by the occupant or by a suitable motor. On bearings which permit of vertical adjustment at each side of the sleigh are journaled short shafts carrying paddle wheels of novel construction, adapted to engage the snow or ice to propel the sleigh forward or to steer it. The shafts may have suitable crank arms for propelling the sleigh by hand, or they may be connected by pitmen with a motor. The paddle wheels have spokes, each having its outer end forked, the transversely extending paddles being made of sheet metal, with their outer edges serrated. Near the forward end of the sleigh, on each opposite side, is a curved rudder held normally out of the snow by a spring, but by pulling on a rearwardly-extending cord a downward swinging motion is given to one of the rudders to move its rear curved end into contact with the snow or ice, to steer the sleigh to the right or left as desired. To conveniently pass the sleigh over ground a pair of front wheels is provided, their axles journaled in pivoted side arms and locked in place by a pin, the arms being swung downward when it is desired to wheel the sleigh over the ground, the paddle wheels being at the same time locked in their lowermost position, whereby the sleigh is lifted entirely off the ground. When the snow or ice is again reached the arms carrying the front wheels are swung into their upper position, and the paddle wheels are raised to the height best adapted to effectively engage the surface of the ice or snow. The invention also provides for the convenient and ready attachment to the main rudders of different forms of auxiliary runners specially adapted for running over ice or hard frozen ground or loose or wet snow.

HOW IT WORKED.

"Upon one of my visits to a hardware man down in Ohio," said E. C. Gault, who represents a number of specialties in the hardware line, "I found him meditating on how to get the people into his store. He wanted to do some advertising, but didn't know how to do it effectively. He asked my advice. He had an indefinite idea about putting a series of signs out on the roads leading into the town. I asked him what were the tools most used and needed by the average farmer. We agreed that the list included a saw, a hammer, an auger, a hatchet, a chisel, a jack plane and sundry other articles. 'Now,' I asked, 'where can you get the cheapest saw?' We went over the catalogues and picked out an assortment of the cheapest tools made, and figured up what the whole batch could be sold for. 'Now,' I said, 'put out a sign saying that this collection of goods, naming them, will be sold for the lump sum named,' and it was surprisingly low. I told him I did not believe that the farmers would take the tools, because they were poor as well as cheap, but they would come to see and a better grade of tools sold them. Well, it worked just as I had prophesied. It was a profitable experience to the retailer, so he told me afterwards. Since then I have come to learn that substantially the same practice is resorted to by the retailers in other lines. They advertise cheap goods which are so obviously poor that very few of them are purchased, but the customer is attracted to the store and a better article sold to satisfy the real needs of the would-be purchaser."—St. Paul Trade Journal.

NEW LIFE-SAVING APPLIANCE.

A new appliance for saving life at sea consists of a structure which, when fitted on shipboard, serves all the purposes of a bridge and chart house, or an ordinary deck house, but which can be released with two or three revolutions of the disengaging screw, and at once made available as a refuge from the sinking ship. It is secured to the deck beams by strong tested steel stretching screws, and is constructed of light steel plates, with strong T-iron frames running longitudinally and transversely, and having ballast tanks, regulated by step valves to adjust the draught of water. It has been named the "Refuge," and is an English invention.

TELEPHONE 1780.

J. H. FARR & CO. MANF'RS OF **FINE VARNISHES**

Shellacs, Japans, Asphaltums, Oil Soap, Roofing and Paving Pitch, Tarred Felt and Building Paper.

Importers and Dealers in Bronze Powders, Gold and Metal Leaf.

8 to 16 MORSE STREET, - - TORONTO, ONT.

TELEPHONE 2480.

FRANCIS, FROST & CO. Importers, Shippers and Jobbers in **TURPENTINE**

Resin, Pine Tar, Pitch, Linseed Oil, Oxides, Dry Colors, etc.

FOUNDRY FACINGS and SUPPLIES. § No. 33 Front St. West, Toronto.

THOS. FIRTH & SONS, Ld.

Best Crucible Cast Steel.

STEEL, PEECH & TOZER, Ld.

Bessemer Steel,

Open Hearth Steel.

Agents,

James Hutton & Co.

MONTREAL.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—
56 and 28 lb ingots, per lb .. 21, 22
Straits ..... " 20½, 21

Tin Plates—*Charcoal Plates, Bright.*

	Per box
M.L.S. equal to Bradley	
I.C., usual sizes	$5 75 $6 00
I.X., "	7 00 7 25
I.X.X., "	8 25 8 50
Raven & P.D. Grades—	
I.C., usual sizes	4 00 4 25
I.X., "	5 00 5 25
I.X.X., "	6 00 6 25
I.XXX., "	7 00 7 25
D.C., 12½ x 17	3 75 4 00
D.X.,	4 75 5 00
D.X.X. "	5 75 6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be purchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.	....	13 00
" " I.X.	....	16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6¼	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	....
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "	....	2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¾ " nd thicker	2 25

Sheet Iron.

1 to 20 gauge	2⅝, 3
22 to 24 "	2¼, 2⅜
26 "	2⅜, 2⅝
28 "	2½, 3

Canada Plates.

All dull	2 65
½ polished	2 75
All Bright	2 90

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head

16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Gordon Crown—

16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Note—Cheaper grades about ½ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅝ 5
" 5-16 " "	4¼ 4¾
" ⅜ " "	4¼ 4¼
" 7-16 " "	4 4¼
" ½ " "	3¾ 4
" ⅝ " "	3⅜ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15 ....
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B. S ..... ton lots	0 11¾ 0 12
Lake Superior	0 12¼ 0 13

Bolt or Bar.

Cut lengths, round, ½ to ¾ in	$0 22 $0 25
" round & square	
1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 18 0 19
" 35 to 45 " "	0 16 0 17
" 50 lb and above per lb	0 15 0 15½

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft	0 21 0 23

Zinc Spelte .

Foreign, per lb	0 04½ 0 05
Domestic "	0 04¾ 0 04¾

Zinc Sheet.

5 cwt casks	0 05½ 0 05¾
Part casks	0 05½ 0 05¾

Lead.

Imported Pig, per lb	0 03 0 03½
Domestic "	0 03
Bar, 1 pound	0 04½
Sheets, 2½ lbs, sq. ft, by roll	0 04½ 0 04¾
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04½ 0 04½

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.
Bar Half-and-half (guar.)	0 15 0 16
Standard	0 14 0 15
Wire	0 17 0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 12½
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do. "	4 75
No. 2 Do. "	4 50
No. 3 Do. "	4 25

Prepared Paints.

(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1 00 1 20
2nd qualities "	0 90 1 00
Barn (in bbls)	0 80 0 90

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red, (best) " "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " } " "	1 25 1 90
Canadian " }	
Paris Green, per lb	0 13½ 0 15
Burnt Sienna, pure, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure, 8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra " "	0 90
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 85
No. 1 Carriage "	1 30
Gold Size Japan "	1 00 1 20
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40
White Shellac	2 25

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 63

Turpentine (in bbls)

Selected Packages, per gal	0 44 0 46

Castor Oil.

Best, per lb	0 07⅞ 0 08

Cod Oil.

Cod Oil, per gal.	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue—F. LePage's, dis. 20 to 25 per ct. off list; Munn's, dis. 25 to 30 per cent. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 25 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardin Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per cwt 0 60 0 65
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—Socket, Framing and Firmer

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's, dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.20-25	2.40	1.75	
26 to 40	1.40	2.70	2.00	
41 to 50		3.10		4 50
57 to 60		3.40		5.00
61 to 70		3.70		5.50
71 to 80		4.10		6.25
81 to 85		4.50		7.00
86 to 90				8.00
91 to 95				9.00
96 to 100				10.00

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
1st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0
Enamelled " 0 55

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis.
Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross ... 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring..... 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 65
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier, per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent.

NEW ARRIVALS

30 Cases CUTLERY AND GUNS

ALL NEW GOODS.

Finest Finish. Best Value.



NEW ARRIVALS

20 Casks Cattle and Trace CHAINS

10 Tons Coil Chain.

Five Cars Window Glass.

Bowman, Kennedy & Co., London, Ont

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 50 to 55 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

F.O.B. Toronto & Hamilton $3 80
Snow, " " ... 3 90
F.O.B. Montreal 15c. less, and London 5c. more than above.

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   - Basis—50 to 60 dy..... 2 30
   - 40dy..... 2 35
   - 30 dy..... 2 40
   - 20, 16 & 12 dy..... 2 45
   - 10 dy..... 2 50
   - 8 & 9 dy..... 2 55
   - 6 & 7 dy..... 2 70
2. American Pattern Only
   - from 4 to 5 dy 2 90
   - 3 dy. (lath)..... 3 30
3. Canada Pattern Only
   - from 4 to 5 dy 2 80
   - 3 dy. (lath)..... 3 20
   - 3 dy A P. Fine 3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... ..... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 60 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... ..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3½
Lanes, 33½ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 55 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33½ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	9	10 10½
¼, 5-16, ⅜ in.....	9½	10¾ 11
Cotton, per lb.....		18 20
New Zealand		8½ 9
Russia Deep Sea, per lb..		12½ 13½
Jute ..... " ...		06½ 07½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 60

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 special brands net price.

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Sapolio

In ½ or ⅓ gross boxes, per grs. 11 30

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Snaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 00
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4½ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33½ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P. S. & W., net list.
Canadian 10 to 15 per cent dis.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33½ p.c. to 35 p.c
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz..... 6 25 9 00

Twines

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4½ 4¾
" 4 " 4 & 6 " "
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... ..... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p.100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33½, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & CO.,

TRADE MARK FOR
SIMPSON HALL MILLER & CO. QUADRUPLE PLATE HOLLOW WARE

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR
WM. ROGERS.
KNIVES, FORKS, SPOONS

Manufacturers of the

Finest Quality Electro-Plated Ware.

And Sole Manufacturers of the Celebrated

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager.

RAZORS, SCISSORS

POCKET KNIVES

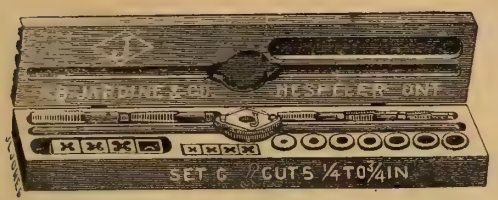


TABLE KNIVES

BUTCHER'S KNIVES

NONE GENUINE WITHOUT THIS LABEL





SAW GUMMERS.

Price $15, complete.

Will gum any cross-cut saw; anyone can work it. There is paying work for a saw gummer in every town, village or cross-roads in Canada

A. B. JARDINE & Co.

Manufacturers of Blacksmith's Tools and Tube Expanders,
HESPELER, ONT.

Do we make any other Skates besides our **GENUINE ACMES?**

Well, We Rather Think So!

What About our Hockey? The most elegant and suitable skate for the purpose ever made.

What About our Racers? Made with wood tops and extra light runners—the only way in which lightness, combined with perfect rigidity, can be secured. Special system of strapping. The leading racers use wood-top skates. Why? Because they know from experience they are the best.

What About our Skeletons? For Rink use the most in demand. Welded iron and steel blades. Plain or nickel-plated.

Why have we secured first honors at Philadelphia, 1876—Paris, 1878—London, 1886—and now Medal and Diploma World's Columbian Exposition, 1893? Because of the superiority of goods exhibited, which are the same as those we are shipping our customers daily.

PRICE?—Ask your jobber about that, and you will find they are quite as cheap as the inferior makes.

THE **Starr Manufacturing Co., Ltd.**

WORKS—Dartmouth. P. O. ADDRESS—Halifax, N. S.



You will Insure Success

IN THE

STOVE

Business, by selling



"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.



The Gurney-Tilden Co. Ltd.

Successors to The E. & C. Gurney Co.

HAMILTON - = ONTARIO.



Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St, Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 and 4 Barb Plain Twist and Strip Fencing

And Staples for same.

Write for Prices and Discounts.

ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

Adorn your Home

with a

"Pittsburgh" Lamp

Unparalleled as Holiday and Wedding

PRESENTS



Ornamental as well as Useful

One "Pittsburgh" gives as much light as six other lamps. It does not smoke and requires very little cleaning. It is simply a "Joy forever" to all who have one. Made in all sizes and styles of Banquet, Hanging, Vase, and Piano.

Write for Primer.

Gowans, Kent & Co.,

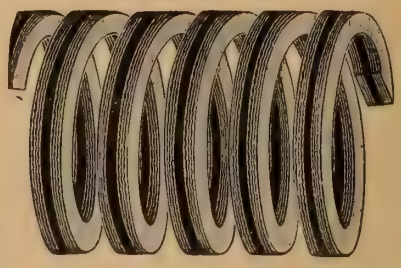
Sole Agents for Canada. TORONTO and WINNIPEG

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7-16, 1-2, 9-16, 5-8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

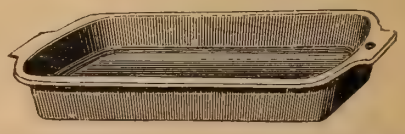
Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., **Toronto.**

"The Seamless Flanged Drip Pan"



Improved Rolled on Edge.

THIS PAN is drawn by means of dies and is finished with a flanged edge, as shown in the cut. This flanged edge enables the housewife to cook or lift the Pan easily and safely from the oven.

The superiority of this seamless pan over the old style pan, made of common stove pipe iron, is apparent at first glance. Its advantages, briefly enumerated, are :—

1. The improved rolled on edge making it easy to handle.
2. The superior quality of metal and the shape of the Pan which prevents it from WARPING and TWISTING, which is the case invariably with the old style lapped edge pan.
3. The Pan retains its shape, thereby insuring an even bake.
4. It is much cheaper, as it will outlast several of the old style pans.

Write for Discount.

SIZES.....	8 x 10	8 x 14	10 x 15	12 x 17
Per Doz.....	**$1.91**	**$2.33**	**$3.20**	**$3.73**

THOS. DAVIDSON & CO., Montreal, Can.

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, DECEMBER 23, 1893. No. 51.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

MAGNOLIA METAL CO.,

London Office: 75 Queen Victoria St.
Chicago Office: Traders Building.
Montreal Office: H. McLaren & Co., Agents

Owners and Sole Manufacturers,
74 Cortland Street, NEW YORK.

Mander Bros.' Varnishes

ARE THE RECOGNIZED STANDARD

By which all other Coach Varnishes are judged to-day. Messrs. Walter H. Cottingham & Company, the Agents for these celebrated goods, are more convinced of this fact than ever before, as the demand continues brisk and the sales are much is excess of former years. We call the attention of the Hardware Dealers to **Mander Bros.' Outside Varnish** which has proven such a boon of satisfaction to the consuming public.

A Full Line of Samples and Prices on Application.

Walter H. Cottingham & Co.

Fine Paints and Varnishes. MONTREAL

Christmas Novelties

CARVERS in SETS and CASES

LADIES' AND GENTLEMEN'S

Manicure and Toilet Sets

Piano, Banquet, and Princess LAMPS

RICE LEWIS & SON,

LIMITED

TORONTO

Copper Cider Kettles

(BRAZED AND HAMMERED.)



PLATE 237.

PRICES ON APPLICATION. CORRESPONDENCE SOLICITED.

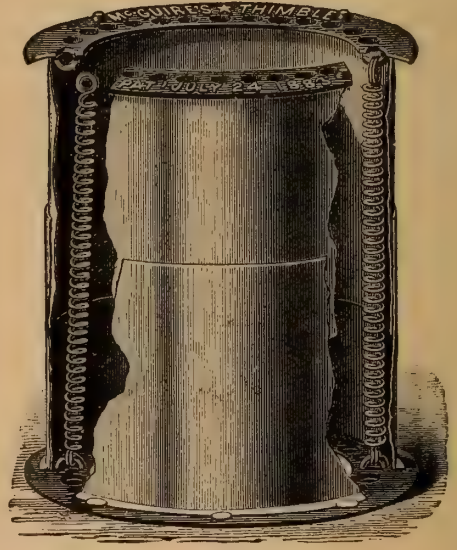
MANUFACTURERS OF

Brewers, Distillers, Confectioners . . . Varnish Makers Plumbers and Marine

Copper Works

The Booth Copper Co.

Formerly BOOTH & SON. : 122 Adelaide Street West, TORONTO



THE ABOVE CUT REPRESENTS THE

McGuire Patent Stove-pipe Thimble

It is the same cut we have used in advertising and illustrating this Thimble for the last eight years. We desire to inform our customers, and the trade in general, that we have been and still are the sole manufacturers of this Thimble in Canada, the reputation of which is so well established. No other persons whatever have been licensed, under the patents covering this Thimble, to manufacture it. Anyone infringing will be prosecuted. And to beware of those who represent they sell McGuire's Star Thimbles, who have no right whatever to manufacture the same and cannot possibly supply the genuine article.

Kemp Manufacturing Co.

TORONTO, ONT.

. . HARDWARE . .

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, DECEMBER 23, 1893 No. 51

J. B. McLEAN, President. HUGH C. McLEAN, Sec.-Treas

THE J. B. McLEAN PUBLISHING COMPANY,

FINE MAGAZINE PRINTERS AND TRADE JOURNAL PUBLISHERS.

HEAD OFFICE: - - 10 Front St. E.
MONTREAL OFFICE: - 146 St. James St. E. Desbarats, Manager.
NEW YORK OFFICE: Room 41, Times Building. Roy V. Somerville, Manager.
EUROPEAN BRANCH: Canadian Government Offices, 17 Victoria St., London, S.W. R. Hargreaves, Manager.

John Cameron, General Subscription Agent.

Poets may sing of Christmas in peons of heavenly inspiration; but after all there is nothing that wears so well as the good old homely Anglo-Saxon greeting — "A Merry Christmas and a Happy New Year." There is no superfluity of adjectives in that sentence. Every word carries weight, and every word is understood by the ignorant as well as the educated, by the poor as well as the rich. "I wish you a Merry Christmas and a Happy New Year." What is their more pleasant to receive than such words as these falling from lips which are moved by the impulses of a warm and generous heart! Nothing. One may be the recipient of valuable presents; but presents in themselves are less to be sought after than the good wishes of fellow man. "I wish you a Merry Christmas and a Happy New Year" is a prayer that blesses both him who utters it and him who is the object for whose welfare it seeks. Kind words, we are told, never die; neither do the well-wishes embodied in the Christmas greeting. We are each one of us only so many atoms in the sea of humanity, and what touches one, be it evil or good, touches all.

* * *

To its readers NARDWARE wishes the enlarged form of greeting: "A Merry Christmas and a Prosperous and Happy New Year" say we. So far the holiday trade has not opened out as auspiciously as some would desire. The periodical cloud of depression that is sweeping over the world is casting some of its shadows over the Dominion, and the spirits of some merchants are dampened thereby. Where these conditions obtain merriment and happiness can scarcely be unalloyed. And yet there is no reason why all should be alloy. There are some grains of gold in every man's experience. In order to see them, all he has to do is to open his eyes and look around. He will be sure to see something in his surroundings that will help to wipe dull care away; something that he can throw into the scales and balance up things a little. The Canadian merchant can, for instance, thank his stars that his store is not in the United States, where such a large number of consumers are out of employment. In Canada we are by no means experiencing a boom. Nor are we without our quota of idle workingmen. But the great mass of our working people — in whose weal or woe the retailer is so wrapped up — exhibit no such deplorable condition. On the contrary, some classes of skilled mechanics are unusually busy for this time of year. Of course, generally speaking trade and commerce is quiet. It would be absurd to assert anything to the contrary. The fact is only too plain. But that the condition of trade is congested and alarming we do deny, and that most emphatically.

* * *

The world is passing through one of its transformation periods. The day for high prices of grain has gone. So has the value of other staples; and the price of labor is tending in the same direction. All this means that we have got to cut our garments according to the cloth. In other words, all hands have got to economise. And it is while conforming ourselves to the new conditions that we feel a little inconvenienced or hurt occasionally. But conceding that the proportion of pleasure a merchant takes out of Christmastide is dependent upon the volume of business he transacts and the profits that accrue thereto, it is obvious that he can of his own evolution do much toward securing the desideratum. The Christmas holiday trade is different from that of any other time of the year. The merchant needs to keep this in mind. In a word, it is a time when novelties for a brief season are king. Novelties, too, yield, as a rule, better profits than staples. It is obvious what it is most advisable for the merchant to do in the premises. Then a little more discrimination in regard to accounts will by no means be amiss. But there is one thing wherein much can be done towards providing the profits which some may deem necessary to a merry Christmas, and that is — stop cutting prices, stop selling at or below cost. Cutting prices is one of the greatest evils in the trade to-day, and as a cause of failures has been one of the most prolific, while as a creator of ill-feeling between merchant and merchant there is none so potent. Quit cutting; and it will not only enable you to earn proportionately higher profits, but to spend a Merry Christmas and a Happy New Year, which HARDWARE wishes all its readers may experience. But if we want a Merry Christmas and a Happy New Year we must seek them. Pleasure does not come unsolicited. Like a coy maiden, it must be sought.

* * *

A card of interesting statistics has been published by Rogers, Brown & Co., of Buffalo, and deals with the pig iron production in the United States since 1854. The following are the figures in detail:—1854, 736,218 tons; 1855, 884,178; 1856, 883,137; 1857, 798,157; 1858, 705,094; 1859, 840,627; 1860, 910,770; 1861, 731,544; 1862, 787,662; 1863, 947,604; 1864, 1,135,996; 1865, 931,582; 1866, 1,350,344; 1867, 1 461,626; 1868, 1,603,000; 1869, 1,916,641; 1870, 1,865,000; 1871, 1,911,608; 1872, 2,854,558; 1873, 2,868,278; 1874, 2,689,413; 1875, 2,266,581; 1876, 2,093,236; 1877, 2,314,585; 1878, 2,577,361; 1879, 3,070,875; 1880, 4,295,414; 1881, 4,641,564; 1882, 5,178,122; 1883, 5,146,972; 1884, 4,589,613; 1885, 4,520,869; 1886, 6,366,688; 1887, 7,187,206; 1888, 7,269,628; 1889, 8,516,079; 1890, 10,307,028; 1891, 9,273,455; 1892, 8,175,910.

THE WIRE NAIL MATTER.

The article in last week's HARDWARE in regard to infringements upon the wire nail agreement and the possibility of the association breaking up occasioned considerable comment in Montreal.

Speaking to HARDWARE correspondent, one or two makers remarked that they had heard of the Aikenhead case, but were not familiar with the exact particulars. They one and all scouted the idea that such an occurrence really endangered the association. Said one of them: "If the association is to be endangered by the action of one wholesaler making one sale of wire nails at a cut, it is founded upon a pretty slim basis. But it is simply a tempest in a teapot. The association is composed of makers, and if an occurrence of the kind is in itself sufficient to cause a break-up, all I can say is that the sooner it comes the better. It is ridiculous to suppose that the action of one out of probably 100,000 buyers in the country can bring about such a result. I cannot speak, of course, for a certainty of what will be done by the association at its meeting in January next in the case in question. There is only one course for it to follow, however, if the agreement is to be upheld; that is to withhold the usual rebate from the Aikenhead company if their purchases have been made from members of the association, and I am almost certain that this will be done. As to the exactments of the case in question I am not prepared to speak. I know, however, that at a recent meeting of the association, which was held in Montreal, a western maker of wire nails who desired to secure the city contract in Toronto demanded as a right that he should be permitted to take back the boxes in which his nails were supplied to the corporation, and allow a certain amount on them. It was pointed out to him at the time, however, that this would be sure to lead to trouble, for there was nothing to regulate what value a maker should put on the package, and, of course, the maker with the highest-priced box who was prepared to take it back would get the order. The association, therefore, refused to concur in this idea, and the party making the request was considerably put out, stating that boxes were taken back from a wholesaler, and he did not see why they should not be taken back from a big buyer like the corporation of Toronto. I have no doubt, however, that when the matter is considered by the association at its coming meeting the original proposition will be found to be the secret of the whole trouble."

Another leading maker coincided entirely in the remarks made by the above gentleman. "It was quite ridiculous," said this maker, "to suppose that such a cause will endanger the Wire Nail Association. There is another cause, however, entirely different from the Aikenhead matter which may lead to trouble, and it is, in my mind, a more serious problem. This is the competition of one or two makers in the west who are not at present members of the association. This is a question that the latter will have to decide at its coming meeting of how to fight them; whether to do so individually or in a body as an association, or what steps can be taken to induce them to enter the ranks of the association. This, in my mind, is a really serious danger, and unless the association can suggest a remedy it is quite likely that the individual members may, out of anger, take the matter into their own hands and meet the cutting of the parties in question by going them one better. This, of course, means a dissolution of the association."

As to the jobbing trade, they did not care to say much, but all seemed to be looking to the annual meeting in January with considerable interest. It is very likely, therefore, that there will be more exciting times than usual, not only in wire nails, but in other branches as well.

BICYCLE REPAIRING.

BY D. C. A.

HARDWARE referred in one of its late issues to the advisability of hardware men adding bicycles to their present stock. Bicycle repairing was also mentioned as a paying addition to their tin and repair shops.

Of late there has been many complaints from wheelmen, both Canadian and tourists from the United States, and both American and Canadian cycling journals have referred to exorbitant prices charged for bicycle repairs in Canada. Now, if they have any excuse for the exorbitant prices they charge, it must be the shortness of the season and the insufficiency of fair profits in the bicycle business to support them, without carrying other lines, or resorting to extortionately high prices for sundries and repairing. An instance worth relating occurred to the writer a couple of months ago. I had just arrived in Toronto from the United States, and my bicycle saddle, which had been broken in the baggage car, needed a new spring. It was a hard saddle with a common V-shaped, round steel spring. I took it to a bicyle store, where to my surprise I was asked $1.25 for the job. I said that I could get a blacksmith to do it for half the money, but was lectured on the foolishness of ever taking anything in the bicycle line out of the regular bicycle shop to be repaired, and assured that if I wanted a good job I must pay a good price. I mentioned that the price was considerably larger than I had been accustomed to pay, but left the saddle, which was in due time mended and paid for. I rode it for two weeks when it gave out, not this time through abuse, but from the inferiority of work and material. I then thought I would take it to a hardware store where they did all kinds of repairing. I did so, and had the work of the bicycle man done over, and also had a new socket put in the front of the saddle. When I came to pay the hardware man, the moderate price of 45c. was asked. The job was a neat one, and has stood every test since then. There must be a screw loose somewhere, and if it is necessary for the bicycle stores to resort to such extortions as this to keep their heads above water, it is about time for some one else who can deal fairly with the wheelmen to take up the business.

Bicycle repairing is a profitable business, even when moderate prices are charged, and can be taken up to advantage by any clever mechanic in the repair shop of a hardware store. A great many of the country and city hardware men in the United States are now doing bicycle repairing, and I know from experience that in many cases you will find men far more capable in the average jobbing shops than most of the bicycle makers' apprentices to whose lot generally falls the fixing of small repairs sent in.

CANADIAN PIG IRON.

The increased production of pig iron in Canada has had the good effect of lowering prices from $3 to $4 a ton in recent years. Formerly the prices of imported pig were a matter of competition between British and American brands, in which both were on equal terms in respect to duty, but in which the American had an advantage in regard to the interior demand in the matter of freight. But the product of Nova Scotia furnaces has been forcing these outside competitors down to still lower prices. The Londonderry, the New Glasgow and the Ferrona works in Nova Scotia produce a very acceptable iron, and the last named in particular having pushed business very actively this season as far west as Montreal. Foundrymen and importers have for some time been expecting a loweriag of the duty on pig iron, and in anticipation of such change have been keeping reserve imports in bond for the last six weeks. The check to importation has benefited domestic producers of pig.—Iron Age.

He failed for sixty thousand,
Took a last look at the wreck,
And when next day they found him,
He was suspended by the neck.

His creditors said he drank;
His wife said he was robbed;
While his moneyed country partner
Simply sat around and sobbed.

But the wily coroner
(His brain was extra-sized)
Said the man was plainly crazy,
For he'd never advertised.

AN ILLEGITIMATE COMPETITOR.

The world seems made up of contrarieties. And we find not infrequently that those things we naturally expect to derive benefit from are injuriously affecting us.

The newspaper — whether it be trade, daily, or ordinary weekly — is in its generally accepted sense, one of the greatest, if not the greatest, factors in business building that the merchant possesses. If he is a wholesaler there is no medium through which he can so well get access to the retailer as the reputable and widely-circulated trade journal. If he be a retailer there is no medium through which he can so well acquaint the great mass of consumers with the character of the goods he has in stock for their inspection as the daily or weekly newspaper. But at the same time the good that some of them do is counteracted by the injury they effect as well. There are some so-called trade papers that are also culpable in this respect. But fortunately they are trade papers only in name. The classes under which they should be designated are either blackmailing or advertising sheets. These are soon known by their works.

The ways in which the interests of merchants have been injuriously affected by the daily and weekly newspaper are many and varied. Of the injury worked by the daily press we have had more than one instance lately. One has been in regard to wholesale quotations, which, published in ex tenso, have naturally gone into the hands of consumers, who knowing nothing about what they read, have readily jumped to the conclusion that the retailer was a leach living in ease and luxury on the exorbitant profits he is sucking out of them. Other instances have been from time to time cited of late, one, it will be remembered, only a few weeks ago, when one of the leading daily papers of Toronto allowed itself to be used by a gang of advertising fakirs as a medium for bleeding the merchants and manufacturers of the city of, in the aggregate, large sums of money.

A way in which some of the daily and weekly newspapers, indiscreetly at least, injure instead of benefit the merchants, is in the premiums that some of them give. Most people who have glanced over the list of premiums that some of the papers offer to subscribers, must, it seems to us, have been repeatedly struck with this fact. The moment the newspaper begins to offer as premiums the goods you are selling that moment does it become your competitor. The publisher, ninety-nine chances to one, never intended that he should assume that position towards you. But that does not, all the same, alter the fact that he is a competitor with you. Look in his paper and the chances are that he is offering as premiums the very same commodities or articles which you or somebody else are advertising in an adjoining column. If somebody were to suggest that you contribute towards buying the goods with which your neighbor was to compete with you in securing the patronage of the consumers in your locality you would naturally refuse. Then no more should the retailer advertise in the paper that so far steps out of its sphere as to trespass upon the domain of the legitimate merchant. It is scarcely likely that the merchant would have to go to the extreme of taking out his advertisement. As already stated, the publisher has probably no intention of competing with his patrons, and, therefore, all that would be necessary in the premises would be to intimate that he was trespassing upon your trade. Of course, if he refuses to move off, there is no other alternative for you but to seek some other advertising medium. But advertise somewhere or somehow.

DISHONEST EMPLOYEES.

"Honesty is the best policy" is a proverb that nearly every man and woman of to-day has had drummed into them to a more or less extent.

But into some people it does not seem to have been drummed enough ; and one does not need to go into the by-ways and alleyways where crime is supposed to reek to discover that fact either.

A glance at the daily papers of the last few weeks demonstrates that there is room for the old proverb being at least practiced, if not taught, in many business places.

Of late dishonesty seems to be almost verging on an epidemic among clerks and persons holding responsible positions ; and it is feared that the cases given publicity through their ventilation in the police courts are but a small proportion of the thieving which is being practiced or the frauds perpetrated from time to time.

As far as Toronto is concerned we know the whole has not been told. In one warehouse alone there was only the other day a chief of a department and several clerks discharged because of dishonesty. While in some of the larger retail stores employees have been caught red-handed, but against whom their employers took no criminal action, merely discharging them on the spot.

Whether to allow dishonest employees to escape without instituting criminal proceedings is the proper course to purpose is questionable. In the first place the employee who steels money or goods from his employer is guilty of an infraction of the law of the country, and to that law is he amenable. Therefore the employer who allows a dishonest employe to go free is in reality compounding a felony. Of course there are instances where leniency may be shown, and that is where a young man or woman who has previously borne a good character has, on the impulse of the moment, or under unusual temptation, taken the first false step. But in cases where it has been discovered that dishonesty has been carried on systematically it is a positive injustice to the community to allow the perpetrator to escape the consequences of his misdeeds, as he has more than once been allowed to do of late.

So numerous of late have these petty cases of thieving become that merchants who employ large numbers of hands are beginning to get serious over the matter ; and well they might. We know of a case the other day where, while there was known to be extravagance and neglect of business on the part of the employer, there was well-grounded suspicion that his failure was caused in part at least by systematic thieving on the part of employees.

"Honesty is the best policy," let people say what they will. In the rush for existence and in the keenness of competition there are often strong temptations on the part of merchants as well as clerks to swerve when the occasion, as they think, demands it, from the path of integrity. Indeed, there are some, and among them merchants, who hold that a man cannot remain in business and be strictly honest. They never made a greater mistake in their lives. "Honesty is the best policy."

As to the dishonesty of employes, it is just a question whether, in some instances, the employer himself is not responsible to some extent for its existence. If he pays salaries to the young men or the young women in his establishment which he knows is not sufficient to keep body and soul together, no matter how frugal they may be, and dress as respectably as the character of his business demands, he cannot but expect that some of them will be led to acts that are dishonest. Of course there is a difference between low wages and starvation wages. The law of supply and demand regulates the price of labor as well as the price of commodities, but the employer knows when the limit of the one is below the living stage as well as if an article offered him is below the price which it could be honestly produced. Then if a merchant allows a clerk to palm off on a customer goods that are not what they are represented to be, he can hardly be said to be setting a good example for his emplayees. It is to be feared that there are some employers as well as some employees who need to remember the old proverb a little better.

A Minnesota merchant, who was compelled to go into bankruptcy, issues the following manly statement: "It has been the greatest sorrow of my life to know that through my misfortunes others have suffered, but I trust that I may yet be of service in assisting the closing up of matters to the benefit of my creditors. It is my purpose to devote the balance of my life to the task of making good the losses of those who have suffered through my business reverses."

NOTE BOOK GLEANINGS OF THE FAIR.

"Don't miss it." "It's the opportunity of a life time." "As an educator it is invaluable." "It beats anything of the kind that the world has ever seen." It was these and sundry similar remarks dropped by friends of mine that induced me to spend a week in the White City towards the close of the Columbia Exhibition. All that I had previously read and heard about this, the greatest triumph of modern civilization, were as feeble in comparison as would be the attempts of a five-year-old child to describe the majesty and beauty of the great Niagara cataract. In the week I was there I saw much and yet comparatively little. I have put in many a hard week's work in my life, but yet the week I spent wending my way, twelve and fourteen hours on a stretch per day, was the hardest I ever put in. But it was a labor of love, but if an inviting seat did occasionally tempt me to rest my tired limbs, my interest flagged not.

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And then an occasional rest like this gave me an opportunity to study the conglomerate mass of humanity that was ever sweeping by or to fall into conversation with some other fellow-tired sight-seer. One peculiarity which I always noticed during such moments of ease was the large nunber of country people that were ever floating along in the tide of humanity sweeping by. In appearance they looked much the same as those we see at our own Industrial Fair. The men wore the same identical clothes, carried the same identical air, wore the same identical soft-felt hats, with the rim turned down in front, and moved along with the same identical gait. The women were dressed in just the same style, and their hats were trimmed with the same variety of colors; they wore the same identical care-worn expression as do so many of their Canadian sisters, and carried around in their arms the same identical infants in long clothes, and had tugging along at their heels the same identical chubby, candy be-smeared-faced, tired-limbed youngsters. The young men—that is the single men—were usually in groups of half a dozen. Almost invariably dangling at a waistcoat button by a piece of pink tape was a small card-board box of lunch, which was sold outside the fair grounds by innumerable hucksters.

* * *

I never had to sit down long before I fell into conversation with some one. And I did not have to "break the ice" either. It did not matter whether my next neighbor was a New Englander, a Westerner or a Southerner—I cannot say so much for a New Yorker, as I did not happen to fall in with one—he would talk. He might begin by passing a remark about the delightful nature of the weather. I am not so sure about that, however. But I do know that the first question he would put as he would turn toward me, throwing one leg over the other as he did so, would be: "What State are you from?"

When this question was put to me on the the first day I was on the grounds I would answer somewhat meekly, "Canada," but after I had caught a few of the glories of my own country, as reflected at the fair, I would swell out with pride and answer with all the emphasis at my command, "Canada, sir."

I do not know whether it was because I was a white man, or because I was not clad in furs, or whether it was because I spoke English, or whether it was that a Canadian should venture so far away from home—perhaps it was all these—but whatever was the cause, they would stare at me in blank amazement and remarked in effect, when they had recovered themselves: "From Canada! Who'd thought it! Why, isn't that a long way?"

"No, Toronto, where I came from, is only a little over 500 miles from Chicago."

One man I fell into conversation with was a farmer from near Nashville, Tenn. I was seated one night in a chair in one of the main avenues in the Manufacturers' and Liberal Arts' building. He was a long, lank, cadaverous individual, but with a face honest and simple-looking, but a face upon which was implanted much determination. First he shuffled himself up near me. The next thing he did of course was to ask me from what State I hailed. And when I told him I was from Toronto, Canada, he, like every other American with whom I had had any conversation, gave vent to the usual exclamations of surprise, although in his case they were a little more pronounced. Next he wanted to know what the farmers down down "our way mostly raised." I told him; and then I seized the opportunity to boast of the fruit, vegetables, live stock cheese and other exhibits made at the Fair by Canada, taking particular pains to dwell on those which had proved superior to those from his own country. He had seen some of the exhibits in question, and like a wise man, to use a slang phrase, "acknowledged the corn." Then I took a turn at question plying. First, I "wanted to know" something regarding the condition of the farmers in his part of the country, and fortunately I was not enquiring at the Circumlocution office. "It's bad; very bad," he said as he rested his cadaverous jaw in the palm of his hand. "Darn it, you see we ain't getting nothing for the stuff. And as for raising mules, I'm out of it. I believe in figgering out everything; and I've figgered out that to raise a mule at the prices going now—$80 to $100—I'm actually out of pocket; I might say the same thing of horses." Then I undertook to fathom him on the currency question. "What we want," he replied as he gave his knee a thump, "is more money. Yes sir, more money. With that things will improve; and until we have they won't."

"You want free silver, then?" I ventured.

"I don't care what it is, so long as it's got the Government's stamp upon it," he rejoined. "They can put it on a piece of paste board and I'll be satisfied. But I tell you we want more money. Wall street has been running this country too long." Then his wife, a big bouncing woman, came and towed him away.

* * *

One day I was leaning over a display of mica in the Mining building, when, "Mica!" I heard in a shrill voice close to my ear. Turning quickly around I encountered the gage of a woman's dark eyes. Then pointing to a large sheet of the mineral resting against which was a card with the word "Mica" printed in large letters, she said, addressing herself to me: "We always called that ising-glass."

"Yes, I know some people do," I replied, "but the proper name is mica; we call it such and as such you see it is labelled."

"Young man, where are you from?" she queried, looking me straight in the eyes.

"From Canada," I quickly replied.

"O, I thought," she rejoined as she tossed her head, "that you were a different countryman. I'm from America."

And before I could reply that I too was from America, and from the greater half to boot, she had grabbed her husband's arm and vanished in the crowd.

* * *

Another American woman—lady I should say—displayed her native egotistical characteristics when viewing the exhibit of the Manitoba Indian Industrial School. "O, what are these," she queried, addressing an Indian maiden. But the child was not conversant with what we call on this side of the line the English language, and replied in French, which her questioner could not understand, who remarked with a lofty air: "Oh, can't you speak United States?"

* * *

If there was one class of people at the Fair to whom I became partial, it was the New Englanders. They have good honest faces, and have little or none of the boastful characteristics that have some of their fellow countrymen hailing from other parts of the Union. One afternoon I was inspecting an old plough shown in the New Hampshire exhibit in the agricultural building. What interested me more than its quaintness and vastness was that it was "made by Daniel Webster and used by him on his Marsfield estate."

"Daniel Webster's plough! "Well, now, I would so like to know how long it is," said a pleasant-faced woman, who had probably

seen half a century of life, as she held pencil to note book.

"I can tell you within a few inches," I ventured.

"Well, could you?" she rejoined. "I wish you'd try." I did, and told her that the plough was about fourteen feet long.

"Goodness me, it's that long, is it? What a length! Well, I'd like to see the man who could handle it now," she said with a laugh.

"Yes, particularly if he struck a rock," remarked a companion.

Then it came my turn to be curious. "What are these?" I asked, pointing to a group of ancient looking wooden tools.

"Oh, this is the flax-break," she explained as she lifted the old wooden hammer that in the early days of the country had been used to crush the flax seed. "And this," she continued, as she picked up a long wooden knife that was suspended to a post, whose head was sharpened to a point like the blade of an axe, and began to wield it, "is the swinging-board, with which they used to cut off the seeds from the flax. Then they took the flax and heckled it over these sharp teeth"—placing her hand on the iron teeth through which the flax was drawn—"and then it was put over this spinning-wheel. What is this?" she said, repeating the query of one of the party, who wanted to know what a short post was with a top dug out like a mortar. "Oh, that is a mortar for crushing mush," she explained as she picked up the big wooden pestle that was standing in it, "which your forefathers and mine used. Oh, I can remember seeing my dear old grandmother use it down in my dear old New Hampshire home, for I'm a New Hampshire woman born and bred," she concluded as her face assumed a more thoughtful expression.

"How, then, did they grind their flour?" queried a by-stander.

"They didn't have any flour," she quickly replied with a laugh.

"Well, I believe they'd go hungry now if they had to eat such stuff," ventured another female spectator.

"Yes, indeed they would," chimed in a jolly, nautical looking man, who had charge of the exhibit. And then I moved on to other exhibits, sorry to part with one of the nicest motherly women I had met in Chicago.

* * *

I had a pleasant fifteen minutes' talk with the gentleman in charge of the Bulgarian exhibit in the Manufacturers' and Liberal Arts' building. He was a pleasant fellow, willing to be communicative, and from him I picked up a good deal of information about the little Balkan state which has occupied so much attention during the last fifteen years. To be brief I learned from him that wheat was the principal product of the farms; that their chief manufacturers were woolens and silks; that the schools are compulsory and that a child must atiend at least six years; that the dwelling houses are not higher than two stories—"none of the 22 stories like you have in Chicago"; that they are following the European plan in regard to building cities and that the Government furnishes the plans for new building to be erected; that they have little or no literature; that they have three industrial schools in the country. "We are now," he said, "engaged in building railways; in fact we may be said to be in a railway age. Before we had railways we did not know what the people in the next village were doing. As a consequence there were no uniformity of custom or of dress. Now this is gradually being done away with and we're becoming an united and progressive people." And his dark eyes shone with pride.

* * *

Of course I went around to see the big Canadian cheese. I had heard about it before I left Toronto, and I knew of its presence before I saw it. When I got a view of the big iron sheathing in which it was encased I saw many people trying to ascend the half-dozen steps leading to the platform on which it was standing, but the proportion that traveled the whole distance and peered over the iron casing was small. All had handkerchiefs to their nose, and by the time I had drawn up along side I was glad to swathe my nasal organ in linen. Among those who were determined to see the cheese was a middle-aged man, who, by the aid of a pair of crutches, could hardly hobble along on the level, much more climb steps. "Smell or no smell, I'm going to see that cheese, Maria," he said as he began the ascent.

"O, he'll get up all right," said an old woman. "The smell will help him."

And when every body got through laughing a young urchin remarked: "You bet it will. There wus a feller here t'other day who tried to steal the cheese, and the smell was so strong that it held him fast until a cop arrived and arrested him."

"O, go along with you," said the old lady as she made a half playful whack at him with her gingham umbrella.

* * *

On my way from the Fair grounds to catch the train for Toronto I dropped into one of the many little stores where souvenir knick-knacks could be purchased. I went in more with the object of getting rid of the Yankee silver I had in my pocket. I made some purchases, and still having a dollar's worth left asked the man behind the counter if he would give me a bill for it, I remarking that I did not want to take silver back to Canada with me. "Parlez vous Francais," he eagerly asked, while his eyes sparkled with as much pleasure as if he had met with a long-lost friend. When I told him that we did not all speak French in Canada he looked surprised, and when I ventured the further information that in the part I came from nothing scarcely but English was spoken he looked sad as well as surprised.

BYSTANDER.

NOTHING BUT A DISCOUNT.

A prominent manufacturing house writes us the following letter: "You at one time started off with a good editorial concerning advertising in trade catalogues. You intimated that it was blackmail, and you wrote strongly and well concerning the matter, and then you stopped. It is an evil which we think the trade papers should take hold of When we get out a catalogue of our goods we never think of asking any manufacturer of goods which go along with our line to take space with us. We do not know that this is a parallel case, but we do know that any number of jobbers throughout the country, and there are hundreds of them, get out trade catalogues and expect our company to take a page or two in advertising. It is just so much discount on the goods we sell them. There is no way of our escaping them that we have as yet discovered. If we do not take a displayed advertisement, and that we never do, we are called upon to contribute so much a page for having our goods a little better illustrated, and in one or two cases we have found that our competitors' goods were equally well represented without the paying of a dollar."

This is not the first time our attention has been called to this piece of sharp practice which no sophistries or metaphysical subtleties can bring under the head of honorable and legitimate business. While this procedure is not countenanced by a great majority of the hardware jobbing trade, there are yet more black sheep in the ranks than there should be. If the victims of this scheme were allowed to prepare copy it would put a different face on the matter. When a firm signs an advertising contract for space in any publication, it is with the understanding that they can use that space as they wish, but in these trade catalogues the advertisers are not allowed to make a display announcement, but are forced to let the jobbers getting out the catalogue do as they please about representing their goods "a little better illustrated" than those of their competitors. We have seen these "better illustrated" announcements in two or three trade catalogues, and they were very farcical from an advertising standpoint; the advantage of the advertiser over the non-advertiser being anything but conspicuous.—American Artizan.

STRICTLY BUSINESS.

"I—I hardly know what to say, Mr. Browncliff," said the agitated young woman who acted as assistant postmaster and clerk at the little village of Peaville, "I—I wasn't expecting anything of this kind."

"That's all right, Miss Frankie," responded Mr. Browncliff, traveling salesman for Pullem & Gummet's glue factory. "That's all right. You can just consider it a square offer. I have a good house and lot, $2,000 in the bank, I'm getting a handsome salary, I am a good judge of girls, and you're the one I want to marry. I've got just five minutes to make a train, Miss Frankie," he added hurriedly, looking at his watch, "and I'll be round again in exactly thirty days for your answer with a full line of samples—save your orders for me and think over what I've said, and I haven't another second to spare; good by. dear!"—Ex.

ELECTRICAL SIGNALS.

Much confusion seems to exist in some mechanical quarters over the reliability of railroad signals, operated partially or entirely by electricity, and in this connection it may be interesting to note that in some portious of Germany the firm of Siemens & Halske are installing numerous plants for this very work.

In their latest system the entire work is done by electric power, the switches being thrown and the signals operated by little motors, operating a worm gearing system to perform the work. The whole operation is under complete control of one man, and is reported to be working very satisfactorily wherever it is installed.

Many devices of a similar nature have been operated here, with the exception that nearly every one has been content to operate the signals only, leaving the switch throwing to be done by manual power or at infrequent intervals by compressed air.

There is no reason, however, why a system similar in principle to that of Siemens & Halske should not be successfully operated in this country, and we presume the American branch of this enterprising house will make efforts to do so.

We have seen, however, within the past few months, a system of electrically-operated signals discarded and the old manual signal replaced, operated, in one instance, by nearly half a mile of wire strung along the telegraph poles beside the railroad.

The station agent at the place was pleased at the change, as the other signal had bothered him somewhat, and it made so many more batteries to look after, and, with his hands full of other work, he had little time to attend to this.

This is too often the cause of failure of electrical devices, and we are not exaggerating the situation in the least when we say that, in most cases of failure in electrically-operated devices, the fault can be traced to inattention or neglect on the part of some one. When any railroad wishes to have signals operate successfully they must be attended to, no matter whether they are electrical or mechanical, and failure to do this will cause poor service in either case.

The electrical signal has the advantage of working automatically whenever the train is in circuit, while the other signals require the presence of an operator for their working. If the electric signal had one-half the attention required by the manual signal in caring for its batteries and working parts, it is safe to say that it would give little trouble. But it is left in charge of a man who has his hands full with other work, and who has no special interest in keeping it in order, and, as a consequence, the only attention it receives is an occasional renewal of the battery, leavlng the working parts of the signal, the contacts, etc., to work out their own destruction. If we expect signal or other apparatus to work successfully, we must take care of it, and it seems as though any road having these signals could not do better than to delegate some competent man to look after the signals, giving each man a section to look after and be responsible for. In this way all the mechanisms would be cared for as well as the battery, and it seems safe to predict that, with this treatment, the the electric signal would give as good satisfaction as could be desired.—American Mechanic.

GAS AND STEAM ENGINES.

The steam engine's race for economy is more nearly ended than many people are prone to imagine. Theoretically its limit must be at about three-fourths of a pound of coal per hourly horse-power. But in practice it cannot be expected to reach its theoretical duty. There are too many losses which are practically unavoidable. At the present day the best engines are said to have attained a coal consumption as low as one pound of coal per hourly horse-power. It is supposed at least that the claims made for some engines that they have reached this point are true. Of course the majority, in fact the 99 per cent. of steam engines, are using from two to six pounds. And there are more above the largest figure than there are those which reach the smaller. Steam engine economy is not only difficult to attain but equally difficult to maintain in practice. Large wastes have to be accepted from the circumstances of the case. Even with the most economical machine it is not an unheard-of thing to have a small alteration of these conditions change it from a highly economic engine to a very wasteful one.

In the future we may expect that steam engine economy as regards the finer class of machines may be considerably increased, yet the margin for this is comparatively small, and it is useless to hope for any great or remarkable work in this direction. Certainly there is but small room for improvement of the very best engines now running.

On the other hand the economic possibilities of the gas engine are startling. As was stated in a recent number of The Mechanical News engines in a practical way have done remarkably well. But the actual cost of fuel per horse-power, even in comparatively small machines, has been made as low as in the largest and finest triple or quadruple expansion steam engines. One English firm is making engines which are in actual work producing a horse-power for less than one pound of coal per hour. In other words, the commercial gas engine of comparatively small power (less than 100 h. p.) is showing an economy greater than that of the finest, largest and most carefully attended steam engines. Comment is needless.

In New York city the gas engine of 25 or 50 horse-power is found to be more economical from the business man's point of view than the steam engine. Taking an establishment requiring a small amount of power it is found that, comparing one year with another, the gas engine bought in the open market and run without skilled attendance costs less than steam. This is the business, the economical test, which cannot be gainsayed. In such a test there is, of course, the saving of handling ashes and the gain at night, no coal being used for banking fires, and it is these gains against which steam has to compete.

It must not be supposed from these remarks that the steam engine is doomed or that its days of usefulness are numbered. It will hold its own for years. The commercial interests involved are too great to be sacrificed, and there are also inherent advantages which will make it the best machine for many places. But the field of the gas engine will be constantly increasing. Its economy will force it into use wherever economy is of any importance, while its handiness and the absence of ashes, together with its safety and the fact that it is independent of a water supply, will be still more powerful inducements to bring it into use. In the Far West the fact that it does not require a large quantity of water will be another element in its favor. The gas engine, therefore, may be regarded as the motor of the future.—The Mechanical News.

THE REVOLUTION AND RUBBER.

The revolution in Brazil is threatening the peace of Para, an important port for the export of india rubber, says an exchange. This in turn may soon advance the price of rubber goods. The situation is a peculiar one. During the panic of last summer, English bankers who carry the rubber stocks, becoming somewhat alarmed, placed some extra burdens on the importation of rubber into this rubber, and as our own manufacturers then bought sparingly, the arrivals in this country were cut down to a surprising minimum. Some of the larger importers at that time found that it was difficult to carry the stocks in this country, and exported a large portion of what they had to Europe, freeing themselves from dangers incidental with panicky times. This has made stocks very low in this country, and since then another factor has come in sight, namely, small receipts at Para. This has been ascribed to low water in the Amazon region, but now it is thought that the political troubles in Brazil have had a depressing effect upon rubber gathering. The pneumatic tire is largely made of Para rubber; but other mechanical goods are made more from Africans, Madagascars and Assams. The price of Para rubber in New York is approximately 70 cents per pound for fine, a quotation considered below the normal in ordinary times, and one susceptible of a sharp advance should a scarcity of Para occur. It is not a product readily cornered, but several attempts have been made in that direction, sending the crude article to the dollar on such occasions.

SKATES ACME, CLUB AND STAR.

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H. S. Howland, Sons & Co.

Wholesale Hardware Merchants, 37 Front Street West, TORONTO.

A very Merry Christmas

and a

Prosperous New Year

to all our friends.

The Toronto Lead & Color Co., Ltd.

Toronto, 24th December, 1893. *P. J. Mestally, Manager.*

IS CRUDE OIL A CHEAP FUEL?

The use of crude oil as a fuel for manufacturing purposes has claimed a great deal of attention for many years past. It has been used extensively on the continent of Europe, particularly on steamers plying the trade of the Black Sea. Experiments without number have been made both in Europe and America, and the practical application of the fluid for generating heat has been demonstrated a success beyond doubt. Methods of burning and styles of burners are counted by hundreds, but there is a lack of data for the use of beginners in making their estimates of probable cost of the fuel after the plant is properly installed as compared with coal.

It has been the privilege of a correspondent of The Iron Age to visit and inspect many plants where crude oil is extensively used. The various methods of its application are an interesting study, but figures regarding cost vary to such an extent that it is found to be a difficult matter to ascertain the actual value of the fuel in various localities. If a plant is carefully designed and properly attended to its convenience and cleanliness soon become apparent. There is no residue to remove and the oil is inexpensively conveyed to the burner. Repairs are slight and much less labor is required than if coal were used, but there are no records available showing the quantity of oil consumed under varying conditions from one year to another. Statements can be found showing the consumption during one to six months, but what is wanted by those who would become users of oil as fuel is a record for at least one year. The reason for this is that during warm weather the oil will keep at a temperature in the storage tanks which makes it fluid enough to pass freely through the pipes without being heated, consequently the cost of conveying oil to the burners is less than during winter, when a pipe containing live steam must be placed alongside the pipe containing oil so as to keep it a fluid state; a coil of steam pipe must also be placed in the storage tank, and, further than this, steam must be passed through the tank car before the oil can be pumped to the storage tank. There are bursting pipes and general repairs to be contended with during the winter which the plant is exempt from during hot weather, and the items of cost vary materially during the year. For these reasons none but figures of a year's consumption should be accepted to establish the relative cost of the fuel as compared with coal. For instance, if good coal for use in a heating furnace or for generating steam in a boiler is worth $1.75 per ton at a given point, at what price is oil equal to it in economy as a fuel? This is a question which interests many readers of The Iron Age, and the person who can and will satisfactorily answer it will render a valuable service.—Iron Age.

A UNIQUE WINDOW ATTRACTION.

A window that is attracting a good deal of attention is that of James Milne & Co., hardware merchants, Yonge street, Toronto. The firm has placed in its window a miniature electric railway which works by the overhead system, and is an exact counterpart of the larger ones of Toronto street railway. The track on which it runs is circular, and when the current is turned on it is propelled round the track, to the delight of the spectators. Around the electric railway are placed numbers of mechanical toys which are wound up from time to time, and seem to afford the holiday shoppers great amusement. Judging from the crowd that daily throng the windows, James Milne & Co. must be getting well advertised these days.

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

A thimble will hold over 100,000 of the smallest screws made.

The Montreal Plating Co. is the name of a new firm that is starting up in Montreal.

Capt. Ives, Windsor, will establish glass works and an iron smelting plant at Ruthven.

The smallest coal-burning locomotive in America is the work of C. D. Young, of Denver. It weighs but 235 pounds.

HARDWARE regrets to hear of the death of Mr. John Steep, father of Henry Steep, hardware merchant, Winnipeg.

John Campbell of St. John, N.B., has obtained the contract for supplying steam heating for the government buildings at Chatham.

The Government gunpowder factory at Waltham Abbey, England, blew up recently. One man was killed and eight were seriously injured.

The Hall Mining Company, owners of the famous Silver King mine near Nelson, are contemplating the building of a concentrator at the outlet.

Jos. Nott, formerly in the plumbing business in Winnipeg, and now with McLennan & McFeely, Vancouver, contemplates opening on his own account.

Iron works at Troy, N.Y., have made for a Havana sugar mill an iron valve weighing 6,500 pounds. The firm claims it to be the largest valve ever constructed.

The Twine Works at Port Hope resumed operations last week. At present the usual number of day hands are not engaged, but they hope to be running in full blast in a few days.

Gillian McLean, hardware merchant, London, has leased the premises 121 Dundas street, one block west of his present store, which place he takes possession of on the 1st of January.

Robert Jaffray, of Toronto, one of the shareholders in Morehouse's smelting works scheme, has been notified by the projector that contracts have been let and that work will be commenced in the spring.

The harvester was invented by McCormick in 1831. Since that time this machine has been brought to such perfection that it, is said, it will cut and bind an acre of grain in forty-five minutes. To such an extent has machinery superseded hand work on the grain farms of the Northwest that it is estimated that the work of one man will raise enough grain to support a thousand men for a year, while the labor of a second will transport it to market, and that a third will prepare it for food.

Edmund Trist is in Toronto this week as an expert witness on an action brought by James McDougal (plater) v. The Kingston Foundry, for $500 extra on a contract he had with that firm on the Algonquin alterations.

Fire Monday night considerably damaged the japanning and polishing rooms of the Raymond sewing machine factory Guelph. The exact amount of the loss cannot be ascertained, but it is fully covered by insurance.

Edwin Pynchon, a Chicago man, has just been granted a patent on an airship. This machine will be bound to make a noise in the world, as it progresses both upward and horizontally by means of the constant discharge of cartridges.

In one place in Africa one missionary and 50,000 barrels of whiskey were landed at the same time. From January 1st, 1890, to January 1st, 1891, there were 1,018,591 gallons of rum shipped from Boston to Africa. In 1891 the trade was almost doubled.

The well-known firm of timber merchants, Moffat & McGregor, Tilbury Centre, are preparing for the largest season's work yet performed. They have already purchased 4,200,000 feet of logs, in addition to a 1,200-acre section of wooded land in Tilbury.

The Government has been advised that the Judicial Committee of the Privy Council has declared the warehousing clauses of the Dominion Banking Act constitutional. The question as to their validity arose in a case in which the Union Bank was appellant.

The H., G. and B. Railway Company Tuesday gave Goomer & Rose, Montreal, an order for 1,350 tons of steel rails, to be delivered in Hamilton in January and February. The rails were purchased at less than one cent per pound.

The collection of minerals which filled the Ontario section of mines and minerals at the World's Fair is to be preserved, but divided up. Part goes to the Toronto School of Practical Science and part to the Toronto School of Technology. Selections have been made for the international fair at Antwerp. The exhibit carried off 35 awards at Chicago.

The many friends of Mr. A. F. Gault, one of Canada's best-known merchant princes, will be glad to learn that he has been called to the directorate of the Bank of Montreal, in place of the late lamented Sir John Caldwell Abbott. Mr. Gault is a born financier, and his election cannot but be viewed with the greatest satisfaction by all friends of Canada's greatest monetary institution.

The B. C. Iron Works Co. have obtained an order for the construction of three boilers 60 inches by 16 and an engine 214 inches by 20, with gearing and shafting poles, the same being for the Sumas dyking scheme. McLean Bros. have the contract for the dyking. The B. C. Iron Works Co obtained this contract in competition with eastern and other British Columbia firms.

"Shoe brusches, ten cents," was what caught the eye of a man passing the shop of a merchant with whom he had some dealings. The passer-by went in and said: "That isn't the way to spell brushes." "Of course it isn't," said the cheerful merchant. That's an advertising dodge. You are the tenth man this morning to come in and call my attention to the supposed mistake.—Michigan Tradesman.

France will soon adopt an interesting innovation in the postal-card system. The cards will be issued in the form of check books with stubs. The sender of the postal-card can make memoranda of its contents on the stub, and can have this stamped at at the post-office before the card is detached, so that a verified record of the correspondence can be kept.

The Sarnia Observer says: "Mr. Donohue, representing a large Chicago company, interested in patents for steel waggons, has been in town for some days past looking over sites for a manufactory. He is greatly impressed with the situation of Sarnia and Point Edward as a manufacturing point, being specially adapted for the smelting of ores and the manufacture of articles of iron and steel.

Thomas Lawrie, who died on Sunday at Hamilton at the advanced age of 82 years, was the oldest millwright in Canada. He was born in Haddingtonshire, Scotland, in 1811, and came to Canada as a boywith his parents. He started a milling business and foundry with John Gartshore in Dundas, and removed to Hamilton in 1860. On the death of his wife in 1879 he went to Detroit.

A novel fire alarm has lately been produced in France. It consists of hollow sphere of aluminum supported at one end of an arm, with a counterpoise at the other end. the two being arranged to balance at the ordinary temperature and pressure of the air. The apparatus is not sensitive enuugh to record natural changes of pressure, etc., but if some unusual cause, such as fire, or

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even a large accumulation of coal gas in the atmosphere, disturbs the specific gravity of the air, the ball drops and rings an electric alarm in falling.

In connection with the negotiations for the location in Hamilton of a branch of the Steel Wheel and Waggon Works, of Chicago, Hedley J. Donahue, representative of the works, has gone to New York to interview J. J. Morehouse, of the Hamilton Iron and Steel Co., to see if the latter company can manufacture the kind of steel required by the wheel company.

J. A. Donaldson, the general agent of the Great Northern Railway, contradicts the statement that work on his lines passenger steamships at Cleveland has been stopped. The only reduction in the force of men has been in the riveters and men employed on the engines of the second boat. The riveting is all done, and the engines of the first boat fill the shop to the exclusion of the second. As to there being next to nobody at work on the boats, the force at present numbers 463 men. The cost of the first boat instead of being $630,000 will not exceed $535,000 when she is ready for use.

The Nelson Hydraulic Mining Company has been formed with a view to develop the Boulder and adjoining claims on Forty-Nine Creek, but eight miles west of Nelson. Kirk & Ritchie, the well known provincial land surveyors, are prominent members of the syndicate, which also inclues R. B. Dougan, F. M. McLeod, John Elliott, J. F. Hume, R. J. Bealey and G. W. Richardson. The mine will be capitalized for $100,000 in 20,000 shares of $5 each: 15,000 being ordinary shares, and 5,000 being preference shares entitled to dividends of 10 per cent. in priority to ordinary shares. The property is to be purchased by the company by the allotment of 9,000 fully paid up shares. The 5,000 preference shares will be offered for sale probably at $3 per share.—News, Vancouver.

NEW USE FOR THE BICYCLE.

Boston has discovered a new line of usefulness for the bicycle Some inventive genius has fitted a wheel with a small chemical tank and a fire axe, with which experiments are going on at the house of a ladder company, South Boston. One of the bicycle houses of that city fitted up a machine of that sort some time ago and sent it to the Chicago Fair to be placed in its exhibit, and the machine of South Boston is the second one of the sort ever tried. The captain of the ladder company says that the practical value of the experiment could not be estimated at present. The machine is being tried by one of his men, who is a wheelman, and for whom it was made. It is a lady's light roadster, with cushion tires, and with its whole outfit weighs about 60 pounds. The chemical tank, fixed between the head of the machine and the seat, holds about two gallons of chemical, which amounts as an extinguisher to twelve pails of water. In speaking of the experiment the captain says: "On the Back Bay on the outskirts of the city where there are good roads, the machine may be of use in extinguishing slight fires, caused by smoking chimneys, blazing curtains or the like, but on the pavement of a city it would be of little practical use. One in each engine house would probably be all that the department would ever use, and yet the experiment has not even been brought to the notice of the Fire Commission."—Hardware.

INFORMATION RE MANY THINGS.

The origin of the term "bastard" as applied to files is generally explained in this way: The rough file was first made, then the second cut. A demand for a file between the two was afterward developed, which being out of the regular line was termed bastard.

Two explanations are current in regard to the use of the term "penny" as a designation of the size of nails. The one which is very generally adopted is as follows: That the word penny is a corruption of pound. Thus, a 4d. nail was one of such a size that 1000 of them weighed 4 pounds. If may be remarked that originally the term "100" when applied to nails was six score, or 120, consequently the 1000 was 1200. Another explanation is based on the fact that cut nails are comparatively of recent date, having been first made in this country, and were introduced in England as late as 1846. Formerly all nails were forged, and the price for forging 1000 1½-inch nails was 4 pence, or as the term is now used, 4d; the price for forging 1000 2-inch or 6d. nails was 6 pence and so on. As a reason why small nails could be forged so cheaply it is stated that children often did the work.

The numbers given horse nails are supposed by some to have originated in the sam way as penny with cut nails, according to the first explanation given above. Thus, 1,000 of any size weighed the number of pounds designating the number of the nail. No. 6 horse nail would then weigh 6 pounds to the 1,000; No. 8, 8 pounds, etc. It is obvious, if this explanation is correct, that the present weight of any number of nails does not correspond with the original weight of the same number.

The numbers by which screws are known designate the numbers of the screw gauge to which the size of the screw corresponds. It would appear that screws were first made in the various sizes and then a screw gauge made as a standard, and wire used in the manufacture of screws drawn to conform to this standard gauge. The screw gauge bears no relation to the wire gauge, as in the case of screws the largest number designates the largest wire, while in the wire gauge the largest number represents the smallest size wire.—Metal Worker.

PROGRESSIVE PAINT FIRM.

It is rumored that Walter H. Cottingham & Co., the proprietors of the celebrated Green Seal brand of paints, varnishes, etc., Montreal, are negotiating for the purchase of a new and extensive factory, to be fitted up with all the latest appliances for turning out the finest materials in their line. This step, it is understood, has become necessary by the growing demand upon their goods, which already enjoy a high reputation among the trade. Through this push and enterprise the Green Seal paints are now known and sold in every part of the Dominion. It is said it is the intention of Cottingham & Co. to hold aloof in the future, as they have done in the past, from all trade combinations and associations in order that they may be able to give their customers every advantage that the market affords.

PERSONAL MENTION.

W. E. Ramsay and P. Breckon, of The Metallic Roofing Co., have returned to Toronto to spend the holidays, after a successful year's business.

M. Mayer left for New York yesterday to attend the wedding of Mr. M. Frankel, of Frankel Bros.

M. Frankel has left for New York, where he intends entering the matrimonial ranks. The bride will be Miss Mayer, sister of M. Mayer, of the Toronto Cutlery Co. After a prolonged tour through Florida and other Southern States, the happy couple will return to Toronto, where they intend residing.

John E. Gaitley, proprietor of the Troy Nickle Works, Troy, N. Y., was in Toronto this week, visiting the Canadian representatives of the firm, Francis, Frost & Co. It is the intention of this firm to boom the Alaska goods the coming season, and to make them convenient for buyers a stock will be carried by Francis, Frost & Co., Toronto.

FIRE PROOFING WOOD.

A new method of fire proofing wooden structures is proposed by a writer in an exchange. His suggestion is to line the room or cover the exposed wood work with wire gauze. The utility of wire gauze in preventing the passage of flames is well known, and has been demonstrated in the Davy safety lamp for use in mines, and in several other applications of the same principle. Applied to wood in the manner suggested, it would be impossible for the wood to burn with a flame, for the fine wires would serve as conductors of heat and effectually cool any flame so that it could not pass and ignite the wood. If the temperature in the immediate vicinity was so great as to char or carbonize the wood, a flameless combustion might be produced, but this would be so slow in its action that but little damage would be done before the fire could be extinguished.

HEATING SHOPS.

The most forcible argument advanced in favor of the eight hours' day is that the men do little or nothing on cold mornings when they commence work at 6 or 6:30 a.m. In any case it appears that whether the eight hours' or the nine hours' day is adopted, a distinct advantage would be gained by promoting the comfort of the men. We put the matter in the light of pecuniary advantage to be gained by the employer, and hold that money expended in heating, fitting and erecting machine shops would be found an excellent investment. Men come to their work winter mornings after a weary trudge through snow and sleet; the thermometer is perhaps 10 to 15 degrees below the freezing point; they find the shops almost, if not quite, as cold as the streets or open country. With feet and hands chilled and numb, with every bit of iron cold enough to give a frost bite, it is next to impossible that a man do justice to himself and his employers. For small work he has lost all delicacy of touch; he scarcely knows whether he has a chisel or a file in his fingers. It is argued that if a man choose he can soon warm himself by hard work. It is a very short-sighted argument. Men running lathes, planers and machine tools in general are not called on to do hard manual work; they can stand by and watch and thrash themselves with their arms to restore circulation, or try to thaw their fingers over the gas flame. They have had no breakfast. [In this country they have had breakfast.—Eds. Engineer, N.Y.] Their energies are all half torpid. It is wonderful that a large proportion of the men prefer to be "cut a quarter" and postpone operations until after breakfast. If, on the other hand, the men found that the shops were fairly warmed and comfortable, there would be more punctuality, less grumbling, and better work turned out. We have never yet heard of a case in which a master had reason to be sorry for doing his best to promote the comfort of his hands.

It is often stated that to warm workshops is so difficult and costly that the thing is not to be thought of. We believe that this argument is based on an entire misconception of what is wanted. We do not advocate the conversion of a fitting shop into a species of hot-house. All that is needed is the maintenance of a temperature 10 or 15 deg. above the freezing point. The amount of piping required for this is small compared to what would be needed to keep the shops hot. The contrast between the open air, at say 18 deg. below freezing, and the air of a shop 10 degrees above it, is very marked and fully appreciated. It is, however, almost unnecesary to discuss the argument that shops cannot be heated. In very cold climates, such as those of North America and Russia, they are heated as a matter of necessity, and in this country warming is practiced by many firms. Wood-working shops are almost invariably heated either by steam, hot water, hot air or stoves. Frozen wood will not work, neither will carpenters nor pattern makers in an ice cold atmosphere. Paint shops, again, are always heated. To heat a fitting shop is very easy; nothing more is required than some 4 inch piping, through which is passed waste steam from any of the shop engines. The piping is run round the building under the vise benches, and is quite out of the way. No one wants to warm a boiler shop or a smithy. Foundries are sometimes very hot. They are sometimes, however, very cold indeed, but the men solve the difficulty by burning coke in iron baskets. The greatest difficulty will be met with in heating large erecting shops and shops crowded with machine tools, but there is no insuperable obstacle in the way, and various devices can be employed. Now and then it happens that a shop in which there is an abundance of hot air is separated only by a wall from the machine shop. Thus, for example, the smithy may stand along side. A very simple and inexpensive arrangement of fans will suffice to draw air from one building and distribute it in the other; a not less simple arrangement of screens will keep out the dust. But engineers of a little experience in heating can devise means of doing all that is needed.

As to the best method of obtaining the heat required, opinions will differ, and much must depend on circumstances. In some cases it will suffice to lead the exhaust steam from an engine, which, standing at one end, drives the line shafting throughout the rest of the building, through a pipe right to the other end. This will in no way hamper the exhaust and set up back pressure, provided care is taken to keep the exhaust pipe clear of water—a very easy matter. Again, the low-pressure hot-water system may be employed, the water being being heated by the waste products of combustion from the main boiler or boilers. It ought not to be necessary in any case to provide special furnaces, or expedients of that kind. No doubt one reason why so little has been done in the way of warming work shops in this country is that too much is attempted. Firms who make the heating of conservatories, churches and large public buildings are called in, and advocate the putting in of, we have almost said, miles of piping; something altogether too elaborate and costly. But they do worse, they insist on putting pipes or radiators in most inconvenient places; and finally, those who have consulted them give up the whole thing in disgust. So far as we are aware, no one has attempted to make the warming of engineer's shops a specialty, possibly because it would not be worth while. Indeed, as we have attempted to show, any engineer who has the will and the brains will quickly find the way to do what is wanted at a minimum cost. Of course we have not attempted to treat the matter in detail. Our object is simply to draw attention to a matter which is, we think, worthy of more consideration than it receives. No doubt some of our readers could supply valuable information by giving their own experience in our correspondence columns.

Before concluding we wish to add a word on another, but closely allied, subject—namely, the keeping of shops cool in summer. As a rule, the ventilation of fitting and erecting shops is abominably bad. It seems to be accepted that large shops will ventilate themselves, and usually being very lofty, the theory is borne out pretty well in practice. But it is just in such lofty shops that we often find galleries, in which are put the lighter and smaller machine tools, and the lack of ventilation in these galleries is severely felt. We have seen such galleries filled with smoke from a steam crane working on a gantry just below their level. To mention such a faulty arrangement is enough to condemn it. We have no hesitation in saying that less is done to provide for the comfort of engineers, fitters, erectors, and machine hands than for any other large class working under cover. This is due, no doubt, partly to thoughtlessness, partly to defective precedent, partly to a misplaced conservatism. It is not, we think, due to want of sympathy with the men, for we find that some of the worst shops belong to men who have spared neither money nor time in providing reading-rooms, coffee palaces, and recreation grounds for their hands. Finally, we may add that one of the best possible expedients for avoiding strikes lies in making the men so comfortable that they will think twice before they throw up their employment.—The Engineer, London.

The students of the Medical College in London with Dr. Gardiner received their second annual lecture on sanitary plumbing and drainage at Mr. Greenaway's plumbing establishment, Dundas street, on Thursday last, which proved very instructive to those present, after which a vote of thanks was moved to Mr. Greenaway, and parted by singing "For He's a Jolly Good Fellow."

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MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Dec. 22, 1893.

HARDWARE.

The situation is much the same as it was a week ago in general hardware, which on the whole is very quiet. All of the jobbing houses are now busy stock-taking, and none of them look for any general activity until the turn of the year. The actual movement at present therefore is small and confined solely to novelties suitable to holiday wants, the demand being made up of small-sized orders for such lines as skates, ornamental lamps, etc., etc. Payments continue about as they were, with complaints from some quarters that they are finding their returns slow.

WIRE—Very little to note except a few small orders for hay-baling wire.

CUTLERY—A few small orders keep coming in for pocket cutlery, but on the whole business is quiet.

WINTER GOODS—Nothing to report except a moderate demand for skates, small orders for which keep coming in and contribute some life.

SADDLERY SUPPLIES.—The same as before.

NAILS—Both cut and wire nails continue dull and unchanged.

TACKS—Nothing to report of importance.

HORSESHOES—Makers say business is very quiet with them, and jobbers tell the same story. There is no alteration to note of any kind. Some orders are still being received by makers for horsenails, but the demand is not what it was a fortnight ago.

IRON PIPE—Demand is not so good, still some fair-sized lots keep going out.

SPORTING GOODS—There has been nothing doing in this line to speak of.

CHAIN—Prices are the same, and only a few small lots have been moved.

TOOLS—Featureless and dull.

BUILDING SUPPLIES—Absolutely nothing doing.

PLUMBING SUPPLIES—A moderate demand has been experienced on local account.

WARE—Continues dull and unchanged.

LAMP GOODS—A moderate business has been doing, with no special features to mention.

NAVAL STORES—Trade in naval stores is of a very limited character, and values are unchanged. We quote: Turpentine, 47 to 48c.; resins, $2.50 to $5.00, as to brand; coal tar, $3 75 to $4; cotton waste, 5½c. for colored, and 7 to 10c. for white; oakum, 5½ to 7½c.; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep-sea line; pure Manilla, 11c. for 7-16 and upwards and 12c. for smaller sizes.

METALS.

It is difficult to find anything of interest in regard to the market for heavy iron and metals. In fact there is absolutely nothing doing in any line of any importance, and values as a general rule are nominal and unchanged.

PIG IRON—Pig iron is very quiet, a few small lots, ex-store, moving at former prices. We quote: Summerlee, $18.50 to $19; Eglinton, $17 to $17.25; Carnbroe, $16.50 to $17; Langloam, $18.50; Nova Scotia, $17 to $17.50.

SCRAP IRON—This article rules easy, with offerings of No. 1 cast at $14.50 to $15, and No. 2 at $12, with few buyers.

BAR IRON—Makers say that business is very quiet with them, as buyers are only taking for actual wants pending the annual meetings. In a jobbing way business is very quiet.

SHEET IRON—There is very little doing in sheet iron. Stocks are ample and the tone rather easy on the whole. We shade prices a trifle, as follows: $2.30 to $2.50, according to grade. Russian sheet iron is very scarce, in fact stocks of it here are almost exhausted. Values are firm at 10½ to 11c.

HOOPS AND BANDS—There is no change in hoops and bands, which rule quiet and steady at $2.30 to $2.35.

STEEL—There is not much doing in steel, a few lots of sleigh shoe steel still moving. We quote: Best cast steel, 10½ to 12c.; sleigh shoe, $2.40; spring, $2.50 tire, $2.50 to $2.75, and round machinery steel, $3.

GALVANIZED SHEETS—Very little business doing in these. Prices remain as before, 4¾ to 5c. for ordinary brands, Morewood, 6 to 6¼c.; tinned sheets, coke, No. 24, 6 to 6¼c.; No. 26, 6½ to 6¾c.

TIN PLATE—Absolutely nothing doing in tin plate. There are ample supplies and prices rule easy in tone. We quote tin plate at $3 05 to $3.20 and charcoal at $3.50 to $4 according to brand.

CANADA PLATE—Nothing to report, with prices the same at $2.40 to $2.50.

TERNE PLATES—Dull and nominal at $7.25 to $7.50 as to grade.

COPPER—Very little doing in copper, while prices rule steady at 11½ to 13c according to quality.

TIN—The easiness already noted in tin continues, and our inside quotation has to be further shaded as follows: 19 to 22c.

ANTIMONY—Little doing, with prices as before: 10½ to 12c.

SPELTER—Remarks of last week can be repeated. We quote $4.60 to $4.75; American the same.

LEAD—The tone is easy, and last week's inside price of $2.80 has been shaded upon. We now quote $2.75 to $3.

ZINC SHEETS—There have been a few small jobbing sales. Prices remain as before at $5 to $5.25.

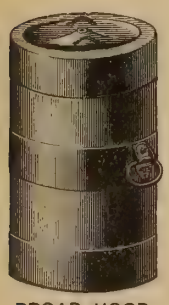
CEMENT—The movement in this line is very small and confined purely to a few casks for the local jobbing trade Prices are as formerly quoted: English cement at $2 to $2.30, and Belgian at $1.90 to $2.05. Fire bricks are scarce, and light stocks have stiffened prices to $17 to $21 per 1,000, according to brand and quality ex-store.

PAINTS AND OILS.

It is now the dull season with the lead and color trade, so that there is little or nothing to report. Linseed oil is steady, and steam refined seal oil is rather firm in tone, but the demand is moderate. We quote: Choice brands of white lead, government standard, $5; No. 1, $4 75; No. 2, $4.50; No. 3, $4.25; No. 4, $4; dry white lead, 5c.; red lead, pure, 4½c.; No. 1, 4¼c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, raw, 60c., boiled 63c., steam refined oil 48 to 50c., cod oil 34 to 35c.

GLASS.

There is no change in glass, which rules quiet as previously quoted, viz., $1.25 for



BROAD HOOP PATTERN.

Milk Can Trimmings
Delivery Can Trimmings
Creamery Can Trimmings
And **Milk Delivery and Creamery Cans Made Up.**

All sizes and guages of Tinned Sheets for Cans and Vats. We have a full stock and can make prompt shipment.



IRON CLAD PATTERN.

THE McCLARY MFG. CO., London, Toronto, Montreal, Winnipeg, Vancouver.

WOOL DUSTERS
WALL DUSTERS

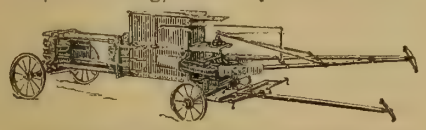
Every Hardware Merchant should have these dusters in stock.

Manufactured by

FRANK HOLT, 81 Colborne St., TORONTO

DEDERICK'S PATENT STEEL SHELL HAY PRESSES.

Made of Steel—lighter, stronger, cheaper, more power, everlasting, and competition distanced.



Also all styles of Bale Ties made from the Best Steel Wire.

Manufactured by BOYD & CO., Huntingdon, Q.

ADAM HOPE & CO.,

HAMILTON

Offer for Sale

"Pioneer" and "Sloss" PIG IRON

These are fine foundry irons, being strong and large scrap carriers.

Also all the well-known—

Scotch Brands,
Broken Car Wheels,
and Railway Cast Scrap.

GAS, ELECTRIC, AND COMBINATION
Fixtures

Of English, Canadian, and American designs. . .

Globes and Shades

Staple Brackets and Gas Fittings. Select stock of above always on hand.

Jas. Barwell, 88 Bay St., Toronto

SHOWROOMS OF JAS. BARWELL, SONS & CO., Birmingham, Eng.

Drawings and Estimates on application.

FRANCIS HYDE & CO.

Builders' Supplies

We make a specialty of Scotch Fire Clay Flint Glazed Sewerage Pipes, Fire Bricks and Fire Clay Agricultural Drain Tiles, White Enamelled Bricks and Tiles for walls. Best brands London Portland Cement.

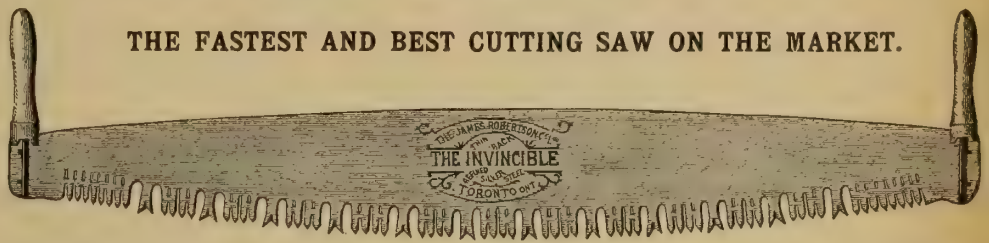
STORES AND YARDS:

King, Queen and Wellington Sts., Montreal

THE INVINCIBLE.

EVERY SAW WARRANTED.

THE FASTEST AND BEST CUTTING SAW ON THE MARKET.



Guaranteed four Guages Thinner on Back than Front and Made from the Highest Quality of Double Refined Silver Steel.

Manufactured only by

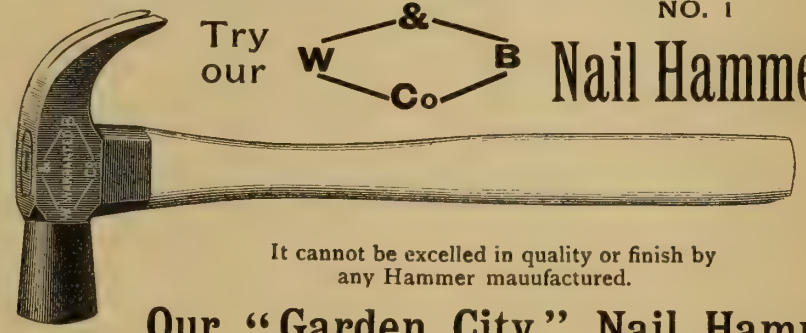
The James Robertson Co. (LIMITED.)

SAMPLE ORDER SOLICITED.

Toronto.

THE WHITMAN & BARNES MFG. CO.

Canadian Branch: St. Catharines, Ont.



Try our W & B Co NO. 1 Nail Hammer

It cannot be excelled in quality or finish by any Hammer manufactured.

Our "Garden City" Nail Hammer

GET OUR PRICES AND TRY OUR GOODS

Is the best and cheapest "Solid Cast Steel" Hammer on the market. . . .

We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .

Boyd's Skeleton Skates



Expert Racer, Crystal Racer, Junior Crystal, Hockey Club, Eclipse Victoria Club and Dominion.

Best line of Skeleton Skates made. Send for Catalogue of Skates, Hockey Sticks, Snowshoes and Winter Sporting Goods. Ask for discount sheet.

T. W. BOYD & SON, 1683 Notre Dame St., **MONTREAL**

MONTREAL MARKETS—Continued.

first break, and so on according to quality. Putty in bulk remains unchanged at $1.85.

PETROLEUM.

A fair trade is doing in petroleum; quite a few carlots of refined moving during the week. Values on both Canadian and American oil are unchanged at last week's quotations. We quote:—Canadian crude at $1.05 per barrel f.o.b. at Petrolia; Canadian refined at 11¼c in shed at Montreal for round lots, and 12c for small quantities. American petroleum, 16½ in car lots, 17c in 10-barrel lots, 17¼c in five-barrel lots, and 17¾c for single barrels, net cash; American benzine, 23 to 25c; Canadian benzine, 10¾c Petrolea; 12½c Montreal.

MONTREAL TRADE NOTES.

All the hardware jobbing houses are busy stock-taking at present.

Some round lots of seal oil have been moved during the week at pretty full figures, 49c. being made on one lot that we know of.

President Graham, of the Nova Scotia Iron and Steel Works, New Glasgow, was in town this week. He stopped over on his return journey from Ottawa.

There is considerable talk among the trade with regard to the duty on scrap iron. It seems to be the opinion of the majority that the duty will be increased.

It is said that an attempt will be made at the coming annual meeting of the Wire Nail Association in Toronto in January to induce outside makers to enter the fold.

The cement business is dull at present, and both Francis Hyde & Co. and Wm. McNally & Co. don't look for any change until well on after the turn of the year.

The representatives of the different branches of the iron industry do not expect to be called to Ottawa for their final conference regarding the iron duties until the end of January.

Jas Hutton & Co. are at present closing out their entire stock of silverware, which includes almost everything on the list from tableware down. This is a good chance for bargains.

T. W. Boyd & Son are having a great run on their crystal racing skates, the early season giving them quite a boom. They have been doing a very large business in hockey sticks; also sending forward some large consignments of these to the west.

Jas. Hutton & Co., Montreal and Toronto, are making a specialty of English brass bedsteads; they have recently fitted out the Hotel Frontenac in Quebec, and the Vancouver Hotel, Vancouver, with these beds. Hardware men would do well to enquire about these goods, which seem to be rapidly gaining in favour. Their cleanliness make them much superior to the wooden ones.

The first annual meeting of the shareholders of the Laprairie Pressed Brick and Terra Co. was held at the company's office, 118 St. Peter street, on Saturday last. A satisfactory statement of the affairs of the company was presented, and all were pleased at the result of the few months' work, by which the company has established the fact that they will be able to deliver the finest grade pressed brick, as well as a superior grade common brick, in Montreal, at prices that will give a good profit to the shareholders. Preparations are being made to manufacture ten million common and pressed bricks during 1894. The following board of directors was appointed: A. A. Ayer, J. W. R. Brunet, Peter Lyall, John McKergow, James W. Tester, A. D. Taylor and Hugh Cameron. At u meeting of directors, A. A. Ayer was elected president; J. W. R. Brunet vice-president, and T. A. Morrison secretary-treasurer.

TORONTO MARKETS.

TORONTO, Dec. 22, 1893.

HARDWARE.

The wholsale trade is assuming its usual holiday character. Nearly all the travelers are in the warehouses this week, and business through that source is of course cut off altogether. Orders from the country are therefore by mail. Under these conditions much business could not be expected. There are, however, quite a few parcels going out, although they are as a rule small. Taken all round the general hardware trade seems to be about up to the average for other years at this season. Travelers report that country merchants have been doing a brisk business in such winter goods as sleigh bells, etc., since the recent snowfall. The only material change to note is a decline of ½ to 1c. in rope. Demand has fallen off somewhat during the last few days, but there is still a fair quantity going out in some lines. Winter goods continue in request, and an improved demand has sprung up for Perfection ware. Business in plumbers' supplies, on the other hand, exhibits a marked falling off. Payments continue to improve; "fairly satisfactory" is the general report regarding them.

WIRE—Orders are small and are divided between annealed and bright.

ROPE—A reduction of ¼c. per pound is announced in manilla and 1c. per pound in sisal. We now qnote: Sisal, 7-16 in. and larger, 8c.; ¼, 5-16, ⅜ in., 8½c. Manilla, 7-16 in. and larger, 10 to 10¼c.; ¼, 5-16, ⅜ in., 10½ to 10¾. Demand is light.

CUTLERY—Is moving freely, especially in the better quality, although the value is not as large as a few days ago.

NAILS—Small quantities of cut and wire nails are going out all the time. Horseshoe nails are going out in fair quantities.

TACKS—There has been no change in this line either in regard to prices or volume of business.

CHAIN—Quantities of this going out are still small and prices are unchanged.

HORSESHOES—A few snowshoes have been sold and demand is steady for ordinary.



WINTER GOODS — Snow-shovels and sleigh-bells have been in active demand, but business in axes and saws has fallen off considerably.

WARE—Trade has improved somewhat in Perfection ware, but in the regular peerless, blue, and white ware business is much as before.

SPORTING GOODS — The movement in goods of this description has fallen off perceptibly.

LAMP GOODS—There has been quite a demand for fancy lamps for the holiday trade.

PLUMBERS' SUPPLIES—Trade has fallen off a good deal, being now characterized as dull. If anything the preference is for iron pipe, but the quantities of that moving are small.

BUILDERS' SUPPLIES—In this there is nothing doing.

METALS.

PIG IRON—There is nothing doing, and fewer enquiries are heard than a week ago. We quote nominally as follows: Summerlee, $20.50 to $21; Carnbroe, $19.50 to $20; Siemen's, $19.50 to $19.75.

Rogers, Brown & Co., Buffalo, report the Toronto market for American pig iron as follows: The holiday dullness has thoroughly settled down upon the pig iron business. There is very little iron selling, and as it is not the period for contracting to cover future wants, the sales are all for early consumption. Prices are firm, however, chiefly because there is no margin for reductions. Sellers prefer to keep their iron rather than to sell at anything less than the prevailing figures. We quote below on the cash basis f. o. b. cars Toronto in bond: 1 X Foundry strong Coke Iron, Lake Superior ore, $14.80; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14 30; 2 Foundry Strong Coke Iron, Lake Superior ore, $13.80; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17.05; Southern Soft 1, $12.85; Southern Soft 2, $12.60.

BAR IRON—The volume of business in this line is insignificant and prices are unchanged; $1 95 still being the basis.

BOILER PLATES AND TUBES—There have been a few sales in these for special purposes, but business generally is dull.

CORRUGATED IRON—Business is practically at a standstill and prices are unchanged. We quote "Owl" brand at $3 to $4 per square for painted and $4.25 to $7 for galvanized, according to gauge.

SHEET STEEL—There is nothing doing, most of the manufacturers having large stocks left over from last season. Prices are unchanged at the base price of $2 90.

SHEET IRON——Stocks are now complete. Trade has dropped off materially on country account, while city trade is on the other hand a little better.

GALVANIZED IRON—Is still going out freely. A number of orders have been booked for import, spring delivery, and some

MARKETS—Continued

good sales are also reported for shipmeut from stock. We quote Queen's Head and Gordon Crown at 5 to 5¼c. for 16 to 24 gauge.

INGOT TIN—Two large orders have been reported, but small quantities are going out steadily. A few good sales in Straits tin are reported. Prices are unchanged at 22 to 22½c. for Lamb and Flag and 21¼ to 22¼c. for Straits.

INGOT COPPER—Some fair sales have been made this week, and new shipments have been received. We quote ton lots at 11¾ to 12c. and ½c. extra for smaller lots.

SHEET COPPER—There is not much doing and stocks are low.

SPELTER—Quiet, and the little that is being done is in the way of import Prices unchanged at 4¼ to 4⅜c. for small lots.

ZINC SHEET.—Prices are firmer, although without actual change here, and demand is fair and stocks low. Prices are unchanged at 5¼ to 5½c. for cask lots.

TIN PLATES—Are going out freely in assorting up sizes. Some nice orders have been booked for import, and there have been a few enquiries for small lots from stock. We quote as before at $3.85 to $4 for I.C., with the usual extras for I.X.

TERNE PLATES.—Dull and unchanged, $7.25 f.o.b. here being the ruling price.

HOOPS AND BANDS.—Although stocks are complete there is not much improvement in business, prices still running on the basis of $2.55 to $2 60 per cwt.

CANADA PLATES—Are still going out freely, but only in small lots. Stocks are fairly large. We quote :—All dull, $2.60 to $2 65 ; half-polished, $2.75, and all bright $2.90.

SOLDER—Is in steady demand, but in the small quantities that is usual at this season. Prices run from 14 to 16c. according to composition.

ANTIMONY—There is no improvement in the dullness which has now been noted for sometime. Prices are unchanged, 11½ to 12c. in cask lots being the idea.

LEAD—Pig lead is going out fairly well at 3c. Sheet lead is dull and uninteresting.

GLASS.

There has been considerable call for glass, but jobbers are experiencing great difficulty in filing orders owing to the scarcity of some sizes. Prices for first break are unchanged at $1.20 to $1.25.

PAINTS AND OILS.

Business in paints and oils could scarcely be less interesting than it is at the moment. There is scarcely anything doing in any line, and there is not even a change in prices to relieve the monotony. Trade for the month of December does not seem to be up to the average in volume. Payments are fairly good. Turpentine is a little easier in the South, but prices here are unchanged at 44c., Toronto, Hamilton, London and Guelph, with 2c. per gallon added for outside points, freight prepaid. In linseed oil there is nothing doing, and we quote as before, at 60c. for raw, 62c. for boiled, Toronto, Hamilton, London, and Guelph, with 2c. added for delivery at outside points.

OLD MATERIAL.

Trade continues dull, and there is no change in prices. We quote prices paid by dealers as follows : Agricultural scrap, 55c. per cwt ; machinery cast, 60c. per cwt.; stove cast scrap 40 to 45c.; No. 1 wrought scrap 40c. per cwt. ; No.2, including sheet iron, hoop iron and mixed steel, 10c.; new light scrap copper 7½c.; heavy scrap copper 8c.; old copper bottoms, 7½c.; light scrap brass 5c.; heavy yellow scrap brass 7c.; heavy red scrap brass 7½ to 8c ; scrap lead 1½ to 2c.; scrap zinc, 1½ to 2c. ; scrap rubber, 3c.; country mixed rags, 75 to 80c. per 100 lbs ; clean dry bones, 50 to 60c. per 100 lbs. ; boring, and turnings, 10 to 15c.

PETROLEUM.

The Petrolea Advertiser, in its weekly review, says there is nothing new to report this week in the price of Canadian oil and quotes as foliows : Crude, $1 to $1 03 delivered ; refined, 6 to 6½c. in bulk, or 8¾ to 9½c. in barrels in car lots f.o.b. Petrolea.

Toronto market is fairly active and unchanged. We quote : 5 to 10 barrel lots, imperial gallon Toronto—Canadian, 12½ to 13c. ; carbon safety, 16½ to 17c.; Canadian water white, 18½ to 19c.; photogene, 22c.

SEEDS.

About the only thing to note specially is an easier feeling in alsike. Although as yet no actual change has taken place, there is no saying what day a drop may be announced. The cause is a falling off in the demand. There is very little red clover moving yet, higher prices being anticipated. There has been a little movement in timothy at unchanged prices. We quote : Alsike, $6 50 to $7 for prime to choice, and $7.20 to $7 30 for extra choice to fancy ; red clover, $5 50 to $5.75 ordinarily, and $5 90 to $6 for choice to fancy ; timothy, $1 to $1.25 for inferior and $1.50 to $1 60 for prime, while choice to fancy bring 15 to 20c. more.

HIDES, SKINS, WOOL, TALLOW

HIDES—Are improving a little; tomatoes are beginning to inquire quite freely, and it is anticipated among dealers that a change for the better will take place after the holidays. Prices remain unchanged at last week's quotations, namely, 3¾c. for No. 1, and 3c. for No. 2.

SKINS—Are unchanged, with no prospects of an advance. Country dealers are still holding back, awaiting an advance in prices, but until they allow their stock to circulate through the market, they cannot expect any special inducements offered by wholesale dealers.

WOOL—Remains much the same as last eport, a little slow. Some choice lots have been moving at 20½c. These are exceptional cases though, and have occurred but rarely, the general run being from 17 to 20c. for pulled and fine combing.

TALLOW—Continues in good demand and dealers are paying a fair price for good quality. Culled tallow, 4½c. ; rough, 2c. ; select quality, 5 to 5¼c.

MARKET NOTES.

H. E. Howland, Sons & Co. are in receipt of a large shipment of Nicholson files, for which they are agents.

Rice Lewis & Son are having a big sale of their special lines in tool chests, which range in price all the way from $5 to $25.

Geo. Duthie & Sons, roofers, Toronto, have assigned to Henry Barber & Co. Their liabilities are $7,602.70, and assets $6,172.70. The firm have considerable real estate, but it is mortgaged to almost its full value.

The Gurney Foundry Co. report business still moving, though the season for brisk stove trade is now over. "The success of our heaters and ranges is too well know to need recounting," the firm says.

Hanging in the private office of H. S. Howland, Sons & Co. is a nicely framed photograph of the late W. T. Nicholson, the Providence, R.I., file manufacturer who died a couple of months ago. It was sent out by the Nicholson File Co. In memoriam of its late head.

The Toronto Silver Plate Co. report that the big demand there has been for there novelties has forced them to work their employees until 10 p.m. every night for the past week. "We are kept busy supplying the demand for holidav goods, and have our hands full," they say.

The Metallic Roofing Co's salesmen are in from their several routes. The bulk of the trade is now over for the season, but small orders still continue to arrive. The firm report the usual demand for Owl brand and Hay's patent lathing.

The Canadian Mineral Wool Company are kept busy. having many contracts on hand, besides inquiries received every day. They are now manufacturing asbetos cement, which they claim is unsurpassed, and say that dealers will do well to correspond with them and consult their prices before stocking up in asbestos goods, etc., for the spring trade.

Geo. F. Bostwick, Front street west, Toronto, will carry the Premier, Raglan, and Centaur bicycles during the coming season. They say: "These wheels are all well known, and have had a large sale the past season. We feel great pleasure in offering to bicyclists the Centaur, which we have lately added to our stock, and for which we are the sole agents."

It is learned from the Gutta Percha Co. of Toronto that their "Guttaperch" brand of spiral and ring self-lubricating piston packings, which were first brougbt to the notice of the general trade through an advertisement in HARDWARE, have become a staple article of stock in all the leading hardware and mill-supply houses throughout the Dominion. The "Guttaperch" packings are made either with the rubber cushions on the outside or on the inside, whichever is preferred by the customer. An immense stock of spiral, in both styles, is kept constantly on hand at the company's warehouse, to meet the demands of the trade. The firm claim that "Guttaperch" packings, by reason of their superior quality, are rapidly driving all other similar packings out of the market.

The McClary Mfg. Co., report that fall orders now being nearly all in, they are making preparation for the spring trade. They say that dealers are generally ready to find fault where the slightest cause appears, but seldom if credit is due. "Hence it is refreshing," say they, when letters like this

are received, and they are much appreciated. It is from James Munro, Chilliwack, B. C. "I tell you the McClary stoves can hold their own any place, that Model is a beauty. I do not want any at present, but soon will. I expect I will write you when I want any or anything else in your line. Your goods have given complete satisfaction, and I must say that my business has increased wonderfully since last fall, I can sell goods right, when I am buying right. These people on the Coast don't like it because I am dropping them cold."

FIRST RAILROAD IN THE UNITED STATES.

Few remain alive of the generation of American citizens who reached man's estate during the first third of the present century —a period which embodied the crude beginnings of much of the marvelous industrial development now possessed by this country. It was toward the close of that period the first American railroad was constructed and put in operation. The last survivor of those connected with that early enterprise is Lewis Cheney, resident in Chelsea, Mass. In a letter lying before us, he says: "You may like to know a few facts regarding the building of the first railroad in the United States, as I recollect perfectly much that may interest you. The Quincy railroad was built in 1826, at Quincy. It was two miles long, commencing at the granite ledge, and running to Neponset River; it was built with a slight down grade, and by placing two large timbers on sleepers, with a strap of iron spiked on top at inner edge of each timber, for the wheels to run on—they were very high. The load was swung under the axle and drawn by one horse, a large strong one, led by the head. The load was drawn on deck of sloop or lighter and conveyed nine miles to Boston for building purposes, some of the granite being used toward the construction of Bunker Hill monument. These facts, gentlemen, may interest you, and, at all events, I am the only person now living who worked on that road."

This little group of historical data will enable the reader to realize how pigmy were the proportions, how limited were the functions, and how clumsy were the operations of the first railroad, compared with the engineering accomplishments, the enormous equipment, and the diversified facilities rendered necessary by the railroad of to-day For all that, the initial step in the progress now ripe was an occasion of signal importance in its time; for it was then a conspicuous and valuable improvement on the snail-pace, inconvenient, expensive modes of transportation in vogue, attracting universal attention and comment. Moreover, it forceably illustrates the great law of evolution in the work of man's hands, whereby all beginnings are curiously crude and defective, although distinct advances on previous conditions. Only by setting up a contrast between widely distant periods is it possible to appreciate the extreme difference which exists between the outset and the culmination of any branch of development, as in the present case.—Industrial World.

Pure Southern **TURPENTINE** Our Specialty

Remember, we are headquarters for the pure article, and intending purchasers will do well to get our price before placing their orders.
Every barrel of Turpentine we ship is accompanied by our printed guarantee that it is ABSOLUTELY PURE.

We Are Not Members of any Combine.

FRANCIS, FROST & CO., 33 Front St.W., TORONTO

A CELESTIAL CLOCK.

An English astronomer, who is also a mechanic, Wynne Molesworth by name, has invented and constructed, says The Pall Mall Budget, a very ingenious "celestial clock." The entire face of the clock rotates under a wire bar, representing the equatorial horizon, and is regulated to perform one revolution in 23h. 56m. 4s., this being the time in which the earth turns once upon its axis. The apparent annual motion of sun, moon and planets in the opposite direction is effected by movable pins, while the north and south polar stars, that do not rise or set for us, revolve simultaneously with the rest by a separate movement. Thus may be seen the entire heavens, with sun, moon, planets and constellations in their actual places, ever rising and setting, as they rise and set in the heavens.

FAULT WITH THE WATER-TANK.

"I find that a great deal of complaint about hot-air furnaces arises from the fact that the water-tank is not always attended to. Very frequently the tank is emptied by evaporation and is not filled until some one who knows how a furnace should be run is called in to find out why there is an unpleasant odor in the house, this having been traced to the heated air coming up through the pipes and registers. Of course, they blame the furnace and not themselves, and accasionally where I have diagnosed the case and told them of their fault, they say, or at least appear to think, that I am covering up some defect in the furnace by blaming them for letting the tank dry." This is the substance of some remarks made by a furnace expert to The Reporter. The remarks themselves were somewhat more emphatic. "And there's still another trouble for which the furnace is not to blame, and that is in the coal, especially when anthracite is used. It has become a practice among dealers to dispense with the screening of coal in order to get rid of the dust and smaller particles. If this is not done, or if the sizes of the lumps are irregular, the coal will not burn properly, and so cannot give out the proper amount of heat. Care should always be taken in this respect, for poorly-burning fuel is inexpensive, beside giving an unnecessary amount of trouble."—Hardware Reporter.

SELLING AND USING STOVES.

How many stove dealers are there who know how to use the several lines of cooking apparatus which they handle? Or, to put it in another way, what proportion of the many thousand dealers in this country have made a study of the many processes of cooking and can give definite and reliable instruction to their customers? It is very probable that if a census could be taken and the dealers were put through a series of questions and of practical, personal tests, the results would be surprisingly disappointing. And yet a knowledge of how to obtain the best results is as necessary in a business sense as is the ability to sell goods, more so, in fact, since if a sale is made and the purchaser is not satisfied with the work of the stove because he has not been thoroughly posted in its use, or even to the details of construction, he complains to the dealer and the latter may be unable to explain that the fault does not lie with the stove, but with those that have tried to use it.

Before any stove is placed upon the market, no matter what may be its make, it is thoroughly tested and proved. If it does not produce satisfactory results in the judgment of those whose business it is to know how a stove should be made, it is subjected to still further tests and is improved upon until it has met all the necessary requirements. When it is offered for sale to the trade, it is as nearly complete in all the essential details of construction as lies within the possibilities of the manufacturers, and in most cases it is guaranteed to perform its work satisfactorily if even the more ordinary rules for using are followed. But in too many instances the dealer acts on the general supposition that the veriest child can build a fire, regulate the drafts and do all that is necessary in managing the fire, merely because a stove is an article of common use and every one is supposed to know all about it. But every one does not know—not even all the dealers —and ignorance is too frequently made to take the place of a knowledge that can be obtained by a careful, but not necessarily a burdensome, study of fuel consumption as applied in each one of the numerous lines. Fuel consumption and its regulation are based on the one principle, with different applications in each case. The rule for operating one stove may not be effective in working another, and it is this difference which should be ascertained by the dealer and given in turn to the purchaser. And still another point is that the best stove in the world will not work satisfactorily if not properly set up and if the chimney construction is faulty. The dealer cannot be held responsible for defects in this latter respect, but he should be both able and willing to make the necessary suggestions.—Hardware Reporter.

BUSINESS CHANCE.

Advertisements inserted under this heading two cents per word each insertion.

STORES and Offices to rent in The Thomson Bros. Block, Calgary, a three story stone building, plate glass front, heated with hot water, lavatory, closets, etc., most central location in the city, ready for occupation in about a month. Address, THOMSON BROS., Calgary.



BERGER BROS.

Manufacturers of

Tinners' Hardware.

Berger's celebrated Pail Ears, Saucepan Handles, Eave Trough Hangers, Pipe Fasteners, Hooks, Straps, and Barrel Trucks, Etc. Send for Prices and Catalogue.

237 Arch St., Philadelphia, Pa.

SOLDER.

Half-and-Half Solder.
Plumber's Solder.
Refined Metal Solder.
Triangular Solder.

We guarantee all OUR GOODS! If found unsatisfactory can be returned at our expense.

TORONTO SMELTING and REFINING WORKS

92 and 94 Queen St. E., TORONTO.

MIXED PAINTS



TRADE MARK

The Unicorn Brand

Has now the leading reputation for purity and durability in Canada.

They are sold all over the Dominion.

Manufactured only by

A. RAMSAY & SON, MONTREAL

ESTABLISHED 1842.

Canada Iron Furnace Co., Ltd.

Manufacturers of

CHARCOAL PIG IRON

MONTREAL.

BRAND "C.I.F." THREE RIVERS

PLANTS AT

Radnor Forges, Que. Three Rivers.
Lac a lac Tortue. Grand Piles.

GEO. E. DRUMMOND,
Managing Director and Treasurer

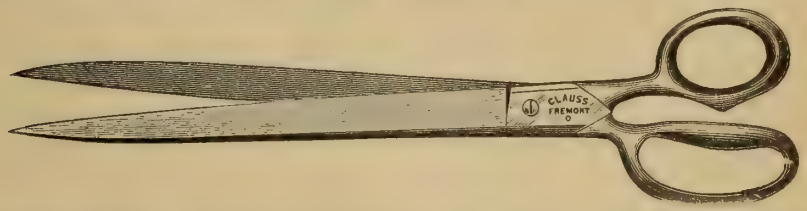
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PLUMBING BY IRONMONGERS.

The following essay written by a gentleman who signs himself "One Who Has Done it," appeared in a recent issue of Ironmonger, London.

For the purpose of this essay I intended to direct my remarks to domestic sanitation, setting aside lead roofing for consideration at another time. I shall also carefully avoid discussing mechanical methods as more within the province of the article being contributed by your expert. An ironmonger who has a practical knowledge of plumbing doubtless starts at a great advantage, and the path of one who wishes to cultivate this branch of his trade without such knowledge would appear to be somewhat thorny. But to a man in earnest there is a distinct and straight course; and at the outset I would say that the one indisputable passport to that road is integrity. I will endeavor to indicate some of the apparent obstacles to be confronted, and what are, in my opinion, the best means of surmounting them.

In the first place it is essential for oneself to have a broad, commonsense, and thorough knowledge of the construction and ventilation of drainage and sanitary apparatus, without any trade bias or prejudice in favor of any one material, always keeping in view that the end to be aimed at is the removal and conduct of all sewage and polluted water from contact with the air of the interior of a dwelling-house to the main sewer as directly and expeditiously as possible, and at the same time to expose it to the purifying and deodorizing influence of fresh air without causing offence, always bering in mind that those materials should be chosen for use which most easily and effectually resist contamination, corrosion and decay.

There are abundant means of obtaining technical instruction on these matters from classes, lectures and books, and one who is engaged in the trade will, as in all else, gain much practical knowledge from each fresh job he undertakes. He should visit most jobs daily at irregular times of the day. Now as a rule a plumber does not receive a comprehensive carte-blanche order from a customer to remodel or renew the whole sanitary apparatus in a house. He gets more likely a message to send a man "just to see to a water-closet." We will suppose that the master goes himself (as he invariably should do in such a case) and finds the house devoid of all modern appliances, and, instead thereof, D traps, trumpet and other wastes connected thereto, bell-traps, sealed drains (probably unsound, but which must remain a mystery until unearthed), and a pervading sickly odour. Now comes the rub. The customer probably thinks a little tinkering and flushing and a box of carbolic will put all to rights, and has a dread of the proverbial plumber's bills. On the other hand there is the sanitary authority, which is now a more or less active body in all towns, and whose regulations must and ought to be obeyed to the letter—they are the plumber's best friends.

The best course to adopt is first to make it quite clear that one is not fishing for work, and then to explain the awful danger to health and life entitled by these antiquated contrivances, and state plainly all that is necessary to bring the house up to the most modern standard of sanitation; and offer to send gratis a careful report thereon, with an estimate of the cost of the necessary work. The price of this estimate should not—and need not—be cut fine, as good work is always well paid for, and many unforeseen contingencies arise which, if possible, should be covered by the price quoted. The customer will consider the matter, and when fully awake to the danger he will probably have the work done. He may perhaps get another price—well, let him: the number of those (including the modern plumbers) who do the work well at a reasonable figure is not at present large.

Or the gentleman may have a short lease, or be short of cash, and not feel disposed, and, in fact, refuse to incur the expense. No plumber can compel a man to have even necessary work done if he does not choose. Then the next best course is to carry out such work as one can obtain permission to do in such a manner that it will not have to be done again when the time comes for the inevitable uprooting of the unsanitary apparatus. For instance, one should refuse to leave a D-trap concealed beneath a floor or fix to it one of those delusive basins so commonly used by botchers which have the outlet conveniently placed so as to fit an old D-trap and give to the unwary the idea of a wash-out; neither should a waste pipe be left emptying into a soil-pipe or D-trap, nor a soil-pipe be left unventilated. The customer should be politely but distinctly given to understand that more is really nccessary to be done, and generally the order will one day follow for the whole of the improvements to be effected.

When required to do bath or hot-water work one should make a point of calling attention as occasion may arise to any obvious defects in sanitation, and leave the impression given by one's remarks to germinate. Also take care that one's work is not so constructed as to act in the slightest degree in conjunction with other appliances one knows to be bad—such, for one instance among many, as allowing the pre-existing waste of a bath, to which one is required to lay on hot water, to empty into a soil-pipe.

In many instances, however, the work is ordered to be done by the sanitary authority, or a new house is to be fitted up. The plumber's course is then clear—he must do the work well and thoroughly, without fear or favor.

Residents in the County of London who are in the plumbing trade should at once obtain a copy of the County Council's by-laws, which came into force in June this year, and where expedient show them to their customers. According to their enactment a plumber is very properly liable to a heavy penalty who attempts to tinker up a water-closet or other (un) sanitary fitting and leave it otherwise than perfect.

Another difficulty to be combated is in the obtaining of really competent men. The fact of a man asking tip-top meney is by no means evidence of his ability as a mechanic. It is best to make the most searching personal inquiries about a man before engaging him, and, other things being equal, to give a countryman the preference over a Londoner. A really good plumber usually places a high value on constant work, and it should be the aim of the employer to secure it for him even at personal sacrifice. He should be paid well, as his skill deserves. The younger men in a shop should be educated up to do the work scientiefially, cleanly, and well, and induced to attend classes on plumbing and kindred subjects. As one's trade develops one's staff of experts will thus be preparing to grapple with it. Another point to be observed is stationery. In rendering an estimate many so-called plumbers send it badly written on a bill-head. An educated tradesman will here find abundant scope for the exercise of his brains in getting up a striking, neat, and confidence-inspiring heading, differing as widely as possible from his usual bill-heads, and he should see that it is nicely written, correctly spelt, and clearly expressed in language which is intelligible to one who is not a plumber. Such an estimate will lift him above the level of a mere workman. It is desirable to make a show in one's shop and window of a well-chosen selection of flush-cisterns, washdown and pedestal and valve water-closets and seats, vent-tops, fresh-air inlet-valves, traps for wastes, brass ferrules foe connecting lead soil-pipes with porcelain and iron ones, and a few gulleys and pipes, channels and covers, such as are used for manholes; but carefully to exclude everything which is not quite up to date.

Regarding aduertisements, I have little faith in the plan of inserting vague comprehensive puffs in newspapers for the purpose under consideration. More solid advantage is to be obtained by the slower but surer course of building up a reputation for promptitude, good work, and compatibly moderate charges. At the same time great benefit may be obtained by issuing a small priced catalogue of sanitary materials, pipes, etc., may be delivered by hand to the houses where it is likely to bear fruit. Such a list should be subject to a fair discount to be allowed to others who undertake similar work. It may appear that possible competitors will be chary of buying of a rival. This may be true to a certain extent, but if one scrupulously refrains from poaching on their preserves they will soon be glad enough to

make use of a shop where the proprietor has a practical knowledge of the goods they require, and keeps a well-chosen, although possibly small, stock of the right things to use.

There is great advantage to be obtained by the last-mentioned class of trade—it enables one to buy in larger quantities and at first hand. One should not be loth, from selfish considerations, to give advice when it is sought as to the most effectual appliances to buy, and should not attempt to make a mystery where there is none—at the same time keeping an open mind, every ready to learn and move and develop with the times.

A DIRECT STEEL PROCESS.

A metallurgical engineer, J. T. Wainwright, now of Chicago, has patented a process of operating a blast furnace for rapidly making steel directly from impure ore and fuel. This process, he states, has been designed to eliminate sulphur and phosphorus during the smelting operation, exclude from the metallic product silicon and other metalloids except carbon. In this method he claims to combine desirable features of the blast furnace and open hearth, while dispensing with some undesirable features usual to both. In operating this process a shaft furnace of moderate size may be constructed by remodeling an ordinary cupola. This furnace is not operated by a continuous process, but intermittent heats are made, and the furnace is recharged for each heat. In operating, when commencing with an empty furnace, the contracted portion of the shaft is bridged over with an open mass of coke, charcoal or coal. On top of this the shaft is charged with a mixture of ore, flux and solid carbonaceous fuel. On top of this ore the shaft is charged with solid carbonaceous fuel which may be of a different and cheaper grade than that charged with the ore. A blast of air is then admitted through the blast pipe and the top of the fuel ignited. It is claimed that by igniting the top of the fuel and confining the blast the gases resulting therefrom increase in temperature, and that the final temperature attained is dependent upon the length of the consumed fuel column. Among the claims made for this process are the following: By generating the furnace gases in this manner the reduction of the ore is effected at a gradually increasing temperature, and thus the most important requirement of a smelting process is met. Also, this increasing temperature throughout the charge prevents congestion. The effect produced upon the ore by forcing the gases downward through it is to maintain a reducing action, and also maintain the upper parts of the ore charge in a hotter and more reduced condition than those below, and if the flux has been regulated to produce a readily fusible basic slag the reducing action reaches a stage at which the cinder separates from the sponge metal and gravitates from same. This isolation of the metal progresses from the top of the ore charge in a downward direction, and the cinder collects in the hearth without having been in contact with sponge metal and carbon at high temperature. Since by this method any desired temperature may be finally attained in the hearth, titaniferous iron ores may be readily smelted. Also steam may be mixed with the furnace gases during the early stages of the process; and by reason of dissociation of same into oxygen and hydrogen, this oxygen combines with carbonaceous matter of the charge, and this hydrogen combines with and effects a thorough elimination of sulphur and some other impurities. Regarding other peculiar features of this process, sulphur and phosphorus that may remain in the fuel above the ore eventually combine with the furnace blast in the condition of gaseous oxide, and when in this chemical condition will not combine with and contaminate the metallic product. Also, this fuel readily combines with the furnace blast, because it is above the ore and consequently not permeated by molten matter. And again, the ore is rapidly reduced, because the permeating cinder drains therefrom, thereby permitting a more effective reducing action. The peculiar features of this process will not permit the use of a furnace of enormous proportions, but simplicity and cheapness are characteristic. And in order to operate at a minimum cost these furnaces must be arranged in batteries, whereby a system of progression will afford continuous employment to the operators.—Chicago Journal of Commerce.

HORSE SPECTACLES IN FRANCE.

According to the Gaulois spectacles are now being made for horses in France. A correspondent of that journal says he had a pair of spectacles made for a short-sighted horse, and thay have proved very satisfactory. The animal was a little restless at first, but he soon became accustomed to the novelty, and is now very uneasy when they are taken off. The owner asserts that his horse has now given up bolting. a bad habit to which he was formerly addicted, and which the owner thinks was owing to the defective sight of the horse. Some time ago we mentioned that spectacles were being made for horses, and no doubt the owner of the horse in question found it out through our journal, as the paragraph was copied by a large number of British and foreign journals. As an improvement on horses' spectacles, a correspondent suggested "that the glasses be colored green, as the horses, when eating chaff, would then fancy they were eating grass. Another advantage would be that when driven through the streets of London they would no doubt think they were in beautiful green pastures." These suggestions are ingenious, but we dare not believe them practicable.—Mechanical News.

GLEANED FROM MANY SOURCES.

Mr. F. Fitzgerald, of the Imperial Oil Company, has been asked to run for mayor in London.

"What's the subscription price of your new paper?" "Two dollars a year." "Is it intended for any particular class of readers?" "Yes; it's for those who have two dollars."

Capt. W. J. Sanderson, who had charge of the Agricultural building at Chicago, is authority for the statement that over $10,000 worth of beverages has been destroyed in that building since the cold weather set in. Bottles burst over the entire building in a continuous fusilade.

At a general meeting of the Commercial Travellers' Mutual Benefit Society the following members were elected on the Board of Management:—Thomas Dunnett, president; Robert Cream, vice-president; Warring Kennedy, treasurer; trustees, J. M. Bayne, Joseph Taylor, W. B. Dack, Henry Goodman, R. L. Patterson, Joseph Bonnick, J. A. Ross, H. Lamont, L. R. Wickett.

These are the officers of the St. John, N.B., Board of Trade for the ensuing year:—W. Frank Hatheway, president; W. S. Fisher, vice-president; Ira Cornwall, secretary-treasurer; T. S. Sims, R. Cruikshank, Wm. M. Jarvis, W. H. Thorne, John White, D. W. Meritt, C. A. Everett, John McMillan, George Robertson, Thomas Gorman, F. W. Daniel, T. H Hall, R. C. Rankine, George Waring, and Ward C. Pitfield, members of Council.

We remember, says B. C. Commercial Journal, having read of a sign placed over a little cottage in a little hamlet in the Motherland which read somewhat as follows:—

"Bibles and Bacon,
Testaments and Treacle,
Godly Books and Gimlets
Sold here."

A cable from London, England, says: The arrivals of apples from Canada are utterly insufficient to meet the Christmas demand. Most of those that arrived last week were from Canada, and, as a result, there was keen competition, prices advancing from three to four shillings per barrel. This advance will, in all probability, be maintained for this week's arrival.

Mr. John Cameron, representing the J. B. McLean Publishing Co., Toronto, was in town recently looking after the interests of that company, who are the proprietors of no less than five papers, THE GROCER, THE DRY GOODS, HARDWARE, BOOKS AND NOTIONS and THE PRINTER AND PUBLISHER. These are lively, creditable, publications, and judging from appearances must be doing well for the publishers. Mr. Cameron has secured a long list of subscribers in this county.—Berlin News.

VIEWS AND INTERVIEWS.

I have heard more than one complimentary remark on the editorial in last week's HARDWARE regarding merchants paying up their accounts at the end of the year and starting off the new year with a clean slate. "It touches exactly on the right point," said one merchant. "You could not have had anything more timely. I for one would be only too willing to allow a special discount to all my debtors who will pay at the end of the year. For instance, those that are entitled to 3 per cent. I would be perfectly willing for 4 per cent.; and I guess there are lots more like me."

* * *

"There is quite a scarcity of oats and potatoes around Bracebridge," said a traveler, who had recently returned from that part of the country. "Potatoes, I know, they are getting from the neighborhood of Barrie, but from where they are getting their oats I can't say."

BYSTANDER.

TRAMWAYS IN EGYPT.

The Egyptian Government has decided to authorize the establishment of a system of tramways in Cairo and its environs, and are inviting tenders, until the 1st February next, for the construction and operation of the same during a period of thirty years. The introduction of tram lines would improve to a great extent the methods of transportation and communication in Cairo, and, if demonstrated a public convenience, a similar concession for Alexandria would doubtless be early decided upon. The permanent population of Cairo is roughly estimated at 500,000, of which 30,000 are Europeans. The question as to whether horse, mechanical or electrical traction shall be employed is left open. In this connection, however, we may mention that the American Consul at Cairo is doing his best to provoke the interest of American electrical engineers in the matter, so that it is far from being improbable that any contractors in this country who may submit tenders will have to compete with schemes prepared by electrical engineers in the United States, where the question of electric traction has made so much progress.—Industries and Iron.

A SAW SET WITH DIAMONDS.

A circular saw which is claimed to cut stone with remarkable efficiency has been invented in France. Its edge is set with black diamonds in the same way as the straight blades; but as the strain on the diamonds is all in one direction, the setting may be made much firmer. This is a good invention, but, before it was devised in France, a similar saw was invented in America, as far back as 1865, by E. S. Drake, who, in the March of that year, patented "a stone-cutting circular saw with black diamond teeth."

GAS AS A POWER.

A paper was recently read before the Incorporated Gas Institute, England, by J. E. Dawson, C.E, who sums up the following leading points on gas power:—Gas power should be used at gas works instead of steam power. Town gas should be sold at specially low rates for gas engines. Makers of gas engines should be urged to scavenge out the products of combustion in all engines worked with coke gas, and in large engines with whatever gas is used. Gas companies should consider the desirability of supplying electric lights in selected areas of the district they control. For this purpose, they can have gas engines worked with town gas in the heart of the areas to be supplied, or they can have a central station at the gas works or elsewhere, and have engines driven by gas. When gas companies supply electric lights they should use gas power and not steam power.

SOUND SENSE ABOUT GOOD ROADS

The advantages of properly-built and well-maintained dirt roads seem to have been largely overlooked in the movement for the improvement of our country roads, and it has been said, with some reason, that the movement in favor of good roads has been hampered to some extent by a somewhat too enthusiastic advocacy of broken stone roads, either macadam or telford. The cost of such stone roads is absolutely prohibitive of their adoption in many parts of the country, where, however, improved roads are urgently needed. Comparatively little is said about dirt roads in the discussion on improved construction, but it is certain that very excellent roads may be made of earth by a proper system of construction. Both surface drainage and sub-drainage are essential in obtaining a durable road, and intelligent maintenance is another essential, which latter is rather difficult to insure. The mere dumping of piles of earth in wet spots or low places is not maintenance, but is mere waste of energy due to carelessness or misdirected zeal. With a good dirt road once completed, it would probably be found economical and advantageous to intrust its maintenance to a few skilled and intelligent men paid for their services, instead of leaving the maintenance to the spasmodic attention of the farmers and their hired men — N. Y. Evening News.

SCOTCHMEN GET A CONTRACT.

Fleming & Ferguson, of Paisley, Scotland, have been awarded the contract to build a steel screw steamer for buoys and lighthouse service, and also to act as a fishery protection cruiser on the Atlantic waters of Canada. This firm built a splendid steamer for the Dominion Government, the Quadra, which is now doing service on the Pacific coast. The proposed new steamer will differ somewhat from the Quadra's lines, being of deeper draft. Her dimensions will be as follows: Length, 180 feet; breadth, 31 feet; depth of hold, 16 feet. She is to have a speed of 12 knots an hour at sea, or 13 to the measured rule. The contract price is in the vicinity of $85,000.

A WORKINGMEN'S EXPOSITION.

It is proposed to hold a Workingmen's International Exposition in Milan, Italy, next year, which, if carried out on the broad lines centemplated by the promoters, with the co-operation of the Government, should yield valuable results. The exhibits are to be divided into three general classes, namely: Works, which will include products of individual workers, small industries, household work, products of co-operative societies, etc.; provisions, which will embrace the work of societies for mutual aid and improvement, institution, models, studies and material for showing how workingmen live, dress, etc., in various countries, as well as hygiene and bibliography in relation to workmen; and instruction, in which class will be displayed all matter relating to industrial schools and and professional schools for different trades and callings. If sufficiently representative in its exhibits, such an exposition would be eminently instructive and useful.—Iron Age.

The Consumers' Oil Company, London, Ont., will go into voluntary liquidation. The creditors, it is expected, will be paid in full.

The Rathbun Company's office and freight shed at the harbor, Belleville, was completely destroyed by fire Thursday morning. Loss from $7,000 to $9,000. Insured for $2,000 on buildings and $6,000 on contents.

The Consumers' Cordage Co. has given notice of an application to Parliament for power to convert its stock. Mr. McGibbon, counsel for the company, in explaining the move, said to-day: "The company's capital stock is now $3,000,000. We intend to ask Parliament for authority to divide this into two classes, $1,000,000 to be preferred stock, entitled to 7 per cent. preferential accumulative dividends, and the balance, $2,000,000, to be common or deferred stock, on which no dividends will be paid until the preferential dividends have been paid."

The annual dinner of the Dominion Commercial Travelers' Association was held at the Windsor, Montreal, Thursday, and as usual was a great success. The newly-elected pesident, Mr. David Watson, occupied the chair, and several hundred members of the association were present. Among the prominent guests assembled were Dr. Anderson, United States Consul-General; Solicitor-General Curran, Mayor Desjardins and Hon. Peter Mitchell. The usual toasts were duly honored, and a very enjoyable evening was passed.

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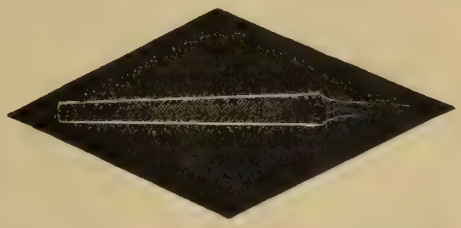
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Chisel Pointed Sawfiles. **Gulletting Sawfiles.**
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THE E. B. EDDY CO., Hull, Canada

HINTS FOR CHRISTMAS TRADE.

BY H. E. W.

At this season of the year, and as Christmas is close at hand, every merchant is looking forward to an increase of business, and as the summer months are the harvest for the farmer, so are the present days the harvest for the hardware merchant. In expectation of a larger trade, stocks are being increased and every imaginable scheme worked out to catch customers, some of which are good and some bad indeed. One bad habit of many merchants at this season of the year is in cutting prices. Go where you will, you will find circulars, posters, etc., announcing great cuts in hardware for the Xmas trade. Why should this be? This is the time when every merchant should not only do a larger trade but also maintain the regular prices, which, by the way, are already fine enough. Instead of this, however, many will resort to the system of "cut and slash." Then after the Christmas and New Year trade is over, and they figure up the amount of business done, they will find that although a large trade may have been done, the profits are all gone, and they are just exactly where they were before the Christmas trade commenced, minus their own time and labor and the profits which could just as well been made as lost. There is no advantage in doing a large trade unless something is made, and why so many hardware men will persist in this cutting of prices at the very time when they should not is a mystery to me.

There are times in the year when a reduction of prices on certain articles may be an advantage, take for example the dull midsummer season, when farmers are all busy and trade in general quiet. At this season, when cash is also scarce it is sometimes a good plan to force business by a few cuts in prices on lines of goods not then staple stock. And while even in the busy season it is always best to keep your business well before the public by good newspaper advertising, the time for increased advertising and special effort in promoting trade is in the dull season, when, too often, many merchants sit quietly down, and while waiting for better times, wonder how it is that trade continues to be so quiet. Keep at all times your business well before the public, but by no means do not reduce your advertising account in the dull season. In my estimation, the main qualifications for a successful business is a neat, clean and attractive store; buy often and keep fresh goods; do a cash business and sell your goods at a fair living profit; have one price only, and that marked in plain figures on all goods so that the customer may see it; have your window dressed neatly and change it often; build up your business on the principle of quality, not quantity, and patronize liberally your local paper; see that clerks are at all times neat in their appearance, obliging and polite, and look well after that class of customers who buy in small quantities and come often, as in nine cases out of ten they will, in the course of a year, leave you more cash than your wealthy customer. Clerks are often inclined to slight the customer who buys in small quantities. This should not be allowed. Where goods are delivered, do so with as much haste as possible. I know of two cases where good customers were lost by neglect in this matter. Let the public once learn that the quality of your goods are excelsior, that your store is always neat and clean, that both your word and that of the clerks can be relied on as truthful, and even though your prices were higher than those of your neighbor, I will guarantee that you will do a paying business. The most profitable and direct way of letting the people know these things is through the newspaper—and then do as you advertise.

TALKS WITH RETAILERS.

"Business is dull, I suppose, in all lines, and we are no exception," said Mr. Fletcher of the Fletcher Manufacturing Co. "It is hard to realize a fair price on goods where things are cut the way they are this fall. I think a lot of people are economising and will not buy anything new as long as the old article will hold together. Collections are hard, and I don't think that there is the least bit of use to try to make any until some time after the holidays. I think while many honest people cannot pay for lack of money, there are a great many who are using the cry of hard times as an excuse. There is a good bit of humbug as well as reality in these hard times."

"You see we are getting things straightened out," said Mr. Pearsall, Yonge street. "There is as nice and roomy a work shop as you can find in a day's march. We are kept pretty busy in jobbing and repairing, and at present have over twenty pairs of skates waiting to be sharpened. I guess we do more in this line than any other shop in this quarter of the city. No, I do not intend taking up any new lines, but will have a larger variety in my usual stock. I intend putting some more machinery in the workshop and am prepared to do anything in this line. Shelf hardware is dull, but if anything is doing I generally manage to get my share."

"The hardware business is not benefited much around this part of the town by sleighing, in my opinion," said W. Pike, Queen street west. "It may do some good to some lines, such as shoemakers. The stove trade is generally pretty well over before the snow comes, and it hurts the building trade and makes things dull in shelf hardware; but what is meat for one is poison for another, and the hardware men around the different markets will reap the benefit of the sleighing, no doubt. We find things rather dull, but still moving. Coal oil trade is good on account of the short days, but there is not much money in it. Sell a barrel of coal oil now, and it will about pay for the barrel."

"There is a great deal of rubbish spoken about people selling below cost," said Mr. Gibson of Gibson & Thomson, Yonge street, Toronto. "We were selling watering cans last summer and a large department store was also selling them. In the smaller sizes they sold a little cheaper than we, but when we came to compare them all through they were dearer in the end. If some merchants wish to cut the price on goods, let them. I sell all my goods at a moderate price and do not have to overcharge in one thing to make up for what I lose on another, and can afford to sell a few less goods and still be in the ring. We handle the Gurney heaters and ranges, and have sold a great many this season."

"The best part of the stove trade is over for the season, though there are a few selling," said Mr. Kinsman, Yonge street, Toronto. "I think the season has been a pretty good one, and I have sold about three times as much as I did last year. Yes, it is hard to get cash at present, but it is easy to get people on your hooks and very hard to get them off. There has been a lack of demand for graniteware this fall, and I do not go much in for such lines. I am making a specialty of bakers' supplies, and am kept pretty busy in the tin shop."

O BLACKSMITH?

O workman of the brawny arm
And the bronzed brow; O say,
Out of the hissing and smitten steel
What dost thou make to-day?

Dost thou use thine art in this time of peace
To fashion the thirsty sword,
That shall cleave its course without remorse
In the battle-wrath abhorred?

Or dost thou forge, with force and fire,
The terrible bayonet,
That shall gleam at the front, and bear the brunt
When the serried hosts have met!

And the grey-haired workman paused in his task,
His heated brow to cool;
He shook his head, and "Alas," he said,
"I'm making a shoe for a mule."

—A. W. Bellaw, in Tid Bits.

The J. & J. Taylor Safe Works, of Toronto, made a shipment of safes to Hong Kong last week.

The Trade Review, of Montreal, looks neat, healthy and vigorous in its enlarged form and new dress.



Fuel is a Large Item in Your Expense Account

CUT IT DOWN ONE-THIRD

By covering your Steam Pipes and Boilers with SECTIONAL MINERAL WOOL COVERING, preventing condensation and loss of steam.

Others have done it, why not you? Full line ASBESTOS GOODS on hand

Canadian Mineral Wool Co., Ltd.,

111 BAY STREET, TORONTO.

GEO. A. COWAN, Montreal Agent, 204 St. James St. GEO. R. THOMPSON & CO., Manitoba Agents, Winnipeg.

THE GURNEY ARBITRATION.

The arbitration over the value of the Gurney property at Hamilton was held at court house there Wednessday before ex-Judge Kingsmill, as sole arbitrator. The firm of E. & C. Gurney decided in October last to divide the interests in the business, the Edward Gurney estate to concentrate its interest in the Gurney Foundry Company, of Toronto, and the Charles Gurney estate in the Gurney-Tilden foundry here. The property involved in this city includes the foundry block on John street, 70 feet of frontage on the west side of John street, and the Gurney scale factory on James street north. R. A. Kennedy, J. Turnbull, Wm. Vallance, W. Roberts, and other witnesses were called to-day. Osler & Co. appear for the Gurney-Tilden Company, and Thompson, Henderson and Bell for the Toronto firm. The evidence at Hamilton was concluded Wednesday afternoon.



All Silverware stamped

TORONTO SILVER PLATE CO.

Is Guaranteed as to Quality.

Factories and Salesrooms

570 KING ST. WEST

TORONTO, CANADA.

E. G. Gooderham, Manager. Jno. C. Copp, Sec.-Treas.

Central Business College

TORONTO AND STRATFORD.

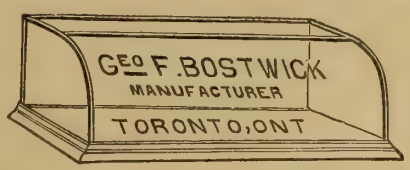
Canada's Greatest Business Schools.

FORTY DOLLARS invested in a first-class business education will produce highly satisfactory results.

Others have found it a paying investment Why don't you try it?

Write for catalogues.

SHAW & ELLIOTT, Principals.



Mantels, Grates and Tiles, Office and Store Fittings and Furnishings.

Clarkson & Cross

ACCOUNTANTS . . .

Established 1864.

26 Wellington St. East, TORONTO



THE OAKVILLE BASKET CO.,



Manufacturers of 1, 2, 3 Bushel

Grain

AND

Root

BASKETS

THE OAKVILLE BASKET CO.



C. C. HARRIS

Manufacturer of Solders and Antimonial Alloys.

Cor. Wickson Ave. and Yonge St., Toronto.

E.O.W.

BUSINESS CHANGES.

DIFFICULTIES, COMPROMISES, ASSIGNMENTS.

G. M. Connor, lumber, Edmonton, N.W.T., has assigned.

J. B. Wilson, general store, Kaslo, B.C., is offering to compromise.

Ganong & Wilson, general merchants, St. Stephen, N.B., have assigned.

J. W. Ross, general merchant, Chatsworth and Sundridge, has assigned.

W. C. Young, general merchant, Alvinston, has assigned to C. B. Armstrong.

Philip Turcotte, shoemaker, Quebec, has assigned ; assets, $2,250 ; liabilities, $3,000.

J. M. Skelton, general merchant, Grand Valley, has assigned to James Glanville, Toronto.

The sheriff is in possession of the premises of Jas. Millay, tinware, Metcalf, and the stock is to be sold Jan. 2.

These are among the assignments announced in the Province of Quebec :— Moore & Co., general merchants, Windsor Mills ; Arsene Crepeau, general merchant, Wotten.

No definite settlement has been arrived at by the creditors of Long & Meharry, but the Western Bank seems to be the only creditor that has not yet acceded to the insolvents' offer of 25 cents on the dollar.

Louis Napoleon Dagenais, merchant, Montreal, has assigned at the demand of Mark Fisher, Sons & Co., with liabilities of about $18,000. The principal creditors are MacDougall, Barrett & Co., $1,374 ; M. Fisher, Sons & Co., $1,279 ; Jas. McDougall & Co., $1,173; Gault Bros. & Co., $1,161; R. Kornmair & Co., $1,030. ; Dame M. L. Dusault, $3,000.

The meeting of the creditors of William Brown, wholesale carriage hardware, Wellington street east, Toronto, will take place on Friday. No statement of the state of affairs has yet been prepared, Mr. Brown being laid up with illness. It is said, however, the nominal surplus will reach at least $35,000 or $40,000. This, however, is mostly in bills receivable and book debts.

PARTNERSHIPS FORMED AND DISSOLVED.

W. H. McLean and Allan McL. Evans have registered a partnership to carry on business as general merchants, Stellarton, N.S., under the firm name of McLean & Evans.

SALES MADE AND PENDING.

Hugh McCulloch, hardware, Stonewall, Man., is reported offering to sell out.

The hardware stock of Arthur R. Precourt, Montreal, is advertised for sale by bailiff.

The estate of Louis Pelissier, merchant, Montreal, is advertised for sale by bailiff.

The estate of H. Bolduc, paints, etc., Montreal, is advertised for sale by the bailiff.

The stock, etc., of D. J. Howell, photo supplies, Toronto, is advertised for sale by tender.

The stock, etc., of Demers & Demers, boot and shoe manufacturers, Quebec, is advertised for sale.

The general stock of James Heamen, general merchant, Alexander, Man., is advertised for sale by auction.

The general stock of Whitehead & Stewart, general merchants, Neepawa, Man., has been sold at 64½c. on the dollar to Davidson & Co.

The boot and shoe and men's furnishing stock of W. Jenkins & Son, Petrolea, has been sold. The price was 56c. on the dollar, and George Howard was the purchaser.

CHANGES.

Carlin & Lake, general merchants, Anthracite, Man., have sold out to G. C. Little.

The Bentley Lumber Co., Lethbridge, Man., has sold out to Stanbury & Colpman.

M. E. Beebe, harness, Owen Sound, has sold out to Thos. Kenney.

Thos. Reed, foundryman, St. John, N.B., has been succeeded by A. Young & Co.

The general business of E. P. Archbald, Little Grace Bay, has been transferred to F. W. W. Archbald.

John C. Nelson, who has been in the Northwest for some months, has disposed of his business here to his sisters, who will continue it under the firm name L. B. Nelson & Co. Mr. Nelson has purchased a boot and shoe business in Woodstock.—Free Press, Acton.

FIRES.

The axle factory of the Gananoque Spring & Axle Co. has been damaged by fire ; insured.

G. Brasher, general merchant, and C. Thompson, drugs, Tilsonburg, have been partially burned out.

DEATHS.

C. J. Smith, lumber merchant, Ottawa, is dead.

HONEST WORKMEN.

One great need of the times is a larger number of honest workmen in all lines of trade, says American Mechanic. The story is told of an old Scotchman that died some time ago, who was asked by a friend, when it was apparent that he could live but a few hours longer, if he was afraid to die, to which he replied that he saw no cause for fear, as he had worked as a carpenter for fifty years, and never drove a screw without putting soap on it. (Soap is sometimes used for this purpose so that the screw may be easily removed several years afterward, should occasion require it.)

We wonder if the average plumber could give the same kind of a reply to a similar question? Could he honestly say that he had never put a lot of red lead into the tees, elbows and couplings that he has used, when he knows that it will do harm there and never any good? Could he with a clear conscience say that he had honestly worked nine hours for every nine hours' pay that he had collected? Does he believe that every joint that he has made is a good one to the best of his knowledge, especially if said joint is well out of sight? Would he dare to state that he has never purposely forgotten (?) to bring necessary fittings, etc., from the shop to a job in hand when he came in the morning so as to put in an hour in going back for them.

We wonder if every fireman has always done the best that he could for the interests of his employer, and made the expense of boiling water as low as possible? Has every engineer who reads this performed every one of his numerous duties to the best of his knowledge and ability, as one day followed another?

And last but not least, we wish to enquire if every manufacturer and steam user to whom this paper shall come has always done what is right by his engineer and fireman? Have they always provided proper light and ventilation for places where men must spend from 10 to 16 hours per day during a large portion of their lives, or have they simply built engine-rooms and boiler-houses where they could at the least expense to themselves, and then told the men who are expected to run their boilers and engines that if they could not stand the heat and the foul air, and work in the darkness and gloom, that they can easily vacate their positions, and plenty of men can be found who will be glad of a chance to take their jobs?

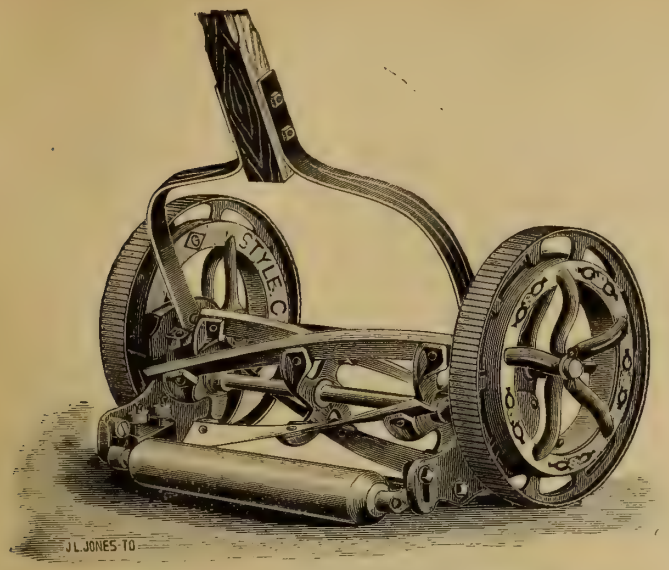
Where these men have proved faithful and trustworthy, have they rewarded them according to their merits, or have they only calculated on how little they could pay them and how much they could abuse them without forcing them to seek other situations where their merits would be appreciated? These are fair questions and should be given honest consideration, as they are well worthy of it, but too often such queries only excite wrath and call forth execrations on the questioner.

Well, we are always willing to have men wear coats that fit them, as they are more becoming than ill-fitting garments, and we have also noticed that when a sportsman fires into a flock of birds, those that have not been hit fly away as if nothing had happened and those that are wounded flutter and fall to the ground. So it is with men, for some will read such matter and be greatly amused to see the other fellows get hauled over the coals, while others take offense when other matters are referred to, because they feel that seme of their shortcomings have been referred to,

> "But I think we need not make much of a fuss
> If what we read doesn't hit us."

—American Mechanic.

Politeness, like beefsteak, had better be a little underdone than overdone.—Galveston News.



THIS IS A CUT OF OUR NEW

"Style C" Lawn Mower

FOR 1894.

10½ in. Driving Wheels for sizes 14 to 20 inch, 9½ in. Wheels for 12 in. New and Improved Gearing throughout. Reserve your orders until you have seen samples and obtained our prices.

THE JAMES SMART MF'G CO. LTD.
BROCKVILLE, ONT.

. . ELEY'S . .
CANADIAN CARTRIDGE



Loaded with Best Powder and Patent Shot.

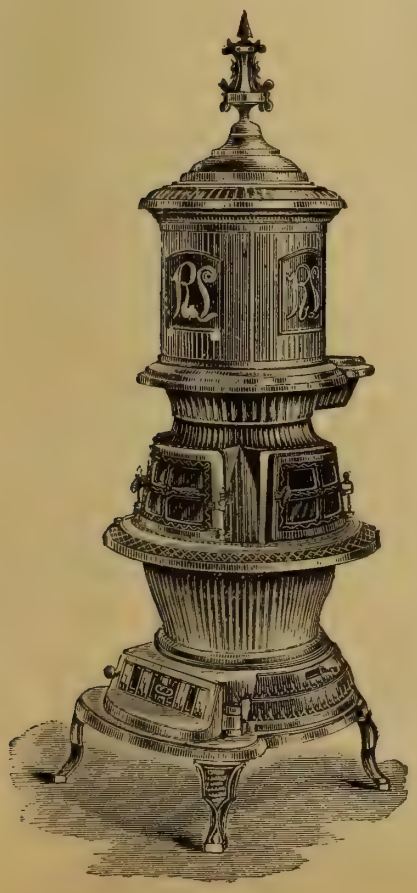
ELEY'S GUN WADDING



Manufacturers of EB and other Percussion Caps.

To be had of All Dealers. **Wholesale Only.**

ELEY BROS., LTD.
254 Gray's Inn Road, LONDON, ENG.



FOR . . .

Warehouses



Churches

School Houses

ETC., ETC.

A GLOBE STOVE

Is the Best.

We have them from $2.50 to $18.00.

Wm. Clendinneng & Son, MONTREAL

TELEPHONE 1780.

J. H. FARR & CO. MANF'RS OF **FINE VARNISHES**

Shellacs, Japans, Asphaltums, Oil Soap, Roofing and Paving Pitch, Tarred Felt and Building Paper.

Importers and Dealers in Bronze Powders, Gold and Metal Leaf.

8 to 16 MORSE STREET, - - TORONTO, ONT.



For Iron Fencing, Bank and Office Railings and all kinds of Iron Work address

Toronto Fence and Ornamental Iron Works,

73 Adelaide Street West, TORONTO.



Ontario Nut Works, Paris

BROWN & CO.

Manufacturers of

All sizes of Hot Pressed Nuts, Square and Hexagon

THOS. FIRTH & SONS, Ld.

Best Crucible Cast Steel.

STEEL, PEECH & TOZER, Ld.

Bessemer Steel,

Open Hearth Steel.

Agents,

James Hutton & Co.

MONTREAL.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—
56 and 28 lb ingots, per lb .. 21, 22
Straits ..... " 20½, 21

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
M.L.S. equal to Bradley		
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 00	4 25
I.X., "	5 00	5 25
I.X.X., "	6 00	6 25
I.XXX., "	7 00	7 25
D.C., 12½ x 17	3 75	4 00
D.X., "	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be purchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets ..	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.	....	13 00
" " I.X.	....	16 00

Charcoal Tin Boiler Plates.

	Per lb.
Cookley Grade—	
.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6½	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb ..	$1 95	....
Refined " " ..	2 35	2 65
Horse Shoe " " ..	2 60	2 75
Band " " ..	2 50	2 60
Hoop " " ..	....	2 60
Swedish " " ..	4 00	4 25
Sleigh Shoe Steel	.....	2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets...	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
⅜ " nd thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2½, 2¾
26 "	2¾, 2⅞
28 "	2¾, 3

Canada Plates.

All dull	2 65
½ polished	2 75
All Bright	2 90

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾
Gordon Crown—	
16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5¾
28 " "	5¾, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6	6 3-5
" ¼ " "	4⅝	5
" 5-16 " "	4½	4⅝
" ⅜ " "	4¼	4½
" 7-16 " "	4	4¼
" ½ " "	3⅝	4
" ⅝ " "	3½	3⅝
" ¾ " "	3	1-5
Trace, per doz. pairs	$3 60	5 90
German coil, per 100 ft	1 65	2 70
Jack chain, iron, single, per doz yards	0 13	0 50
Jack chain, double, per doz yards	0 15	....
Jack chain, brass, single, per doz yards	0 20	1 10

Copper—*Ingot.*

English B. S ..... ton lots	0 11¾	0 12
Lake Superior	0 12¼	0 13

Bolt or Bar.

Cut lengths, round, ½ to ¾ in.	$0 22	$0 25
" round & square 1 to 2 in	0 20	0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16	0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17	0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26	0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb..	0 18	0 19
" 35 to 45 " " ..	0 16	0 17
" 50 lb and above per lb	0 15	0 15½

Boiler & T. K. Pitts.

Plain Tinned per lb	....	0 21
Spun " "	....	0 25

Wire.

Pure, in coils—		
From 1 to 20 gauge	0 25	0 27
From 20 gauge, up	0 28	0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20	0 21
" " 27 to 30 " ..	0 23	0 25
" " 30 and up	0 26	0 28
Sheets, hard-rolled 2x4 ft...	0 21	0 23

Zinc Spelte .

Foreign, per lb	0 04½	0 05
Domestic "	0 04⅝	0 04¾

Zinc Sheet.

5 cwt casks	0 05½	0 05⅝
Part casks	0 05½	0 05¾

Lead.

Imported Pig. per lb	0 03	0 03½
Domestic "	....	0 03
Bar, 1 pound	....	0 04½
Sheets, 2½ lbs, sq. ft, by roll	0 04½	0 04¾
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04½	0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)...	0 15	0 16
Standard	0 14	0 15
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12	0 12½
Other makes "	0 11	0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt		5 00
No. 1 Do "		4 75
No. 2 Do "		4 50
No. 3 Do "		4 25

Prepared Paints.
(In ½, ¼ and 1 gallon tins.)

Pure, per gallon	$1 00	1 20
2nd qualities "	0 90	1 00
Barn (in bbls)	0 80	0 90

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p.c wt	1 35	1 40
" " (J.F.L.S.) " "		2 75
" " Royal " "	1 10	1 15
Venetian Red, (best) " "	1 80	1 90
English Oxides per cwt	3 00	3 25
American " } " "	1 25	1 90
Canadian " }		

Paris Green, per lb	0 13½	0 15
Burnt Sienna, pure, per lb		0 08½
Burnt Umber "		0 05
do pure		0 08
Drop Black "		0 09
Chrome Yellows "		0 12
" " Lemon pure, 8 lb. tins, per lb		0 19
Chrome Greens "		0 12
Golden Ochre		0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal		0 69
Extra "		0 90
Brown Japan "		0 65
Brown Japan, Turpentine p. gal.		0 85
No. 1 Carriage "		1 30
Gold Size Japan "	1 00	1 20
Pure Orange Shellac "	1 95	2 05
Hard Oil Finish "		1 30
Oil Shellac		1 40
White Shellac		2 25

Linseed Oil (in bbls)

Raw, per gal	0 60	0 62
Boiled "	0 63	0 65

Turpentine (in bbls)

Selected Packages, per gal	0 44	0 46

Castor Oil.

Best, per lb	0 07⅞	0 08

Cod Oil.

Cod Oil, per gal.	0 50	0 51

Glue (in bbls)

Common, broken	0 10	0 11
French medal	0 11	0 13
Cabinet	0 13	0 15
White, extra	0 16	0 18
Gelatine	0 20	0 30
Strip	0 16	0 17
Coopers	0 17	0 19

Liquid Glue—F. LePage's, dis. 20 to 25 per ct. off list; Munn's, dis. 25 to 30 per cent. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb..... 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 23

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardin Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per cwt 0 60 0 65
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18
Chisels—*Socket, Framing and Firmer*
American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size United inches	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
16 to 25	1.20-25	2.40	1.75	
26 to 40	1.40	2.70	2.00	
41 to 50		3.10		4 50
57 to 60		3.40		5.00
61 to 70		3.70		5.50
71 to 80		4.10		6.25
81 to 85		4.50		7.00
86 to 90				8.00
91 to 95				9.00
96 to 100				10.00

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0
Enamelled " 0 55

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb . 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's..... 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent

NEW ARRIVALS

30 Cases CUTLERY AND GUNS

ALL NEW GOODS.

Finest Finish. Best Value.



NEW ARRIVALS

20 Casks Cattle and Trace CHAINS

10 Tons Coil Chain.

Five Cars Window Glass.

Bowman, Kennedy & Co., London, Ont

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw, bright, Eng., dis. 50 to 55 per cent.

Horse Nails

Canadian, dis. 65 to 70

Horse Shoes,

F.O.B. Toronto & Hamilton $3 80
Snow, " ... 3 90
F.O.B. Montreal 15c. less, and London 5c. more than above.

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross..... 1 60 4 75

Knobs.

Door, japanned, and N. P., per doz. 85 to 3 00
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross..... $1 30 4 00

Ladles.

Melting, per doz..... 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Blacksmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.
   Basis—50 to 60 dy..... 2 30
   40dy..... 2 35
   30 dy..... 2 40
   20, 16 & 12 dy..... 2 45
   10 dy..... 2 50
   8 & 9 dy..... 2 55
   6 & 7 dy..... 2 70
2. American Pattern Only
   from 4 to 5 dy 2 90
   3 dy. (lath)..... 3 30
3. Canada Pattern Only
   from 4 to 5 dy 2 80
   3 dy. (lath)..... 3 20
   3 dy A.P. Fine 3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

per gross

Square, round and octagon 3 38 4 00
Diamond..... 12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 60 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz..... 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross..... 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz..... 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan. R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz..... 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz..... 4 00 5 50

Pulleys

Hothouse, per doz..... 55 1 00
Axle. 22 33
Screw 27 1 00
Awning..... 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3½ 3¾
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 55 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	8	10 10½
¼, 5-16, ⅜ in.....	8½	10½ 10⅝
Cotton, per lb.....		18 20
New Zealand		8½ 9
Russia Deep Sea, per lb..		12½ 13½
Jute ..... " ...		06¾ 07½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb..... 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D, dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz..... 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P, dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 special brands net price.

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis. 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Sapolio

In ½ or ⅛ gross boxes, per grs. 11 30.

Soldering Irons.

Per lb..... 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross 7 50 12 00
Dessert " ..... " 21 00 .....
Table " ..... " 30 00 30 00
Dessert Forks.... " 24 00 .....
Medium " .... " 27 00 .....
Table " ... " 36 00 .....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4¼ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.
Stove Polish, (Catchpole's).
Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net list.
Canadian 10 to 15 per cent dis.

Tinware.

Stamped, dis. Assn list, 70, and 12½ per cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ p.c. to 35 p.c
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz..... 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz..... 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9 00

Twines.

Bag, per lb 0 12½ 0 20
Wrapp'g, mottl'd, pr. pack. 0 50 0 60
" cotton, per lb .. 0 18 0 20
Mattress, per lb 0 33 0 45
Staging " 0 27 0 35
Broom " 0 30 0 55
Binding, flax, per lb ....
" jute " ....
" Blue ribbon 0 12½
" Red cap..... ..... 0 11½
" Crown..... ..... 0 10½
" Silver Composite 0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz..... 4 00 6 00
Bench, parallel, each 2 00 4 50½
Coach, each..... 6 00 7 00
Peter Wright's, per lb 0 12 0 13
Pipe, each 5 50 9 00
Saw, per doz..... 6 50 13 00

Washer Cutters.

Per doz..... 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart } 4½ 4¾
" 4 " 4 & 6 " }
" Plain twist, 2&3 wires
" Steel thorn and ribbon..... 4¾ 5
"Lock Barb," 4 point 0 04½
Ditto Glidden 2 point 0 04½
Galvanized Barb, "Lyman," 2 to 4 points..... .... 0 04½
Steel staples 0 04½ 0 04½
Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.
Agricultural, 70 and 5 to 70 and 10 p c
Standard, dis. 60, 60 & 10 p.c.
Coe's Gen'ne, dis. 32½ to 35 p. c dis.
Diamond, dis. 33⅓, 35 p. c.
Tower's Engineer, each .. 2 00 3 00
" S., per doz..... 5 80 7 00
G. & K.'s Pipe " 6 00
Burrell's " each 3 40
Pocket, per doz..... 1 25 2 00

SIMPSON, HALL, MILLER & Co.,

TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

16 and 18 DeBresoles St., Montreal.

REGISTERED TRADE MARK FOR WM. ROGERS. KNIVES, FORKS, SPOONS

Manufacturers of the

Finest Quality Electro-Plated Ware.

And Sole Manufacturers of the Celebrated

WM. ROGERS' Knives, Forks, Spoons, Etc. A. J. Whimbey, Manager

---

RAZORS, SCISSORS

POCKET KNIVES



TABLE KNIVES

BUTCHER'S KNIVES

None Genuine without this Brand



Stamped in head of Every Package.

BLACKSMITHS' TOOLS.



Horseshoe Vises.

Price, No. 1, - $4 00
" No. 2, - 7.50

Will save their cost in a week's sharpening. . . . .

A. B. JARDINE & Co.

HESPELER, ONT.

Do we make any other Skates besides our **GENUINE ACMES?**

Well, We Rather Think So!

What About our Hockey? The most elegant and suitable skate for the purpose ever made.

What About our Racers? Made with wood tops and extra light runners—the only way in which lightness, combined with perfect rigidity, can be secured. Special system of strapping. The leading racers use wood-top skates. Why? Because they know from experience they are the best.

What About our Skeletons? For Rink use the most in demand. Welded iron and steel blades. Plain or nickel-plated.

Why have we secured first honors at Philadelphia, 1876—Paris, 1878—London, 1886—and now Medal and Diploma World's Columbian Exposition, 1893? Because of the superiority of goods exhibited, which are the same as those we are shipping our customers daily.

PRICE?—Ask your jobber about that, and you will find they are quite as cheap as the inferior makes.

THE **Starr Manufacturing Co., Ltd.**

WORKS—Dartmouth. P. O. ADDRESS—Halifax, N. S.



You will Insure Success

IN THE

STOVE



Business, by selling

"Souvenir" Stoves and Ranges

They are Leaders and Sure Profit Makers.

If you are not acquainted with the superior merits of these goods, order samples, and you will lead your competitor in sales.



The Gurney-Tilden Co. Ltd.

Successors to The E. & C. Gurney Co.

HAMILTON - - ONTARIO.



Dominion Wire Mnfg. Co., (Limited)

27 Front St. East, Toronto, Ont. 185 St. James St, Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

MANUFACTURERS OF

2 and 4 Barb Plain Twist and Strip Fencing

And Staples for same.

Write for Prices and Discounts.

ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

We wish you all . .



A Merry Christmas

. . AND A . .

Happy New Year

GOWANS, KENT & CO.

TORONTO and WINNIPEG

SOLE AGENTS FOR CANADA

FOR

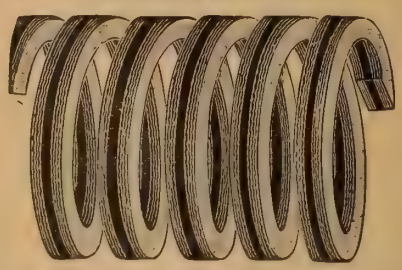
The "Pittsburgh" Lamp

Only Rubber Factory in Toronto.

H. D. WARREN, Pres.-Treas.
CHAS. N. CANDEE, Secy.

"GUTTAPERCH"

BRAND OF



SPIRAL PACKING

ANTI-FRICTION, SELF-LUBRICATING

Neatly packed in 14 in. telescope boxes, 12 feet to the coil and each size in a separate box. Full directions for use accompany each box. Most perfect, convenient and economical **Piston Packing.** Stock sizes 3-16, 1-4, 5-16, 3-8, 7 16, 1-2, 9 16, 5 8, 11-16, 3-4, 13-16, 7-8, 15-16, 1 inch. Will not deteriorate in stock.

Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

OF TORONTO, LIMITED.

61-63 FRONT STREET W., Toronto.



W. & S. BUTCHER, Sheffield, England, Makers for over ***ONE HUNDRED YEARS*** of the celebrated **"WADE & BUTCHER"** Razors, and the Original Manufacturers of Hollow Ground Razors, can with confidence highly recommend their goods and particularly their Brand as being the most perfect ***Extra Hollow Ground*** Razors ever manufactured and especially suited for the use of Barbers and for private use. Genuine Razors are marked with one of the following Corporate Trade marks :

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FOR SALE BY ALL DEALERS IN HARDWARE, CUTLERY and FANCY GOODS

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The Hardware Merchant

New Year, 1894





THE HARDWARE MERCHANT wishes you the Season's Compliments and begs the favor of your advertising for 1894.

We expect our circulation the coming year to exceed 200,000. This means that we will provide you with a traveler and guarantee that each week he will call on the leading buyers in nearly every village, town, and city in every province in the Dominion.

Don't take our word for it. Drop into the Head Office and we will show you our subscription list. Ask your travelers if they do not see it. Ask your customers if they do not take it. Find out somehow, because we want your business.

CANADIAN

HARDWARE

AND METAL MERCHANT

VOL. V. TORONTO, DECEMBER 30, 1893. No. 52.

MAGNOLIA METAL

—IN USE BY—

EIGHT LEADING GOVERNMENTS.

BEST ANTI-FRICTION METAL FOR

High-Speed Engine, Dynamo, Rolling-Mill, Steamship, Railroad, Saw-Mill, Cotton-Mill, Paper-Mill, Woollen-Mill, Silk-Mill, Jute-Mill, Rubber-Mill, Sugar Mill, Flour-Mill, and all Machinery Bearings.

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Mander Bros.' Varnishes

ARE THE RECOGNIZED STANDARD

By which all other Coach Varnishes are judged to-day. Messrs. Walter H. Cottingham & Company, the Agents for these celebrated goods, are more convinced of this fact than ever before, as the demand continues brisk and the sales are much is excess of former years. We call the attention of the Hardware Dealers to **Mander Bros.' Outside Varnish** which has proven such a boon of satisfaction to the consuming public.

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TORONTO

ANOTHER REVOLUTION!

In the Bath Trade.

"Steel Clad" No. 2

READY JANUARY 1894

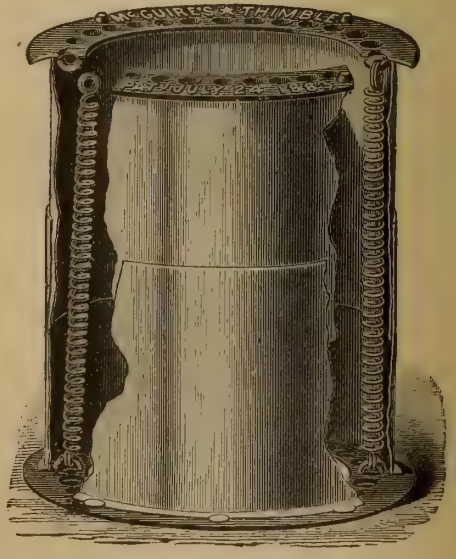
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Toronto Steel-Clad Bath and Metal Co.

LIMITED

123 Queen St. East, **TORONTO**



THE ABOVE CUT REPRESENTS THE

McGuire Patent Stove-pipe Thimble

It is the same cut we have used in advertising and illustrating this Thimble for the last eight years. We desire to inform our customers, and the trade in general, that we have been and still are the sole manufacturers of this Thimble in Canada, the reputation of which is so well established. No other persons whatever have been licensed, under the patents covering this Thimble, to manufacture it. Anyone infringing will be prosecuted. And to beware of those who represent they sell McGuire's Star Thimbles, who have no right whatever to manufacture the same and cannot possibly supply the genuine article.

Kemp Manufacturing Co.

TORONTO, ONT.

.. HARDWARE ..

A PRACTICAL JOURNAL FOR THE WROUGHT, CAST, STAMPED, SHEET AND SPUN METAL TRADES.

Published Weekly. $2.00 a Year.

Vol. V. TORONTO, DECEMBER 30, 1893 No. 52

If the hardware trade of 1893 will be remembered particularly for any one thing it will be in regard to the low point touched by prices. In England and in the United States the same conditions have ruled ; in fact the present state of affairs in Canada is largely attributable to the trade and financial situation of these countries. Upon what these conditions were it is not necessary to dwell. Everybody in the trade is more or less conversant with them. As for any material improvement, the prospects are not bright. Should the present agitation in England for the strengthening of the navy result in the inauguration of extensive ship-building operations, the iron and steel trades of that country would undoubtedly be benefited. But anything approaching great activity has not yet appeared upon the horizon of possibilities. In the United States the prospects are even darker than they are in England. There, in addition to stagnation the most pronounced in the history of the country, public confidence, owing to an aggregation of circumstances, has been so shaken that it will be some time before the normal conditions are again restored.

* * *

The turn over during the year has been rather better than might have been expected when the stagnation that existed the world over is taken into account ; but the ratio of profits to the volume of business transacted has been so small that the returns to the capital invested have been much smaller than usual. In other words, there must now be a larger turn-over of goods, in order to bring the receipts up to what they were a few years ago. But this peculiarity is little if any more marked in the hardware trade than in any other branch of trade. All alike are affected in this respect. The natural consequence of the narrowing down of the margin of profits is the inauguration of a more careful business policy. All who buy and sell goods are being influenced more and more every year by their actual requirements and less and less by speculation. A closer scrutiny of accounts has been induced, and there is a shortening of the terms of credit all along the line. A higher qualification and a larger capital is also demanded of those embarking in business, which, in turn, means a narrowing down of the stream of men starting into business and a greater share of what is going for the merchants already in existence.

* * *

Trade in metals during the year that is just closing has been fairly satisfactory. The phenomenal advances and declines of the previous year have been marked by their absence. This naturally gave business a steadiness which it otherwis would not have had, particularly in view of the depression in the United States. All metals, however, have during the last six months ruled exceedingly low. In shelf and heavy hardware prices have alzo been unmarked by any sharp fluctuations, but this may be in part owing to the fact that associations among the different manufacturers are more numerous than ever before. Indeed it is difficult to say what article in the hardware store there is not an association on. Another feature of the year has been the reduction of the discount on a number of lines. Where these changes have taken place the terms are now four months, or 3 per cent. off for cash, instead of four months and 5 off for cash. While this may not be altogether satisfactory to the retailer who has been in the habit of taking his discounts, the change has its advantage. When the cash discount was 5 per cent. off it is obvious that the wholesaler would rather give a good reliable customer time and take his note, because even after discounting the latter he would be better off than if he allowed the five per cent. at the expiry of 30 days. With the cash discount at 3 per cent. the wholesale men claim that the inducement to persuade all their customers to take their discounts is greater than it was under the previous rate. If it accomplishes this the lower rate of discount will certainly have done much good. The nearer we get to a cash basis the better ; and the narrow margin on profits which now obtains necessitates our getting pretty close to the cash line. For the stove manufacturers the years' appears to have been a good one, in regard to volume of business at any rate, one factory alone having turned out some three thousand more stoves than the previous year. Manufacturers of harvest and garden tools also had a brisk season, the demand in some instances exceeding the ability to supply. Manufacturers of reapers and mowers, on the other hand, have not fared so well. A year ago it was anticipated that there would be a much enlarged demand from the Northwest for these machines, but so far short of the anticipations were the realities that the manufacturers find themselves with unusually large numbers of reapers, mowers, binders, etc., on their hands. As a consequence, their purchases of iron and steel are smaller than usual.

* * *

The paint and oil market has been marked by some strong features during the year. Early in the spring the white lead grinders of Canada formed an association with the object of establishing a uniform price on their product, which had for some time been as erratic as the lines upon a weather map. And well they appear to have succeeded in their purpose, for the price of white lead during the year has not been marked by the sharp fluctuations which had previously characterized it. At the opening of the year the base price was 4½ to 5c.; and when the association was formed it went up to 5¼c., but this price soon fell back to 4¾c. At this price it remained till August, when it was fixed at 5c., and that is still the base price. In regard to turpentine, it is claimed to have ruled lower than during any other year on record; it is quoted to-day at 44c. Toronto, while a yearago the price was 50c. Linseed oil, on the other hand has ruled higher than last year ; about 5c. per gallon it is estimated. This is attributed largely to the short crop of foreign seed, which kept the price high in England. On the Toronto market the price at the opening of the year was 56½c. per gallon for raw, now it is 60c. ; then it was 59½c. for boiled, now it is 63c. Glass has been in good demand all year, and one feature of the trade has been that the proportion of "double diamond" to the other kinds used has been larger than ever before. Prepared paints continue to increase in favor, more of them being on the market and more of them being used.

THE DUTY ON SCRAP IRON.

MR. A. T. PATTERSON, of the Londonderry Iron Company, has favored HARDWARE with additional facts in regard to the present duty of $2 per ton on scrap iron.

He said the duty on scrap iron should be increased for several reasons: First, because it is too low relatively to the duties on other articles, and is, therefore, inconsistent with the principles of a uniform protective tariff for the iron industry. It has the effect of throwing an undue profit into the pockets of a few individuals, and seriously endangers the whole system, as it enables opponents to prove that the tariff is not devised to protect native labor; secondly, it frustrates the object that the Government announced they had in view in readjusting the iron duties which was to develop the manufacture of iron in Canada from Canadian ore, fuel, etc., by affording uniform protection to the labor employed in each branch or stage of the industry equivalent to the difference in cost between European and Canadian wages. In proof of this I would call attention to the following facts:

"The first and most crude form in which iron exists as a merchantable commodity is that of pig iron, on which our duty is $4 per ton. Now, it is entirely inconsistent with the principle on which this duty was imposed to admit a more finished grade of iron upon which a great deal more labor has been expended at one-half the duty imposed on pig iron. As it costs about $12.75 to produce pig iron in Canada, the protection given to the Canadian labor employed on it is about 31½ per cent. Setting aside castings, which is a distinct branch not involved in this discussion, the next stage of manufacture in the progress of pig toward finished iron is that of transforming the pig into puddled bars. To convert a ton of pig into a ton of puddled bars in Canada costs about $13, and our duty on puddled bars being $9 as against $4 on pig, the difference of $5 gives to the labor emp oyed in making puddled bars a protection of 38½ per cent. The third and final stage is the conversion of puddled bars into bar iron, sheets, hoops, or nail plate, which costs in Canada $10 per ton. Our duty on these being $13 as against $9 on puddled bars, the difference of $4 gives a protection to the additional labor employed of about 40 per cent. It may be observed that these duties are not mathematically correct, and that the percentage of protection of labor is higher in the more advanced than in the earlier stages of manufacture, but specific duties are fixed while the cost of labor fluctuates, and they cannot, therefore, be expected to be always uniform to the cost of labor. On the whole, however, our duties on pig iron, puddled bars and bar iron, plates and sheets, etc., are fairly accurate. Free traders think them high, but admit that they are not unequal, and from a protectionist point of view the rates imposed on these articles are fairly proportionate.

"I have shown that the difference in duty between puddled bar and bars, hoop, sheet, or plate iron made from it is $4 per ton, and that it affords a protection to labor employed in the process of 40 per cent., which is relatively high to the protection on labor employed in the earlier stages of manufacture, or, indeed, to the ideal rate necessary to equalize European and Canadian labor, which was 50 per cent. on the former and 33⅓ on the latter. Now, it so happens also that bar iron, hoop, plate, or sheet iron can be made out of what is called wrought scrap as well as out of puddled bars, and the question arises what should the duty on this substitute be? My answer is, it should be such as to afford just the same degree of protection to the labor necessary to convert it into bar, plate, hoop, or sheet iron, as is given to the labor necessary to produce the same articles from puddled bars.

"Now let us see what wrought scrap is, and what it costs to convert it into bars, hoops, etc., and what percentage of protection our present scale of duties affords to the labor employed in that process. Wrought serap is iron which has already arrived at the third stage of manufacture (having been made out of pig iron and puddled bars), but it either has been in use or has been cut off from bars or sheets made too large for the purpose to which they were to be applied. It is, therefore, already finished iron, but requires to be reshaped to adapt it for use. If a piece of scrap iron is large enough, it only requires to be heated once and rolled into the desired form to convert it into a bar-hoop or sheet. Being already finished and less impure than puddled bar, it requires less work to effect the change, which is, in fact, merely an alteration of shape, and not, as in the case of puddled bars, an improvement in quality also. If scrap iron is not large enough to be made directly into the desired form, it may be used in two ways: first, in conjunction with two or more large pieces, filling up vacancies between them, in which case it is identical with the larger piece, requiring only one heat; secondly, it is made into a scrap bar or billet, which is then again made into the bar iron required. This process you, of course, understand requires two heats.

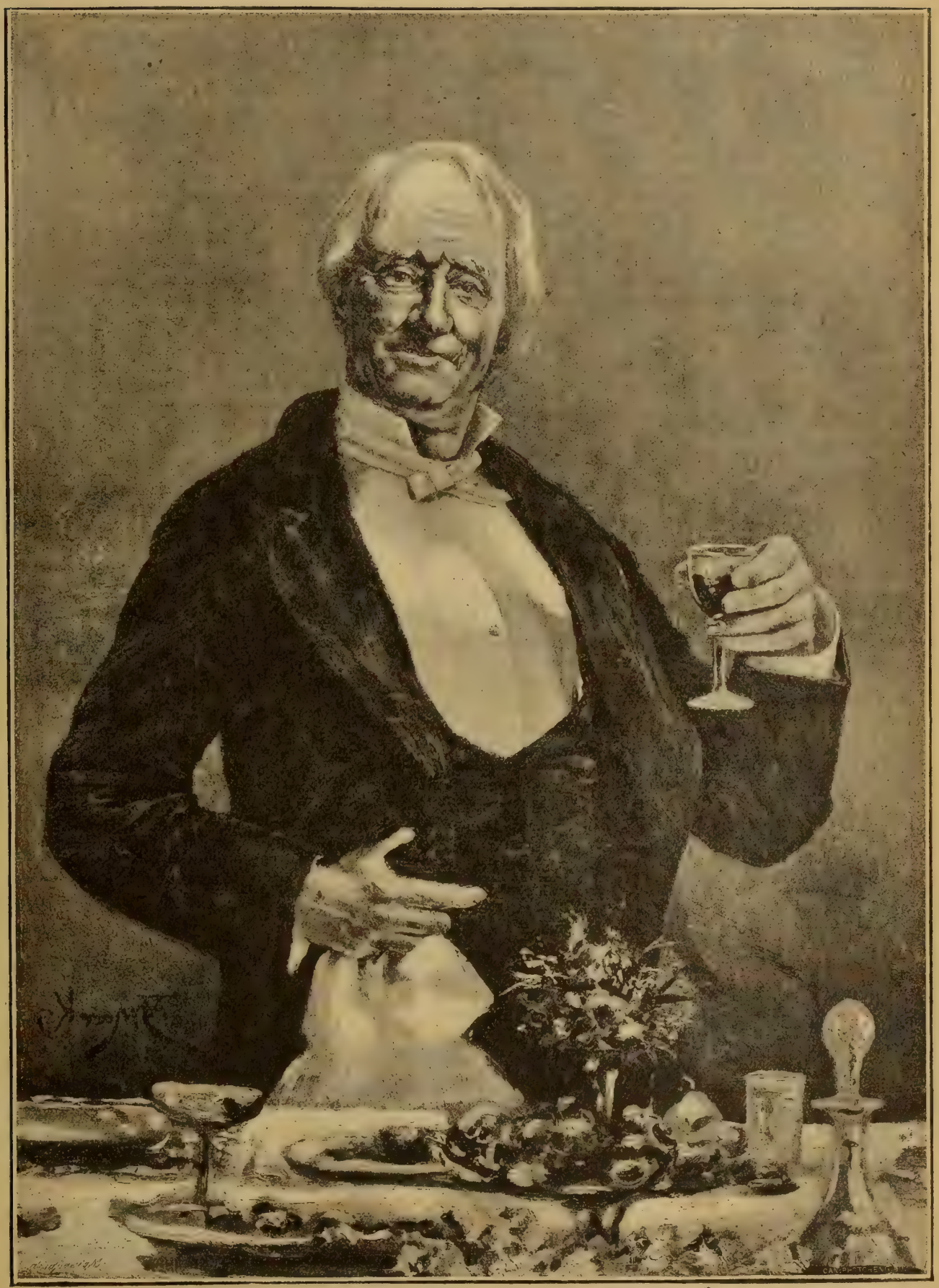
"The cost in Canada of the first of these processes—the direct conversion of scrap by one heat into bar iron—I believe does not exceed $8 per ton, and I have heard it claimed that it can be done for $6 per ton, but for the sake of argument I am willing to assume that it costs as much as to make the same article from puddled bar, say $10 per ton, and as the duty on this scrap is only $2 per ton, while the duty on bar iron that may be made from it is $13, the protection afforded bar iron in such a case is $11 per ton, or equivalent to 110 per cent. on the labor employed.

"The cost in Canada of the second mode of dealing with scrap iron is about $14 per ton, and as the difference in duty is $11 as above, the protection to the labor is equivalent to about 79 per cent. The fact that labor in Canada costs so much more than in Europe naturally causes our people to buy the first class of scrap in preference to the second, even if they pay rather more for it than an European manufacturer would, and I believe that I am well within the mark when I say that two-thirds of the scrap imported into Canada is of the first class. Taking it at that ratio, the average labor cost of converting scrap into bars will be $11.33⅓ per ton and the protection on it $11, or 99⅓ per cent., a rate entirely out of unison with the protection given to labor employed in any other branch of the industry, and this undue excess of protection does not affect wages, for if they were raised in proportion we should at once be flooded with operatives from the United States.

"It is clear, therefore, to me and to every one who cares to go into the subject that this unfair duty merely affords an extra profit to the manufacturer who works scrap at the expense of the revenue or consumer and crushes out the manufacture of iron from puddled bar, thus defeating the object the Government had in view in readjusting the tariff two years ago. I think my remarks prove the justice of the request that the makers of puddled bars should be protected from the unfair competition.

"It has been contended in opposition to an increase of the duty on scrap that if it was done there is not enough puddled bars made in the country to supply the demand. This is quite true, and what is more, there will be less and less puddled bar made, unless this unfairly low duty on a substitute for it is allowed to exist. As a matter of fact, not half the pig iron is being puddled that there was a year or so ago. If the change were made, however, the production of puddled bars would increase in the same ratio as the production of Canadian pig iron has increased, and every one knows what this increase has been.

"I may point out also that the change would be certain incidentally to lead to an increased consumption of Canadian pig iron as well. Pig iron is usually classified as foundry and forge iron, and the former is again subdivided into soft foundry and hard foundry, and experience has shown that a furnace running in Nova Scotia under existing conditions will turn out about one-third soft foundry, one-third hard foundry and one-third forge iron. At present only the soft foundry finds a good market in Canada, the sale of the hard foundry being



"WELL, HERE'S TO YOU, AND MANY OF THEM."

interfered with by the extraordinary facts above outlined. These preclude the sale of forge iron in Canada, as the low rate of duty on wrought scrap prevents the manufacture of bar and sheet iron in Canada out of Canadian pig except at a loss. If the duty on scrap is increased, therefore, to a uniform extent, it should naturally lead to Canadian puddled bars replacing it, and so increase the consumption of native pig iron to an extent equivalent with the present importation of scrap iron. I hope I have made myself clear," said Mr. Patterson, and the interview ended.

AN IDEAL FOREMAN.

WHILE much has been written upon the subject of skilled and unskilled labor by a certain class of writers, others have made the question of the qualifications necessary for a successful foreman the subject of many labored articles; and while each one has his own ideas upon this subject, there is still quite a variety of opinion, and the question of what constitutes the necessary qualifications for a successful foreman has not been, to my mind, answered in a satisfactory manner.

I do not intend to discuss the necessary qualifications for a successful manager of a large concern, where each department is under the direct charge of a foreman who is in daily contact with his men. The general manager of a large concern may be a man of ability and a successful one in that position, and not be personally acquainted with half a dozen of the men in the works aside from the different foremen in the several departments under him, and know but little of their abilities as mechanics.

But it is the foreman in each department that we intend to refer to who is in daily contact with the men under his charge and must necessarily not only know the mechanical skill and ability of each individual workman, whether he is a skilled workman or a laborer, and he has also an opportunity to study the disposition and temperament of each in order to obtain the best results from his labor; and the foreman who goes about the shop with his nose elevated in the air and considers it beneath his dignity to speak to one of his men, except to give some orders about his work, makes the same mistake as the other style of foreman that has been referred to, who is the first in the mill or shop in the morning and the last one at night and spends the greater part of his time in tearing around the mill finding fault and swearing at every man or boy that he comes in contact with. Such men can never become acquainted with their men or understand them, and consequently they are always working to a disadvantage, and while he spends all of his time in watching his men the men are apt to spend the greater part of their time in watching him. While there is no objection to his being on time in the morning and remaining in the mill until quitting time at night, it makes no difference how good a mechanic he may be he must, in order to be a successful foreman, command the respect and good will of his men, which he can never do so long as he persists in the practice just referred to; and I am sorry to say that too many such foremen are to be found at the present time. There is reason, however, in all things, and while it is true that it is not always good policy for the foreman of a mill or shop to make himself too familiar with all his men, for while a certain amount of familiarity is always appreciated by a certain class of men, there are others that take advantage of it and fulfill the old proverb that "familiarity breeds contempt," and the foreman who indulges in too much familiarity with this class of workmen will soon find that they have but little respect or regard for him.

One writer in particular whom I have in mind insists that a foreman, to command the respect of his men, should never equalize himself with any of them, but treat every one alike by keeping the same wide gulf between them. Now in this respect I differ with him materially, but at the same time the foreman should study the disposition of his men, and if he will do so carefully he will find some who are just as intelligent and perhaps as well educated, besides being as good practical mechanics as himself, and a pleasant word or a little conversation with such men at times will do more to gain their confidence and respect than all the laws, although they may be as strict and unchangable as those of the Medes and Persians. My ideas of an ideal foreman may differ from others, but if they do it may be owing to different conditions. I write, however, from my own personal experience as a workman, foreman and general manager.

While it is true that all mills, shops and other wood-working establishments are not up to the same standard or governed by the same rules and conditions, still there is sufficient similarity between the same rules, with perhaps some slight modifications, to apply to all. Take, for example, a medium sized planing mill. While it is not to be expected that the foreman will stand in front of any one machine and run it or perform the hardest part of the work in the mill, still he should be a first class wood-worker and competent to take hold of any machine in the mill and not only run it, but put it in good working order. If he possesses the knowledge and ability to do so he will be the better able to intelligently direct the work of others, and also better able to judge of the quantity and quality of the work performed by the men under his charge, and in order to properly direct the work in the mill it is not necessary for him to go tearing around with one suspender, and that made of lace leather, and his pantaloons tucked into his boots, as the ideal foreman of one writer is described as doing. Neither is it necessary to swear at every man and boy in the mill at least once a day, as some foremen do. My ideal foreman would dress himself decently and according to his work, and by treating his men in a firm and gentlemanly manner he will be more likely to command their respect and confidence than otherwise. While I cannot but think that the exquisite clothes of the dude have no place in a saw mill, planing mill, or machine shop, still I believe that the foreman who goes to the other extreme renders himself equally ridiculous in the estimation of his men, and I believe that the foreman who dresses himself in a plain, decent, and substantial manner and conducts himself in accordance with his dress will be more likely to command the respect of his men than otherwise. Example with men as well as animals is said to be contagious, and the foreman who is careless and slovenly with his dress and person is very apt to be so with his work, and his men generally follow his example. With a foreman of a planing mill, while it is not absolutely necessary that he be a practical machinist, still he should thoroughly understand the principles of all the machinery under his charge, so as to be able to direct all the necessary repairs and explain in an intelligent manner to the machinist the requirements in the case. The style of foreman referred to will always manifest good judgment in selecting his men, and while many of the men employed in the mill are classed as unskilled labor, still there is a great difference in the intelligence and skill of this class of men.

Finally, my ideal foreman should be a gentleman in the strict sense of the term; he should treat all his men, whether skilled or unskilled, kindly but firmly, and when he gives an order it should be understood that his orders must be obeyed, and if a man becomes careless and negligent, and fails to perform his work according to orders, go to him in a kind but firm manner and admonish him, and if he persists in the same course after reasonable admonition, promptly discharge him, let others be influenced by his example; for, as before stated, example is contagious. Another thing I have noticed in my long experience is that those mills which employ a foreman of the kind I have described necessarily have to pay him a liberal salary, but at the same time they are generally found to be prosperous and making money.—C. R. Tompkins, in Age of Steel.

An Italian inventor in New York has just devised a water filter, the principle of which embodies a theory of his own, that water is best filtered upward instead of from the bottom. The advantage of filtering water upward rather than downward is obvious. When water is filtered downward it has to be strained through the accumulation of impurities. In filtering upward the impurities fall to the bottom of the vessel.

BRAD BRACKETT.

Brad Brackett kept a wholesale store
Under the Spring hoe-tel ;
And though his ware was in demand
It was hard ware to sell.

His stock of staple goods was on
A scale you seldom find ;
Including pokers, shovels, tongs,
Andirons of that kind.

Although a skillful financier,
He would not gouge in trade ;
Nor chisel any one a bit,
If ne'er a cent he made.

A plane and quiet man, he ne'er
Was known to stirrup strife ;
A firmer friend one never saw
En-gauge in business life.

Possessed of hinge-enuity,
That compassed one's ends,
He did his business on the square,
And had a host of friends.

'Twas not by any ax-ident
He rose above the rest ;
The key to his success was that
He did his level best.

Nobody had a stronger faith
In printers' ink than Brad's ;
He used to say he carved his way
To fortune with his adz.

He always paddled his own can-oe,
And, pulley as he might
Against the stream or with the stream,
Was sure to come out right.

Of being a strong partisan
He had the reputation ;
But, rather than support bad men,
He'd bolt a nomination.

As a tack-tician he excelled—
In auger-nizing led—
Though screw-pulous, was sure to hit
The nail upon the head.

He deprecated rings and frauds,
And scorned a party tool ;
In politics, religion, trade,
He observed the golden rule.

He was no misanthrope, but took
A file-anthro-pick view
Of life, with its vise-cissitudes,
As all of us should do.

A splendid "catch," he lived a bach,
Anvil-age belles were told,
They tried in vain his heart to gain
With beauty or with gold.

Though a teetotaler, he kept
The best of bars, 'tis true,
Where one could get his "nippers," and
All kinds of punches, too.

But fickle forture chain-ged at last.
And caster threatening pall
O'er him, and with one fatal wrench
Deprived him of his awl.

His locks by sorrow's weight were turned
To silver, and 'ere long ;
He fell before the scythe of Time
To join Death's mighty throng.

—Detroit Free Press.

COMMERCIAL TRAVELERS DINE.

THE Dominion Commercial Travelers' Association held their annual dinner at the Windsor Hotel in Montreal on Thursday evening last. Now the drummer, as he is called, knows how to enjoy himself, none better, for who has the collection of stories, yarns, etc., than he has. He is eloquent himself, as many a buyer throughout the length and breadth of the land can vouch, and therefore can appreciate eloquence from others. With all these advantages, therefore, it is needless to say that the boys had a good time at Montreal last week. They had, and a good deal was also due to the fact that the following gentlemen had the arrangements in hand :—Messrs. F. Birks, G. L. Cains, J. H. Clerk, F. S. Cote, E. H. Copland, W. H. Callahan, J. T. Dwyer, F. X. de Grandpre, M. E. Davis, A. Elliott, I. Friedmann, C. Gurd, Fred. Hughes, P. S. Lassonde, E. D. Marceau, J. H. Morin, W. McNally, T. L. Paton and A. A. Mason, whilst special praise is due to the indefatigable efforts of the secretary, Mr. H. W. Wadsworth, who greatly helped to make the dinner the success it was.

They saw that nothing was wanting, so that when President David Watson, the newly elected president, took the chair at 8 o'clock everything was as it should be. At his table were seated His Worship Mayor Desjardins, Solicitor-General Curran, U. S. Consul General Anderson, Col. Stevenson and Messrs. F. Hughes, Geo. Cains and Geo. Summer, ex-presidents of the Association.

After the good things had been disposed of the chairman read letters of regret from many, among others the Governor-General, Sir John Thompson, Lieut.-Governor Chapleau, Hon. W. Laurier, Hon. L. O. Taillon, Hon. N. Clarke Wallace and Mr. W. C. Van Horne.

The chairman followed this up with a nice little speech. First thanking the members for the honor they had conferred upon him, he passed on to refer to the work the Association was doing, which he claimed was a great and noble work. Its objects were to promote the welfare and interests of its members, by making provision against sickness, misfortune, accident or death, and by relieving the widow, orphan children or representatives of members deceased. The total income for the year 1893 was $20,326. Out of this $13,000 had been paid in death and accident claims, whilst the ordinary working expenses were only $4,866. He then, amid loud cheers, submitted the toast of "The Queen and the Royal Family," which was loyally drunk with musical honors.

These were followed by the toast of the President of the United States. Consul-General Anderson, whose abilities in this respect are well known, made a very humorous reply. He said that after an absence of a few years, enforced by circumstances entirely beyond his own control, it was his privilege and honor to again be a guest of the Dominion Commercial Travelers' Association. On his return to Canada he noticed, with great pleasure, that Montreal had made wonderful strides in improvements, one of which was the introduction of the electric car service. After speaking some kind words about the Montreal cabmen, he said that Montreal was noted for the cheapest cab service in America, if not in the whole world. The Consul-General concluded his remarks by thanking those present for the cordial manner in which they had toasted the health of the President.

The Vice-President, Mr. Wm. McNally, submitted "The Commercial Interests of the Dominion" in a brief but capital speech, which was replied to by the Hon. Peter Mitchell, who spoke eloquently on the progress of the metropolis and how much the men who were sitting around him had to do with enhancing that progress. He closed with the wish that Canada's commerce would both prosper and increase in the days to come as in the past. A few remarks on the same topic were also delivered in French, by Mr. H. Laporte, the well known wholesale grocer, after which Mr. L. Paton proposed the toast of the railway and forwarding interests, coupled with the health of Solicitor-General Curran.

Mr. Curran spoke of the great progress which had been made in railway enterprise during recent years, and which had tended so largely to open up this great and glorious country, and then went on to show that this progress had been accompanied by a great and growing increase in trade between ths several portions of the Dominion and other countries. The hon. gentleman concluded by thanking those present for the hearty manner in which they had coupled his name with the toast.

The other toasts were "Our Guests," proposed by ex-Ald. Rolland, and responded ed to by Mr. A. T. Lepine. M.P., whilst that of "Our Sister Associations" was proposed by Mr. Marceau and responded to by Mr. C. C. Van Norman, of the Commercial Travelers' Association of Toronto. The toast of the "Mayor and Corporation," proposed by Mr. J. Rogers, was enthusiastically drank, and when the Mayor and Ald. Stevenson stood up to respond they received hearty receptions. The toast of "The Ladies" was in the capable hands of Mr. J. L. Dwyer.

During the evening the pleasure was greatly enhanced by the following gentlemen, who either sang or recited :—Messrs. Charles Terroux, Duquette, Venables and Carmichael.

While the Vanderbilts, supposing them to be worth $200,000,000, could buy, if they wished, more than 312 tons of gold, they have not money enough to purchase at its present market price two tons of gallium.

A WELL-KNOWN FIRM TO WIND UP.

IN the iron and brass founding business there is perhaps no name better known in Montreal than that of E. Chanteloup, 587 to 593 Craig street, and the announcement that the business of this firm is to be wound up during the ensuing year has generally surprised the trade. The founder of the concern was the late Mr. E. Chanteloup, who came from France many years ago a poor workman, and died some years ago one of the rich men of Montreal, his success in his particular line of business being steady and continuous. At the time of his death his will left his entire estate, with the exception of some handsome bequests to Montreal charities, to a niece in France, Messrs. Earle, Wall and Hurtubise, three of his employees, who occupied important positions, being named executors and directed to carry on the operations of the firm. Since then Messrs. Earle and Wall both joined the majority, the remaining executor, Mr. Hurtubise, directing the business for the heiress, Mrs. Gerardin, since. The latter gentleman, speaking of the matter, said: "We intend closing up our business as soon as all our contracts are completed, which which will probably not be until July or August next. I cannot state the reasons for this, except that the present owner, Mme. Gerardin, is going to France. After our contracts are completed, the intention is to go into voluntary liquidation, or probably the business may be sold out to a new firm who will carry it on as formerly. Until then the business will be carried on as usual."

TALKS WITH RETAILERS.

Two rival retail hardware merchants in Toronto are affording some amusement to their fellow tradesmen, by trying to see who can sell children's sleighs at the lowest price. The prices asked last week were 12c and 12½c respectively. They are now both offering them at 10c. This is actually less than cost. "It may be great sport," said another merchant, "but don't you think it looks a little foolish?"

"Well, I have been touching up my window a little. How does it look?" said B. Ibbotson, Queen street west. There is an increase in demand for carvers and pocket cutlery. Skates are picking up and work in the shop is still good. Mr. Ibbotson shows neatness and taste in arrangement of his stock.

"Business remains about the same, though there is a little increase in the demand for skates," said Mr. Castor, Queen street west. "I am not going into holiday lines much this year, though I have always in stock cutlery and other goods suitable for Christmas presents. We have sold quite a few tool chests. People who are carrying these lines are cutting the prices so fine that there is now no profit in them."

"Yes, they are cutting things pretty fine," said a Toronto hardware merchant, with a smile. "There is one man who is advertising skates at 50c. a pair, and at the price he is selling them he will have to sell at least 100 pair before he has made enough on them to pay for the large sign that he he has hung out."

"I am handling a few novelties and Christmas goods," said J. Ivory, Queen staeet west. "There has been a little brightening up in trade in these lines the last week and we have sold a few skates. Lamps, too, have been more in demand. I am not complaining, for my sales last week exceeded those of the corresponding week last year. By-the-bye, I want to renew my subscription for HARDWARE. Here is the money, and I am sure that I could never get better value for it. I would not be without your paper for a good deal."

THE COPPER SITUATION.

THE demand for copper is of such encouraging activity as to give the situation an optimistic outlook. The influences at work in this direction are the practical reconstruction of the German telegraph system and the replacing of one of the Anglo-American Company's cables. A hint has also been made giving emphasis to the situation that a contract has been placed by the Commercial Cable Company for a new cable requiring many thousand tons of copper. The war preparations in Europe are an added stimulus to demand, both in France, Germany and Russia. The extension also of the British admiralty shipbuilding programme, apart from any renewal of the Naval Defence Act, will probably result in the construction of battle ships and cruisers that will absorb a large quantity of copper. As in the Revenge, recently launched, with its ninety-six auxiliary engines ia addition to those supplying the motive power of the screws, the absorption of copper will necessarily be large in the number of new ships to be built. The Atlantic cables, however, as factors of consumption, cut a much more important figure in anticipated demand. The exports to Great Britain, outside of the American product, include shipments from Spain, Portugal, Chili and Australia, freely made in November, have not, it is said, added to the bulk of English stocks. This would signify increased demand and stronger feeling. During the first ten months of the year the copper exports of the United States were 54 per cent. of the total production, this being largely accounted for by the paralysis of such industries that were factors in domestic consumption. Recent sales for home use having revived, it is not likely that Europe will continue to be a storage warehouse for American copper at little more than covering expenses. The closing of mines under these conditions of loss rather than gain was an economic necessity. It is stated that with foreign demands nourished, as at present, American supplies, if not replenished, must diminish rapidly. The rise in prices has had a curtailing effect, for the time being, on European orders, but a revival for the reasons named is not unlikely in the near future.—Age of Steel.

BAD DEBTS MAKE MERRIMENT.

Bad debts are not often a subject of "innocent merriment" with those who incur them; but several Birmingham manufacturers and their friends have, nevertheless, according to Ironmonger, been making merry lately over the ridiculously microscopic dividend which is foreshadowed by a liquidation in the North of England. The bankrupt firm, who called themselves import and export merchants, contrived to get into the books of several usually wary local manufacturers by commencing with one or two small cash transactions. Having thus established confidence, they proceeded to place larger orders on the understanding that payment would be accepted in bills. By the time the latter came due the heads of the firm had realised all they could and withdrawn to a more congenial soil, without, however, leaving their address. They left instead liabilities amounting to some thousands of pounds, against which the only assets available have realised the magnificent sum of £52 2s. 10d. The costs of liquidating estate amounted to £51 18s. 1d., so that the total amount available for distribution among the unlucky creditors is just 4s. 9d., or a fraction of a farthing per pound. Some grim mirth seems to be justifiable under the circumstances.

AN INTERESTING ADVERTISEMENT

The following is from a very old copy of the Philadelphia Weekly Mercury:—

Philadelphia STAGE-WAGGON and New York STAGE-BOAT performs their Stages twice a week.

JOHN BUTLER, with his waggon, sets out on Mondays from his House, at the Sign of the Death of the Fox, in Strawberry Alley, and drives the same day to Trenton Ferry, when Francis Holman meets him, and proceeds on Tuesday to Brunswick, and the passengers and goods being shifted into the waggon of Isaac Fitzrandolph, he takes them to the New Blazing-Star to Jacob Fitzrandolph's, the same day, where Rubin Fitzrandolph, with a boat well suited, will receive them, and take them to New York that night. John Butler returning to Philadelphia on Tuesday with the passengers and goods delivered by Francis Holman will again set out for Trenton Ferry on Thursday, and Francis Holman, &c., will carry his passengers and goods, with the same expedition as above to New York.

March 8, 1759.

. . SKATES . .

We still have a stock of STAR and ACME SKATES. Nos. 0 and 7, both plain and plated, and are able to fill orders in almost all sizes, also Skate Straps and Skate Repairs.

. . ORDERS SOLICITED . .

Headquarters for Cross Cut Saws, Axes, Handles, Files, Chain, Iron, Steel, Nails and Glass, Putty, Rope, etc. . . . .
ORDERS SOLICITED.

H. S. Howland, Sons & Co.

Wholesale Hardware Merchants, 37 Front Street West, TORONTO.

A very *Merry Christmas*

and a

Prosperous New Year

to all our friends.

The Toronto Lead & Color Co., Ltd.

Toronto, 24th December, 1893. *P. J. McNally, Manager.*

TAKING STOCK.

THE usual time for taking stock and making up final balance sheets for the year in many kinds of business is fast approaching. With its approach, a growing anxiety to know just what the year has brought forth of prosperity or adversity will possess the minds of men to whom the memorable commercial events of the year have already brought anxiety enough. Some of these will undoubtedly have to face a very unsatisfactory result in the aggregate of the year's trade, and very few will be able to congratulate themselves upon large profits gained in 1893. The majority will esteem themselves worthy of congratulation if they have paid all expenses and come out even. All who have been able to do this may feel sure that, with improved conditions of trade certain to come, they can compensate themselves for the trials from which the business of the country is emerging.

Nothing exceeds the annual inventory in importance as related to good business methods. But with over-sanguine or timorous men it often is made the source of gross self deception. A man who deceives himself about anything is the most complete of dupes. The man of true courage and commercial ability, however much he may be willing that others may deceive themselves as to what he may be worth financially, is most reluctant to hide from himself the exact condition of his affairs. Therefore, in estimating the value of his assets, if any uncertainty exists as to what any particular asset may be worth he rather estimates it at its lower than its higher possible value.

In manufacturing business where iron founding is a prominent element, assets frequently much overrated are the patterns, flasks, core boxes, etc. These things often cost a great deal of money in the aggregate, and in valuing them from year to year there is a tendency to put down patterns in particular at their original cost, even after they have ceased to be of that value either on account of deterioration, or because the goods they were made for have become more or less unsalable. An element in the value of a pattern is its present utility as one of the appliances for conducting business. It may, and often does, become merely so much lumber, and, as such, of no value whatever as an asset. As to core boxes and flasks, especially if these be of wood, they deteriorate rapidly in use, and an underestimate of wear aud tear may lead to erroneous conclusions in the profit and loss account. An exaggerated valuation of assets has often proved a rock upon which commercial enterprises have been wrecked. —Iron age.

HOW A FAT MAN EARNED $10.

"You may laugh at my fatness," said a jolly obese fellow to a reporter, "but it's stood me a good turn. Not long ago, when I was in hard luck, I was walking along Front street. A man stopped me and asked if I wanted to make ten dollars. That was just the thing for me, and I was't long in answering that I was 'on the make.' He hired me, and I stood most of the next day in such a manner as to hide the big sign of sheriff's sale on a small flag which was placed against a sign. Few passers-by could see any evidence of a sale. The scheme was finished off to a nicety by a darkey, who, for a consideration, rang a child's toy bell instead of the big things usually used on such occasions. The result was that the man bought his own stock at a mighty low figure.'

TRADE CHAT

[Importers, wholesale merchants and manufacturers should send any items intended for this department so that they may reach the head office not later than Wednesday morning. The editor will always welcome such information.]

THE Canadian Pacific route via Vancouver is gradually taking the Australian trade, which, heretofore, went by way of New York. A Toronto implement firm had another shipment of five cars pass through to Vancouver a few days ago and which will be forwarded from that seaport by the steamship Arawa to Melbourne.

The magnesium light was first applied to art photography in 1864.

Red-hot shot were first employed at the last siege of Gibraltar by the English artillery.

To clean brass and copper, apply a mixture of oil and rotten stone with a chamois cloth and rub bright.

Mr. William Nesbitt of the Toronto Silver Plate Co. has been elected a member of the Toronto Board of Trade.

The Krupp gun works claim to have manufactured a machine which will roll iron so thin that it would take 1,800 sheets to make an inch.

In every mile of railroad there are seven feet four inches that is not covered by the rails—the space left between them for expansion.

If a nail or a piece of wire is run into the flesh, hold the wounded place, as soon as possible, over burning sugar, and there will be no soreness.

Twenty-five years ago electricity as a mechanical power was unknown. Now $900,000,000 are invested in various kinds of electrical machinery.

The first steamship crossed the Atlantic in 1818. There are now 70 lines of mail steamers. In 1888 there were 107,137 steam vessels on the high seas.

The first practical sewing machine was invented in 1841. In 1888 there were 600,000 made in the United States, able to do the work of 7,200,000 women.

Somebody wants to know why it is that one of the stores in the towns where stores are too many is not transplanted to Lavender, where a good business could be done.

The most singular ship in the world is the Polyphemus, of the British navy. It is simply a long steel tube, deeply buried in the water, the deck rising only four feet above the sea.

Mr. John Cameron, the energetic and successful agent for the PRINTER AND PUBLISHER and THE GROCER, made the Free Press a pleasant call yesterday.—Free Press, Acton.

The Scotch steelmakers, to meet the extra cost brought about by the coal strike in Scotland, following the strike settlement in the Midlands, have raised the price of steel ship-plates 2s. 6d. per ton.

"Wonderful mouse-trap this, madame. May I show it to you?" "Don't want any mouse-traps. Haven't a mouse in the house." "We can supply you with mice, madame, on very reasonable terms."

Many Chinese temples are provided with a bell at the entrance,and when the worshiper enters he gives the rope a pull and rings the bell in order that the deity may be notified of his coming, and be on hand to attend to his business.

George H. Babcock, the inventor of the famous Babcock & Wilcox boiler, died at Plainfield, N. Y., recently, aged 62 years. He was the first inventor of a chromatic printing press, and during the war invented the shrapnell shell.

The warehouse and office, together with the cement storehouse, with contents, belonging to the Rathbun Co., and situated on their dock at Belleville, were destroyed by fire on Wednesday night. Total loss about $5,000, covered by insurance.

Samuel O. Burnett, hardware dealer at 288 Fulton street, Brooklyn, N.Y., was robbed recently of over $60,000 worth of bonds, stocks, etc. The negotiable part of the swag will hardly net the thieves one-tenth of 1 per cent. of this amount.—Ex.

From the known properties of aluminum to resist the action of salt water, it is being used as an alloy, 12 parts to 88 of other metals, for bolts for boats. In this shape it forms a combination with copper which is of a bright yellow color and very tough.

Mr. John May, Winnipeg, expects to go into business for himself in the course of a week or two, in the line of tents, awnings, mattresses, etc. Mr. May, up to within a short time ago, has acted in the capacity of foreman for Hope & Co., since the boom days.

To keep tins in a state of dazzling brilliancy, says an exchange, wash them inside and out with hot water and soda. Dry them and rub the outside with a paste made of whitening and water. When this has dried, rub it off with a soft cloth and polish with leather and dry whitening.

In heating water by steam, say from a temperature of 40 deg. Fah. to the boiling point, it can readily be shown by calculation that one pound of steam will suffice for 5.43 pounds of water. One to five is the proportion which may be taken as a close approximation and which can be easily remembered.

The teapot which the Princess of Wales invariably uses every day is exceedingly curious, and is said to be of great value. It is very old, in the shape of a stout Dutchman sitting astride a barrel of wine. The old man's cap serves as a lid, and a gold tap in the barrel lets out the favorite five o'clock beverage.

So great has been the demand for the new aluminum bicycles that the manufacturers have been compelled to put on a force of night hands. The frame of every machine is made to stand a carrying strain of 2,000 pounds before leaving the shop, and every other part of the machine is also thoroughly tested.—Ex.

Messrs. W. A. McIntosh & Co., Vancouver, report a brisk demand for the Australian mutton received by the Arawa, and their waggons were busily engaged all yesterday hauling the mutton up from the ship. Mr. McIntosh, however, is not very sanguine as to the outlook for future shipments, as the duty eats up nearly all the profits.

A folding grade measurer for railway work has been brought out in France. It is in five lengths, two pairs of which bolt together in a straight line so as make it only three The other is graduated to degrees, and serves as an upright, a separate level enabling the device to be used as a clinometer.

Germany's naval experts have decided that the best color to paint their cruisers and torpedo boats, in order to make them as difficult of observation as possible, is a kind of dirty buff. They recommend that the whole of the vessels should be uniformly coated with this color, and that nothing on their decks or upper works should contrast with it.

The Canadian navy is shortly to be reinforced by the addition of another ship, which will be used in the buoy and lighthouse service on the Atlantic coast. A Paisley, Scotland, firm will build a steel steamer suitable for the service. She will be of deeper draught than the Quadra, and will be available for commission in the fishery protective season.

During the lake shipping season just closed 10,000,000 barrels of flour were received and handled at Buffalo, by far the largest record of any flour depot in existence. The season began April 16 and closed December 17. The average number of barrels

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Correspondence Solicited. Estimates Given
Special Discount to the Trade.



Oh no, we never advertised; we thought we knew it all,
Till biz'ness took a sudden slump an' pushed us to the wall;
An' know we're knockin' 'round the world, our hopes unrealized,
An' all because we knew so much, we never advertised.

handled daily was 40,000, but on some days as many as 150,000 were taken out of vessels and stored in warehouses pending reshipment by rail and canal.

It may well be questioned if it is ever worth while to build a boiler chimney over 150 feet high. Where cost is no consideration, there is no objection to building them as high as one pleases. Sometimes special circumstances make an extremely high chimney a necessity: but for the purely utilitarian purpose of steam-heating there is no occasion to go beyond the above mentioned 150-foot limit. In fact, shorter chimneys often give as good results and at much less cost.

A metal sawing machine specially adapted for rail sawing has as the method of transmitting power to the cutting disk a spur gear operated by a ratchet lever. Each tooth of the disk acts like a planer cutter, leaving the work true. It is operated by two men, and it is claimed that by it a 60-pound rail has been cut in three minutes, and 95-pound in three minutes and 25 seconds, and the 73-pound rail at 35 degrees angle in seven minutes. It takes up two by six feet floor space.

Darius Davison, the naval architect, is, it is said, working on the plans of a ship that is, he says, to be the coming Atlantic liner. The vessel is to be 1000 feet long, 80 feet wide, 70 feet in depth, and to have a displacement of 45,000 tons. She will be moved by four propellers driven by a 50,000 horsepower engine, and the distinctive feature of the ship is a projecting bow and stern, each 150 feet long, an entirely new departure in marine architecture.

A novel electric lock has been invented especially for use on windows, which by means of this device may be left open one or two inches for ventilation and be quite as secure as when completely closed. The lock operates with ease by simply pressing a button, and can readily be connected with the fire or police alarm service, so that any unwarranted tampering with the window or mechanism will be immediately followed by a report at the fire or police station.

Does boiler inspection pay? North Dakota has been experimenting with the question in a practical way, trying one year with, the next without. The year the inspection law was in force it got through the threshing season without a single explosion. The bill was then repealed, and the season just closed has witnessed seven explosions and seventeen fatalities. If human life is worth anything in Dakota, inspection pays.—Power.

The South Metropolitan Gas Co. has adopted the penny-in-the-slot system of meters, and, according to a recent report, a nine months' trial has demonstrated the novelty to be a real success, it having secured nearly 6,000 additional customers. Applications for meters were being received, we are told, at the rate of about 8,000 per annum for the half year ending June last.

The bicycle has produced some queer changes, says an exchange. It is restoring the wayside inn, among other things. Along certain country roads not far from Boston, which are much frequented by wheelmen, and especially along those in the direction of the beaches, there are little summer restaurants or cafes which derive the largest part of their income from the passing riders of bicycles.

At one time, and not very long ago either, there was hardly a mill of any kind that was not troubled with heaps of rubbish or waste material that it did not know what to do with. Silk manufacturers saw the rise of these heaps with annoyance, and took it as a favor if anyone would cart them away and use them for purposes of fertilization. But an English inventor saw that there were possibilities in this refuse, and he set about inventing machinery to utilize it. As a result of his forethought and genius, 5,000 persons are at present employed in making the finest seal plushes, ribbons and velvets from the refuse piles of silk mills, and the inventor himself is a man who has made his fortune. — Invention, London.



Milk Can Trimmings

Old Cuts but New Goods.

See our new improved

TRIMMINGS



BOTTOM PRACTICALLY IN ONE PIECE.

THOS. DAVIDSON & CO., - Montreal

WINDOW DRESSING.

THE most effective way of dressing the show window should be a matter of no little concern, and no pains should be spared in making your windows as attractive as possible. The tailor, the dry goods man and the stationer all make it a point to make periodical changes in their window display, but there seems to be a lack of interest displayed in this line by hardware men, and the window of the hardware store seems to be the only one that has not received any extra attention for the holiday season. Hardware men are prone to complain that other stores take up the Christmas lines that legitimately belong to them, and yet when other merchants have decked their stores out in gala array, the window of the average hardware store has remained with the same articles in the window, thrown in without taste or attempt at arrangement.

Much holiday shopping is always done in the evening, and in a trip around the city on Christmas eve a HARDWARE representative found other stores aglow with light and made attractive by the exhibition of all their seasonable wares. The hardware stores, however, remained, with one or two exceptions, as gloomy as though it were Lenten instead of Christmastide. Is it then any wonder that the holiday buyer shuns the gloomy window in which there is nothing to be seen but a jumble of pots and pans, flat irons, etc., which from all appearance might have, in some instances, been thrown in from the other end of the store and left lay where they had fallen.

Such windows as these denote a lack of the business enterprise which has prompted their fellow townsmen handling other lines to make the most of their opportunities. Are hardware men going to take a back seat and watch other merchants make inroads into their business and adopt lines that are legitimately theirs, while they sit calmly by and meditate on the unfitness of things in general and hardware in particular?

AN ARGUMENT ON WRINGERS.

THERE are many articles in the hardware trade upon which there has been a great deal of cutting for some time. One of them is clothes' wringers. And to put a stop to underselling it this particular the Canadian manufacturers—some three or four in all—have formed an association.

"Yes," said a jobber, "an association has been formed and cutting will be stopped, and merchants now finding it necessary to replenish their stocks will be compelled to pay the advanced price of $36 per dozen. Prices are firm at this figure. There is one wringer, however, on the market which is selling at a cut price. but it is a poor tool, although it is represented as being a first-class article. It looks all right, but it is black in the heart. What do I mean? Simply this: The rollers are made of the very poorest black rubber, and to hide this fact from the public they are covered with a white substance which gives he rollers the appearance of those which are first class. The members of the trade should keep their eyes open and see that this machine is not palmed off on them."

DEARER BRUSHES PROBABLE.

CHAS. BOECKH & SONS, brush manufacturers, Toronto, have thought it advisable to notify their customers, who have for many years handled Boeckh's standard brushes, that a heavy advance has lately taken place in bristles, in consequence of which English and American manufacturers have raised their prices from 10 to 15 per cent. The firm, in a circular addressed to the trade, says: "In anticipation of this we purchased heavily for the spring trade of 1894, before the advance took place, and we will continue to sell at our present prices and discounts as long as our stock will permit us to do so. We think it will be to your advantage to place your full spring orders at the earliest possible moment, as the advance in raw material is a matter beyond our control, and when our present stock is exhausted we shall be compelled to make advances in accordance with the ruling market price of bristles, in event of which we cannot bind ourselves to give notice."

CHURNMAKERS' COMBINE.

An association has been formed by the churn manufacturers. The manufacturers claim that they have been compelled to take this step for self protection, having hitherto been losing money. "The advance in prices, which has followed, is however, but trifling's laid HARDWARE'S informant, "and will not, materially affect the price of the churns. The manufacturers had to do it. They could not afford to continue in business at a loss."

A PNEUMATIC OIL CAN.

A late American invention is that of a pneumatic oil can. It is made of heavy galvanized iron, to hold five gallons of oil, the oil being forced from the can by the atmospheric pressure. By pressing down a plunger the air forces the oil out by way of the spout, and when the pressure is released the oil ceases to flow. The spout, which is covered at the end, is jointed at the can, and when filling a lamp it is turned down to a horizontal position, so that the lamp is filled without lifting it from the table, on which the lamp and can stand. The spout is also reversible, and when reversed, the can, it is stated, is vapor proof, thus preventing the escape of gasoline or other vapors from the can. The point is made that the absence of a faucet for drawing lessens the liability of the oil or gasoline being tampered with by children.

TRAVELERS ELECT OFFICERS.

The annual meeting of the Dominion Commercial Travelers' Association was held in the Y.M.C.A. parlors, Hamilton, Tuesday afternoon. The reports presented were satisfactory. Thomas Gaip and E. Fielding were appointed a committee to make arrangements for better hotel accommodation. A proposition to publish a monthly magazine was discussed, and E. Fielding and H. Matthews were appointed a committee to further consider the suggestion. H. Matthews and E. Fielding were appointed delegates to the Y.M.C.A. Convention, to be held in Toronto in January. The following officers were elected for the ensuing year: H. Matthews, Toronto, president; R. Coleman, vice-president; E. Fielding, Toronto, secretary; R. M. Stuart, Hamilton, treasurer; Rev. Mr. Shorey, Toronto, chaplain. The meeting adjourned, to meet in Toronto on Feb. 23.

A break-down, some time ago, of one set of engines of one of the fast trans-atlantic liners afforded a startling illustration of the enormous cost of high ocean speeds. Part of the trip during which the mishap occurred was finished with the starboard engines alone. Comparing the three-days run with the single set of engines with a corresponding period on the previous voyage with with engines running, the axerage ratio of the speeds in the two cases was found to be as 0.82 is to 1. The loss of one-half the propelling power had the effect of reducing the speed by only 18 per cent. This ought to give the promoters of 28-knot steamship lines something to think about.

Christmas morning cables from Europe were but anything in unison with the sentiment of the season: "Peace on earth and good will toward men." Instead of peace they breathed of war. One hundred and thirty thousand more armed men than there were the Christmas of 1892 are, we were told, standing ready and eager to jump at each other's throats, while Russia, with the cooperation of France, was threatening to force the Dardanelles, make a union of her Black and Mediterranean sea fleets, drive England from the scene, and capture Constantinople. The holiday trade, too, was unsatisfactory, while want and misery was apparent everywhere.

THE ONTARIO TACK CO.
MANUFACTURERS OF
WIRE NAILS
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M. MAYER, Propr.

NON-XLL Pocket Knives
IMPERIAL Razors
T. C. Co.'s Nickel Steel Shears
WILLIAMS Dble Shear Steel Butcher Knives

WARRANTED

We fully guarantee all goods named above.

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TORONTO Hardware and Iron Merchants

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Toronto Files and Dundas Axes

Quality and finish of our Files and Axes unsurpassed. . . .

Special Attention to Letter Orders.

Pure Southern TURPENTINE Our Specialty

Remember, we are headquarters for the pure article, and intending purchasers will do well to get our price before placing their orders.
Every barrel of Turpentine we ship is accompanied by our printed guarantee that it is ABSOLUTELY PURE.

We Are Not Members of any Combine.

FRANCIS, FROST & CO., 33 Front St.W., TORONTO

Wire Goods

WIRE

- Door Mats
- Cutter Dash Screens
- Spark Guards for Grates
- Rat Traps
- Coal Screens
- Flower Stands
- Window Guards and Railings

WIRE WORK IN ALL ITS BRANCHES.

Our work is of the highest grade. Dealers sell our goods from catalogues. Inquiries solicited.

Dennis Wire and Iron Works, LONDON, ONTARIO

M. & L. SAMUEL, BENJAMIN & CO.,

26, 28, 30 Front St. West, TORONTO

ENGLISH HOUSE: **SAMUEL, SONS & BENJAMIN**
164 Fenchurch St., London, E. C.

SKATES "COLUMBUS," ACME AND "STAR."

SNOW SHOVELS, Wood and Steel.

SLEIGH BELLS and SHAFT GONGS,

WEATHER STRIPS, Different kinds.

MARKETS

[As there is often inequality in the prices of the various sellers on this market, owing to differences in buying conditions and other circumstances, and as prices are modified by both quantity and quality, the quotations given below and in our Prices Current necessarily take a wide range.]

MONTREAL MARKETS.

MONTREAL, Dec. 29, 1893.

HARDWARE.

THERE have been few striking features in the hardware market this week, and naturally so. A moderate sorting up trade has been done in skates, sleigh bells, etc., but otherwise there is nothing to note. Horseshoes and horsenails are quiet, and the same is to note in the case of cut and wire nails, while other lines present no new features. Most of the houses are now stock-taking.

WIRE—Business is smaller than a week ago, and there is no change to note.

CUTLERY—Pocket cutlery has received a moderate degree of attention in a sorting way.

WINTER GOODS—Skates, sleigh bells and other kinds of winter goods have attracted a fair degree of attention.

SADDLERY SUPPLIES—No change to note and business quiet.

NAILS—Cut and wire nails rule extremely dull.

TACKS—The same remarks apply to tacks.

HORSESHOES—Business in these is small, and the same is to note in the case of horse nails.

IRON PIPE—A moderate movement in this article is to note.

SPORTING GOODS—Business in these is considerably diminished.

CHAIN—Is without new feature and the trading unimportant.

BUILDING SUPPLIES—Very little business is doing in this line.

PLUMBING SUPPLIES—There is very little business to note in this line.

NAVAL STORES—These are inclined to dullness, with no change in any line. We quote: Turpentine, 47 to 48c.; resins, $2.50 to $5.00, as to brand; coal tar, $3 75 to $4; cotton waste, 5½c. for colored, and 7 to 10c. for white; oakum, 5½ to 7½c.; and cotton oakum, 10 to 12c. Cordage, Sisal at 9¾c. for 7-16 and upwards, and 15c. for deep-sea line; pure Manilla, 11c. for 7-16 and upwards and 12c. for smaller sizes.

METALS.

The quiet spell which usually characterizes the holiday season in iron and heavy metals is now on in full force, and the result is that there are few special features to mention

PIG IRON—Little or nothing doing and prices are unchanged. We quote: Summerlee, $18.50 to $19; Eglinton, $17 to $17.25; Carnbroe, $16.50 to $17; Langloam, $18.50; Nova Scotia, $17 to $17 50.

SCRAP IRON—This line is dull and unchanged.

BAR IRON—Buyers are not doing anything in this line at all at present.

SHEET IRON—Business is small and the tone of values easy at $2.30 to $2.50, according to grade The scarcity of Russian sheet iron is a feature. It is firm at 10½ to 11c.

HOOPS AND BANDS—No change in hoops and bands of importance. We quote: $2.30 to $2.35.

STEEL—There is very little business doing in steel. We quote: Best cast steel, 10½ to 12c.; sleigh shoe, $2.40; spring, $2.50 tire, $2.50 to $2 75, and round machinery steel, $3.

GALVANIZED SHEETS—Very little trade doing. We quote: 4¾ to 5c. for ordinary brands, Morewood, 6 to 6¼c.; tinned sheets, coke, No. 24, 6 to 6¼c.; No. 26, 6½ to 6¾c.

TIN PLATE—Nothing doing and prices unchanged. We quote: cokes $3.05 to $3.20. and charcoal $3,50 to $4 according to brand;

CANADA PLATE—This line is dull and unchanged at $2.40 to $2.50.

TERNE PLATES—Prices are purely nominal at $7.25 to $7.50.

COPPER—Nothing doing in copper, which rules steady at 11½ to 13c.

TIN—This article rules easy, but there has been no further change in volume, which continues at 19 to 22c.

SPELTER—Nothing to report, and prices are the same, $4 60 to $4 75.

ANTIMONY—Business nil and prices the same, 10½ to 12c.

LEAD—Rules easy, but prices remain as they were a week ago, viz., $2.75 to $3.

ZINC SHEETS—A few small transactions have been noted at $5 to $5.25.

CEMENT—There is no change in this line. We quote as before: English cement at $2 to $2.30, and Belgian at $1.90 to $2.05. Fire bricks are scarce, and light stocks have stiffened prices to $17 to $21 per 1,000, according to brand and quality ex-store.

PAINTS AND OILS.

The market for lead paints and varnishes is very quiet. Linseed oil is unchanged, and the same is to remark in the case of seal oil. We quote: Choice brands of white lead, government standard, $5; No. 1, $4 75; No. 2, $4.50; No. 3, $4.25; No. 4, $4; dry white lead, 5c.; red lead, pure, 4½c.; No. 1, 4¼c.; zinc white, pure, $7; No. 1, $6; No. 2, $5; linseed oil, raw, 60c., boiled 63c., steam refined oil 48 to 50c., cod oil 34 to 35c.

GLASS.

Glass is unchanged, with very little to note. We quote on the former basis of $1.25 for first break and so on.

PETROLEUM.

Business has been quiet during the week. Prices are well sustained, however. We quote: — Canadian crude at $1.05 per barrel f.o.b. at Petrolia; Canadian refined at 11¼c in shed at Montreal, for round lots, and 12c for small quantities. American petroleum, 16½ in car lots, 17c in 10-barrel lots, 17¼c in five-barrel lots, and 17¾c for single barrels, net cash; American benzine, 23 to 25c; Canadian benzine, 10¾c Petrolea; 12½c Montreal.

MONTREAL TRADE NOTES.

James Hutton & Co. have been successful so far with their closing out sale of silverware.

The Bank of Toronto's new building on the corner of Victoria and St. James streets is rapidly approaching completion. It is being fitted throughout with Safford radiators.

At the regular meeting of the Canadian Association of Stationary Engineers, held last evening, with Mr. J. Robertson in the chair, a resolution of condolence was passed with the family of the late Mr. W. Wilson, who was accidentally killed at the Rolling Mills. Mr. Ryan stated that, agreeably to the wishes of the association, he had caused



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Delivery Can Trimmings
Creamery Can Trimmings
And **Milk Delivery and Creamery Cans Made Up.**

All sizes and guages of Tinned Sheets for Cans and Vats. We have a full stock and can make prompt shipment.



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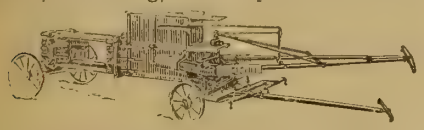
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Manufactured by BOYD & CO., Huntingdon, Q.

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"Pioneer" and "Sloss" PIG IRON

These are fine foundry irons, being strong and large scrap carriers.

Also all the well-known—

Scotch Brands,
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and Railway Cast Scrap.

GAS, ELECTRIC, AND COMBINATION
Fixtures

Of English, Canadian, and American designs. . .

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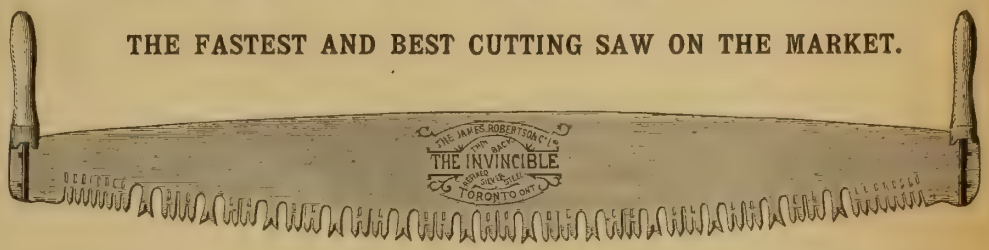
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Guaranteed four Guages Thinner on Back than Front and Made from the Highest Quality of Double Refined Silver Steel.

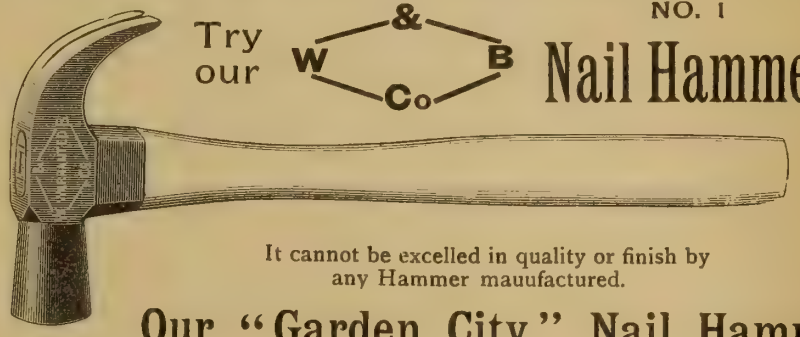
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It cannot be excelled in quality or finish by any Hammer manufactured.

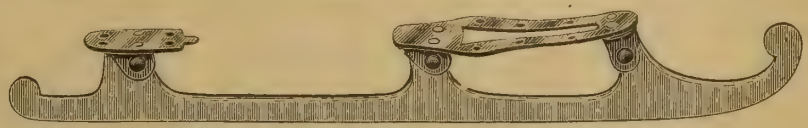
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We aim to keep in stock a full line of Hammers, Sledges, etc., and will make prompt shipments. . . . . .

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Expert Racer, Crystal Racer, Junior Crystal, Hockey Club, Eclipse Victoria Club and Dominion.

Best line of Skeleton Skates made. Send for Catalogue of Skates, Hockey Sticks, Snowshoes and Winter Sporting Goods. Ask for discount sheet.

T. W. BOYD & SON, 1683 Notre Dame St., **MONTREAL**

MONTREAL MARKETS—Continued.

to be made a brooch, emblematic of the order, which they had presented to Mrs. George Hunt for the interest she had taken in the association. Mr. Hunt replied, and thanked the members for their valuable present.

Owing to the large increase of the sale in this country of the goods exported by Theile & Quack of Germany, Mr. Lamplough, their Canadian representatlve, has found it necessary to enlarge his business, and for that end has associated with him Jas. McNaughton, for many years connected with the well-known house of Drummond, McCall & Co., Montreal. The new firm will be known as Lamplough & McNaughton.

TORONTO MARKETS.

TORONTO, Dec. 29, 1893.

HARDWARE.

TRADE has settled down to its regular holiday quietude. The travelers are still in the city, but next week will see them out on the road again. The most activity displayed in the warehouses just now is in either actually taking stock or in making preparations to do so. Next week will see stock-taking general. Business in such lines as cutlery, winter goods, sporting goods, and lamp goods, is practically over for the season. The nail manufacturers meet next week. As to whether any change will be made in price it is only a subject for speculation, although there are some who think a change will be made on account of the low prices ruling in the United States. In the meantime, however, people are only buying to satisfy immediate requirements. Payments continue to show slight improvement.

WIRE—Trade in annealed wire for binding purposes is good for this time of year.

ROPE—Business is quiet at the recent decline. We quote: Sisal, 7-16 in. and larger, 8c.; ¼, 5-16, ⅜ in., 8½c.; Manilla, 7-16 in. and larger, 10 to 10¼c.; ¼, 5-16, ⅜ in., 10¼ to 10¾c. Stock here are rather large, and in the United States rope is selling, it is said, at about equal to the price of the raw material. This latter condition is what induced the Canadian manufacturers to take the step they did.

CUTLERY—There is still a little movement, but an improvement is looked for when the travelers again resume operations, but orders then will, of course, be for later delivery.

NAILS—There is a little doing in cut, wire, and horseshoe nails in small lots for immediate requirements, and until the meeting of the manufacturers next week no movement in quantities can be expected.

GREEN WIRE CLOTH—The manufacturers of this article have fixed the price at $1.85 for the ensuing season, and orders are being placed at that figure.

TACKS—Business in this line remains in the same interesting condition as for some time.

CHAIN—A good many orders have been received for chain of certain sizes, and enquiries are heard for large sizes, delivery later; ⅜-in. coil chain is scarce.

HORSESHOES—Quite a number of horseshoes are going out at the unchanged price of $3.80. There is not much doing in snowshoes.

WINTER GOODS—The season is about over. A few odd strings of sleighbells are going out and a good many skates are still selling. Demand continues brisk for steel snow shovels, which are as hard as ever to get.

WARE—Demand for tinware is only moderate, but a fair business is still being done in peerless ware.

SPORTING GOODS—Demand has been satisfied for the season, and jobbers are now making preparations for next season's trade.

LAMP GOODS—This is another of the seasonable lines for which the demand is over for the season.

PLUMBERS' SUPPLIES—A good many boilers are going out, and iron pipe nicely, particularly sizes over 1 inch. Been very little doing in bright iron wire.

BUILDERS' SUPPLIES—Dull and unchanged is still the predominating characteristic of trade in this line.

METALS.

No material change has taken place in this line during the week, heavy metals being particularly quiet.

PIG IRON—Dull with quotations nominally as before: Summerlee, $20.50 to $21; Carnbroe, $19.50 to $20; Siemen's, $19.50 to $19.75.

Rogers, Brown & Co., Buffalo, report the Toronto market for American pig iron as follows:—The market for the week, though the dullest on record, is no disappointment. The situation as it developed was exactly what had been expected. No more surprises can be born in the pig iron family so far as dullness and declining prices are concerned. The surprises all lie in the unknown future of advancing prices. We quote for cash f. o. b. cars Toronto in bond: 1 X Foundry Strong Coke Iron, Lake Superior ore, $14.80; 2 X Foundry Strong Coke Iron, Lake Superior ore, $14.30; 2 Foundry Strong Coke Iron, Lake Superior ore, $13.80; Jackson County Silvery 1, $17.55 to $18.30; Jackson County Silvery 2, $17.05 to $17.80; Lake Superior Charcoal, $17.05; Southern Soft 1, $12.85; Southern Soft 2, $12.60.

BAR IRON—A number of orders are announced, but in quantities that are small, people only buying from hand to mouth, and most orders are supplied from factory rather than from stock. The base price is unchanged at $1.95.

CORRUGATED IRON—Quiet and unchanged. We quote "Owl" brand at $3 to $4 per square for painted and $4.25 to $7 for galvanized, according to gauge.

SHEET STEEL—Quite a number of orders for small lots have been received on the basis of $2.90.

SHEET IRON—There is the usual demand at $2.75 up to 20 gauge.

GALVANIZED IRON—There is a fair business doing in galvanized iron, but it is for small lots. A good many orders are being booked for future delivery. We quote Queen's Head and Gordon Crown at 5 to 5¼c. for 16 to 24 gauge.

INGOT TIN—Demand is increasing, and prices are unchanged, at 22 to 22½c. for Lamb and Flag and 21¼ to 22¼c. for Straits.

INGOT COPPER—Is in fair demand for the season at unchanged prices. We quote ton lots at 11¾ to 12c. and ½c. extra for smaller lots.

EASTLAKE
MANUFACTURED BY
METALLIC ROOFING Co
TORONTO
ILLUSTRATED CATALOGUE FREE
STEEL SHINGLES

SHEET COPPER—There is the usual quiet, seasonable trade doing at 16 to 18c, according to size.

SPELTER—Dull and unchanged, 4¼ to 4⅝c. still being the idea for small lots.

ZINC SHEET—Stocks are now ample for the demand and prices are unchanged, at 5¼ to 5½c.

TIN PLATES—Some large orders are reported and we quote as before, at $3.85 to $4 for I.C., with the usual extras for I.X.

TERNE PLATES—There is nothing doing and prices are unchanged, $7.25 still being the ruling figure.

HOOPS AND BANDS—Much as before, demand being largely for small lots on the basis of $2.55 to $2 60 per cwt.

CANADA PLATES—The season is about over for this line, and the volume of business is light in consequence. We quote: All dull, $2.60 to $2.65; half-polished, $2.75, and all bright, $2.90.

SOLDER—There is the usual demand at former quotations, prices running from 14 to 16c., according to composition.

ANTIMONY—Some good sales are reported in this line at the old price of 11½ to 12c. in cask lots.

LEAD—Quiet and unchanged at 3c.

GLASS.

Business in this line is light and stocks low, but some shipments are expected next week. Ruling prices for first break are still $1.20 to $1.25. A few import orders are being booked.

PAINTS AND OILS.

The dullness noted for the last couple of weeks is even more pronounced at the moment, but one good feature is in regard to payments, which are reported to be coming in freely. White lead is weaker in England, bnt this market is quiet and unchanged at the base price of 5c. Turpentine is dull and unchanged at 44c. Toronto, Hamilton, London and Guelph, with 2c. per gallon added for outside points, freight prepaid. In the South there has been an advance of 1½c. per gallon. Linseed oil, while not so dull as turpentine, is far indeed from being active. Flaxseed has dropped 5c. per bushel in the United States, and this has had the effect of causing a decline of 2 to 3c. in the price of linseed oil there, but quotations here remain as before at 60c, for raw, 62c. for boiled, Toronto, Hamilton, London and Guelph, with 2c. added for delivery at outside points. Prices here are still relatively lower than in the States.

OLD MATERIAL.

This trade continues dull owing to the lack of foundry work going on, but there seems to be a prospect of things brightening towards the end of January. Prices remain the same with the exception of ½c. advance on heavy scrap copper, and a drop of ½c. on stove cast scrap. We quote prices paid by dealers as follows: Agricultural scrap, 55c. per cwt.; machinery cast, 60c. per cwt.; stove cast scrap 40 to 42½c.; No. 1 wrought scrap 40c. per cwt.; No. 2, including sheet iron, hoop iron and mixed steel, 10c.; new light scrap cop-

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BUTCHER KNIVES
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Are the Best in the World.
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We guarantee all OUR GOODS! If found unsatisfactory can be returned at our expense.
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MIXED PAINTS
The Unicorn Brand
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Has now the leading reputation for purity and durability in Canada.
They are sold all over the Dominion.
Manufactured only by
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BRAND "C.I.F." THREE RIVERS
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Lac a lac Tortue. Grand Piles.
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Send for samples and get our prices. Targets well packed and no second handling. Shipped direct from factory in Hamilton.
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OUR SALES OF
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For the past 8 months have been
25,499 CASKS.
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Try it and be convinced. . . . .
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MARKETS—Continued

per 7½c.; heavy scrap copper 8 to 8½c.; old copper bottoms, 7½c.; light scrap brass 5c.; heavy yellow scrap brass 7c.; heavy red scrap brass 7½ to 8c.; scrap lead 1½ to 2c.; scrap zinc, 1½ to 2c.; scrap rubber, 3c.; country mixed rags, 75 to 80c. per 100 lbs.; clean dry bones, 50 to 60c. per 100 lbs.; boring, and turnings, 10 to 15c.

HIDES, SKINS, WOOL, TALLOW

HIDES—Are not quite as brisk as they were, owing to stock-taking which is being carried on at the present time by the different dealers, although some good sales are reported at prices varying according to quality. We quote 4c. for No. 1 and 3c. for No. 2.

SKINS—Are the same as last week, nothing much doing. However dealers think there will be a change ere long; in fact it is reported that the prospects are brighter than they have been for some time for a good trade at the beginning of the year.

WOOL—There is no change. A change, however, is hoped for soon. Prices remain at last week's decline. For extra quality of pulled wool dealers are paying 17 to 18c., and for fine combing 20c.

TALLOW—Is in good demand and dealers find it difficult to supply the trade. Prices are about the same as last report. We quote: Culled tallow, 4½c.; rough, 2c.; select quality, 5 to 5¼c.

SEEDS.

There has been no material change in anything but alsike. That has declined 30 to 50c. per bushel, according to grade. Medium and low grades have declined more relatively than the finer grades, the foreign demand for the latter not having dropped off so perceptibly. Red clover is moving slowly at the old prices, and much the same may be said of timothy. We quote: Alsike, $5.75 to $6.25 for good to prime seed, and $6.50 to $7 for choice to fancy. Red clover, $5.50 to $5.75 ordinarily, and $5 90 to $6 for choice to fancy. Timothy, $1 to $1.25 for inferior and $1.50 to $1.60 for prime, while choice to fancy bring 15 to 20c. more.

PETROLEUM.

Trade continues brisk on the Toronto market at unchanged prices. We quote: 5 to 10 barrel lots, imperial gallon Toronto—Canadian, 12½ to 13c.; carbon safety, 16½ to 17c.; Canadian water white, 18½ to 19c.; photogene, 22c.

The Petrolia Advertiser in its weekly report, says: The Oil Exchange has once more been resuscitated and the crude end of the business is assuming an activity that has not been noticeable for some months. The above quotation of $1 for crude is for oil in warehouse tanks, or in other words for warehouse receipts. The direct delivery system, which we have so strongly condemned for some time, is practically a thing of the past, and refiners will have to come to market to buy. As an instance of the feeling on the Change we may state that a buyer's option for March oil was sold yesterday at $1.05. The buyer immediately duplicated his offer, but although there were several producers on the market there were none ready to sell at that price. That crude will find a ready sale at $1.10 in January we have no doubt. By next week we expect to see an important change in the market. Refined is being shipped at the above quotations and business is brisk.

MARKET NOTES.

The Toronto Fence and Ornamental Iron Works report that while large orders are scarce there is still a good deal of repairing going on. The firm says the slackness of the times has not arrived at the stage that it warrants taking a holiday.

The price of green wire cloth has been fixed at $1.85.

The manufacturers of clothes wringers have agreed to advance the price to $36 per dozen.

The Kemp Manufacturing Co., Toronto, are busy taking stock and preparing for the spring trade.

The Collins Manufacturing Co. are working on a new damper, and are also kept busy by the increase in demand for their weather strips.

Frankel Bros. report the receipt of a large stock of cotton waste, which they say is of a very superior quality, and which they are offering to the trade at a very low price.

At a recent meeting of his creditors J. W. Ross, general merchant, Chatsworth and Sundridge, the insolvent intimated his intention of trying to pay his liabilities in full.

The McClary Manufacturing Co., Toronto, report that all orders now coming in are by mail and of a sorting up character. "We are straightening up our stock, taking inventory, and preparing for the spring trade," they say.

The Toronto Steel Clad Bath and Metal Co. are now at work on their new bath to be known as Steel Clad No. 2. They report their sales in steel clad baths for the past month to be twice as large as those of the corresponding month last year.

A. C. Leslie & Co. have placed a new line of scissors on the market. It is known as the "Hercules." A line of pruning shears has also been put on the market under that name, and large numbers of them have already been sold.

"Trade in plate glass is dull, as in all other lines, but we are making preparations for better times," says Consolidated Plate Glass Co. "This is not our busy season and consequently we are not having large demand for any particular lines."

Ex Ald. Moses, hardware dealer, 301 Yonge street, Toronto, assigned on Thursday to Assignee Geo. Clay. The sheriff is in possession under the power of several judgments filed against Mr. Moses. No statement has yet been prepared, but the insolvent has an equity in several parcels of real estate, and his own statement of a year ago showed assets of over $19,000.

A King street hardware merchant, having read a recent article in HARDWARE on the advisability of hardware men taking up bicycle repairing, and the large profits that there were in the business, and being impressed favorably thereby, told a representative of this paper that he has decided to open out a repairing branch in connection with his regular business. There is nothing like a little enterprise, and HARDWARE wishes him success.

Turpentine is up 1½c. and linseed oil is 2 to 3c. cheaper in the States.

An attractive calendar for 1894 has been issued by the Standard Drain Pipe Co. of St. John's, Que.

M. & L. Samuel, Benjamin & Co. report that they have had an unusually big demand for their special brands of axes and axhandles.

The contract for supplying the city of Toronto with a six-foot steel pipe for the Yonge street extension has been awarded to the Central Bridge Co., of Peterboro, at $7.48 per foot.

The Windsor Patent Brush Co. claim to be turning out a superior make of broom, and which has certain peculiarities of construction which increases its wearing materially. The firm draws particular attention to the ferrule on the finish of the broom, which is a neat improvement over the old cloth finish, and there is no wire to break loose.

The senior partner of the Booth Copper Co. showed HARDWARE a sheet of aluminum the other day which resembled planished tin and cuts as easily as lead. It has a beautiful surface. The firm have not decided as yet to make any practical use of the metal, the great difficulty being the soldering of it.

The Canadian Mineral Wool Co., Toronto, report having made a shipment of their Asbestos Roofing cement to Bermuda, and they have also established an agency in New Zealand. They have the contract for supplying two large cotton mills in New Brunswick, and say that local trade continues brisk.

A. R. Woodyatt, of the firm of A. R. Woodyatt & Co., Guelph, hardware manufacturers, has lately returned from an extended trip to England and the Continent, on behalf of the "Woodyatt" lawn mower, which is a specialty with this firm. He visited England, Scotland, Ireland, Germany, France, Holland and Belgium, and reports trade with these countries very good, and that their mower was more than holding its own against all comers.

NEW YORK MARKETS.

NEW YORK, Dec. 29, 1893.

PIG TIN.—This is quiet and unchanged for spot and December delivery, but prices for futures are 5 to 10 points higher. Foreign prices 5 shillings lower on an active market and closed steady, with sales of 100 tons spot and 130 tons futures.

COPPER.—This market is quiet, with offerings from second hands at 10¼c. and lower prices would undoubtedly be accepted. London prices are unchanged, the market being barely steady. It closed 2s. 6d. lower with the feeling easier.

LEAD.—The market is dull and a shade easier, with sellers at $3 30.

SPELTER.—This market is easier, with sellers of spot and January delivery at $3.60. Western shipment is offered at $3.55½.

ANTIMONY.—Prices are unchanged. Contracts for future delivery all next year can now be made, giving buyers the benefit of any alteration in the present rate of duty.

SOLIDIFIED PETROLEUM.

The method of making fuel bricks of crude petroleum adopted by Engineer Maestracci, of the Italian Navy, is, according to an exchange, as follows: The bricks are of similar form and size to the coal briquettes extensively used in France and Germany. The mixture is made in the proportion of 1 liter of petroleum, 10 per cent. of rosin, 150 grains of powdered soap and 333 grams of caustic soda. The mixture is heated and stirred at the same time; solidification begins in about 10 minutes, and the operation must then be carefully watched. If there is a tendency to remain liquid, a little more soda is added. The mixture is stirred until the mass becomes nearly solid. The then paste is then poured into the molds, which are placed for 10 or 15 minutes in a drying stove. The briquettes are then cooled and are ready for use in a few hours. Signor Maestracci recommends the addition of 20 per cent. of wood sawdust and 20 per cent. of clay or sand, which will make the briquettes cheaper and more solid. In trials made at Marseilles on several tug boats the petroleum briquettes furnished about three times as much heat as coal briquettes of the same size. They were burned in the ordinary boiler furnace, without any special preparation, and gave out very little smoke, leaving also little or no ash. The advantages claimed for the petroleum briquettes for marine use are the absence of smoke and a large reduction in bulk of fuel which must be carried, as compared with coal, while the risks attending the carrying of liquid fuel are avoided.

BUSINESS CHANCE.

Advertisements inserted under this heading two cents per word each insertion.

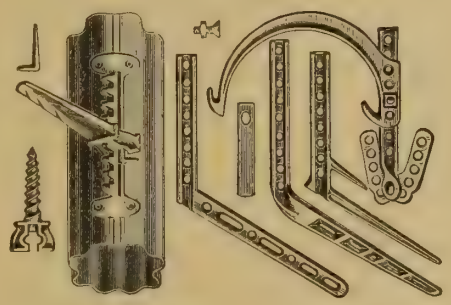
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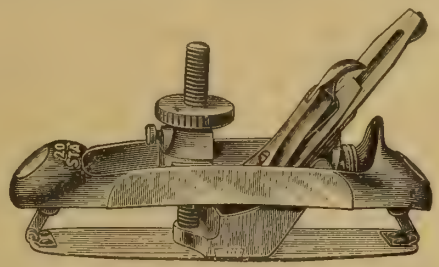


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The Flexible Steel Face of this Plane can be made concave, or convex, by turning the screw which is attached to its centre.

No. 20. Circular Plane, Nickel Plated, 1¾ in. Cutter, $6.00

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PRIZE CUPS
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Suitable for any Athletic competition. Special designs prepared, and estimates furnished on application.



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Lawn Mower
IN THE MARKET.

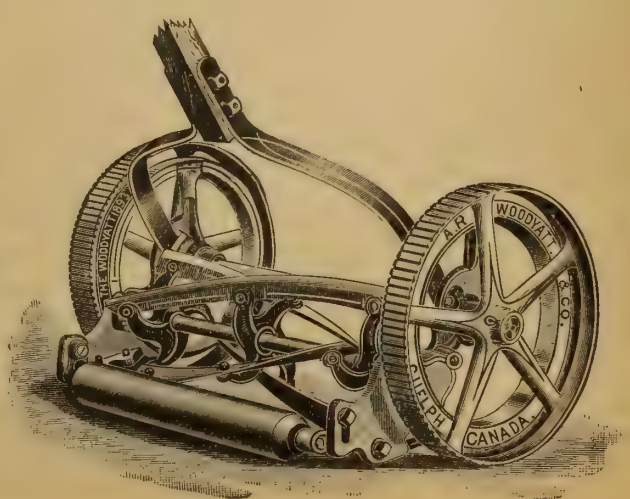
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10½ in. Wheel.
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A. R. WOODYATT & CO.
GUELPH, CANADA.



SOME OF A HARDWARE CLERK'S CHRISTMAS DAYS.

"YOU were at sea before you were clerk in a hardware store, were you not?" asked one of the boys, as he tossed the cards that were in his hand on the table. "You have been round the world a good deal, and I suppose, have spent Christmas in many different quarters of the globe. I'm tired of playing cards, let us have one of those sailor yarns, and we will light our pipes and listen. Come on old fellow, we're all ears." So I knocked the ashes out of my pipe, refilled and lighted it, settled back in my chair, and got ready to satisfy their curiosity.

As I gazed at the smoke from my pipe as it floated away towards the ceiling, the memory of the first Christmas day that I spent away from home came vividly back to my memory and I commenced something after this fashion: You must imagine what sights sailors see when they are in foreign lands, and also what prodigious lies they tell when they return, so I will do my best to stick to the truth, the whole truth, and nothing but the truth, which is a mighty hard thing for a sailor to do, so here goes. I was brought up in a town of some six thousand inhabitants not far from Toronto. Reading Capt. Marryatt's sea tales and numerous dime novels inspired me with a longing to be off, so one day, when I was about 13, I packed up a few of my belongings, and started off for a neighboring town, where, to make a long story short, I fell in with a man who was taking a car load of poultry to New York. I offered my services to feed the stock on the road down, and told him that I had run away from my parents who lived in New York and I wished to return to them. He gave me the job, and three days later found me wandering about amongst the shipping of that city.

While standing around close to one of the shipping offices, to which I had been attracted by the sign, Seamen Wanted for the barque "Joaquim," a man came running up, and grabbing me by the arm, said: "Are you a ship's boy?" Of course I said "Yes," and I was quickly hustled into the presence of a young man, who proved to be skipper of a small schooner, plying on Long Island Sound. He wanted a boy badly, and so was not too particular about asking me questions, so I signed articles, and two hours after I found myself fully installed as chief cook of the schooner "John Mayo," of Providence, R I., fifty tons burden, and carrying three hands all told—the captain, the mate, and myself, bound for Bridgeport, Conn., on the 24th of December, 1880. We hove up anchor and sailed soon after I came aboard, and I was initiated by the mate into the mysteries of how to make sea pie for supper. The captain had already found out that I was a greenhorn, but he had taken a fancy to me, and, giving me a slap on the back that made my teeth rattle, he said he guessed that if I kept a stiff upper lip I would get along all right, and when I had got over seasickness all would be plain sailing. I tell you, boys, I was as proud as a dog with two tails, and though I must confess that I did feel a little qualmish in the lower regions I managed, under the directions of the mate, to get some supper ready. We arrived outside of the port of Bridgeport about midnight, and as the tide was falling the captain ran her a little out of the channel and dropped anchor, and after lighting the riding light, which he hung to the mast, we went below to sleep until the tide should rise again, when we intended crossing the shallow sand bar at the mouth of the harbour.

As the tide fell the schooner's keel touched the bottom, and she settled on her side, and I fell asleep for the first time in a sailor's bunk. The cabin had four berths, two on each side, one above the other, and I had a top one. I slept soundly, and was dreaming that I was a rear admiral, commanding a line of battle ships, when I suddenly found myself flying through the air, and I landed on the mate's back, who was lying face downwards on the floor, where he had been thrown amid a pile of crockery, etc. The mate, however, after throwing me off his back and asking what I was sniffling about, made a dash for the companionway, quickly followed by the captain. When I had collected my scattered senses I followed also, and could hear them on deck calling choice expressions from the great garden of profanity and hurling them at the receding form of a big steamer that had just passed, and whose swell had thrown us over from the side on which we lay to the other side.

After gathering up the debris I again climbed into my bunk, rubbing affectionately the spot where the captain had planted his foot for the good of my health, and as I lay there I came to the conclusion that Christmas eve on the "ocean wave, or a home on the rolling deep," was not what the poets had cracked it up to be.

My first Christmas abroad was not an eventful one, but for the fact that I assisted in preparing the dinner, which was the first and last Christmas dinner that I ever attempted to cook.

My next Christmas was spent on board the full-rigged ship Fiji of Liverpool, 1,200 tuns burden, and lying becalmed a little south of the equator in the South Pacific Ocean. Now as a good dinner is a thing indispensable to a merry Christmas whether afloat or ashore, Christmas Eve is necessarily the last day of the ship's pig's life. The killing of the pig is one of the events of the voyage. You may often notice some old salt rubbing the pig's back, slyly poking its ribs and smacking his lips in anticipation of things to come. The pig is generally killed in the dog watch, which means between 4 and 8 p.m., and in this particular case all hands turned out to formally apologise to the pig for the liberthey were taking in killing him. One seaman acted the officiating priest, having in place of a Bible, Nories' "Epitome on Navigation," absolved his pigship from his his many sins, such as squealing and waking the watch below, etc; and we all solemnly announced that we forgave him. Then the executioner arrived in the person of the colored cook, who, after scratching the pig's back to assure him that what he was about to do was purely out of fellowship, he grabbed him by the ear and drove the knife home, a few kicks and all was over. Capt. Marryatt said in one of his novels "that no one could fathom a nigger's love for a pig." Then every man goes to work, and having previously sharpened his sheath knife and brought all the kettle lids into use, they scalded, scraped him and hung him up under the boats, ready to be whacked out to the men for Christmas dinner This was the first fresh meat we had had, or were likely to have, for a long time and had been long anticipated. I always think that the ship's pig tastes better than any turkey that I have ever eaten ashore. Christmas was spent by most of us in mending our clothes and washing what dirty things we had.

Now, I will skip to the Christmas of 1885 which I spent in Saigon, Cochin China; and I will again start in on Christmas eve. I was one of the crew of the ship "Oberon," of London, and was on shore for the purpose of spending a Merry Christmas and painting the town red. I am sorry to say that our efforts to do so proved a dismal failure. Well, to cut a long yarn short, after our day's work was done we went to the captain in a body and asked for a month's pay each, and a day's liberty, which he gave us, after giving us fair warning that any man coming aboard three sheets in the wind would be fined and have his liberty stopped. However, this advice went in one ear and out of the other. We soon found ourselves seated in one of the cafes that are so numerous in all French ports. Saigon is the Franco-Chinese naval station, and the cafe was filled with French sailors and soldiers who were sitting at little round tables, drinking wine, talking and singing. When we entered the Frenchmen all rose from their seats and gave bows that only Frenchmen can. After doing our best to imitate them, we got seated and began to call for liquids. One of our crew, a young Scotchman, could, to use a sailor's expression, talk the lingo, so he acted as our spokesman, and harangued the French seamen and soldiers something after this fashion: "Now, mates, one of our crowd is going to sing a song, and I tell you he's good at it, and if you fellows will keep your 'tater traps

shut until he belays, we will give you a chance to reel off a French ditty." This is what he told me he said. The Frenchmen all rose and bowed, waved their arms, and all spoke at once, expressing their willingness to keep quiet, then settled down to listen. One of our crew arose, and after considerable humming and coughing launched out with, "'Twas in Trafalgar Bay." At the word Trafalgar there was considerable uneasiness amongst the French seamen, but he continued, "We saw the Frenchmen lay." They did not understand any more until the singer mentioned the name of Nelson. Then one of the French sailors made some remark, to which one of our men retorted.

In less time than it takes to tell all was confusion, and I found myself, with the young Scotchman, in the grasp of four gendarmes, who hustled us off, while our shipmates retreated slowly to the ships, followed by all the French inhabitants, who kept up a fire at them with stones, bricks, or whatever came handiest. In the meantime I and my companion in distress were marched to a mat hut, where we were placed on a kind of low table, and one of each of our legs placed in stocks that ran along the bottom of it. The legs of the table that were nearest our feet were shorter than those nearest our heads, and there was a piece of scantling running along the top to lay our heads on. Between us they had placed a Chinaman, who from his uneasy movements in his sleep, for he did sleep, and soundly too, must have been pretty thickly populated with vermin, and I gave him as wide a berth as was possible under the circumstances. What he had done to be locked up I do not know to this day. After lying on my back and looking up in the darkness, wondering what they meant to do with us next, I fell asleep, and when I awoke there was a battle royal going on between my chum and the Chinaman, whose tobacco he had been trying to steal from a cloth that he wore round his waist. Of course I piled in to help my shipmate out, and notwithstanding the fact that we were fastened by the leg at distances of about three feet apart, we managed to have him hollering blue murder in less than no time. Hearing his cries the sentry came in and after clubbing our feet all round with the butt of his rifle he called in two or three more soldiers and they unlocked the stocks and took the Chinaman away, and I can tell you we were glad to get rid of him. The sentry then told my shipmate, in French, that we had better be civil or we would get six weeks in the calaboose, as he called it. After giving us another clubbing on the feet he left. We were not brought before the prefecture of the police until evening, he deeming it more comfortable to give us a hearing in the cool of the day. After hearing our case he sent us down to our ship with an escort of two gendarmes, who informed the captain that we were not to come ashore again while in the port.

Well, boys, it is getting late, so I will just give you a short account of the way that I spent my last Christmas abroad. On the 28th of December, 1889, I was aboard the British S.S. "Cartago Nova," of London, and lying in the port of Alexandria. After having breakfast I was sitting on the bulwarks, with my legs dangling outside, and gazing at the water, wondering how I was going to put in the day, when I heard the splash of oars, and a boat came around the bows, filled with seamen off on liberty from some other British ships that were lying in the harbor. They hailed me and wanted to know how many of our crew were coming on shore. "Get your shore togs on and come along and make one of the gang," shouted one of the men in the boat as they pulled alongside. "We're out for a time and we mean to have it." So two or three of us rigged ourselves out and were soon on our way to Bum-boat John's, an Arab who kept a liquor store and bum-boat and catered to the taste of the sailors. After splicing the main brace a few times we were as friendly as if we had known each other all our lives; and when some one suggested that we should all take donkeys and go out to Pompey's Pillar and the Catacombs we all fell in with his views, and went out to make a bargain with the donkey boys, who always flock around the entrance of a place where sailors are drinking, on the lookout for a fare. After being pulled one way and another by rival donkey boys, who loudly sounded the praises of their respective animals in broken English, we each got one and off we went, the owners of the donkeys running behind and beating them with a short stick or twisting their tails, when they were offered a small reward if their donkey got ahead.

It was a curious sight—the donkeys were very small and our legs nearly touched the ground. Seamen are not at their best in the saddle, and the amount of spirituous ballast they had taken aboard before starting made them sway to and fro, threatening every minute to fall off, which they often did. The catacombs were reached, and were voted by most of the men to be dismal holes, anyhow. Pompey's Pillar, however, interested us more. It is a massive column, and has the peculiarity of seeming to lean towards you, no matter from which point you look at it. One sailor, after walking around it a couple of times, thought that it was about time he was making for the ship, as he felt sure he had got them again. There were two or three tents pitched around the bottom of the pillar, in which Arabs were selling a mixture of gin and aniseseed, which seemed to suit the sailor's tastes, as they patronized them most liberally, and I believe that I remarked that it was not at all bad, and had my glass filled up again. One thing, however, I will admit, and that is, that I could give you a far more lucid description of what happened on the way home had I not taken any. Towards evening we started back for the ships, but donkeys were no longer of any use to the majority of the seamen, who after struggling vainly to keep their seat, by being propped up on one side by the donkey boys, gave up the ghost, and were bundled into ghurrys, which is the name of the native vehicles, which had followed us out, their drivers well knowing from previous experience that their services would be needed before the day was over.

We arrived again at Bum-boat John's in the evening, and after a lot of quarrelling with the donkey boys and Churry men about the amount of hire to be paid, we separated, some to lay down in John's back yard and recover from the effects of their expedition and the gin and aniseseed, and others to do the town up and add to the load that most of them already carried.

This is a fair specimen of a sailor's Christmas. I have swallowed the anchor, however, at last, to use a nautical expression and do not intend going to sea again.

> The curious up and down motion
> That one meets on the treacherous ocean
> Has inspired me at length with a notion
> That I never was meant for the sea

Well, good, bye boys, I have an appointment that I must keep. You know how it is yourself. No, I'm not going to get spliced yet a while. SINBAD.

GOD'S DESSERT.

His people have feasted on barley,
His people have dined upon wheat;
His people have fed upon plenty,
And corn is piled thick at their feet.

God stands a-tiptoe and sees us,
Amidst all our plenty, in sin;
Forgiving, he orders, to please us
A glorious dessert brought in.

The angels pile plums on our table,
Plums that are purple and red;
No people in legend or fable
With ever such splendors were fed.

The arm of the angel outstretches
Thro' fields that are prefumed and broad—
He is piling our lap full of peaches,
He plucks from the gardens of God.

Again His arm is outstretching,
Lest the spirit of autumn escapes;
The arm is gathering and fetching,
And loading our sideboards with grapes.

The red-cheeked apples are rounding
Their forms in the autumn-tide sun,
With pears in their bounty abounding
Ere glorious fall-tide is done.

This is the feast of the splendid
That aye to everyone comes,
Rosy-cheeked apples are blended
With grapes and peaches and plums.

Sit down to the o'erladen table,
Long, loaded, heaped fully and broad;
Come feast ye as much as you're able,
With gifts that are given of God.

—THE KHAN.

DON'T PREVARICATE.

IT is singular how the impression still holds in some minds that a person may be a little too honest for his own good; that a certain amount of untruthfulness and dishonesty is needful, especially in trade, says an exchange. And yet each one individually persists in preferring to deal with honest people. A professional man in a responsible position who had numerous appointments in his gift, set aside a very skilful employee for deliberately attempting to deceive him. He was deaf to the appeals with regard to his ability, saying:

"When a man lies to me once, that is all I want to do with him."

There is nothing so fatal to a young tradesman as the whisper, even, that he prevaricates; that you cannot depend on his word about his goods, and that he does not hesitate to defraud to the extent of a few pence, or a dime. Not many will "multiply words" about such trifles, but they quietly drop off trading at that place.

A lady was asked why she preferred shopping in the city, even for little things, to buying them at the stores in her own village? She replied in substance, that she had been repeatedly deceived and over-charged in several stores she mentioned, and advantage was taken of her ignorance of goods. "No, in the large stores in the city," she said, "they have one price for all; the goods turn out as represented. Every article sold and the clerk who sells it, even the cash boy who delivers it at the wrapping counter, is noted down, so that employees have no opportunity of defrauding on their own account. Honest intentions are stamped on every department, and even country buyers feel themselves safe."

Perhaps it is this feeling which has largely helped to make the leading stores of great cities such a centre of country trade for all the region round about. Another reason is that customers are not importuned to buy. One leading retailer relates that in his boyish years he felt shy of entering the grand stores, and he made up his mind that when he owned one it should be a place where country people would feel at home, and where they would not be pressed to buy what they did not wish. It seemed like a boy's day dream in those hard-working years, but the energy and steadfast principle he brought to bear on everything he undertook soon made his "manifest destiny" apparent to many thoughtful observers.

There are others now in small establishments in country places who are in process of training for a similar future. One I have in mind, whose small store is always well filled, and the people go out of their way, and pass two large establishments in order to shop there. Goods are always as represented, and please rather better when viewed at home than in the store. Everything is fresh and tasteful, and you unconsciously carry away the impression that the young man is even more desirous of obliging you than of selling you goods. Nobody will take the trouble of bringing home from the city what they can get at W——'s.

REGULATIONS TOO CAPTIOUS.

CONTROLLING the temperature of offices and public buildings generally is an object of more importance than the average occupant imagines, remarks Age of Steel. It is one of our characteristics to run into extremes. We are noodle-headed in making refrigerators of ourselves with ice water in summer, and we patiently endure the sweating process in winter that gives us a free and rapid passage to sickness and death. We bathe ourselves in zero weather in office temperatures from 70 to 80 degrees F., and after this equatorial indulgence we wrap in Esquimaux garments and rush with verdant innocence into the atmosphere of an Arctic latitude. The burials in March tell the story of such folly in January. This is strictly an American sin, for which we pay as heavy a price as we do for pie and fireworks. The present system of heating is as near perfect as it can be, but the regulation thereof is of too captious a nature to do it justice. Persons requiring to be wrapped in flannel and steam are unfortunately too many in the business world, and this tender school-graduate delicacy, so common in spring, has been incubating all winter in overheated offices and buildings.

BUSINESS MEN AND CLERKS.

THE world credits the American business man with being industrious and careful, and to those qualities, quite as much as to his native shrewdness, is attributed his wonderful success, remarks a contemporary. He is a worker in all that word implies, and all unite in accrediting to him a closer attention to the details than is given by men of other countries. Employees overlook this fact, and they look upon their employer as a man who has profited by their labor, not stopping to think of the hours and toil that he has passed through. The workman has his fixed hours for labor, and when the day's work is done his mind is not tormented with thoughts of the morrow, but with the employer there are no stated hours for his work; his only limit is the few hours given to sleep.

The hours of his shop when superintending his work are his easiest hours. His severest toil is that of providing ways and means of conducting his business. To do this he must find customers, watch commercial affairs, look to credit, see that the work produced is such as will sell, guard against waste in every department, be ready to meet competition without loss, and to systematize the workings of the factory and office that loss may be reduced to a minimum, and the office may always be provided with funds to meet all demands upon it His life is one continuous round of labor, and the closer attention he pays to the details, and the more prosperous the business, the better it is for the workman. Then, too, the more active the man the closer his connection with the business and with his relationship to his workmen, and the less the friction between employer and employee.

PERSONAL MENTION.

W. S. Leslie, the representative in Toronto and the West of A. C. Leslie & Co., is in Montreal, and will not return until after New Year's.

W. Ough of Aurora was in Toronto this week doing a little sorting up.

N. Courtemanche of Penetang was seen touring the Toronto warehouses this week.

Hugh McDonald of the Canadian Plumbing Co. and his brother Charles of Pulford's drug store received a telegram of the dangerous illness of their mother, and leave by the west train to-day for the family residence at Virden.—Free Press, Winnipeg.

Coal first came into use in England in 1234. During the last ten years there were produced 11,086,000,000 tons, and coal fields have been discovered in every country in the world. It is estimated that the coal fields now known will supply the constantly increasing demand for 1,000 years, which will give the world time to look round and either discover more or find a proper substitute.

Paint from potatoes is a new wrinkle in the arts and sciences. Kuhlow's Trade Review gives the manner of preparation: Boil a kilo of peeled potatoes in water; after mashing, dilute with water and pass through a fine sieve. Add two kilos of Spanish white diluted with four kilos of water and the result will be a color of beautiful milkwhite. Different colors can be effected by the addition of different ochres or minerals. Apply with brush; it adheres to plaster and wood very well, will not peel, and best of all, is cheap.

The general accounts of falling off in the iron ore traffic and in business of all kinds would lead us to expect a material decrease this season in the traffic of the Sault Ste. Marie Canal, through which pass all the vessels plying between the Lake Superior ports and those of the lower lakes. Such, however, has not been the case. The canal closed for the season on December 6th, and while the full statement is not yet made up, we have the figures to November 30th, which the additions for the remaining week will not greatly change. To the end of November this year the total freight carried by vessels passing through the canal was 10,838,131 tons, while last year it was 11,188,676 tons, showing for the present season only the small reduction of 350,545 tons, or 3.1 per cent. This will surprise many, who had expected a far greater decrease.—Ex.

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BANK RAILINGS

Bank and Office Counter Railings, Inside Wire Window Blinds and Signs, plain and lettered. Basement Window Guards. Write for Catalogue.

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Will find the cheapest Paint Brushes are those having our . . .

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Why? Because the bridle can be taken off and replaced in a moment. The paint circulates and the stump never hardens. You can wear the brush down shorter, therefore it will last much longer.

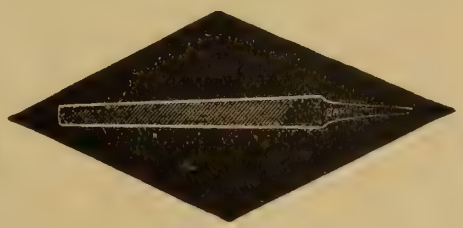
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BLACK DIAMOND



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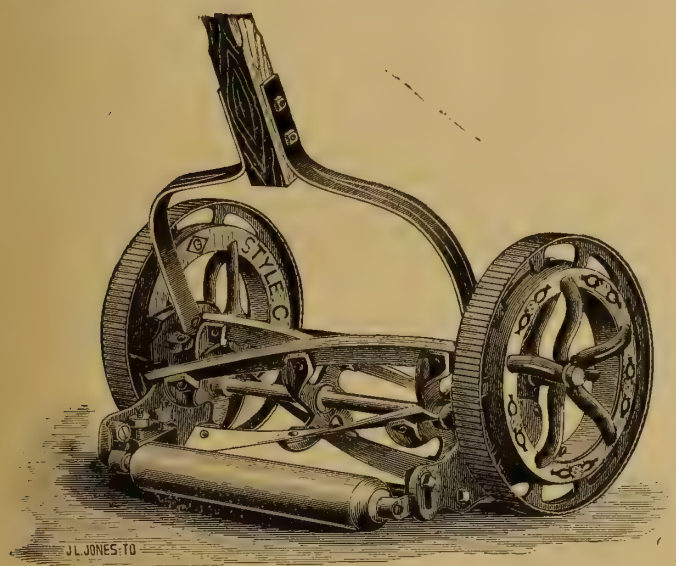
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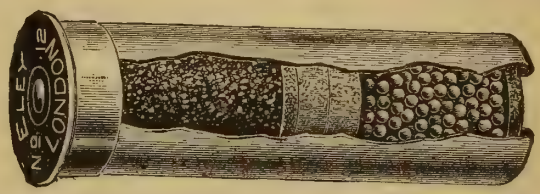
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CANADIAN CARTRIDGE



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ELEY'S GUN WADDING


BLACK EDGE


THICK FELT


PINK EDGE



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One thing at a time, because there's not time enough for two things at a time.

The economy of religion, politics, and business focuses its strength into one concentrated point, that by its oneness it may stand in the full majesty of single identity.

The man who thinks he can do everything is the jackass of all trades. No man can do two things as well as he can do one thing. No book or play with more than one leading character has ever gained public approval. The business man who can sell goods as well as he can buy goods is a mighty poor business man both ways.

The strength of success is the oneness of it.

Two lamps do not appear to give twice as much light as one. One might as well mix soup with his fish, and live upon semi-fluid hash, as to attempt to say more than one thing at a time, do more than one thing at a time, and advertise more than one thing at a time. Two good things are not twice as well appreciated as one good thing.

A nail squarly hit on the head and well driven will hold better than ten nails bent in the driving. One point remembered is better than ten points forgotten.

The advertisement which tells everything about the man who advertises, and as much about the goods he has for sale, interesting as it may be to the advertiser himself, and to those in his employ, is weak dish water to the reader.

An advertisement of shawls in the same column and closely connected with a similar announcement of window shades, allows the window shade argument to detract from it, and itself detracts from the window shade argument.

People like to buy something which is especially advertised. They like to feel that on a certain day the great specialty in window shades, or shawls, or something else, and that they can expect on that day some thing extra for their money. This is an age of specialties, and regular goods must be advertised as specialties, to attract special attention.

When it is necessary for a firm to advertise a large number of things at the same time, these articles should be divided by lines, borders, or intervening white space, so that each article will have an identity of its own, and not be mixed up with other similar or dissimilar articles.

The woman who desires to buy some sheeting will read and be guided by an advertisement which is all sheeting when she will pass by an advertisement which speaks of sheeting, hose, blankets, handkerchiefs, and other things.

While parlor stoves and ranges are in the same general line, it is far better to advertise the range in one advertisement, and the stove in another, giving each the full identity of itself alone rather than to combine them in one general advertisement.

An advertisement, besides advertising only one thing, should attempt to make but one point at a time, for one point will be remembered while a great many points will be forgotten, and too many points allow each point to handicap the effect and strength of all the other points.

There are cases where description must be given, and there is no objection to it, but the descriptive matter can be set in type of reasonable size so as to allow room for the largest heading aud the greatest display, there being sufficient argument or interest in the heading and the opening part of the descriptive matter to make the person read further, if he be a possible customer. The advertisement can have all the advantages of brevity, and yet contain a large amount of descriptive matter, because the advertisment can be practically in three parts—an attractive heading, followed by a short argument in large type and complete in itself, both preceding the descriptive matter.—By Nath'l C. Fowler, Jr.

HARDWARE IN SOUTH AFRICA.

A CORRESPONDENT of Iron Age, writing from Port Elizabeth, South Africa, says: South Africa, with its even million of white people, is growing more and more in touch with the rest of the civilized world.

Our World's Fair has certainly helped to this end. Quite a number of people have lately returned from Chicago, bringing with them not only interes ing stories of the fair, but also quite an assortment of new lines of merchandise picked up in the States from exhibits made at the fair.

This is materially helped by the direct line of steamers which leave new York every three or four weeks, and make the 7,200 miles direct passage to Cape Town in thirty days. These steamers do not ask any more freight charges than those from London to the Cape, and virtually take no longer in transit, so that many lines which did not interest the colonial buyer when he had to wait for a three months' sailing ship now obtain a demand, and we are put on a more even footing with the European factories. The writer has found it possible to sell several lines because of this, which two years ago would not excite interest. It is to be hoped that the steamers have come to stay, though many of the colonial merchants prefer the sailing vessels, since the more obstacles there are put in the way of importing the less crowded do they find competition. It is a fact that these steamers each bring out a number of first-class passengers, and there are at the great mining centers down here several Americans in charge of large interests, for, of course, the mining machinery in vogue is chiefly from the United States.

Cape Town, with its 85,000 people, is taking a step up in the world—that is to say, two or three years ago there were but two or or three buildings over two stories high, now there are half a dozen running up to five stories and several to three.

I would take much more interest in building interests here if they would only use decent hardware, but the builders' hardware in use would shame a third class tenement. They use almost entirely cheap, heavy English rim locks, which turn only one way and have an inch and a half brass knob. There are very few Mortise locks in use and no night latches, although in this city the trade have done very well with American rim locks, introduced two years ago. In Cape Town they could not be tempted to handle the goods because of the light case, and in neither city do they take kindly to our nicely finished wrought steel butts, but prefer, at a higher price, the English cast butt.

The building trades have done very well during the year, which helps the tool lines, where we come in for a large share. Some day we will be able to meet the mother country on common iron goods, even as we now do on malleables, where we almost invariably score an advantage, but on brass hardware we are out of it again.

Every day I am told of the increased effort the Germans are putting forth for colonial business. Both in Australia and throughout South Africa they have numbers of sample rooms and travelers seeking importation orders for new lines for that market. Even lately have they come into this field with plows, which is a very large line at this port. One number of an American plow coming here to the tune of 30,000 per annum is in popular demand from Kaffirs as well as from the Dutch and English.

But there is one great advantage all over the world in competing with goods of German manufacture—viz., that the buyer takes it for granted that they must be of very inferior quality.

KEEP YOUR FEET SHOD.

At a certain horse race recently, it happened that one of the best horses fell behind, and the discovery was made that the jockey had been racing the horse with loose shoes. The jockey was fined, replaced by another, the horse's shoes were fastened on, and then the horse won the race with ease. We can find a moral in this incident of a horse race. Many a young man begins life handicapped by loose shoes; his principles are loose, his plans poorly formed. The wise young man, remarks an exchange, has his feet tighly shod, his principles are unwavering, his plans definite and stable.

"Love laughs at locksmiths" until marriage comes along and claps on a combination lock.

ORIGIN OF HARDWARE TERMS.

THERE is more or less uncertainty as to the origin of many trade terms in general use, and not a few of the designations of various kinds and sizes of hardware articles are involved in obscurity as to the reason for their adoption. As examples of this the way in which nails are designated as 10 or 20 penny, the gauge of shotguns, the numbers of screws, caps, etc., will readily occur to our readers. These and similar terms have been unquestionably in use for a long time and the origin of terms is largely tradition, as most of such markings originated with foreign makers before hardware was manufactured in this country. When similar goods were first made here the designations familiar to the trade were naturally adhered to by the American producers so that confusion might be avoided, in very much the same way as American tin plate makers have adopted the foreign terms to designate the different grades of American tin plates. Among well-informed persons explanations of most of these terms are, however, current, and in many cases there is little reason for doubt as to their correctness. In some instances, however, there are different and inconsistent explanations given, and on these questions there is, of course, more or less doubt. We give below the opinions of well-informed parties as to the origin of some of these designations:—

The usage by which the bore of guns is designated, as, for example, 12 gauge, is supposed to have originated in this way: The gauge of guns was determined by the number of pure lead bullets, spherical in shape, any one of which would fill the bore of a gun. Thus, a gun whose bore would be filled by one of 12 such bullets weighing together a pound was termed 12 gauge.

The numbers given to caps are supposed to have been arbitrarily given by foreign makers, and were continued by American manufacturers when the goods were produced here.

The origin of the term "bastard," as applied to files, is generally explained in this way: The rough file was first made, then the second cut. A demand for a file between the two was afterward developed, which, being out of the regular line, was termed bastard.

Two explanations are current in regard to the use of the term "penny" as a designation of the size of nails. The one which is very generally adopted is as follows: That the word penny is a corruption of pound. Thus, a 4d nail was one of such a size that 1,000 of them weighed 4 pounds. It may be remarked that originally the term "100" when applied to nails was six score, or 120; consequently the 1,000 was 1,200. Another explanation is based on the fact that cut nails are comparatively of recent date, having been first made in this country, and were introduced in England as late as 1846. Formerly all nails were forged, and the price for forging 1,000 1½-inch nails was 4 pence, or, as the term is now used, 4d; the price for forging 1,000 2-inch or 6d nails was 6 pence, and so on. As a reason why small nails could be forged so cheaply it is stated that children often did the work.

The numbers given horse nails are supposed by some to have originated in the same way as penny with cut nails, according to the first explanation given above. Thus, 1,000 of any size weighed the number of pounds designating the number of the nail. No. 6 horse nails would then weigh 6 pounds to the 1,000; No. 8, 8 pounds, etc. It is obvious, if this explanation is correct, that the present weight of any number of nail does not correspond to the original weight of the same number.

The numbers by which screws are known designate the numbers of the screw gauge to which the sizes of the screws correspond. It would appear that screws were first made in the various sizes and then a screw gauge made as a standard, and wire used in the manufacture of screws drawn to conform to this standard gauge. The screw gauge bears no relation to the wire gauge, as in the case of screws the largest number designates the largest wire, while in the wire gauge the largest number represents the smallest size wire.—Iron Age.

AN OPPORTUNITY FOR INVENTORS

THE Metropolitan Traction Company of New York have, it is announced, decided to appropriate the sum of $50,000 as a prize to any person who shall, before March, 1894, submit an actual working system of motive power for street railway cars which shall be as efficient in speed and economy as the cable or trolley, but without the use of poles and overhead wires. The Railroad Commissioners have promised co-operation in the matter, and it is expected that the Company's liberal offer willstimulate some inventive genius to devise a method of street transportation more suitable to a crowded metropolis than those now in use. The experience of the new cable cars on Broadway since their inauguration a short time ago, where traffic has increased 25 per cent., while operating expenses have decreased 20 per cent., has convinced the traction company that some more speedy and reliable motive power than horses is demanded by the public. As the desired system is intended for use over the entire city the cable would be inapplicable, while the overhead features of the trolley system would be so objectionable in the crowded streets of New York as to make that method undesirable. The company declare that they will exact no rights in the invention in return for the $50,000, although they do not promise to defray the expenses of experiments. This encouraging opportunity for the exercise of the large stores of inventive genius existing in this country will assuredly not be lost.

THE BEST WHITEWASH.

THE complete success is well known of the formula for whitewash adopted by the United States Government as a coating for lighthouses, and for its effectual prevention of any moisture striking through the walls. It is simply, says an exchange, the mixing with fresh water, in the most thorough manner, of three parts Rosendale cement and one part of fine clean sand, this giving a gray or granite color, dark or light according to the color of the cement; if a very light color is desired, lime is used with the cement and sand; if brick is sought, enough Venetian red is added to the original mixture as to insure that result. Care is exercised to have the various ingredients well mixed together—also, in applying the wash, to have the wall wet with clean, fresh water — following immediately with the cement wash — this method preventing the bricks from absorbing the water from the wash too rapidly, and it also gives time for the cement to be properly set. The mixture is made as thick as can conveniently be applied with a whitewash brush in the usual manner, and the wash is well stirred during the process of its application. It is stated, however, that though this mixture is so admirably suited for the purpose in question, it cannot be used to advantage over paint or whitewash.

TEN YEARS HENCE.

'Twas in a dime museum hall in 1903,
A crowd of eager visitors had gone the sights to see;
And there were curiosities of every kind on view,
From the modest editor who gave his circulation true
To the meek, sedate reporter, whose statements never lied,
And the small, veracious newsboy who false news never cried;
But around a certain comer the whole crowd seemed to stand,
Inspecting there the greatest freak then known in all the land;
I asked a stranger what it was; he said he didn't know,
But he guessed it was the most attractive feature in the show.
I forward pressed among the crowd, and there beheld a man,
The object of their curious gaze—whose face was pale and wan;
And as I paused I saw the keeper point at him and say,
"The only living man who thinks advertising doesn't pay!"

BUSINESS CHANGES.

DIFFICULTIES, COMPROMISES, ASSIGNMENTS.

THE liabilities of A. E. McLauson, the Joggins Mines merchant who assigned a few days ago, are estimated at $21,000.

Murdock McLean, painter, Moncton, N.B., has assigned.

George Stothart, hardware, etc., Chatham, N.B., has assigned.

W. Calverley, harness, Whitby, has assigned to J. Maynard.

A. E. Melanson, general merchant, Joggins Mines, N.S., has assigned.

L. G Burns, plumber, Victoria, B.C., has assigned to E. G. Anderson.

Robert Hardie, coal merchant, Montreal, has filed consent of abandonment.

Mrs. John Howard, coal and wood, Whitby, has assigned to H. W. Wilcox.

A demand of assignment has been made on F. Bertrand, machinist, Montreal.

Mrs. Janet Hamilton, general merchant, Clifford. has assigned to W. D. Ebbells.

W. H. Minhinnick, general merchant, Kinbrae, Assa., is offering to compromise.

Geo. Duthie & Sons, roofing, Toronto, are offering to compromise at 40c. on the dollar.

The liabilities of Abraham Moses, general dealer, of Waverley, who assigned last week to W. A. Campbell, are $6,700.31.

W. Brown, the carriage hardware dealer, Toronto, whose financial difficulties were announced the other day, is offering his creditors 50c. on the dollar.

A meeting of the creditors and stockholders of the Erie Glass Co., was held at Assignee Clarkson's office on Tuesday. Inspectors were appointed to look into the estate in conjunction with the assignee. No statement of liabilities or assets has yet been made.

PARTNERSHIPS FORMED AND DISSOLVED.

Irwin, Hooper & Co., asbestos and minerals, Montreal, have dissolved. The business will be conducted by R. T. Hooper.

Story & Avison, general merchants, Wawanesa, Man., have dissolved. J. J. Story will continue the business, and to him all debts due the firm must be paid.

SALES MADE OR PENDING.

The stock of W. S. Dockrill, plumber, has been sold.

The stock, etc., of F. C. Desouche, general merchant, Bryson, Que., have been sold.

The effects of J. Street, blacksmith, Duncan's Station, B.C., are advertised for sale.

The boot and shoe stock of H. Duverger, Joliette, Que., has been sold at 67c. on the dollar.

Stock of A. E. Hall & Co., general merchants, Grenville, Que., has been sold at 52½c. on the dollar.

Stock, etc., of George St. Armand, general merchant, Ste. Genevieve de Bastican, Que, have been sold at 60c. on the dollar.

CHANGES.

R. Morrison, blacksmith, Shelburne, has been succeeded by Angus Bell.

J. B. Gowanlock, furniture and carriages, Cypress River, N.W.T., is selling out.

W. Thompson, lumber, Russell, Man., has sold out to Callin & McDonaugh.

The estate of F. C. Dube, lumber, Fraserville, Que., has been succeeded by Emile Dube.

A. M. Featherstone, boots and shoes, pianos and organs, Montreal, has sold out boot and shoe business to J. S. Banister.

DEATHS.

J. A. Preston, general merchant, Murray, is dead.

Auguste Ceauillard, wholesale hardware merchant, Montreal, is dead.

VIEWS AND INTERVIEWS.

"THERE is no news," said a jobber, "but wait till the manufacturers meet next month. Then there'll be lots of news for you," he concluded, with a wink.

* * *

"Well, Christmas trade was not, I fancy, so good as usual," remarked one of the head salesmen in a wholesale house, as he thoughtfully scratched his head. "As far as purely Christmas goods were concerned, I am sure it was not. Of course trade in cutlery has been good."

"Yes," remarked another salesman, "but a good many carvers in fancy cases will be carried over. "People hadn't the money to go in for high-priced goods."

* * *

My old friend Percy Brown is now settled down as a hardware merchant in Morden, Man. He located there some three months ago, having severed his connection with the firm of Brown & Mitchell, Brandon, of which he was the senior partner. Previously to entering the latter firm Percy was with M. & L. Samuel, Benjamin & Co. I am pleased to learn that business with him in Morden has so far exceeded his anticipations and that the future promises well. But there is one thing that Percy doesn't like, and that is the winter weather around Morden; he says it is "measley." Percy, I think, never did like cold weather, anyhow.

* * *

There seems to be at least one town in Ontario where trade is brisk and in which men are not going about searching in vain for work. That town is Penetang, and N. Courtemanche of that place is the accredited authority for the statement. Mr. Courtemanche was in Toronto this week doing a little sorting up, and to a friend of mine he said, in effect: "Trade in Penetang is very good, and what is more, we haven't an idle man in the town."

* * *

"Trade has been good and lively in Walkerton this Christmas," said a traveler to me. "The merchants in some lines of trade had to telegraph to have goods sent on by express, the volume of business having exceeded their anticipations and the preparations they had made for it."

* * *

"There has been a good deal of cutting in glass this year. Of course you understand I refer to prices. I don't mean the article itself. It is in order to cut that, while to cut prices is not, although I know some people seem to think it is. Well, all I know, if prices aren't better next year, this firm won't keep glass in stock." It was a well-known wholesale hardware man that made this semi-humorous remark in my hearing.

* * *

"A good deal of dissatisfaction exists in the west regarding Canada plates," said a traveler to me the other day. "The trouble seems to be that plates which were bought for half-and-half are turning out to be all dull, hence the kick. There is also some spurious solder being put on the market. It has been sold as half-and-half, when it has not actually been within 20 per cent. of it.

BYSTANDER.

LAWN MOWERS.

THE wholesale jobbing houses are now looking up their orders for lawn mowers for next season, and already quite a few orders, it is understood, have been placed with the manufacturers. The past season has been a good one, and one of the principal makers of these goods, A. R. Woodyatt & Co., of Guelph, inform HARDWARE that the demand for their "Woodyatt" mower was so great towards the close of the season that they had to refuse large orders owing to their inability to keep pace with the demand. Judging from this the demand for their next season's machine will be large, and they have made extensive arrangements to cope with it. Their new Woodyatt Mower, improved for 1894, is held to be the acme of perfection. The knives are made of Thomas Firth's caststeel rolled to special section, hardened and tempered in oil, and caststeel pinions, properly hardened, have replaced the old iron ones. The shafts, which are of drawn steel, revolve in compression bearings, which arre long, and adjustable for wear. The wheels are 10½ in. high, making the mower easy to operate; and the handles are self-adjusting, so that either a man or a child can use them. These machines have a world-wide reputation, and are on sale in the principal cities in England, Scotland, Ireland, Germany, France, Russia, Norway, Sweden, Denmark, Holland, Belgium, and Australia, and are known the length and breadth of Canada, being handled by all the leading wholesalers. For cut of this mower the reader's attention is drawn to Woodyatt & Co.'s advertisment on page 19 of the present issue. Intending purchasers are advised to place their orders early so as to avoid possible disappointment.

COAL AND FURNACE MANAGEMENT

IN large manufacturing establishments the amount of coal consumed is generally very accurately determined. The coal is usually weighed on the premises as delivered, and thus there is little room for error or fraud in the deliverg. The same cannot be said of coal as purchased for domestic use from the coal yards. The large majority of people have no way of determining whether or not the amount delivered is the amount purchased and paid for ; and if such facilities for the commission of fraud do not sometimes lead to it, coal dealers must possess, on the average, a much higher standard of commercial morality than grocers, butchers and others from whom domestic supplies are obtained. That such frauds do occur is evidenced by the fact that a recent prosecution of a coal dealer by a customer who took special and unexpected pains to privately reweigh coal delivered resulted in a judgment in favor of the plaintiff. It might be advisable for other consumers to take similar pains. Some think that a close enough estimate can be made by a comparison between the bulk of any particular delivery with that of previous deliveries. But, aside from the fact that previous deliveries have generally been accepted as correct without reweighing, and so form no trustworthy standard of comparison, this method is unreliable in other respects. There is much variation in the density of coal, as may be proved by testing specimens from different mines, and even from the same mine at different periods. The specific gravity tables in engineering books give averages, not absolute, invariable figures. Specific gravity of various coals may differ as widely as 20 per cent. The only true way to determine weight is to weigh, except with substances whose weight for a given bulk is known to be constant.

Very few domestic establishments are provided with suitable scales for conveniently weighing fuel. Even with platform scales large enough to weigh a considerable bulk, say 200 pounds, it would not always be convenient to weigh coal as delivered, though in most cases with such scales this could be done; but spring scales, which will weigh 50 pounds, are not costly affairs, and with these coal could be weighed in the hod as consumed with little trouble, and a well kept tally would in the end show conclusively whether the amount purchased was fully delivered or otherwise. If people were known to adopt generally or even partially the system of weighing coal during its consumption dealers would soon become very careful to deliver full weight. Also some errors of judgment that more or less affect the furnace and steam heating trades would cease to be committed. For instance, a householder speaking of a new furnace he had used during a single winter said, "It is a handy furnace and heats well, but I judge it burns about three tons of coal more than the old one.'

The person to whom the statement just quoted was made very patiently asked on what the estimate was based, and was answered that the usual supply having been exhausted, three tons more, nearly all of which was burned, had to be purchased to get through the season, and as the average cold during the winter had not materially varied from that of the preceding winter, the required addition was attributed to the new furnace. In further conversation it came out that the coal had that year been purchased from a different yard than formerly. Of course there might have been more coal actually consumed ; but, on the other hand, it is equally possible that injustice was done to the furnace and its manufacturer. This will appear more probable from a brief account of a different experience on the part of a resident of the same city. The person referred to had been in the habit of putting in coal purchased from a particular yard for some six or seven years in succession, the amount purchased and paid for for furnace use being 20 tons. Except in specially mild seasons the amount delivered was very nearly or quite consumed, the house being large and the furnace correspondingly large. One year, for some reason, he was led to buy his supply from another dealer, the same quantity being paid for and the same kind of coal being ordered. That year the winter was colder than the average, yet at the end of the season, although the same person attended the furnace as in former seasons, he estimated that there remained in the coal bin at the end of the season not less than two tons. Now suppose this to have happened at the end of a season when a new furnace had been put in. In all probability the new furnace would have been credited with superior economy, and with no better foundation than that upon which the furnace previously cited was discredited. Very likely a heating apparatus is often misjudged through blind confidence placed in the integrity of coal dealers—a confidence paralleled in no other trade. People will weigh butter and meat suspected of light weight, but coal, not once in a hundred times.—Metal-Worker.

FRENCH BICYCLISTS.

The bicycling craze among the French women has become so great that it is calling out some interesting protests, according to a Paris despatch. One reason of its popularity seems to be the opportunity it furnishes for the display of peculiar French costumes. The least startling of these is full zouave trousers reaching to the knees with only bicycle stockings and shoes below. One despairing husband writes to the papers that women are neglecting their domestic duties to indulge in the new pastime.

REWORKING SCRAP.

FOLLOWING cheap steel sheet bars several mills have been built without bar mills attached to them, no provision being made for reworking the scrap or trimmings from sides and ends of sheet packs. This has been found to be a source of trouble, as sheet scrap cannot be sold at a figure that will pay for the trouble and expense of handling and transporting it to other mills to be reworked. It is too light and bulky. Sheet mill managers have always found it necessary to devise means of using their scrap in an economical manner. A common method is to bushel the scrap in an ordinary puddling farnace, pass through the squeezer and roll into a bar, which is cut to length and made into a pile, reheated and rolled into sheet bars. To save the expense of one heat, it is now a custom in many mills to fagot scrap.

The method employed is as follows : A bench is constructed upon which a wrought iron box is placed, the ends being open and a door on the front side. In the bottom of this box a muck bar is placed, and upon this sheet scrap bent to the length of the bar is piled, another muck bar is placed on the top of the scrap, then more scrap and a third muck bar on top of the fagot. The whole pile or fagot is then about 12 inches high, it is reduced by means of a screw to a height of 7 or 8 inches and bound together with round iron half-inch diameter. It is necessary that iron be used for binding, if steel is used it witll not unite with the muck bar and a seam is left in the bar. In this manner nearly all the scrap can be worked up into such shape that only one heat is required to roll into sheet bars ready for use. Attempts have often been made to work scrap fagots in this manner without using muck bars, but without success. The scrap works dry and muck bar is necessary as a flux. The proportion of scrap to muck bar in a well made fagot is about two-thirds. This plan of using scrap is second only in cheapness to the practice of rolling sheets from ends of boiler and ship plate. In Scotland large quantities of sheets are made in this manner, but American shipyards are not so numerous, and only a limited quantity of the material can be obtained.

Having described the general methods of of rolling sheets of iron or steel and noted the changes made in machinery during the past 20 years this article would not be complete without reference to the attempts recently made to revolutionize the method of rolling sheets.—Iron Age.

The contract for furnishing the first smokeless powder for use by the United States army was recently divided between two firms, the Leonard Powder Company and the California Powder Works, each to furnish 5000 pounds. The division was made in order to compare the merits of the two powders.

TELEPHONE 1780.

J. H. FARR & CO. MANF'RS OF **FINE VARNISHES**

Shellacs, Japans, Asphaltums, Oil Soap, Roofing and Paving Pitch, Tarred Felt and Building Paper.

Importers and Dealers in Bronze Powders, Gold and Metal Leaf.

8 to 16 MORSE STREET, - - - TORONTO, ONT.



For Iron Fencing, Bank and Office Railings and all kinds of Iron Work address

Toronto Fence and Ornamental Iron Works,

73 Adelaide Street West, TORONTO.



Ontario Nut Works, Paris

BROWN & CO.

Manufacturers of

All sizes of Hot Pressed Nuts, Square and Hexagon

THOS. FIRTH & SONS, Ld.

Best Crucible Cast Steel.

STEEL, PEECH & TOZER, Ld.

Bessemer Steel,

Open Hearth Steel.

Agents,

James Hutton & Co.

MONTREAL.

CURRENT MARKET QUOTATIONS

METALS.

Tin.

Lamb and Flag—	
56 and 28 lb ingots, per lb	21, 22
Straits "	20½, 21

Tin Plates—*Charcoal Plates, Bright.*

	Per box	
M.L.S. equal to Bradley		
I.C., usual sizes	$5 75	$6 00
I.X., "	7 00	7 25
I.X.X., "	8 25	8 50
Raven & P.D. Grades—		
I.C., usual sizes	4 00	4 25
I.X., "	5 00	5 25
I.X.X., "	6 00	6 25
I.XXX., "	7 00	7 25
D.C., 12½ x 17	3 75	4 00
D.X.,	4 75	5 00
D.X.X. "	5 75	6 00

Note.—Other brands might be shaded by 25c. per box.

Coke Plates—Bright

Bessemer Steel—		
I.C., usual sizes	4 00	4 25
I.C., special sizes	5 00	5 25
B.V. Grade, I.C., usual sizes	4 85	5 00

Note.—Round lots of 14x20 might be purchased of 25c. box

Charcoal Plates—Terne.

Dean or J.G. Grade—		
I.C. 20 x 28, 112 sheets	7 50	7 75
I.X. Terne Tin	9 50	9 75
Old process I.C.		13 00
" " I.X.		16 00

Charcoal Tin Boiler Plates.

	Per lb.
Oakley Grade—	
I.X.X., 14x56, 50 sheet bxs	6½c, 7c
" 14x60, "	
14x65,	

Tinned Plates

72x30 up to 24 gauge	6¼	6½
26 "	6¾	7
28 "	7¼	7½

Iron and Steel.

	Base	Price
Common Bar, per 100 lb	$1 95	
Refined " "	2 35	2 65
Horse Shoe " "	2 60	2 75
Band " "	2 50	2 60
Hoop " "		2 60
Swedish " "	4 00	4 25
Sleigh Shoe Steel		2 50
Tire Steel	3 00	3 25
Machinery	2 75	3 00
Cast Steel, per lb	0 10	0 14
Russian Sheet "	0 10½	0 11
Tank Plates1-5 and thicker	2 00	2 25
Boiler Rivets	4 50	5 00

Boiler Tubes.

2-inch	10½c
3-inch	13½

Steel Boiler Plate.

¼ inch	$2 45
16 "	2 35
¾ " and thicker	2 25

Sheet Iron,

1 to 20 gauge	2¾, 3
22 to 24 "	2¼, 2¾
26 "	2¼, 2½
28 "	2½, 3

Canada Plates.

All dull	2 65
½ polished	2 75
All Bright	2 90

Iron Pipe.

Wrought 62½ and 5 p.
Galvanized, 40 to 40 and 5 per cent.
Cast, soil, 2, 3, 4 and 5 in., 50 and 10 to 60 per cent.

Galvanized Iron.

Adams—Mars Best and Queen's Head

16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾

Gordon Crown—

16 to 24 gauge, per lb	5, 5½
26 gauge, "	5½, 5½
28 " "	5½, 5¾

Note—Cheaper grades about ¼ cen per lb less.

Chain.

Proof Coil, 3-16 inch, per lb	6 6 3-5
" ¼ " "	4⅞ 5
" 5-16 " "	4½ 4¾
" ⅜ " "	4¼ 4½
" 7-16 " "	4 4¼
" ½ " "	3¾ 4
" ⅝ " "	3⅜ 3⅝
" ¾ " "	3 1-5
Trace, per doz. pairs	$3 60 5 90
German coil, per 100 ft	1 65 2 70
Jack chain, iron, single, per doz yards	0 13 0 50
Jack chain, double, per doz yards	0 15
Jack chain, brass, single, per doz yards	0 20 1 10

Copper—*Ingot.*

English B. S ton lots	0 11¾ 0 12
Lake Superior	0 12¼ 0 13

Bolt or Bar.

Cut lengths, round, ¼ to ¾ in	$0 22 $0 25
" round & square 1 to 2 in	0 20 0 23

Note—Complete, lengths abou fifteen feet, from 3 to 5 cents a pound

Sheet.

Untinned, 14 oz, and light, 16 oz, 14x48 and 14x60	$0 16 0 17
Untinned, 14 oz, and light, 16 oz, irregular sizes	0 17 0 18

Note—Extra for tinning, 2 cents per pound, and tinning and half planishing 3 cents per pound.

Planished and tinned, 14x 48 and 14x60	0 26 0 27

Braziers. (In sheets.)

4x6 ft, 25 to 30 lb ea, per lb	0 18 0 19
" 35 to 45 " "	0 16 0 17
" 50 lb and above per lb	0 15 0 15½

Boiler & T. K. Pitts.

Plain Tinned per lb	0 21
Spun " "	0 25

Wire.

Pure, in coils—	
From 1 to 20 gauge	0 25 0 27
From 20 gauge, up	0 28 0 30

Brass.

Roll & Sheet, 14 to 26 gauge.	0 20 0 21
" " 27 to 30 "	0 23 0 25
" " 30 and up	0 26 0 28
Sheets, hard-rolled 2x4 ft.	0 21 0 23

Zinc Spelte .

Foreign, per lb	0 04¾ 0 05
Domestic "	0 04⅝ 0 04¾

Zinc Sheet.

5 cwt casks	0 05½ 0 05⅝
Part casks	0 05⅝ 0 05¾

Lead.

Imported Pig, per lb	0 03 0 03¼
Domestic "	0 03
Bar, 1 pound	0 04½
Sheets, 2½ lbs, sq. ft, by roll	0 04½ 0 04¾
Sheets, 3 to 6 lbs, per sq ft, by roll	0 04½ 0 04¾

Note—Cut sheets half cent per lb extra. Pipe, by the roll, usual weights per yard, lists at 7c per lb and 25 p.c. discount.

Note—Cut lengths, net price; ton lots 25 and 10 p.c. dis.; waste pipe, in 8 ft lengths lists at 7½c.

Solder.

	per lb.	
Bar Half-and-half (guar.)	0 15	0 16
Standard	0 14	0 15
Wire	0 17	0 19

Note—Prices of this graded according to quantity. The prices of other qualities of solder in the market indicated by private brands vary according to composition.

Antimony.

Cookson's, per lb	$0 12 0 12½
Other makes "	0 11 0 12

White Lead.

Pure, Assoc. guarantee, ground in oil, 25 lb. irons, per cwt	5 00
No. 1 Do. "	4 75
No. 2 Do. "	4 50
No. 3 Do. "	4 25

Prepared Paints.

(In ¼, ½ and 1 gallon tins.)

Pure, per gallon	$1 00 1 20
2nd qualities "	0 90 1 00
Barn (in bbls)	0 80 0 90

Colors in Oil.

(25 lb tins, Standard Quality.)

Venetian Red, per lb	0 05
Chrome Yellow "	0 11
Golden Ochre	0 06
French "	0 05
Marine Black	0 09
" Green	0 09
Chrome "	0 08
French Imperial Green	0 19

Colors, Dry

Yellow Ochre (J.C.) bbls, p. cwt	1 35 1 40
" " (J.F.L.S.) " "	2 75
" " Royal " "	1 10 1 15
Venetian Red, (best) " "	1 80 1 90
English Oxides per cwt	3 00 3 25
American " } " "	1 25 1 90
Canadian " }	
Paris Green, per lb	0 13½ 0 15
Burnt Sienna, pure, per lb	0 08½
Burnt Umber "	0 05
do pure	0 08
Drop Black "	0 09
Chrome Yellows "	0 12
" " Lemon pure, 8 lb. tins, per lb	0 19
Chrome Greens "	0 12
Golden Ochre	0 03½

Varnishes (in bbls).

No. 1 Furniture, per gal	0 69
Extra "	0 90
Brown Japan "	0 65
Brown Japan, Turpentine p. gal.	0 85
No. 1 Carriage "	1 30
Gold Size Japan "	1 00 1 20
Pure Orange Shellac "	1 95 2 05
Hard Oil Finish	1 30
Oil Shellac	1 40
White Shellac	2 25

Linseed Oil (in bbls)

Raw, per gal	0 60 0 62
Boiled "	0 63 0 65

Turpentine (in bbls)

Selected Packages, per gal	0 44 0 46

Castor Oil.

Best, per lb	0 07⅞ 0 08

Cod Oil.

Cod Oil, per gal	0 50 0 51

Glue (in bbls)

Common, broken	0 10 0 11
French medal	0 11 0 13
Cabinet	0 13 0 15
White, extra	0 16 0 18
Gelatine	0 20 0 30
Strip	0 16 0 17
Coopers	0 17 0 19

Liquid Glue—F. LePage's, dis. 20 to 25 per ct. off list; Munn's, dis. 25 to 30 per cent. off list.

HARDWARE.

Ammunition—*Cartridges.*

Rim Fire Pistol, dis. 40 to 45 p.c. Amer
Rim Fire Cartridges, Dom. 50 and 5.
Rim Fire, Military, net list, Amer.
Central Fire Pistol & Rifle, 15 to 18 per cent., Amer.
Central Fire Cartridges, Dom. 30 p.c.
Central Fire, Military and Sporting, Amer. net list. B.B. Caps, discount 45 p.c. Amer.
Loaded Shot Shells, "Trap" and "Dominion" grade, 10 p.c

Shot.

Canadian, common, 15 per cent.

Wads.—Baldwin's.

	per lb
Best thick white felt wadding, in ½ lb. bags	1 00
Best thick brown or grey felt wads, in ½ lb. bags	0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 85
Best thick white card wads, in boxes of 500 boxes, 8 gauge	0 55

Thin card wads in boxes of 1000 each, 12 and smaller gauges... 0 20
Thin card wads in boxes of 1000 each, 10 gauge..... 0 25
Thin card wads in boxes of 1000 each, 8 gauge..... 0 45
Chemically prepared black edge grey cloth wads, in boxes of p. M 250 each—
11 and smaller gauge 0 65
9 and 10 gauge 0 75
7 and 8 gauge..... 0 90
5 and 6 gauge 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge..... 1 15
9 and 10 gauges 1 40
7 and 8 gauges..... 1 65
5 and 6 gauges..... 1 90

Anvils

Per lb 0 10 0 12½
Anvil and Vice combined each..... .... 4 50

Augers.

Gilmour's, discount 50 per cent.
Hollow Stearn's per doz.. 13 00 20 00
Adjustable " each..... 5 50 6 50
Post Hole, Vaughan's, each 1 35 1 60
Excelsior, Jennings', discount 50 per cent.

Awls.

Sewing per gross.... 0 65 1 59
Pegging, " ... 0 65 1 25
Brad, ... 0 85 1 60
" handled " ... 3 60 7 30
Saddlers' " 0 45 1 60

Awl Hafts.

Patent Peg, per gross..... } 7 25 8 00
" Sewing, " .... }

Awl and Tool Sets.

Millar's Falls, per doz.... 2 80 8 30

Axes.

Per box 6 00 12 00

Axle Grease.

Per gross 6 50 14 00

Bath Tubs.

Zinc discount 25 per cent.
Copper, discount, 35 to 40 pc. off Revised list.
Steel Clad 20 p.c. dis.

Bells—*Hand.*

Brass, 60 to 66⅔.
Nickel 50 and 10 to 60 p.c

Door.

Gongs, Sargant's..... 5 50 8 00
" Peterboro, dis. 50 per cent

Cow.

American make, discount 60, 60 and 10 per cent.
Canadian, dis 45 and 50 pc.

Farm.

American, each 2 00 5 00

House.

American, per lb..... 0 35 0 40

Bellows.

Hand, per doz 3 35 4 75
Moulders' " 7 50 10 00
Blacksmiths' discount 35,40 per cent

Belting.

Agricultural, 50 per cent.
No. 1, leather, dis. 40 & 5 per cent.
Best, ditto, 30 to 33⅓ per cent.

Bench Stops.

Per doz..... 5 00 6 00

Bits—*Auger.*

Gilmour's dis 60 per cent.
Excelsior, discount 60 per cent.
Rockford Common, 60 and 10 to 65 p.c
" Perfection, 50 and 10 per c.
Jenning's Gen, net list to 5 p. cent dis

Car.

Gilmour's, 47½ to 50 per cent

Expansive

Clark's, 15 per cent.
Excelsior, 10 per cent.

Gimlet

Clark's, per doz..... 0 65 0 90
Diamond, Shell " 1 00 1 50
Nail and Spike, per gross 2 25 5 20

Blacking, (Catchpole's).

No. 1, Egyptian Blacking. 9 00
" 2, " " 4 50

Blind Rollers.

Annex .....per doz. 1 25 1 75
Mascot ..... " 1 35 1 85
Erminie ..... " 1 12 1 20

Blind and Bed Staples.

All sizes, per lb..... .. 0 11 0 15

Bolts.

Carriage, dis, 70.
Tire, dis. 50 and 10 per cent to 60 p. c
Stove, dis., 45 to 50 p.c.
Elevator, dis., 35 to 40 p. c.
Machine, dis., 70 to 70 and 10 per cent

Boring Machines.

Complete, with Augers, ea. 5 00 7 50

Braces.

Barber's 6 00 7 75
Barber's Ratchet..... 10 00 11 00
Farmers' 2 00 2 75
Millar's Falls 15 50 29 00

Brackets—Shelf.

Japanned Canadian, per doz. pairs..... 0 50 3 40
Berlin Bronze Cana'n 0 85 3 20

Broilers.

Light, dis. 65 to 67½ per cent.
Reversible, dis., 65 to 67½ per cent.
Vegetable, per doz., dis. 37½ per cent
Henis, No. 8 " 6 00
" No. 9 " 7 00
Queen City 7 50 10 00

Butchers' Cleavers.

From 8 to 12 inch, per doz 500 4 25

Butts—*Brass.*

Wrought Brass dis. 70 and 10 to 75 per cent

Cast Iron.

Loose Pin, dis 65 and 5 to 65 5 pc. and 5 per cent.

Wrought Steel.

Fast Joint, dis. 65 & 10 to 70 pc.,
Loose Pins, " 65 & 10 to 70 p.c.
Berlin Bronzed, dis. 70, 70 and 5 per cent.
Gen Bronzed, per pair 0 40 0 65

Can Openers.

Acme, per gross 9 00 10 00
Sardin Scissors, per doz. 3 75 4 50

Card.

Horse, per doz..... 0 60 1 00

Carpet Stretchers.

American, per doz..... 1 00 1 50
Bullards " ..... 6 50 ....

Carpet Sweepers.

Bissell, per doz..... .... 22 50
World " 21 75
Daisy, " 24 00
Star, " 18 00
Crown Jewel, per doz... .... 29 00
Grand Rapids, " 30 00 33 00

Cartridges—*See* Ammunition.

Castors.

Bed, new list, dis. 50pc. } to 50 and 5
Plate dis. 50pc. } per cent.

Cattle Leaders.

No 31 and 32, per gross 8 50 11 25

Cement.

Portland, car load lots 2 70
Thorold " 1 10
Queenston " 1 10
Napanee " 1 10

Chalk.

Carpenters' Colored, per gross 0 45 0 75
White, lump, per cwt 0 60 0 65
Red..... 0 05 0 06
Crayon, per gross 0 14 0 18

Chisels—*Socket, Framing and Firmer*

American, dis 70 per cent.
Canadian, dis 35 per cent.
Tanged Firmer per doz.... 0 85 4 00

Churns

Daisy, dis. From factory 65 to 65 and 5 per cent.
From stock 60 and 5 to 60 and 10 p.c.

Clamps.

Judd's, dis. 20 p.c.
Stearns, per doz..... 3 00 10 00

Clips.

Axle, dis. 65 p c.

Coffee Mills.

Box 3 60 13 00
Side 3 60 4 00
Enterprize, No. 0..... .... 1 35
" No 2..... .... 2 70

Compasses, Dividers, etc.

American, dis., 60 to 62 and ½ p.c

Cradles, Grain.

Canadian, discount 25 o 30 p.c.

Dies.

Hart Mfg. Co., (pipe dies) (Amer. list) dis. 40 per cent.
Hart Mfg. Co., (bolt dies) (Amer. list) dis. 25 per cent.

Door Springs.

Torrey's Rod, per doz 2 0
Coil, per doz..... 0 88 1 60
English, " 2 00 4 00

Draw Knives.

American, dis. 70.
Canadian, dis 25 to 35 p.c.

Drills—*Hand and Breast.*

Millar Falls, per doz..... 16 00 51 50
P. S. & W., dis. 40 per cent.

Drill Bit.

Morse, dis. 37½ to 40 per cent.
Standard, dis. 47½ to 50 p. c.

Elbows—*Stove Pipe*

$1.00 to $2.65 per doz.

Fawcets.

Cork Lined, per doz. 0 30 0 60
Wine, per doz..... 1 30 2 25
Star, " 2 80 3 90
Fenns Corkstops, No 2 p.doz 1 70
Petroleum, per doz 4 50 6 50

Files and Rasps.

Kearney & Foote's discount Am. List 57½ to 60 per cent.
Black Diamond, 50 & 5 per cent. dis to 50 and 7½ Amer. List.
Nicholson's dis., Amer. list, 50, 50 and 5 per cent.
Toronto File Co., 50 and 10 to 60 p.c., Amer. list
Jowitt's, dis. Can. list, 25pc. to 27½ p.c.
Globe File Co.'s disc. 60 per cent.
Horse Rasps, Kearney & Foote's dis Am list, 50 p.c. to 50 and 10 p.c.
Horse Rasps, dis. 45 p.c. Amer. Hellers
Horse Rasps, Spencer's, dis. Can. list 40 p.c.
Horse Rasps, Toronto File Co., 50 and 10 p.c., Amer. list.

Fluting Machines.

Each 0 60 2 00

Forks.

Hay, Manure, etc, dis. 40 to 45 p.c.

Freezers, Ice Cream.

Gem, dis, 57½ to 60 per cent.
Shepard's Lightning, dis. 50 to 50 and 10 p.c.

Fruit Presses.

Henis' per doz 4 00
Enterprise, discount 10p.c
Shepard's Queen City, dis. 15 p.c.

Fry Pans.

Acme, discount 55 to 60 per cent

Gauges—*Marking, Mortise, etc.*

Stanley's. dis. 50, 55 p. c.

Wire Gauges

Winn's Nos. 26 to 33, each 1 65 2 40

Glass.

Window.

Box Price.

Size	Star. Per 50 ft	Star. Per 100 ft.	Double Diamond Per 50 ft.	Double Diamond Per 100 ft
United inches				
16 to 25	1.20-25	2.40	1.75	
26 to 40	1.40	2.70	2.00	
41 to 50		3.10		4 50
57 to 60		3.40		5.00
61 to 70		3.70		5.50
71 to 80		4.10		6.25
81 to 85		4.50		7.00
86 to 90				8.00
91 to 95				9.00
96 to 100				10.00

Pilkington.

[Discount 10 p.c. off for box lots, and 10 and 5 for 10-box lots.]
Ordinary.
st break $3 65
2nd " 3 90
3rd " 4 60
4th " 4 95
5th " 5 40
6th " 5 90
7th " 0 50

Picture Glass.

Pilkington's ordinary.
1st break 4 0
2nd " 4 70
3rd " 5 40
4th " 5 90
5th " 6 50
6th " 6 90
7th " 7 70

Gas Fittings and Staple Brackets.

Jas. Barwell, Toronto—Dis. 20 to 25 p. c., free of duty. Net list on application.

Glue Pots.

Tinned, each 0 30 0
Enamelled " 0 55

Grindstone Fixtures.

P. S. & W., per doz 3 88 4 25

Hammers—*Nail.*

Maydole's net list to 5 per cent. dis. Can. discount 25 to 27½ p.c

Tack.

Magnetic, per doz 1 10 1 50

Sledge

Canadian, per lb..... 0 12½ 0 13

Ball Pean.

English and Can., per lb . 0 25 0 30

Handles.

Axe per doz..... 00 3 50
Store door " 1 00 1 80
Chest, per doz pairs 0 40 2 50

Chisel.

Firmer per gross 3 00 4 50
Socket Firmer " 3 25 8 00
Socket Framing per gross 3 75 5 00

Fork.

C. & B., discount 35 per cent. to 40 p.c

Hoe.

C. & B., discount 35 per cent. to 40 p. c

Saw.

American, per doz 1 00 1 25

Plane.

American, per gross 3 15 3 75

Hammer and Hatchet.

American, per doz 0 50 0 80

Cross Cut Saw.

Canadian per pair..... 0 18 0 25

Hangers.

Door 4 and 5 inch, per pair 0 40 0 80
Lanes, 45 to 47½ p.c. dis

Hatchets.

Can., dis 40 to 42½ p c.

Hinges.

Blind, Parker's, dis. 60 to 60 and 10 p.c.
" Shepard's Noiseless, dis. 60 p.c.
" " Buffalo, dis 60 to 70 p.c.
Light T and strap, dis 62½ to 65 per
Heavy, per lb..... 0 5 0 05½
Screw hook and hinge—
6 to 10 in., per set 0 00 0 04½
12 up " 0 00 0 03½

Per doz. sets

Screw, Eureka 1 13 1 80
Gate, Clark's 1 50 2 20
" Shepard's, dis 50 to 60 p.c.

Per doz. pairs

Spring 1 50 3 50
" Shepard's Samson 1 75 1 90

Hoes.

Garden, Mor ar, etc., discount 40 to 45 per cent.
Planter doz 4 00 5 00

Hooks—*Cast Iron*

Bird Cage, per doz 0 50 1 10
Clothes Line, " 0 27 0 63
Harness, " 0 72 0 88
Hat and Coat, per gross.. 1 00 3 00
Chandelier per doz 0 50 1

Wrought Iron.

Wrought Hooks and Staples, Can dis. 40 and 5 to 40 and 10 per cent

NEW ARRIVALS

30 Cases CUTLERY AND GUNS

ALL NEW GOODS.

Finest Finish. Best Value.



NEW ARRIVALS

20 Casks Cattle and Trace CHAINS

10 Tons Coil Chain.

Five Cars Window Glass.

Bowman, Kennedy & Co., London, Ont

Wrought Hooks and Staples, Amer. dis. 75 and 10 to 80 per cent.

Wire.

Hat and Coat, dis. 55 to 60 p.c
Belt, per 1,000 ..... 0 60 2 70
Screw bright, Eng., dis. 50 to 55 per cent.

Horse Nails

Canadian, dis. 55 to 70

Horse Shoes.

F.O.B. Toronto & Hamilton $3 80
Snow, " " .. 3 90
F.O.B. Montreal 15c. less, and London 5c. more than above.

Ice Picks.

Star, per doz 3 00 3 25

Kettles.

Brass spun, 7½ per cent. dis. off new list.
Copper, per lb .. 0 30 0 35
Enamelled Can. 50 p.c
American, 60 and 5 to 60 and 10 p.c

Keys

Lock, Can, dis 50 p.c.
Cabinet, Trunk, and Padlock, Am per gross 1 60 4 75

Knobs.

Door, japanned, and N. P., 85 to 3 00 per doz.
Bronze, Berlin, per doz .. 2 75 3 25
Bronze Gem, " 6 00 9 00
Sava " 8 75 10 00
Shutter porcelain, F & L screw, per gross $1 30 4 00

Ladles.

Melting, per doz 1 70 4 50

Lemon Squeezers.

Porcelain lined, per doz 2 20 5 60
Galvanized, " 1 87 3 85
King, wood, " 2 75 2 90
" glass " 4 00 4 50
All glass, " 1 20 1 30

Lines.

Fish, per gross 1 05 2 50
Chalk, " 1 90 7 40

Locks—*Door.*

Canadian, dis. per cent.. 50
Russell & Erwin, per doz 2 90 7 50

Cabinet.

Eagle, dis. per cent, 27½ per cent. to 30 per cent.

Padlock.

English and Am. per doz 50 6 00
Scandinavian, " 1 00 2 40
Eagle, dis. per cent, 15 to 17½ per cent

Mallets.

Tinsmiths', per doz 1 25 1 50
Carp't'rs', hickory " 1 25 3 75
Lignum Vitæ, " 3 85 5 00
Caulking, each 1 60 2 00

Mattocks.

Canadian, per doz 8 50 10 00

Meat Cutter

Enterprise, American dis. 17½ to 20 per cent. dis.
Home, each ....

Mincing Knives.

American, per doz 42 2 35

Molasses Gates.

Stebbin's Patent, dis. per cent, 65 to 70 to 70.10 per cent

Nails.

Cut Nails (Iron)

1. Either Canada or American Pattern.

Basis—50 to 60 dy	2 30
40dy	2 35
30 dy	2 40
20, 16 & 12 dy	2 45
10 dy	2 50
8 & 9 dy	2 55
6 & 7 dy	2 70

2. American Pattern Only

from 4 to 5 dy	2 90
3 dy. (lath)	3 30

3. Canada Pattern Only

from 4 to 5 dy	2 80
3 dy. (lath)	3 20
3 dy A.P. Fine	3 90

Cut Nails (steel) Add 10c. to the prices in list for iron nails.
Wire Nails, 75 per cent. from List Jan. 8, '92 Extras as per List for special nails Terms, 4 months or 3 per cent. cash.
Brads & Moulding Nails, 75 per cent. from new list.

Nail Pullers.

German & American.... 1 85 3 50

Nail Sets.

	per gross
Square, round and octagon	3 38 4 00
Diamond	12 00 15 00

Netting.

Poultry, 50 and 10 per cent dis.
Import 60 p.c.

Oil.

Canada Refined Oil (Toronto) 14 15
Carbon Safety " 0 17 0 18
Canada W.W. " 0 20 0 22
American W.W. " 0 25
S. R. Seal .....per gal 0 63 0 65

Oilers.

McClary's Galvan. Iron Oil Can, with Pump, per doz 19 50
Zinc and Tin, dis. 50, 50 and 10.
Copper, per doz 1 25 3 50
Brass, " 1 50 3 50
Malleable, dis. 25 per ct.

Pails.

Galvanized, per doz 2 25 3 30

Pencils.

Dixon's, per gross 1 00 4 25
" Carpenter..... 2 25 3 60

Picks

Per doz 6 00 9 00

Picture Nails.

Porcelain Head, p. gross 1 65 3 00
Brass Head, " 40 1 00

Planes.

Wood, bench, Canadian dis. 60 per cent American dis. 57½
Wood, fancy Canadian, or American 35 to 37½ per cent.
Bailey's (Stan R & L. Co.) 42½ to 45 p.c.
Miscellaneous, dis. 15 to 17½ per cent
Bailey's Victor, dis. 15 to 17½ per cent

Plane Irons.

English, per doz 2 00 5 00

Pliers and Nippers.

Button's Genuine, per doz. prs. dis 37½, 40 p c.
Button's Imitation, per doz.. ..... 5 00 9 00
German, per doz 60 2 60

Plumbs and Levels

S. R. & L. Co., dis. 70 p. c.

Poppers.

Corn, square, per doz.... 1 35 2 00

Pruning Shears.

Per doz 4 00 5 50

Pulleys

Hothouse, per doz 55 1 00
Axle. 22 33
Screw 27 1 00
Awning 35 2 50

Pumps.

Rumsey or Canadian Cistern 57½ to 60 per cent.
Pitcher Spout, 65 to 67½ p.c
Canadian Cistern 60 to 62½ p. c. from factory.
Canadian Pitcher Spout 67½ to 70 p. c. from factory.

Punches

Saddler's, per doz..... 1 00 1 85
Conductors' " 9 00 15 00
Tinner's solid, per set.... 72
" hollow, per inch 1 00

Putty

Bladder, per 100 lbs 2 00 2 25
Tins, lbs 2 50 2 75

Rail.

Barn Door, per foot.... 3 3½
Sliding Door, " 3¼ 3¾
Lanes, 33⅓ to 35 p.c. dis

Rakes.

Cast Steel and Malleable Canadian list dis. 40 to 45 per cent.

Razors.

Boker's, per doz 7 50 11 00
Wade & Butcher's " 3 60 10 00

Razor Strops.

Currier's, per doz 1 25 3 60

Rivets and Burrs.

4 mos., or 3 per cent. cash.
Copper Rivets, dis. 55 per cent.
Iron " " 55 per cent.
Burrs, Iron, 30, 33⅓ per c

Rivet Sets.

Canadian dis. 30, 35 per c

Rope

	Per lb. Sisal.	Manilla.
7-16 in. and larger..	8	10 10½
¼, 5-16, ⅜ in.....	8½	10½ 10¾
Cotton, per lb.....		18 20
New Zealand.....		8½ 9
Russia Deep Sea, per lb..		12½ 13½
Jute ..... " ...		06¾ 07½

Rules.

Boxwood, dis. 75 & 10 to 80 p.c.
Ivory, dis 37½ to 40 per cent

Sad Irons.

Mrs. Potts, per set 75 80
" N P. " 1 00 1 05

Sad Heaters.

Dome, Shepard's, per doz 4 75 5 00

Sand and Emery Paper.

B. & A., sand, 35 to 37½ per cent.
Emery, per quire..... 55 90

Sash Cord

Per lb 22 50

Sash Locks.

Triumph and Morris, dis 37½, 40 per cent.
Kempshell's dis. 40, 62½ per cent
Canadian, dis. 45, 50 p. c.

Sash Weights.

Sectional, per lb..... 1½ 1¾

Saws.

Hand, Disston's, dis 10 p. c.
S. & D., dis. 35 per cent. to 40 per cent
Cross Cut, Disston's, per ft. 35 to 55.
S & D dis. 35 per cent.
Hack, complete, each.... 75 2 75
" frame only 75

Saw Sets.

Per doz 1 65 9 00

Scales.

Canadian List, dis. 40 p.c

Scale Beams.

Canadian, B S. & M. dis. 40 per cent

Scrapers.

Box, per doz 2 10 4 50
Foot, " 40 3 50

Screens.

Window, patent, per doz 5 00 6 00

Screw Drivers.

Sargent's, per doz 65 4 00

Screws.

Wood, F. H., Iron, and Steel, 77½ per cent., dis.
Wood, R. H. " 72½ per cent. dis.
" F. H. Brass 75 " "
" R. H 70 " "
Diamond Point wood screw nails bright, dis. 77½ and 20 per cent.
Bench, wood, per doz.... 3 25 4 00
Bench iron per doz..... 4 25 5 75

Scythes

Discount 40 to 45 per cent.

Scythe Snaths.

Canadian, dis. 35 to 40 p. c

Shears.

B. & W., japanned, dis. 75 per cent.
B. & W. N. P., dis. 65 p. c.
Seymour's dis. 60 p. cent.
Ætna, dis. 75 @ to 75 and 10 per cent
Heinish 60 per cent.
Bristol, Japanned, 80 per cent.
" N.P., 70 per cent.

Sheaves

Sliding Door, per set ... 77 1 40

Shovels and Spades

Canadian, dis. 40 special brands net price.

HALIFAX SHOVEL CO.

Fenerty's disc, 45 to 50 per cent.

Sieves

Wood Rim, black, p. doz 1 15 1 35
" tinned, 1 35 1 60
Tin Rim, " " 2 30 2 45
" black, " 1 80 2 25

Snaps

Harness, German, dis. 35 per cent
Acme, " 3 00 5 00
Lock, Andrew's " 4 50 11 50

Sapolio

In ½ or ¼ gross boxes, per grs. 11 30

Soldering Irons.

Per lb 0 28 0 30

Wrought Spikes

Discount, 20 per cent. to 25 per cent.

Spoke Shaves.

Wood, English 1 80 5 00
Iron, American 1 35 2 35

Spoons and Forks.

Tea Spoons.....per gross	7 50	12 00
Dessert " ..... "	21 00	.....
Table " ..... "	30 00	30 00
Dessert Forks.... "	24 00	.....
Medium " .... "	27 00	.....
Table " ... "	36 00	.....

Squares.

Iron, per doz 1 65 2 90
Steel, dis. 75 and 10 to 80 p.c.
Try and bevel, dis. 50 to 52½ per cent

Staples.

Fence, galvanized, per lb 4½ 4½
Wrought Iron, dis. 75, 75 and 10 per cent.
Stocks and Dies, Amer. dis. 25 per cent.

Stove Polish, (Catchpole's).

Stove Pipe Varnish, enamelled cans, per doz 1 75
No 1, Stove Paste, per gross 9 00
" 2 " " " 4 80

Stone.

Washita, per lb 0 25 50
Hindostan, per lb..... 0 06 07
" Slips, per lb 9
Labrador, per lb 0 13
" Axe, " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe, per gross..... 3 50 5 00
Grind, per ton 15 00 18 00

Tacks, Brads, etc.

Leather Carpet, 35 per cent.
Cut, Carpet Blued, gimp, 55 per cent
" tinned, dis. 57½ per cent.
Swedes' iron, blued or tinned, dis. 50 per cent.
Upholsterers' dis. 50 per cent.
Copper Nails, dis. 60 per cent.
" Tacks, 45 per cent.
Clout Nails, dis. 60 p. c to 65 p.c.
Patent Brads, dis. 50 per cent.
Finishing Nails, dis. 45 per cent.
Trunk Nails, dis. 65 per cent.
Trunk Tacks, dis. 57½ per cent.
Channel nails 5c. lb. off list
Trunk Tacks, tinned, 62½ p.c.
Cigar Box Nails, dis. 45 per cent.
Shoe Finders' Tacks and Nails, dis. 37½ per cent.

Tape Lines.

English, ass skin per doz. $2 75 $5 50
English Pat. Leather 5 50 9 75
Chesterman's, each 0 90 2 85
" steel, each . 0 80 8 00

Thermometers.

Tin case & dairy, dis. 75p.c

Thimbles.

Asbestos, filled, per doz., 25 to 33⅓ p c

Ties.

Cow, per doz 1 75 2 50

Tinner's Shears and Snips

P.S.&W., net list.
Canadian 10 to 15 per cent dis.

Tinware.

Stamped, dis. Assn list, 70, and 12½ pe cent. to 70 and 25 p.c. on special lines.
Japanned, Prices on application
Pieced, " " "

Transom Lifters

Payson's, $2.60 to $5.00 per doz.

Traps

Game, Newhouse, dis 33⅓ p.c. to 35 p.c
Game, H & N., P.S. & W. or Steel, 60 and 10 to 67½ per cent.
Mouse, per doz 0 35 1 50
Rat " 2 00 4 50

Trowels.

Disston's, discount 10 p.c.
German, per doz 4 75 9 00
Brade's " 00 10 50
S. & D., discount 35 p.c.

Triers.

Butter, per doz 6 25 9 00

Twines

Bag, per lb	0 12½ 0 20
Wrapp'g, mottl'd, pr. pack.	0 50 0 60
" cotton, per lb ..	0 18 0 20
Mattress, per lb	0 33 0 45
Staging "	0 27 0 35
Broom "	0 30 0 55
Binding, flax, per lb	....
" jute "	....
" Blue ribbon	..... 0 12½
" Red cap.....	..... 0 11½
" Crown.....	..... 0 10½
" Silver Composite	0 09

Freight allowed to any station south and east of Owen Sound in 1,000 lb. lots of any one brand.

Vises.

Hand, per doz	4 00 6 00
Bench, parallel, each	2 00 4 50½
Coach, each	6 00 7 00
Peter Wright's, per lb	0 12 0 13
Pipe, each	5 50 9 00
Saw, per doz	6 50 13 00

Washer Cutters.

Per doz 4 00 8 50
Washers "Iron," 40 per cent., 4 mos. or 3 per cent.

Well Wheels.

Amer., per doz. 8, 10 & 12 in. 3 38 6 00

Wire.

Brass Wire, 16 to 25 wire gauge, 21 to 26c. lb.
Copper Wire, 5 to 10 p. c. off Amer. list
Annealed, annealed and oiled, galvanized 20 per cent. dis.
Bright, Coppered steel and spring 15 per cent f.o.b. Montreal
Plus 10 cents f.o.b. Hamilton.
" 10 " " Toronto.
" 14 " " London.
Broom Wire 6 to 6¾c. per lb.
Clothes Line Wire, 19 gauge, per doz coils 3 95

Wire Fencing.

Galv. 2 barb, 2½ & 5 in. apart, 4 " 4 & 6 " "	4½ 4¾
" Plain twist, 2&3 wires	
" Steel thorn and ribbon.....	4¾ 5
"Lock Barb," 4 point	.... 0 04½
Ditto Glidden 2 point	.... 0 04½
Galvanized Barb, "Lyman," 2 to 4 points.....	..... 0 04½
Steel staples	0 04½ 0 04½

Terms, 60 days or 2 per cent. in 30 days.

Wire Cloth.

Ordinary, discount 25 p.c.
Painted Screen, p. 100 sq ft 1 90

Wrenches.

Acme, 35 to 37½ per cent.	
Agricultural, 70 and 5 to 70 and 10 p c	
Standard, dis. 60, 60 & 10 p.c.	
Coe's Gen'ne, dis. 32½ to 35 p. c dis.	
Diamond, dis. 33⅓; 35 p. c.	
Tower's Engineer, each ..	2 00 3
" S., per doz.....	5 80 7 0
G. & K.'s Pipe "	.... 6 00
Burrell's " each	.... 3 40
Pocket, per doz.....	1 25 2 00

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TRADE MARK FOR SIMPSON, HALL, MILLER & CO. QUADRUPLE PLATE HOLLOW WARE.

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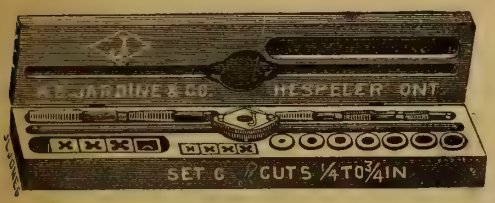
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BUTCHER'S KNIVES

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Price $15, complete.

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Manufacturers of Blacksmith's Tools and Tube Expanders,

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GENUINE ACMES?

Well, We Rather Think So!

What About our Hockey? The most elegant and suitable skate for the purpose ever made.

What About our Racers? Made with wood tops and extra light runners—the only way in which lightness, combined with perfect rigidity, can be secured. Special system of strapping. The leading racers use wood-top skates. Why? Because they know from experience they are the best.

What About our Skeletons? For Rink use the most in demand. Welded iron and steel blades. Plain or nickel-plated.

Why have we secured first honors at Philadelphia, 1876—Paris, 1878—London, 1886—and now Medal and Diploma World's Columbian Exposition, 1893? Because of the superiority of goods exhibited, which are the same as those we are shipping our customers daily.

PRICE?—Ask your jobber about that, and you will find they are quite as cheap as the inferior makes.

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They are Leaders and Sure Profit Makers.

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27 Front St. East, Toronto, Ont. 185 St. James St., Montreal, Que.

WORKS AT LACHINE, QUE., Near Montreal.

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2 and 4 Barb Plain Twist and Strip Fencing

And Staples for same.

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ESTABLISHED 1880 INCORPORATED 1893 DOMINION TRADE MARK

"Crescent" Coat and Hat Hooks.

Supplied in Coppered, Japanned, and Tinned Steel Wire, also in Brass Wire. Best Selling Hook made. TRY IT.

BEST QUALITY

Iron, Steel, Brass, and Copper . . **Wire**

ALSO

Wire Nails, Wood Screws, and Jack Chain.

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"Pittsburgh" Lamp

Unparalelled as Holiday and Wedding

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One "Pittsburgh" gives as much light as six other lamps. It does not smoke and requires very little cleaning. It is simply a "Joy forever" to all who have one. Made in all sizes and styles of Banquet, Hanging, Vase, and Piano.

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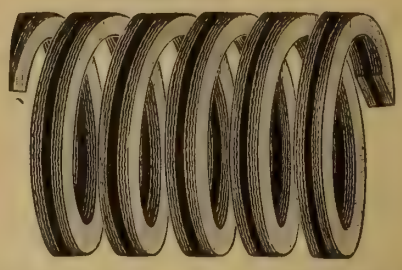
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ANTI-FRICTION, SELF-LUBRICATING

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Price per lb. $1.20. Special Discount to Dealers.

THE GUTTA PERCHA AND RUBBER M'F'G CO.

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61-63 FRONT STREET W., Toronto.

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JOSEPH RODGERS & SONS, Limited.

MANUFACTURERS OF

Pocket and Table Cutlery, Scissors, Razors, Erasers, Etc.

These goods have fully maintained their reputation as the best cutlery in the world for over

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Manillas, Brown Wrapping,
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We have them from $2.50 to $18.00.

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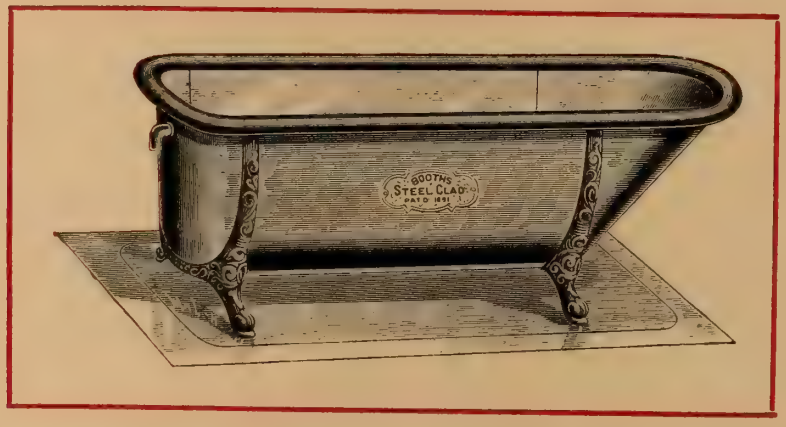
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WE WILL CONTINUE TO MAKE OUR REGULAR LINES AS USUAL.

These will be made on exactly same principle as our other Steel-Clads but at a much reduced price. . . . .

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